CITY OF TAFT

energized for the future

ENVIRONMENTAL IMPACT REPORT

JULY 2009

NOTICE OF AVAILABILITY

PROPOSED DRAFT GENERAL PLAN AND DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE CITY OF TAFT

JULY 28, 2009

Lead Agency: City of Taft
Community Development Department
Attn: Paul Gorte, AICP, Acting Community Development Director
209 East Kern Street
Taft, California 93268
Email: pgorte@cityoftaft.org
Fax: (661) 765-2480

Project Title: City of Taft General Plan

Project Description: The proposed City of Taft General Plan would replace the existing General Plan, adopted in April of 1986. State law requires that general plans include seven elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety. This General Plan includes the required elements plus three optional elements. The optional elements include: Energy, Public Facilities, and Economic Development. In addition, the City of Taft is committed to being a leader in sustainability and therefore has included "green" and sustainable principles throughout all of the elements of the General Plan.

In adopting this General Plan, the City of Taft is making a clear and definitive statement that good planning is crucial to the City's success. The City recognizes and acknowledges the ability of planning to affect the quality of lives of residents, the success of businesses, the appearance of the community, the ability of Taft to respond to changing economic circumstances, and the extent to which the City can help in statewide and national efforts to reduce energy consumption and reduce greenhouse gas emissions.

The City of Taft was incorporated November 7, 1910, and today covers approximately 15 square miles of land. The General Plan for the City of Taft addresses land within the city limits and an area beyond the city that impacts the City's planning efforts. This area is referred to as the General Plan Planning Area and encompasses 157,570 acres, or roughly 246 square miles.

Findings/Determination: The City Planning Commission will receive comments and make a recommendation to the City Council on the General Plan and Environmental Impact Report at their regular

meeting on October 13, 2009 at 6:30 p.m. at the City Hall Council Chambers.

The City Council will receive comments and hear Planning Commission's recommendation on the General Plan and Environmental Impact Report at their regular meeting on October 20, 2009 at 7:00 p.m. at the City Hall Council Chambers.

Public Review Period: A 45-day public review period for the Draft Environmental Impact Report will commence on **Tuesday, July 28, 2009** and will end on **Thursday, September 10, 2009** for interested individuals and public agencies to submit written comments on the document. Any written comments on the Draft General Plan or Draft Environmental Impact Report must be received at the above address within the public review period. Copies of both documents are available for review at the above address and on the City's website, www.cityoftaft.org.

Contact Person: Paul Gorte, AICP, Acting Community Development Director
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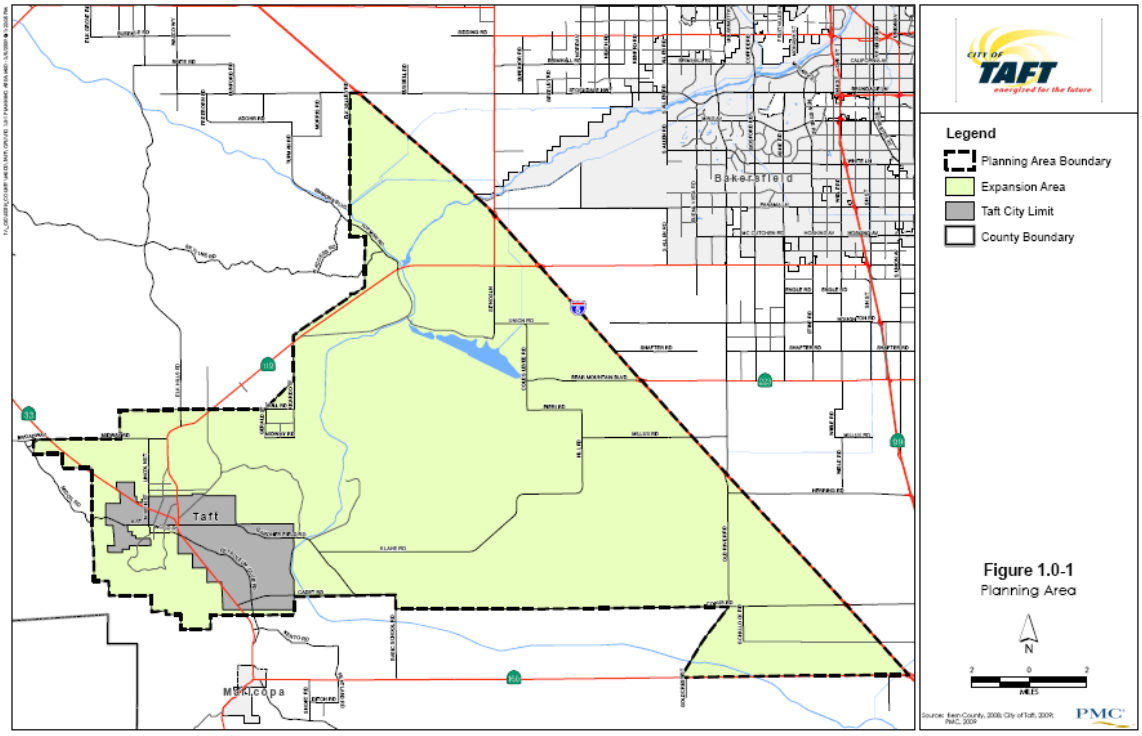
City of Taft
209 East Kern Street
Taft, California 93268

Public Meeting: A public meeting will be held on August 12, 2009, at 6:00 p.m. at the West Side Recreation and Park District, 500 Cascade Place, Taft, CA 93268.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Taft
Maricopa
Legend
Planning Area Boundary
Expansion Area
Taft City Limit
County Boundary
Figure 1.0-1
Planning Area
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CITY OF TAFT
GENERAL PLAN
DRAFT ENVIRONMENTAL IMPACT REPORT

Prepared for:

CITY OF TAFT
209 EAST KERN STREET
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Prepared by:

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JULY 2009

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1.0
INTRODUCTION

This Draft Environmental Impact Report ("Draft EIR" or "DEIR") was prepared in accordance with the California Environmental Quality Act (CEQA) (Cal. Pub. Resources Code Sections 21000, et seq.) and the State CEQA Guidelines (14 Cal. Code Regs., Section 15000, et seq.). The City of Taft (City) is the lead agency for the environmental review of the proposed update to the City of Taft General Plan ("project", "proposed project", "General Plan Update", "GPU") evaluated herein and has the principal responsibility for approving the project. This DEIR assesses the expected environmental impacts resulting from adoption of the proposed project and the associated impacts from subsequent development under the updated General Plan.

This DEIR utilizes technical information and analyses from previous studies which are supported by State CEQA Guidelines (Section 15148 (Citation) and 15159 [Incorporation by Reference]). By utilizing these provisions of the CEQA Guidelines, the City, in preparing this DEIR, has been able to make maximum feasible and appropriate use of the available technical information.

1.1 PURPOSE OF THE EIR

The City, acting as the lead agency, has prepared this Draft EIR to provide the public and responsible and trustee agencies with information about the potential environmental effects of the proposed project. The last comprehensive update of the City's General Plan was certified in 1986, with subsequent amendments occurring since. A significant amendment to the City's Land Use and Circulation Elements was adopted in 2004. Additionally, the City's Housing Element was updated and adopted by the City Council in 2004. The City Council subsequently adopted an updated Housing Element in September 2008. The California Department of Housing and Community Development (DHCD) asked for certain revisions to that document, necessitating another revision by the City. On June 8, 2009, the DHCD informed the City that the revised draft will comply with the State Housing Element law (Article 10.6 of the Government Code) when adopted and submitted pursuant to Government Code Section 65585(g). The revised Housing Element was reviewed and approved by the Planning Commission on July 14, 2009 and by the City Council on July 21, 2009. Recent growth and development within the City and anticipated growth for the future has necessitated a focused update to the General Plan. Therefore, the City of Taft commenced its General Plan Update in 2007.

As described in CEQA Guidelines Section 15121(a), an Environmental Impact Report (EIR) is a public informational document that assesses potential environmental effects of the proposed project, as well as identifies mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. Public agencies are charged with the duty to consider and, where feasible, minimize environmental impacts of proposed development, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

CEQA requires the preparation of an EIR prior to approving any project, which may have a significant effect on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section

15378[a]). With respect to the proposed General Plan Update, the City has determined that the proposed plan is a "project" within the definition of CEQA.

1.2 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

For the purpose of CEQA, a "Trustee" agency is an agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386). For example, the California Department of Fish and Game (CDFG) is a trustee agency with regard to the fish and wildlife of the state and designated rare or endangered native plants.

The term "Responsible Agency" includes all public agencies other than the Lead Agency that have discretionary approval power over the project or an aspect of the project (CEQA Guidelines Section 15381). Potential Responsible Agencies may include, but are not limited to:

- U.S Army Corps of Engineers (USCOE)
- U.S. Bureau of Land Management (USBLM)
- U.S. Environmental Protection Agency (USEPA)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Occupational Safety and Health Administration (OSHA)
- California Department of Conservation (DOC)
- California Department of Fish and Game (CDFG)
- California Department of Forestry and Fire Protection (CDF)
- California Department of Housing and Community Development (HCD)
- California Department of Toxic Substances Control (DTSC)
- California Department of Transportation (Caltrans)
- California Division of Aeronautics (DoA)
- California Division of Oil, Gas, and Geothermal Resources (DOGGR)
- California Office of Emergency Services (OES)
- California Public Utilities Commission (CA PUC)
- Central Valley Regional Water Quality Control Board (RWQCB)
- County of Kern (County)
- Local Agency Formation Commission (LAFCo) of Kern County
- Native American Heritage Commission (NAHC)
- San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD)
- Taft City School District
- Taft Union High School District

1.3 TYPE OF DOCUMENT

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Program EIR pursuant to CEQA Guidelines Section 15168. According to Section 15168:

"A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

1) *Geographically,*

2) *As logical parts in the chain of contemplated actions,*

3) *In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program, or*

4) *As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways."*

The program-level analysis considers the broad environmental effects of the overall proposed project. This EIR will be used to evaluate subsequent projects and activities within the City's proposed updated General Plan Planning Area (Planning Area). Additional environmental review of subsequent projects will be performed consistent with the requirements of CEQA. That subsequent review would consider the subsequent project's consistency with the updated General Plan and the analysis in this EIR. When individual projects or activities are proposed, the City would be required to examine the projects or activities to determine whether their effects were adequately analyzed in this program EIR (CEQA Guidelines Section 15168). If the projects or activities have no effects beyond those analyzed in this EIR, no further CEQA compliance would be required.

In addition, this program-level General Plan update EIR analysis addresses the cumulative impacts of development accommodated by the proposed project as required by State CEQA Guidelines Section 15130a-e, and analyzes a reasonable range of alternatives to the proposed project as required by State CEQA Guidelines Section 15126.6a-f.

1.4 INTENDED USES OF THE EIR

This EIR is intended to evaluate the environmental impacts of the project to the greatest extent possible. This EIR should be used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with projects in the City. Subsequent actions that may be associated with the proposed General Plan are identified in Section 3.0 (Project Description) of this document.

1.5 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the DEIR was established through review of environmental and planning documentation developed for the project, environmental and planning documentation prepared for recent projects located within the General Plan Planning Area

(Planning Area), environmental documentation developed for the County of Kern (County) and cities and counties adjacent to the Planning Area, and public agency responses to the Notice of Preparation (NOP). For purposes of this EIR, the General Plan Planning Area includes the current City limits and an area beyond the City that bears relation to the City's future planning efforts, as described in Section 3.0 (Project Description).

This Draft EIR is organized in the following manner:

SECTION 1.0 – INTRODUCTION

Section 1.0 provides an introduction and overview describing the purpose, type, and intended use of the EIR, responsible agencies, organization and scope of the EIR, the review and certification process, and a summary of comments received on the NOP.

SECTION 2.0 - EXECUTIVE SUMMARY

This section summarizes the characteristics of the proposed project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the project's environmental impacts, General Plan policies, and possible mitigation measures, and identification of alternatives that reduce or avoid at least one environmental effect of the proposed project.

SECTION 3.0 - PROJECT DESCRIPTION

This section provides a detailed description of the proposed project, including the location, intended objectives, background information, the physical and technical characteristics of the project, including the decisions subject to CEQA and a list of related environmental review and consultation requirements.

SECTION 4.0 - ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Section 4.0 contains an analysis of environmental topic areas as identified below. Each subsection contains a description of the existing setting of the project area, identifies project-related impacts, and recommends appropriate General Plan policies and mitigation measures.

This section also includes an introduction to the environmental analysis that describes the general assumptions used to evaluate project-specific and cumulative environmental impacts. However, specific analyses are provided in each environmental issue area section.

The following major environmental topics are addressed in this section:

- Land Use
- Agricultural Resources
- Population/Housing/Employment
- Transportation and Circulation
- Air Quality

- Noise
- Biological Resources
- Cultural and Paleontological Resources
- Hazards and Human Health
- Geology and Soils (including Mineral Resources)
- Hydrology and Water Quality
- Public Services and Utilities (including Recreation)
- Visual Resources

SECTION 5.0 - CUMULATIVE IMPACTS SUMMARY

This section summarizes all identified cumulative impacts associated with the proposed project. As required by State CEQA Guidelines Sections 15130 and 15065(a)(3), an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable.

SECTION 6.0 - ALTERNATIVES TO THE PROJECT

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

SECTION 7.0 - LONG-TERM IMPLICATIONS OF THE PROJECT

This section contains discussions and analysis of various other topical issues mandated by State CEQA Guidelines Sections 15126 and 15126.2a-d. These include significant environmental effects that cannot be avoided if the project is implemented, significant irreversible environmental changes, and growth-inducing impacts.

SECTION 8.0 - REPORT PREPARERS

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

APPENDICES

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

1.6 ENVIRONMENTAL REVIEW PROCESS

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

NOTICE OF PREPARATION AND INITIAL STUDY

In accordance with Section 15082 of the State CEQA Guidelines, the City prepared a Notice of Preparation (NOP) of an EIR for the proposed project on February 13, 2009. The 30-day public review comment period commenced on February 13, 2009 and extended through March 16, 2009. The City was identified as the Lead Agency for the proposed project. This notice was circulated to the State Clearinghouse and to the public, local, state, and federal agencies, and other interested parties to solicit comments on the proposed project. Concerns raised in response to the NOP were considered during preparation of the DEIR. The NOP, including the Initial Study, and responses by interested parties are presented in **Appendix 1.0**.

DRAFT EIR

This document constitutes the Draft EIR (DEIR). The DEIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Upon completion of the DEIR, the City will file the Notice of Completion (NOC) with the Governor's Office of Planning and Research (OPR) to begin the public review period (Cal. Pub. Resources Code Section 21161).

PUBLIC NOTICE/PUBLIC REVIEW

Concurrent with the NOC, the City will provide public notice of the availability of the Draft EIR for public review, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA, the review period for this Draft EIR is forty-five (45) days. Public comment on the Draft EIR will be accepted both in written form and orally at public hearings. Although no public hearings to accept comments on the EIR are required by CEQA, the City expects to hold a public comment meeting during the forty-five (45) day review period. Notice of the date, time and location of the hearing will be published prior to the hearing. All comments or questions regarding the Draft EIR should be addressed to:

Anna Choudhuri, City of Taft General Plan EIR Project Manager
PMC
1590 Drew Avenue, Suite 120
Davis, CA 95618
(530) 750-7076 Ext 14201
achoudhuri@pmcworld.com

Copy to:
Paul M. Gorte, AICP, Acting Community Development Director
City of Taft
209 E. Kern St.
Taft, CA 93268
pgorte@cityoftaft.org

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR (FEIR) will be prepared. The FEIR will respond to written comments received during the public review period and to oral comments made at any public hearing or public meeting, if either a hearing or meeting is conducted during such review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City will review and consider the FEIR. If the City finds that the Final EIR is "adequate and complete", the City Council will certify the Final EIR. Upon review and consideration of the FEIR, the City of Taft City Council may take action to approve, revise, or reject the project. A decision to approve the proposed General Plan Update, for which this EIR identifies significant environmental effects, could only be made if accompanied by written findings in accordance with State CEQA Guidelines Section 15091 and Section 15093. A Mitigation Monitoring and Reporting Program (MMRP), as described below, would also be adopted for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. This Mitigation Monitoring Program will be designed to ensure that these measures are carried out during project implementation, in a manner that is consistent with the EIR.

MITIGATION MONITORING

CEQA Section 21081.6(a) requires lead agencies to adopt a mitigation monitoring and reporting program (MMRP) to describe measures that have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The specific "reporting or monitoring" program required by CEQA is not required to be included in the EIR; however it will be presented to City Council for adoption. Throughout the EIR, however, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a monitoring and reporting program. The MMRP for the proposed project will identify timing and responsible parties, and implementation for each mitigation measure to ensure the measures are implemented.

1.7 SCOPE OF THE EIR

Based on the NOP, the City of Taft determined that the preparation of an EIR was appropriate due to potentially significant environmental impacts that could result from implementing the proposed update to the City of Taft's General Plan. This DEIR evaluates the existing environmental resources in the vicinity of the City, analyzes potential impacts on those resources due to the proposed project, and identifies mitigation measures that could avoid or reduce the magnitude of those impacts. This EIR provides a general review of the environmental effects of development of the City, based on proposed land use designations and estimated public service demands resulting there from. This EIR will be used to evaluate the direct and indirect environmental effects of subsequent development under the General Plan (e.g., residential

subdivisions, rezones, commercial structures, park sites, recreation facility development, and infrastructure improvements).

POTENTIALLY SIGNIFICANT ENVIRONMENTAL EFFECTS

Pursuant to CEQA and the CEQA Guidelines, the scope of this DEIR includes specific issues and concerns identified as potentially significant physical effects on the environment. Based on the NOP comments, this EIR addresses the following topics in depth:

- Land Use (Section 4.1)
- Agricultural Resources (Section 4.2)
- Population/Housing/Employment (Section 4.3)
- Transportation and Circulation (Section 4.4)
- Air Quality (Section 4.5)
- Noise (Section 4.6)
- Hazards and Human Health (Section 4.7)
- Geology and Soils (Section 4.8)
- Cultural and Paleontological Resources (Section 4.9)
- Biological Resources (Section 4.10)
- Hydrology and Water Quality (Section 4.11)
- Visual Resources (Section 4.12)
- Public Services and Utilities (Section 4.13)
- Cumulative Impacts (Section 5.0)
- Alternative (Section 6.0)
- Long-Term Implications (Section 7.0)

Effects Not Found to Be Potentially Significant

Typically, an EIR evaluates project or program effects on environmental issues listed in the Environmental Checklist Form, which is in Appendix G of the CEQA Guidelines. The NOP for the DEIR identified potential environmental issues that were generally consistent with those found in the Environmental Checklist. Based on preliminary evaluation associated with preparation of the NOP, the City determined that the proposed General Plan would have potentially significant effects on all environmental issues mentioned in the Environmental Checklist. No issues were scoped out from analysis in the EIR.

1.8 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City received comment letters on the NOPs for the City of Taft General Plan DEIR. A copy of each letter is provided in **Appendix 1.0** of this DEIR. The City received letters from the following federal, state, and local agencies and interested parties:

Individual	Agency	Date
Dan Tuttle, Senior Oil and Gas Engineer	California Department of Conservation, Division of Oil, Gas and Geothermal Resources	February 27, 2009
Dan Bartel, Engineer-Manager	Buena Vista Water Storage District	March 2, 2009
Dennis Castrillo, Environmental Officer	California Emergency Management Agency	March 2, 2009
Dave Singleton, Program Analyst	Native American Heritage Commission	March 5, 2009
Ruben J. Arroyo, Agricultural Commissioner/Sealer	California Department of Agriculture and Measurement Standards	March 6, 2009
James D. Movius, Planning Director	City of Bakersfield Development Services Department	March 10, 2009
Lisa Zito, Office of Transportation Planning, District 6	California Department of Transportation	March 13, 2009
Gordon L. Nipp, Ph.D., Vice-Chair	Sierra Club, Kern Kaweah Chapter	March 13, 2009
Arthur Unger	Sierra Club, Kern Kaweah Chapter	March 16, 2009
Jeffery R. Single, Ph.D., Regional Manager	California Department of Fish and Game	March 16, 2009
Ted James, AICP, Director	Kern County Resource Management Agency, Planning Department	March 16, 2009
Timothy Z. Smith, Field Office Manager	U.S. Department of Interior, Bureau of Land Management	March 19, 2009
Nancy L. Ewert, P.E., Senior Engineering Manager	Kern County Waste Management Department	March 19, 2009
Sandy Hesnard, Aviation Environmental Specialist	Department of Transportation, Division of Aeronautics	March 20, 2009

The following summarizes the major concerns identified for the project in these letters:

- Thorough evaluations of land use map, circulation map and planned infrastructure systems
- Water supply availability and planning
- Wastewater treatment capacity
- Potential contamination of groundwater resources
- Provision and funding of public services in planned new growth areas

- Environmental review of planned Sphere of Influence (SOI) expansion and annexations
- Growth inducing impacts
- Loss of agricultural land; land use incompatibilities with active agricultural operations; conflict with Williamson Act contracts
- Increased traffic on Interstate 5 and state highways; required right-of-way for ultimate widening of highways
- Impacts on oil and gas industry; land use compatibility issues associated with oil field operations; impacts on federal oil and gas leases
- Consistency of proposed General Plan update with the Airport Land Use Compatibility Plan for the Taft-Kern County Airport; incompatible uses near the airport
- Airport noise impacts on new development
- Structural and wildlife hazards near the airport and hazards to schools associated with airport operations
- Contribution to climate change; urban heat island effect
- Impacts to biological resources including conservation lands held by the state and known populations of threatened and endangered species
- Inconsistencies with the goals of the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) and the Kern County Valley Floor Habitat Conservation Plan (VFHCP)
- Conflicts with existing dairy animal facilities and future siting of such facilities
- Conflicts with the South Kern Industrial Specific Plan
- Impacts and conflicts with existing County facilities and services within proposed Planning Area
- Impacts on existing unincorporated communities
- Direct and indirect traffic and air quality impacts
- Public health and safety hazards
- Impacts to archaeological and paleontological resources
- Impacts to solid waste infrastructure and capacity

1.9 IMPACT TERMINOLOGY

Identified below are common terms used throughout this document. A complete list of acronyms is also provided.

CEQA TERMINOLOGY

Cumulatively Considerable Impact: A cumulative significant impact would result when the project would contribute considerably to a significant physical impact on the environment expected under cumulative conditions.

Less Than Cumulatively Considerable Impact: A less than cumulatively considerable impact would result when the project would not contribute considerably to a significant physical impact on the environment expected under cumulative conditions.

Less Than Significant Impact: A less than significant impact would cause no substantial change in the environment (no mitigation required).

No Impact: No adverse change to the environment would occur.

Potentially Significant Impact: a potentially significant impact is one that may or may not occur and where a definite determination cannot be made. Feasible mitigation measures and/or project alternatives are identified to avoid or reduce the project's effects on the environment to a less than significant level.

Significant Impact: A significant impact would cause (or would potentially cause) a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects using specified standards of significance. Mitigation measures and/or project alternatives are identified to reduce project effects on the environment.

Significant and Unavoidable Impact: A significant and unavoidable impact would result in a substantial change in the environment that cannot be avoided or mitigated to a less than significant level if the project is implemented.

Standards of Significance: A set of criteria used by the lead agency to determine at what level or "threshold" an impact would be considered significant. Significance criteria used in this EIR include the State CEQA Guidelines; factual or scientific information; regulatory performance standards of local, state, and federal agencies; and City goals, objectives, and policies.

GENERAL TERMINOLOGY

City: City of Taft
County: Kern County
General Plan: City of Taft General Plan

Existing City Limits: The City of Taft is located at the southern end of the Central Valley in Kern County, approximately 40 miles southwest of the City of Bakersfield and about 100 miles northwest of the City of Los Angeles. The current City limits include approximately 9,622 acres of land, or roughly 15 square miles of land. See Section 3.0, Project Description, for a detailed description of the existing City limits.

General Plan Planning Area: The Planning Area is crossed by four state highways, State Route (SR) 119, SR 33, SR 43, and SR 223. SR 166 borders the southern corner of the Planning Area and Interstate 5 lies along its eastern boundary. The Planning Area includes total of approximately 157,570 acres or roughly 246 square miles.

Proposed Project: City of Taft General Plan update

ACRONYMS

1	**AB**	Assembly Bill
2	**ACBM**	Asbestos-Containing Building Materials
3	**ALUC**	Airport Land Use Commission
4	**APS**	Alternative Planning Strategy
5	**ARB**	Air Resources Board
6	**ATCM**	Airborne Toxics Control Measure
7	**BACT**	Best Available Control Technology
8	**BMP**	Best Management Practices
9	**BVWSD**	Buena Vista Water Storage District
10	**CAA**	Federal Clean Air Act
11	**CAL-EPA**	California Environmental Protection Agency
12	**Cal-OSHA**	California Occupational Safety and Health Administration
13	**Caltrans**	California Department of Transportation
14	**CASP**	California Aviation System Plan
15	**CASQA**	California Stormwater Quality Association
16	**CAT**	Climate Action Team

17	**CBC**	California Building Code
18	**CCAA**	California Clean Air Act
19	**CCAR**	California Climate Action Registry
20	**CCASP**	Central California Aviation System Plan
21	**CDFG**	California Department of Fish and Game
22	**CEC**	California Energy Commission
23	**CEQA**	California Environmental Quality Act
24	**CERCLA**	Comprehensive Environmental Response, Compensation, & Liability Act
25	**CFCs**	Chlorofluorocarbons
26	**CHP**	California Highway Patrol
27	**CLUP**	Taft-Kern County Airport Comprehensive Land Use Plan
28	**CMA**	Congestion Management Agency
29	**CMP**	Congestion Management Plan
30	**CNDDB**	California Natural Diversity Database
31	**CPUC**	California Public Utilities Commission
32	**CRHR**	California Register of Historical Resources
33	**CWA**	Clean Water Act
34	**dB**	Decibels
35	**DEIR**	Draft Environmental Impact Report
36	**DOF**	Department of Finance
37	**DOGGR**	California Division of Oil, Gas, and Geothermal Resources
38	**DTSC**	Department of Toxic Substances
39	**DU**	Dwelling Unit

40	**EIR**	Environmental Impact Report
41	**EMF**	Electromagnetic Field
42	**FAA**	Federal Aviation Administration
43	**FAR**	Federal Aviation Regulation
44	**FCC**	Federal Communications Commission
45	**FEMA**	Federal Emergency Management Agency
46	**FESA**	Federal Endangered Species Act
47	**GEIMS**	Geographic Environmental Information Management System
48	**GHG**	Greenhouse Gases
49	**GPU**	General Plan Update
50	**H**	County's Airport Approach Height Combining District
51	**HAPs**	Hazardous Air Pollutants
52	**HMPC**	Hazard Mitigation Planning Committee
53	**HUD**	Housing and Urban Development
54	**Kern COG**	Kern County Council of Governments
55	**KRT**	Kern Regional Transit
56	**LAFCo**	Local Area Formation Commission
57	**LOS**	Level of Service
58	**LUFT**	Leaking Underground Fuel Tank
59	**LUST**	Leaking Underground Storage Tank
60	**MACT**	Maximum Available Control Technology
61	**MMT**	Million Metric Tons
62	**MPOs**	Metropolitan Planning Organizations
63	**MRZ**	Mineral Resource Zones

64	**MSDS**	Material Safety Data Sheets
65	**NCP**	National Contingency Plan
66	**NEHRP**	National Earthquake Hazard Reduction Program
67	**NEPA**	National Environmental Policy Act
68	**NESHAP**	National Emissions Standards for Hazardous Air Pollution
69	**NIH**	National Institutes of Health
70	**NIOSH**	National Institute for Occupational Safety & Health
71	**NPDES**	National Pollutant Discharge Elimination System
72	**NPL**	National Priorities List
73	**NRHP**	National Register of Historic Places
74	**NTIA**	National Telecommunications & Information Administration
75	**NTSB**	National Transportation Safety Board
76	**OES**	State Office of Emergency Services
77	**OPR**	State Office of Planning and Research
78	**OSHA**	Occupational Safety and Health Administration
79	**PADS**	PCB Activity Database
80	**PCBs**	Polychlorinated Biphenyls
81	**PG&E**	Pacific Gas and Electric
82	**PSD**	Prevention of Significant Deterioration
83	**PUC**	Public Utilities Commission
84	**RACT**	Reasonably Available Control Technologies
85	**RCRA**	Resource Conservation and Recovery Act
86	**RHNA**	Regional Housing Needs Assessment
87	**ROG**	Reactive Organic Gases

88	**RTP**	Regional Transportation Plan
89	**RUP**	Restricted Use Pesticide
90	**RWQCB**	Regional Water Quality Control Board
91	**SCS**	Sustainable Communities Strategy
92	**SJV**	San Joaquin Valley
93	**SJVAB**	San Joaquin Valley Air Basin
94	**SJVAPCD**	San Joaquin Valley Air Pollution Control District
95	**SLC**	Species of Local Concern
96	**SMARA**	Surface Mining and Reclamation Act
97	**SOI**	Sphere of Influence
98	**SR**	State Route
99	**SWPPP**	Storm Water Pollution Prevention Plan
100	**SWRCB**	State Water Resources Control Board
101	**TAC**	Toxic Air Contaminants
102	**TAT**	Taft Area Transit
103	**TAZ**	Traffic Analysis Zones
104	**TCR**	Transportation Concept Report
105	**TDR**	Travel Demand Forecasting
106	**TMDLs**	Total Maximum Daily Loads
107	**TPY**	Tons per Year
108	**TSCA**	Toxic Substances Control Act
109	**UBC**	Uniform Building Code
110	**USCOE/USACE**	U.S. Army Corps of Engineers
111	**USDOT**	United States Department of Transportation

112	**USEPA**	United States Environmental Protection Agency
113	**UST**	Underground Storage Tank
114	**VFHCP**	Valley Floor Habitat Conservation Plan
115	**WDR**	Waste Discharge Requirements
116	**WEE**	Western Equine Encephalitis
117	**WKWD**	West Kern Water District
118	**WSA**	Water Supply Assessments
119	**WSMVCD**	West Side Mosquito and Vector Control District
120	**WWTP**	Wastewater Treatment Plant

2.0
EXECUTIVE SUMMARY

This section provides an overview of the environmental analysis of the proposed project. For additional detail regarding specific issues, please consult the appropriate chapter of Sections 4.1 through 4.13 (Environmental Setting, Impacts, and Mitigation Measures).

2.1 PURPOSE AND SCOPE OF THE ENVIRONMENTAL IMPACT REPORT

This Environmental Impact Report (EIR) will provide, to the greatest extent possible, an analysis of the potential environmental effects associated with the implementation of the project, pursuant to the California Environmental Quality Act (CEQA).

This EIR analysis focuses upon potential environmental impacts that could arise from implementation of the project through development of the land uses within the City of Taft General Plan Planning Area (Planning Area) as regulated and guided by General Plan policies and action items. The EIR adopts this approach in order to provide a credible worst-case scenario of the impacts resulting from project implementation.

2.2 PROJECT CHARACTERISTICS

The proposed project is the adoption and implementation of an updated General Plan for the City of Taft (City). The updated City of Taft General Plan would replace the existing General Plan, which was last comprehensively updated in 1986.

The proposed City of Taft General Plan Update is comprised of a Land Use Map (see Section 3.0, Project Description) and policy document that contains ten "policy" elements. Each of the elements identifies goals and associated policies and action items. State law requires that general plans address seven topics: land use, circulation, housing, conservation, open space, noise, and safety. The Taft General Plan Update covers all of these topics plus several additional issues, for a total of ten elements. A brief description and goals for each element are as follows:

SUSTAINABILITY ELEMENT (OPTIONAL ELEMENT)

The Sustainability Element establishes policies and action items that promote sustainability for the environment and the local economy and help establish equity for all people. The Sustainability Element also addresses schools and education, good government, economic and workforce development, and social and community systems.

LAND USE ELEMENT (REQUIRED ELEMENT)

The Land Use Element focuses on the distribution of land uses within the City and the General Plan Planning Area, including residential, commercial, industrial, public facilities, agricultural, and open space. Topics addressed include the density, minimum lot sizes, and location of each type of development allowed. Goals identified in the Land Use Element are as follows:

- A high quality of life for all residents;
- A sustainable community;

- A clean, energetic, and attractive community;
- A vibrant, active, healthy, walkable Downtown;
- Protection of the natural resources and agricultural uses in the Planning Area; and
- A pattern of land use which enhances the community character of Taft, provides employment and shopping opportunities to serve residents and the region, provides for use of transit, and protects Taft's unique historical and natural features.

Land Use Map

The proposed General Plan includes the updated Land Use Map which is a detailed land use plan for the City of Taft, and assigns land use designations to all lands within the Planning Area. Those areas located outside the City limits are also assigned land use designations by the updated General Plan, and are pre-zoned accordingly.

Land use designations proposed under the updated General Plan Land Use Map are shown in Table 4.1-2 and include:

- Specific Plan.

CIRCULATION ELEMENT (REQUIRED ELEMENT)

The Circulation Element identifies the components of the City-wide circulation system and their general location and role within the community. Goals identified in the Circulation Element are as follows:

- A safe, balanced, efficient, and effective transportation system that addresses motorized, non-motorized, and pedestrian traffic movement;
- An improved transportation system that will reduce the need for parking;
- A circulation system which recognizes and responds to the needs of bicycle traffic and minimizes motorist/bicycle conflicts;
- A well-integrated pedestrian and bicycle trail system; and
- A circulation system that creates a positive image of Taft and contributes to the residents' quality of life.

OPEN SPACE AND CONSERVATION ELEMENT (REQUIRED ELEMENTS)

The Open Space and Conservation Element provides for the protection, maintenance, and enhancement of existing natural resources, open space and natural recreational areas, as well as the creation of additional areas for the enjoyment of residents and the protection of the environment. Goals identified in the Open Space and Conservation Element are as follows:

- A citywide network of open space;
- Recreational opportunities for all residents;
- Protection and preservation of the agricultural landscape;
- A sustainable agricultural economy;
- Conservation of native wildlife and plant communities;
- A healthy water quality and supply for the community and natural environment;
- Reduction of air pollutant emissions;
- Monitoring of and response to climate change impacts, including greenhouse gas emissions;
- Efficient and sustainable development;
- Preservation and enhancement of cultural and historic resources; and
- Preservation of Taft's scenic qualities.

HOUSING ELEMENT (REQUIRED ELEMENT)

The Housing Element is a comprehensive statement by the City of Taft of its current and future housing needs at all income levels. Goals identified in the Housing Element are as follows:

- Promote the development, improvement and maintenance of housing in locations best served by the community's facilities and infrastructure, and that are compatible with surrounding neighborhoods;
- Conserve and maintain sound, viable neighborhoods that are decent, safe and sanitary;
- Provide equal opportunity of housing choice for all residents regardless of race, creed, national origin, age, sex, or ethnic group affiliation; and
- Encourage energy conservation for single and multiple family residential developments.

ENERGY RESOURCES ELEMENT (OPTIONAL ELEMENT)

The Energy Resources Element asserts the City of Taft's position as an energy producer, including development of alternative energies and active involvement in the decisions and actions of other agencies as they affect energy development in the areas within and surrounding the City. Goals identified in the Energy Resources Element are as follows:

- Be a leader in energy production;
- Promote oil production and mineral extraction resources;
- Protect public health, safety, and the environment;
- Encourage diversification of Taft's energy economy;
- Be a leader in development of alternative energies; and
- Minimize the City's economic susceptibility to fluctuations in petroleum production levels.

NOISE ELEMENT (REQUIRED ELEMENT)

The purpose of this Noise Element is to identify and remedy both present and anticipated concerns regarding major sources of noise issues within and surrounding the City. The Noise Element identifies viable solutions to minimize annoyance, potential risk of death, injuries, property damage, economic hardship, and social displacement resulting from noise hazards. Goals identified in the Noise Element are as follows:

- Prevent excessive levels of unwanted noise;
- Protect existing noise sensitive land uses from encroachment of and exposure to excessive levels of noise; and
- Protect the City's economic base by preventing the encroachment of noise-sensitive land uses near known noise-producing sources.

SAFETY ELEMENT (REQUIRED ELEMENT)

The purpose of this Safety Element is to identify and remedy both present and anticipated concerns regarding major sources of safety issues within and surrounding the City. The Safety Element identifies viable solutions to minimize annoyance, potential risk of death, injuries, property damage, economic hardship, and social displacement resulting from safety hazards. Goals identified in the Safety Element are as follows:

- A safe community.

PUBLIC FACILITIES ELEMENT (OPTIONAL ELEMENT)

The Public Facilities Element identifies the types and levels of service necessary to support a healthy and viable community. Goals identified in the Public Facilities Element are as follows:

- High-quality water and wastewater systems in the City;
- Quality school system at all levels;
- Expand health care facilities in the community;
- Multipurpose use of public facilities; and
- Finance and maintain new and existing infrastructure.

ECONOMIC DEVELOPMENT ELEMENT (OPTIONAL ELEMENT)

This Element is an optional element included in the General Plan so the City's officials can continue to improve the City's prosperity, maintain competitiveness, ensure accessibility to its assets, make sure the market is aware of the City's opportunities, and set fair and equitable rules for development. Goals identified in the Economic Development Element are as follows:

- A high quality of life and strong, positive community image for Taft;
- Be the economic center for Kern County west of Interstate 5;
- A business community which includes a diversity of industrial and office uses, locally and regionally oriented retail and services, and a diversity of residential types;
- A balance between the numbers and types of workers residing in Taft and opportunities for employment in the City;
- A positive environment for business retention and expansion;
- Creation of Taft as a desirable place to establish a business; and
- Establishment of an Enterprise Zone.

2.3 PROJECT ALTERNATIVES SUMMARY

State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project and avoid and/or lessen the environmental effects of the project. Further, the CEQA Guidelines Section 15126.6(e) requires that a "no project" alternative be evaluated in an EIR. This alternatives analysis provides a comparative analysis between the project and the selected

alternatives. The Draft EIR qualitatively evaluates the following other land use alternatives, which include:

- ***Alternative 1 –No Project Alternative:*** Under this alternative, the proposed General Plan Update and its associated Land Use Map would not be adopted and the City would continue to operate under its existing 1986 General Plan.

- ***Alternative 2 – Reduced Sphere of Influence Alternative:*** Under Alternative 2, the Planning Area would be reduced to exclude approximately 60,163 acres of largely undeveloped, agricultural and mineral extraction land located east of the current City limits. The Planning Area would still extend out to I-5 both north and south of the excluded area, leaving a large area of County land in between the two "arms" of land included in the Planning Area. This alternative would therefore exclude the South Kern Industrial Center Specific Plan Area, which would remain under Kern County jurisdiction and would not be proposed for annexation or subsequent development by the City.

- ***Alternative 3 – Northeast High Density Mixed Use Cluster Alternative:*** Under Alternative 3, the Planning Area would be reduced to exclude approximately 94,003 acres of largely undeveloped, agricultural and mineral extraction land located east of the current City limits. The Planning Area would extend out to I-5 to the northeast of the current city limits, but would not include the southernmost "arm" of land in the Planning Area that is included in Alternative 2. This alternative would, therefore, exclude the South Kern Industrial Center Specific Plan Area, which would remain under Kern County jurisdiction and would not be proposed for annexation or subsequent development within the City.

- ***Alternative 4 –Southeast High Density Mixed Use Cluster Alternative:*** Under Alternative 4, the Planning Area would be reduced to exclude approximately 64,158 acres of land located east and northeast of the current City limits. These areas are largely undeveloped agricultural and mineral extraction land as well as land proposed for Commercial designation under the proposed project. This alternative would, therefore, exclude the South Kern Industrial Center, Buena Vista Hills, and Dustin Acres Specific Plan Areas. These areas would remain under Kern County jurisdiction and would not be proposed for annexation or subsequent development by the City.

2.4 AREAS OF CONTROVERSY

The City of Taft was identified as the Lead Agency for the proposed project. In accordance with Section 15082 of the State CEQA Guidelines, the City of Taft prepared and distributed a Notice of Preparation (NOP) for the Ione General Plan that was circulated for public review on February 13, 2009. The NOP included a summary of probable effects on the environment from the implementation of the project. Written comments received in response to the NOP were considered in the preparation of the EIR. Section 1.0 (Introduction) provides a summary of issues and areas of concern related to the proposed General Plan and the Draft EIR, presented

to the City by agencies and the public during the NOP review period. The complete text of the NOP and NOP comments are included as **Appendix 1.0** to this EIR. The issues raised included:

- Water supply impacts
- Wastewater treatment impacts
- Groundwater impacts;
- Public services impacts
- Growth inducing impacts
- Agricultural Impacts
- Traffic and transportation impacts
- Noise impacts
- Biological resources impacts;
- Air quality and climate change impacts;
- Land use and planning impacts;
- Public health and safety impacts;
- Archaeological and paleontological resources impacts; and
- Solid waste impacts.

2.5 SUMMARY OF ENVIRONMENTAL IMPACTS

Table 2.0-1 displays a summary of impacts for the proposed General Plan Land Use Policy Map, City of Taft General Plan policies and action items, and proposed mitigation measures that would avoid or minimize potential impacts. In the table, the level of significance is indicated both before and after the implementation of each mitigation measure.

For detailed discussions of all mitigation measures and of proposed General Plan policies and action items that would provide mitigation for each type of environmental impact addressed in this EIR, refer to the appropriate environmental topic section (i.e., Sections 4.1 through 4.13.)

TABLE 2.0-1
EXECUTIVE SUMMARY TABLE

Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
4.1 Land Use				
Impact 4.1.1 Implementation of the proposed Taft General Plan Update would not result in the physical division of any established communities because the General Plan focuses on redevelopment and infill within existing underdeveloped areas and preservation and revitalization of the existing neighborhoods within the City, rather than developing in a way that might divide an established community. The impact is considered **less than significant**.	Policy LU-1 Encourage infill development in the existing urban areas of the Planning Area. Policy LU-28 Encourage commercial infill development. Action LU-28a Provide incentives, such as flexible zoning, for commercial infill projects. Policy LU-29 Encourage the location, size, scale, and design of neighborhood commercial uses to complement and meet the needs of the surrounding neighborhood. Policy LU-32 Encourage clustered, smaller scale office and professional land uses throughout the community to meet the needs of nearby neighborhoods. Policy LU-35 Encourage industrial infill development. Action LU-35a Provide incentives, such as flexible zoning, for industrial infill projects. Policy LU-56 Promote a mix of compatible land uses contributing to the historic nature and economic viability of the Downtown area. Policy LU-58 Protect and enhance the integrity of historical resources as identified in the Historic Preservation Plan. Policy LU-61 Promote infill development that is aesthetically pleasing and compatible with existing development. Action LU-61a Provide incentives, such as flexible zoning regulations, for infill projects. Policy LU-67 Actively promote reinvestment in existing neighborhoods. Policy LU-78 Ensure that the provision of new or enlarged parking facilities does not adversely affect the livability and desirability of the surrounding neighborhoods. Policy LU-79 Discourage the proliferation of surface parking as an interim land use when sound residential, commercial or industrial buildings would be demolished pending other development. Policy LU-87 Encourage public involvement in deciding the future of Taft. Policy LU-90 Annex of Taft Heights, South Taft and Ford City.	LS	None Required.	LS
Impact 4.1.2 Implementation of the proposed project could result in incompatibilities or conflicts between existing and future land uses within the Planning Area. However, implementation of policy provisions of the General Plan would reduce this potential impact to a **less than significant** level.	Policy LU-2 Protect existing businesses within areas designated by the General Plan for existing or future industrial and commercial uses from conflicts with and encroachment by non-compatible land uses. Policy LU-27 Promote commercial development that is aesthetically pleasing. Action LU-27a Establish Commercial Design Guidelines. Action LU-27b Modify the development standards for commercial zone districts to upgrade improvements such as parking, landscaping, pedestrian features, transit stops, setbacks, and signage. Policy LU-39 Encourage industrial and business activity areas to provide room for expansion and sufficient buffers to prevent incompatibility with surrounding uses. Policy LU-40 Encourage screening of unsightly operations and landscaping of storage area perimeters. Action LU-40a Develop standards for outside industrial storage facilities. Policy LU-53 Establish and maintain downtown Taft as the community business shopping and activity center for the west side of Kern County with clearly defined trade area boundaries, a recognizable identity, compatible and mutually supportive land uses, and a pleasant and pleasing atmosphere. Policy LU-56 Promote a mix of compatible land uses contributing to the historic nature and economic viability of the Downtown area. Policy LU-69 Encourage businesses to create minimal and/or mitigable levels of noise, fumes, odors, hazardous waste, traffic, and other negative factors for the community as a whole and their location in particular. Policy LU-78 Ensure that the provision of new or enlarged parking facilities does not adversely affect the livability and desirability of the surrounding neighborhoods. Policy LU-81 Continue to actively enforce the City's sign ordinance. Policy LU-83 Do not allow legal, non-conforming land uses to be enlarged physically or operationally, without careful consideration of long-term impacts associated with revitalizing the use. Action LU-83a Actively enforce existing zoning and building regulations that preclude or eliminate uses of land or buildings that present conflicts for adjacent properties. Policy LU-86 Control development of commercial signage,	LS	None required	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	including restrictions of off-site signage, and set development standards for all types of commercial signage. Policy C-5 Working in consultation with the Kern County Agricultural Commission and the Kern County Farm Bureau, establish agricultural buffer zones between urban and agricultural land uses. Design buffer zones to address the physical effects of agricultural practices, such as chemical spraying, noise, and odors, and to prohibit residential incursion into agricultural areas. Action C-5a Adopt a buffer zone policy to designate specific setbacks on developing land from existing agricultural land. Policy C-7 Encourage cluster development as a means of obtaining open space to be used as a buffer. Policy C-8 Encourage the use of innovative techniques and emerging research on integrated pest control methods to minimize the impact of pesticide and herbicide use on the City's human and natural communities. Policy C-32 Promote land use policies that minimize public exposure to sources of toxic air contaminants, ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, and lead. Policy C-33 Ensure that all land use decisions are equitable and protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the adverse health effects of air pollution. Policy C-34 Encourage the mitigation of significant off-site impacts when new residential development and other sensitive receptors are sited adjacent to existing and potential sources of toxic emissions. Policy N-1 Require new development to conform with noise levels contained in Table 8.0-1 (Land Use Compatibility for New Development Near Transportation and Non-Transportation Noise Sources). Locate, construct, and/or screen all indoor and outdoor areas from noise sources to achieve compliance with the City's noise standards. Action N-1a Amend the Taft Municipal Code to reflect the noise thresholds identified in Table 8.0-1 (Land Use Compatibility for new Development Near Transportation and Non-Transportation Noise Sources). Action N-1b Require an acoustical analysis as part of the environmental review process when proposed development is likely to produce noise levels that exceed the City's noise standards. Action N-1c Identify potential noise impacts during the acoustical analysis to be mitigated in the project design to the maximum extent. Policy N-2 Use site planning, project design, and all other practical design-related noise mitigation measures as the primary means of noise mitigation. Policy N-3 Use noise barriers as a secondary means of noise mitigation. Require noise barriers, if required, to be visually attractive, complement the surroundings, and include a provision for continuing maintenance. Policy N-4 Minimize the impacts of construction noise on adjacent uses. Action N-4a Amend the Taft Municipal Code to establish standards for construction noise including the following: • Restrict noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to between the hours of 6 a.m. and 7 p.m. Monday through Friday, and between 6 a.m. and 5 p.m. on weekends. • Require the use of temporary construction noise control measures including the use of temporary noise barriers, if necessary, as mitigation for noise generated during construction of public and/or private projects. Policy N-5 Encourage new development in the vicinity of the airport to be compatible with existing and projected airport noise levels as set forth in the Airport Land Use Compatibility Plan. Action N-5a Discourage residential and other noise-sensitive uses from being located near the airport. Policy N-6 Route truck traffic around noise-sensitive areas, such as residential neighborhoods. Policy N-7 Prohibit new non-residential land uses, including energy project proposals, from creating operational noise disturbances in existing noise-sensitive areas. Policy N-8 Mitigate noise created by proposed non-transportation noise sources. Action N-8a Require the operation of loading docks, trash compactors, and other noise-producing uses that are adjacent to residential and other sensitive uses to be consistent with Table 8.0-1. Policy N-9 Discourage future noise-sensitive uses from locating in areas designated for commercial and/or industrial land uses to protect existing and proposed conforming noise-producing uses.			

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	Action N-9a Require new noise-sensitive uses proposed in or adjacent to areas designated for commercial and/or industrial land uses to be provided a disclosure statement notifying them of existing and potential noise-producing uses. Policy N-10 Maintain acceptable noise levels and adequate privacy in higher density and mixed-use development. Action N-10a Require design and construction standards that minimize noise conflicts between residents with shared walls or floors/ceilings. Policy S-11 Require industries which store and process hazardous or toxic materials to provide a buffer between the source and the property boundaries sufficient to protect public safety, subject to approval by the City and any other regulatory agency. Action S-11a As part of review and approval of development plans, require adequate buffering of sensitive uses from hazardous or potential hazardous areas.			
Impact 4.1.3 Implementation of the proposed General Plan Update would not conflict with other applicable land use plans, policies, or regulations of agencies with jurisdiction over parts of the Planning Area that provide for environmental protection. This is considered a **less than significant** impact.		LS	None Required	LS
Impact 4.1.4 Implementation of the proposed General Plan Land Use Map has the potential to conflict with the development restrictions established in the Taft-Kern County Airport Land Use Compatibility Plan. This impact is considered to be **less than significant**.	Policy LU-6 Require all development to be compatible with the Airport Land Use Compatibility Plan (ALUCP). Policy CI-39 Where required by the Federal Aviation Administration, require the dedication of aviation easements for discretionary projects to provide for orderly development and as a means of preventing new noise and safety impacts.	LS	None Required	LS
Impact 4.1.5 When considered with existing, proposed, approved and planned development in the region, implementation of the proposed Taft General Plan Update has the potential to contribute to cumulative land use conditions in the region that result in significant impacts to the physical environment. This is considered a **cumulatively considerable** impact.	The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing cumulative land use impacts. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Land Use Element* Policy LU-1; Policy LU-2; Policy LU-27; Action LU-27a; Action LU-27b; Policy LU-28; Action LU-28a; Policy LU-29; Policy LU-32; Policy LU-35; Action LU-35a; Policy LU-39; Policy LU-40; Action LU-40a; Policy LU-53; Policy LU-56; Policy LU-58; Policy LU-61; Action LU-61a; Policy LU-67; Policy LU-69; Policy LU-78; Policy LU-79; Policy LU-81; Policy LU-83; Action LU-83a; Policy LU-86; Policy LU-87; Policy LU-90 *Open Space and Conservation Element* Policy C-5; Action C-5a; Policy C-7; Policy C-8; Policy C-32; Policy C-34 *Noise Element* Policy N-1; Action N-1a; Action N-1b; Action N-1c; Policy N-2; Policy N-3; Policy N-4; Action N-4a; Policy N-5; Action N-5a; Policy N-6; Policy N-7; Policy N-8; Action N-8a; Policy N-9; Action N-9a; Policy N-10; Action N-10a *Safety Element* Policy S-11; Action S-11a *Circulation Element* Policy CI-39 Though the above proposed General Plan policies would assist in reducing the environmental effects of the proposed development under the GPU, urban development would still occur under the proposed General Plan, and currently undeveloped lands would still be converted to urban uses. This would also occur in other parts of the County over which the City has no jurisdiction, either under the County's GP development potential, or the development potential of other jurisdictions' General Plans. Therefore, the anticipated cumulative impacts described previously would take place, although the GP policies would reduce the City's cumulative contribution. This impact is considered **cumulatively considerable** and a **significant and unavoidable impact**.	CC	No additional feasible mitigation is available.	CC/SU
4.2 Agricultural Resources				
Impact 4.2.1 Implementation of the proposed General Plan Update would result in the loss of Important Farmlands (Prime Farmland, Unique Farmland, and Farmland of Statewide	The following policies are included in the proposed General Plan Update and would reduce impacts associated with the loss of agricultural lands: Policy C-1 Support the continued use of agriculture in the Planning Area.	S	No further feasible mitigation measures available.	SU

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Importance) as designated under the Farmland Mapping and Monitoring Program. This is considered a **significant impact**.	Policy C-2 Preserve agricultural lands for agricultural uses, prioritizing the protection of lands with prime and other important soil classifications. Policy C-3 Work with public agency, private, and nonprofit partners to provide a means to preserve open space and agricultural lands. Action C-3a Amend the Zoning Ordinance to require a 1:1 acreage replacement ratio for conversion of agricultural lands classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance under the Farmland Mapping and Monitoring Program. Policy C-4 Facilitate and support agricultural conservation easements, Williamson Act and Farmland Security Zone contracts, and land conservation programs used to protect agricultural resources. Action C-4a Adopt ordinances necessary to allow the continuation of Williamson Act and Farmland Security Zone contracts and land conservation programs after annexation Policy C-5 Working in consultation with the Kern County Agricultural Commission and the Kern County Farm Bureau, establish agricultural buffer zones between urban and agricultural land uses. Design buffer zones to address the physical effects of agricultural practices, such as chemical spraying, noise, and odors, and to prohibit residential incursion into agricultural areas. Action C-5a Adopt a buffer zone policy to designate specific setbacks on developing land from existing agricultural land. Policy C-6 Prioritize infill development over the conversion of agricultural lands to accommodate future growth. Policy C-7 Encourage cluster development as a means of obtaining open space to be used as a buffer. Policy C-9 Encourage organic and sustainable agricultural practices and crop diversification. Policy C-10 Encourage efficient water use to enhance agriculture and grazing, employing techniques such as use of reclaimed water. Policy C-11 Encourage the growth of environmentally sustainable agricultural businesses and support services. Policy C-12 Encourage the marketing of local agricultural products to local residents, vendors, and restaurants through farmers markets and other direct farm-to-table sales. Action C-12a Partner with private and nonprofit partners to manage a "Buy Local" program for local agricultural projects. These policies would encourage the conservation and continued use of agricultural lands. In particular, the policies that prioritize infill development and the protection of lands with prime and other important soil classifications would guide development away from agricultural lands. Nevertheless, the General Plan Update does propose land use designations that could result in non-agricultural uses on 41,612 acres of existing Important Farmland within the entire Planning Area (4,532 within City limits + 37,080 within Expansion Area). While implementation of the above General Plan policies would reduce impacts to agricultural land conversion, it would not fully avoid conversion and loss of Important Farmlands as these farmlands would remain designated for non-agricultural uses. Thus, impacts to Important Farmland would remain **significant and unavoidable**.			
Impact 4.2.2 Implementation of the proposed General Plan Update could result in indirect farmland conversion due to agricultural/urban interface conflicts. This is considered a **significant** impact.	The following policies are included in the proposed General Plan Update and would reduce impacts associated with agricultural/urban interface conflicts: Policy C-1 Support the continued use of agriculture in the Planning Area. Policy C-2 Preserve agricultural lands for agricultural uses, prioritizing the protection of lands with prime and other important soil classifications. Policy C-3 Work with public agency, private, and nonprofit partners to provide a means to preserve open space and agricultural lands. Action C-3a Amend the Zoning Ordinance to require a 1:1 acreage replacement ratio for conversion of agricultural lands classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance under the Farmland Mapping and Monitoring Program. Policy C-4 Facilitate and support agricultural conservation easements, Williamson Act and Farmland Security Zone contracts, and land conservation programs used to protect agricultural resources. Action C-4a Adopt ordinances necessary to allow the continuation of Williamson Act and Farmland Security Zone contracts and land conservation programs after annexation Policy C-5 Working in consultation with the Kern County Agricultural Commission and the Kern County Farm Bureau, establish agricultural buffer zones between urban and agricultural land uses. Design buffer zones to address the physical effects of agricultural practices, such as chemical spraying, noise, and odors, and to prohibit	S	No further feasible mitigation is available.	SU

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	residential incursion into agricultural areas. Action C-5a Adopt a buffer zone policy to designate specific setbacks on developing land from existing agricultural land. Policy C-6 Prioritize infill development over the conversion of agricultural lands to accommodate future growth. Policy C-7 Encourage cluster development as a means of obtaining open space to be used as a buffer. Implementation of the above General Plan policies would encourage existing agricultural uses to continue and would require agricultural uses to be buffered from urban uses. Such buffers would lessen physical effects to urban uses such as chemical spraying, noise, and odors and would, in turn, reduce effects to agricultural operations such as nuisance complaints, trespassing and vandalism. The City's right to farm provisions would further protect existing agricultural uses from nuisance complaints associated with encroaching urban uses by making residents aware of potential nuisances prior to purchasing properties adjacent to agricultural uses. The vast majority of land within the Planning Area designated for agricultural use would not be located adjacent to proposed urban uses and would not be subject to agriculture/urban interface conflicts. However, where such interface conflicts could occur, ongoing urban develop would continue to place pressure on active agricultural operations and could result in the conversion of farmland to urban uses. This impact is considered **significant and unavoidable**.			
Impact 4.2.3 Implementation of the proposed General Plan Update could result in conflicts with existing Williamson Act and FSZ contracts. This is considered a **significant** impact.	The following policies are included in the proposed General Plan Update and would reduce impacts associated with agricultural/urban interface conflicts: Policy C-1 Support the continued use of agriculture in the Planning Area. Policy C-2 Preserve agricultural lands for agricultural uses, prioritizing the protection of lands with prime and other important soil classifications. Policy C-3 Work with public agency, private, and nonprofit partners to provide a means to preserve open space and agricultural lands. Action C-3a Amend the Zoning Ordinance to require a 1:1 acreage replacement ratio for conversion of agricultural lands classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance under the Farmland Mapping and Monitoring Program. Policy C-4 Facilitate and support agricultural conservation easements, Williamson Act and Farmland Security Zone contracts, and land conservation programs used to protect agricultural resources. Action C-4a Adopt ordinances necessary to allow the continuation of Williamson Act and Farmland Security Zone contracts and land conservation programs after annexation Policy C-5 Working in consultation with the Kern County Agricultural Commission and the Kern County Farm Bureau, establish agricultural buffer zones between urban and agricultural land uses. Design buffer zones to address the physical effects of agricultural practices, such as chemical spraying, noise, and odors, and to prohibit residential incursion into agricultural areas. Action C-5a Adopt a buffer zone policy to designate specific setbacks on developing land from existing agricultural land. Policy C-6 Prioritize infill development over the conversion of agricultural lands to accommodate future growth. Policy C-7 Encourage cluster development as a means of obtaining open space to be used as a buffer. Implementation of the above General Plan policies would reduce potential conflicts between Williamson Act lands and future development, particularly Policy C-4 which requires the City to facilitate and support Williamson Act and Farmland Security Zone contracts. In addition, Title XI of the Municipal Code facilitates the administration of Williamson Act and Farmland Security Zone contracts when land under contracts is annexed into the City. Nevertheless, the proposed General Plan designates 14,478 acres of Williamson Act and FSZ contract lands for uses other than agriculture and it is anticipated that such lands would eventually be converted to urban uses as designated by the General Plan Update, irrespective of any measures that could be taken. Therefore, this impact is considered **significant and unavoidable**.	S	No further feasible mitigation measures available.	SU
Impact 4.2.4 Implementation of the proposed project, along with other proposed development in Kern County, would contribute to the cumulative conversion of Important Farmlands to other uses and may increase agriculture/urban interface conflicts. This is a **cumulatively considerable** impact.	The following policies are included in the proposed General Plan Update and would reduce cumulative impacts to agricultural lands: The proposed General Plan Update contains several goals, policies, and actions that would assist in reducing this cumulative agricultural resource impact. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and	CC	Implementation of the proposed General Plan policies would reduce the General Plan Update's contribution to the additional conversion of Important Farmlands to other uses and increased	CC/ SU

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	action item numbers. *Conservation Element* Policy C-1; Policy C-2; Policy C-3; Action C-3a; Policy C-4; Action C-4a; Policy C-5; Action C-5a; Policy C-6; Policy C-7; Policy C-9; Policy C-10; Policy C-11; Policy C-12; Action C-12a Implementation of the above General Plan policies would reduce the General Plan Update's contribution to cumulative impacts to agricultural resources. However, implementation of the General Plan would still irrevocably convert Important Farmland, and land under Williamson Act and FSZ contracts, to other uses. Therefore, the project would have a **cumulatively considerable** contribution to this impact and is therefore considered **significant and unavoidable.**		agriculture/urban interface conflicts. However, proposed General Plan policies would not fully avoid conversion of farmland and agriculture/urban interface conflicts as agricultural lands would be designated for urban uses and non-agricultural uses. Therefore, there are no further feasible mitigation measures are available.	
4.3 Population/Housing/Employment				
Impact 4.3.1 Implementation of the proposed General Plan Land Use Map would include land uses that promote the increase in population, housing, and employment in the Planning Area, and thus induce substantial growth. This is a **potentially significant** impact.	Policy LU-1: Encourage infill development in the existing urban areas of the Planning Area. Policy LU-3: Promote sustainable development practices. Policy CI-2: Require projects subject to discretionary review to minimize new vehicle trips. Action CI-2a: Work with transportation agencies to create a template for a Transportation Demand Management program that can be used by businesses or modified to meet the needs of the businesses. The template could include a variety of methods to minimize trips and incentives for participation. Action CI-2b: Amend the Zoning Ordinance to require secure bicycle racks or storage facilities at a ratio of 1 per every 10 vehicle spaces in new commercial and public buildings. Policy PF-1: Attain a minimum LEED (Leadership in Energy and Environmental Design) certification of Silver or equivalent for all new public facilities. Policy PF-6: Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council.	PS	Implementation of the above General Plan policies and associated action items provide for intensification of land uses, mixed-use development, and housing in infill locations in close proximity to employment centers and or transit, thereby reducing the increase in vehicle traffic and its associated air and noise impacts associated with the proposed General Plan, as well as assist in the reduction of traffic, air and noise impacts by providing for community design that promotes alternative transportation resources. All of these policies and actions would aid in the reduction of impacts to the environment, nevertheless, implementation of the General Plan would allow for a substantial increase in population, housing units, and employment in the City and Planning Area, as illustrated in **Table 4.3-11**, which would have a considerable impact on the surrounding environmental regardless of the above listed policies and actions. As noted in Section 7.0, implementation of the General Plan and its associated growth is expected to result in several significant and avoidable effects to the environment. Therefore, this impact is considered **significant and unavoidable.**	SU
Impact 4.3.2 Implementation of the General Plan may result in the displacement of housing and/or persons due to the construction of infrastructure necessary to serve new development or revitalization efforts.		LS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
This is considered a **less than significant** impact**.**				
Impact 4.3.3 Subsequent land use activities associated with implementation of the proposed General Plan Update, in addition to existing, approved, proposed, and reasonable foreseeable projects, could result in a cumulative increase in population and housing growth in the City of Taft as well as in the surrounding Cities and unincorporated areas of the County, along with associated environmental impacts. This is considered a **cumulatively considerable** and **significant and unavoidable** impact.	Policy LU-1: Encourage infill development in the existing urban areas of the Planning Area. Policy LU-3: Promote sustainable development practices. Policy CI-2: Require projects subject to discretionary review to minimize new vehicle trips. Action CI-2a: Work with transportation agencies to create a template for a Transportation Demand Management program that can be used by businesses or modified to meet the needs of the businesses. The template could include a variety of methods to minimize trips and incentives for participation. Action CI-2b: Amend the Zoning Ordinance to require secure bicycle racks or storage facilities at a ratio of 1 per every 10 vehicle spaces in new commercial and public buildings. Policy PF-1: Attain a minimum LEED (Leadership in Energy and Environmental Design) certification of Silver or equivalent for all new public facilities. Policy PF-6: Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council. These policies provide for housing in close proximity to employment centers and or transit, therefore reducing the vehicle traffic and its associated air and noise impacts. The General Plan growth boundary also minimizes impacts to agricultural and biological resources by creating more compact, dense development that results in fewer land acres being impacted. These policies and actions would aid in the reduction of increased impacts to the environment. Nevertheless, implementation of the General Plan would allow for a substantial increase in population and housing units in the City and Planning Area, as illustrated in **Table 4.3-10** and **Table 4.3-11**, which would have a considerable impact on the surrounding environment regardless of the above listed policies and actions. Therefore, this impact is **cumulatively considerable** and a **significant and unavoidable** impact**.**	CS/SU	No further feasible mitigation available.	CS/SU
4.4 Traffic and Circulation				
Impact 4.4.1 Implementation of the proposed project would result in an increase in traffic volumes beyond traffic volumes associated with the existing General Plan that would result in deficient level of service conditions in year 2035 and would conflict with Caltrans standards for level of service. This is a **significant** impact.	Policy CI-2: Require projects subject to discretionary review to minimize vehicle trips. Action CI-2a: Work with transportation agencies to create a template for a Transportation Demand Management program that can be used by businesses or modified to meet the needs of the businesses. The template could include a variety of methods to minimize trips and incentives for participation. Action CI-2b: Amend the Zoning Ordinance to require secure bicycle racks or storage facilities at a ratio of 1 per every 10 vehicle spaces in new commercial and public buildings. Policy CI-7: Maintain the Level of Service on roadways and at intersections in the Planning Area as follows: a) Assure that roadway congestion generally does not exceed Level of Service D except where: • Providing Level of Service D would be infeasible due to physical constraints. • Maintaining Level of Service D would require an unreasonable expansion of the roadway or intersection as determined by the City. b) Maintain a Level of Service D at all signalized intersections except where: • The level of congestion already exceeds this standard; or • Where increased intersection capacity cannot be provided due to physical constraints. c) Maintain the Level of Service at unsignalized intersections at D or better; intersections may be evaluated on a case-by-case basis to determine if signal warrants are met. Policy CI-8: Adopt and maintain a circulation system evaluation methodology that establishes Levels of Service and determines significance thresholds for impacts to intersections and roadways within the Planning Area. Where a project would cause or contribute to congestion exceeding the Level of Service and/or significance threshold, require on- or off-site transportation improvements as a condition of approval as appropriate. Examples include, but are not limited to: • Improvements to on- or off-site roadways; • Improvements to intersections in the vicinity of the project; • Installation of transit, bicycle, or pedestrian facilities, including	S	Implementation of the proposed General Plan policies and actions listed above would reduce significant impacts to transportation and circulation. However, the impacts of the proposed General Plan Update to levels of service within the Planning Area and those portions of the study area outside the Planning Area, cannot be mitigated to a less-than-significant level at the locations discussed below because the mitigation measures are considered to be infeasible (see discussion below) (see also CEQA Guidelines Section 15126.4). Because of the infeasibility of mitigation measures, this impact is considered **significant and unavoidable**. **SR 119 – Tupman Road to SR 43** Widening of this portion of SR 119 beyond six lanes would improve operations consistent with City LOS	SU

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	facilities which exceed the minimum standards imposed by City regulations; • Restriction of access to roadways; • Limitations on hours of operation or use. Policy CI-9: Improve the operating efficiency of the roadway system through transportation system management strategies (e.g., signal timing, restricted access). Policy CI-14: Eliminate unnecessary cross-traffic conflicts and reduce traffic disruptions to improve the traffic flow along arterial and collector streets. Action CI-14a: Install raised medians as necessary to restrict turning movements and maintain an acceptable Level of Service. Action CI-14b: Minimize the number of driveways serving commercial or industrial development. Action CI-14c: Prohibit individual residential driveways from directly accessing arterial and collector streets. Action CI-14d: Limit direct access to arterial highways wherever possible. Policy CI-16: Recognizing that access to Interstate 5 and State Routes 33, 43, 119, 166, and 223 in the Planning Area is controlled by the State of California, work with Caltrans to implement that agency's desired roadway system. Work with Caltrans to identify interchange locations and preliminary designs, and require right-of-way dedication for future highway construction and widening. Policy CI-24: Support efforts by businesses, schools, and government to reduce peak travel demand. Action CI-24a: Support implementation of flexible or staggered work hours and work from home programs so that travel demand is spread more evenly throughout the day. Action CI-24b: Support efforts to promote ridesharing and other programs to reduce vehicle travel and encourage walking, bicycling, and telecommuting.		standards. However, there are crossings of the California Aqueduct which will require coordination and approval with appropriate oversight agencies. In addition, as reflected in the City's level of service policy, a lower level of service should be considered if maintaining LOS D would result in an unreasonable expansion of the roadway or intersection as determined by the City. As shown on the Circulation Map, the City does not desire this roadway to be widened beyond six lanes. The City believes that the addition of housing in the Taft area will change traffic patterns by allowing oil workers who now commute from Bakersfield to live in Taft with a shorter commute that does not involve this segment. Thus, the City determined that the facility should be planned as a six-lane arterial. Therefore, implementation of the mitigation measure is considered infeasible, since it is in violation with the proposed General Plan vision for this facility. **SR 119 - SR 43 to I-5** Widening of this portion of SR 119 beyond six lanes would improve operations consistent with City LOS standards. However, there are crossings of the California Aqueduct which will require coordination and approval with appropriate oversight agencies. In addition, as reflected in the City's level of service policy, a lower level of service should be considered if maintaining LOS D would result in an unreasonable expansion of the roadway or intersection as determined by the City. As shown on the Circulation Map, the City does not desire this roadway to be widened beyond six lanes. The City believes that the addition of housing in the Taft area will change traffic patterns		

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
			by allowing oil workers who now commute from Bakersfield to live in Taft with a shorter commute that does not involve this segment. Thus, the City determined that the facility should be planned as a six-lane arterial. Therefore, implementation of the mitigation measure is considered infeasible, since it is in violation with the proposed General Plan vision for this facility. Due to the infeasibility of mitigation measures, this impact is considered **significant and unavoidable**. No feasible mitigation measures are available.	
Impact 4.4.2 Implementation of the proposed project would result in an increase in the demand for pedestrian and bicycle infrastructure. This is considered a **less than significant** impact.	Policy CI-22: Require new development to provide safe and convenient access to alternative transportation within the project area. Action CI-22a: Amend the Taft Municipal Code to require all new development to provide for pedestrian and bicycle connections and facilities. Action CI-22b: Encourage new development to provide weatherproof bicycle parking and storage facilities and ensure long-term maintenance of such facilities. Policy CI-25: Provide for safe and effective bicycle transportation for recreational and commuting cyclists in Taft. Action CI-25a: Develop a Bikeway Master Plan that coordinates with the regional bikeway system and is in accordance with State Bikeway Design Criteria. Action CI-25b: Periodically review and update street standards to accommodate bicycle lanes where indicated on the Bikeway Master Plan. Action CI-25c: Amend the Taft Municipal Code to require all new development to provide for safe bicycle connections and facilities, including bicycle parking. Action CI-25d: Design bicycle paths so that interaction with vehicular traffic is minimized. Action CI-25e: Establish effective programs for financing the construction and maintenance of bicycle paths. Action CI-25f: Provide an information/education program to encourage use of the regional bicycle system and to promote safe riding. Policy CI-26: Provide a well-integrated trail system in the Planning Area that addresses bicycle and pedestrian uses consistent with the bicycle and pedestrian trail system as shown on Figure 4.0-2 (Bikeways and Pedestrian Trails Map). Action CI-26a: Pursue local, state, and federal grants and other funding sources for development of bicycle and pedestrian paths. Policy CI-30: Widen sidewalks above the minimum established Improvement Standards where intensive commercial, recreational, or institutional activity is present and where residential densities are 8 DU/Ac and above. Action CI-30a: Update street standards to include an urban sidewalk pattern above the minimum established Improvement Standards Policy CI-31: Provide convenient pedestrian crossings at roadways. Policy CI-32: Require sidewalks in new developments. Policy CI-33: In existing developed areas where sidewalks do not exist, support existing programs and pursue new programs for sidewalk construction. Policy CI-34: Design development projects to promote pedestrian movement through direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area. Policy CI-36: Consider pedestrian-sensitive areas when planning circulation systems and seek to avoid impacts to these areas. Action CI-36a: Designate the existing and planned locations of pedestrian-sensitive areas.	LS	None required	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	The Circulation Element in the proposed GPU contains numerous policies and actions to guide the implementation of the bicycle and pedestrian system such as requiring development projects to provide sidewalks and crosswalks in new development areas and on roadways that are being expanded, provide funding or to construct roadway/intersection improvements to develop and implement a Bikeways Master Plan, and promote improved pedestrian and cyclist movements throughout the City. Therefore, this impact would be **less than significant.**			
Impact 4.4.3 Implementation of the proposed General Plan would result in an increase in demand for public transit services in the Planning Area. This is considered a **less than significant** impact.	Policy CI-18: Provide transit services to the entire Planning Area to serve the needs of all persons, in particular those without access to private vehicles, the disabled, the elderly, and children. Policy CI-19: Encourage the use of public transit. Action CI-19a: Provide for transit service in the design of the arterial and collector street system. Action CI-19b: Coordinate with Kern Regional Transit to require appropriately designed bus stops along arterials and collectors and in other locations as appropriate. Action CI-19c: Provide for transit service in the site plan review process. Action CI-19d: Coordinate with Kern Regional Transit to locate bus stops as close as possible to the facilities they serve. Action CI-19e: Work with Kern Regional Transit to provide scheduled transit services. Action CI-19f: Work with Taft Area Transit to provide social services transportation. Action CI-19g: Pursue local, state, and federal funding for transit services. Action CI-20b: Encourage ridership of Taft Area Transit among disabled persons through disabled and senior citizen fare discounts. The proposed General Plan's consistency with local transit plans as well as implementation of the proposed General Plan policies and actions listed above would reduce this impact to a **less than significant** level.	LS	None required	LS
Impact 4.4.4 Implementation of the proposed General Plan Update would result in an increase in the demand for airport use in the area. This is considered a **potentially significant** impact.	Policy CI-37: Support the continued operation and possible relocation of the Taft-Kern County Airport. Policy CI-38: Allow for the establishment of private airports in the Planning Area. Despite the proposed General Plan policies listed above, increasing demand for aviation travel to an airport which currently is not satisfactory is considered a **potentially significant** impact.	PS	To mitigate the identified impact, the airport could be reconstructed or relocated to a new area. It should also be noted that there is an on-going study investigating the feasibility of improving the airport and, if the study identifies that improving the airport is infeasible, the study would be expanded to identify an alternative airport location. However, until the study is completed, the feasibility to either relocate or upgrade the airport is unknown. Therefore, in the short term the impact remains **significant and unavoidable**.	SU
Impact 4.4.5 When considered with existing, proposed, approved and planned development in the region, implementation of the proposed project has the potential to contribute to an increase in traffic volumes that would result in deficient level of service conditions under cumulative conditions (including buildout of the Planning Area) resulting in significant impacts to the physical environment. This is considered a **cumulatively considerable** impact.	The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing the project's contribution to cumulative impacts to study roadway segments and levels of service. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Circulation Element* Policy CI-2; Action CI-2a; Action CI-2b; Policy CI-7; Policy CI-8; Policy CI-9; Policy CI-14; Action CI-14a; Action CI-14b; Action CI-14c; Action CI-14d; Policy CI-16; Policy CI-24; Action CI-24a; Action CI-24b Mitigation Measures Implementation of proposed General Plan policies and action items would assist in reducing its cumulative contribution to regional traffic effects. However, this impact would still be considered **cumulatively considerable** and a **significant and unavoidable impact**. The City	CC	None required	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	does not have jurisdiction over improvements outside of the City's jurisdiction (e.g., facilities within Kern County and Caltrans facilities) and the City cannot ensure that these improvements would be completed. With the exception of funding sources for regional traffic improvements associated with the Kern COG RTP, there are no other regional traffic mitigation programs that the City could participate in to minimize its regional traffic impact. **Bicycle and Pedestrian System** **Impact 4.4.6** Implementation of the proposed project would contribute to cumulative demands for pedestrian and bicycle infrastructure. The General Plan's contribution is considered **less than cumulatively considerable**. The project would increase pedestrian and bicycle use in the Planning Area in addition to anticipated growth in pedestrian and bicycle usage in the region. However, the proposed General Plan Update accommodates a mix of pedestrian and bicycle facilities to promote options for movement other than the use of motor vehicles. Given the plans to provide better and increased facilities for these modes of travel, implementation of the proposed General Plan Update would accommodate its increase in demand for pedestrian and bicycle infrastructure and would have a **less than cumulatively considerable** contribution to pedestrian and bicycle infrastructure. Proposed General Plan Policies that Provide Mitigation The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing the project's contribution to cumulative impacts to pedestrian and bicycle infrastructure. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Circulation Element* Policy CI-22; Action CI-22a; Action CI-22b; Policy CI-25; Action CI-25a; Action CI-25b; Action CI-25c; Action CI-25d; Action CI-25e; Action CI-25f; Policy CI-26; Action CI-26a; Policy CI-30; Action CI-30a; Policy CI-31; Policy CI-32; Policy CI-33; Policy CI-34; Policy CI-36; Action CI-36a The proposed mixed of land uses within the Planning Area and consistency with planned bicycle and pedestrian facilities as well as implementation of the proposed General Plan policies and action listed above would reduce this impact to a **less than significant** level.			
Impact 4.4.7 Implementation of the proposed General Plan Update would contribute to the cumulative demand for public transit service (e.g., bus and demand-responsive transit services). The proposed project's contribution is considered **less than cumulatively considerable**.	The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing the project's contribution to cumulative impacts to the transit system. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Circulation Element* Policy CI-18; Policy CI-19; Action CI-19a; Action CI-19b; Action CI-19c; Action CI-19d; Action CI-19e; Action CI-19f; Action CI-19g; Action CI-20b The proposed General Plan's consistency with local transit plans as well as implementation of the proposed General Plan policies and actions listed above would reduce this impact to a **less than significant** level. Mitigation Measures None required. **Aviation System Impacts** **Impact 4.4.8** When considered with existing, proposed, planned and approved development in the region, implementation of the proposed General Plan Update would result in an increase in the demand for airport use in the area. This is considered a **cumulatively considerable** impact. The project would increase demand at the local airport. As identified in the existing setting, the current Kern County Regional Aviation System Plan identified that: While there is significant demand for an airport in this region, the existing facility has for some years been considered unsatisfactory. The runway heading is poorly oriented to wind direction, the runway gradient of 2.2 percent exceeds FAA standards, and there is insufficient land for improvements. In addition, the land is held by the County under a lease subject to 90-day cancellation notice. As discussed under Impact 4.4.4, the project would increase demand for aviation services in the Planning Area as well as demands for such services in the region. However, the Kern-Taft Airport would need to be improved and expanded to accommodate increased travel demand at its facility. The City does not have ultimate decision authority on the	LCC	Implementation of the proposed General Plan policies and action items would support reconstruction of the existing facility or support relocation of the facility to improve service to the area. Since it is the FAA and not the City that has the ultimate decision making power on the future of the airport, and since there have not been any feasibility studies assessing potential future demand at the airport conducted by the FAA or the City, expansions or even possible relocation of the airport cannot be planned by the City under its General Plan growth scenario. Therefore this impact would still be considered **cumulatively considerable** and **significant and unavoidable**.	CC/SU

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	airport and all decisions about the airport must be coordinated through the FAA. Additionally, the feasibility study assessing the future of the airport has not yet been completed, thus the City cannot plan for the future of the existing airport or plan for a new airport. This impact is a **cumulatively considerable** impact. Proposed General Plan Policies that Provide Mitigation The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing the project's contribution to cumulative impacts to the aviation system. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Circulation Element* Policy CI-37; Policy CI-38 Despite the proposed General Plan policies listed above, increasing demand for aviation travel to an airport which currently is not satisfactory is considered a **cumulatively considerable** impact.			
4.5 Air Quality				
Impact 4.5.1 Implementation of the General Plan Update would allow for population growth that would exceed projections assumed in SJVAPCD's 2007 Ozone Plan. This inconsistency could hinder SJVAPCD's ozone attainment strategy. However, proposed General Plan policies would address this inconsistency and ensure that the region's attainment plans incorporate the City's updated growth forecast for the Planning Area. This impact is considered to be **potentially significant**.	The following General Plan policies and action items are intended to directly or indirectly reduce criteria pollutant emissions associated with growth. *Land Use Element* Policy LU-29: Encourage the location, size, scale, and design of neighborhood commercial uses to complement and meet the needs of the surrounding neighborhood. Policy LU-30: Encourage the provision of pedestrian, bicycle, and other non-motorized access in all neighborhoods. Policy LU-33: Encourage commercial developments and adjacent land uses to be pedestrian-oriented. Policy LU-38: To minimize traffic impacts, locate industrial and business activities in areas close to major transportation facilities or include development of transit stop(s) within, or close to, proposed activities. Policy LU-52: Create a safe and comfortable environment in the Downtown where pedestrians, bicyclists, vehicular traffic, and parking work in harmony. *Circulation Element* Policy CI-2: Require projects subject to discretionary review to minimize vehicle trips. *Open Space and Conservation Element* Policy C-26: Minimize air pollutant emissions from all City facilities and operations consistent with the City's need to provide a high level of public service. Policy C-27: Incorporate design, construction, and/or operational features to reduce emissions in all development projects which have the potential to result in substantial air quality impacts. Policy C-28 Support San Joaquin Valley Air Pollution Control District efforts to reduce regional and localized pollutants. Policy C-29: Development shall comply with the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts. Policy C-30: Encourage and facilitate the use of railways as an alternative to using trucks to transport materials by preserving existing rights-of-way and investigating the feasibility of increasing general freight traffic by developing additional facilities. Policy C-31: Support incentives to residents, fleet operators, school districts, and employers to purchase and use alternative fuel or low-emission vehicles as funding sources become available. Policy C-32: Promote land use policies that minimize public exposure to sources of toxic air contaminants, ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, and lead. Policy C-33: Ensure that all land use decisions are equitable and protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the adverse health effects of air pollution. Even with these proposed policies, the rate of growth within the City and the Planning Area exceeds that which is accommodated by the regional attainment plans.	PS	**MM 4.5.1** The City of Taft shall ensure that both Kern COG and the SJVAPCD incorporate the updated growth forecasts from the proposed General Plan Update in their upcoming revisions to the region's transportation and ozone attainment plans, respectively. The coordination with Kern COG and SJVAPCD is designed to ensure that the City's projected growth will not obstruct the regional ozone, PM_{10}, and $PM_{2.5}$ attainment and maintenance plans. However, until such attainment demonstrations can be made that accommodate this level of growth, the General Plan Update could conflict with future attainment plans for the region. This impact is considered **significant and unavoidable**.	SU
Impact 4.5.2 The General Plan Update would allow continued growth in population, housing, and jobs in the City of Taft that would increase traffic volumes on local roadways over time. This would result in elevated CO emissions from		LS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
motor vehicle congestion that could expose sensitive receptors to elevated CO concentrations. However, based on the projections of traffic congestion, this is not expected to result in exceedances of CO standards. As a result, this is considered to be a **less than significant** impact.				
Impact 4.5.3 Implementation of the General Plan Update may result in future siting of land uses that create objectionable odors or expose future sensitive receptors to existing odor sources. This impact is **less than significant**.	The following General Plan policies and action items are intended to directly or indirectly reduce impacts associated with objectionable odors. *Land Use Element* Policy LU-5: All development projects shall be analyzed in accordance with the provisions of CEQA. Policy LU-39: Encourage industrial and business activity areas to provide room for expansion and sufficient buffers to prevent incompatibility with surrounding uses. *Open Space and Conservation Element* Policy C-29: Development shall comply with the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts. The proposed General Plan Update is designed to ensure that development considers environmental constraints and opportunities, existing land uses, the circulation system, and other factors. With implementation of proposed General Plan policies listed above and SJVAPCD Rule 4102, the General Plan Update's impact from the creation of objectionable odors is expected to be **less than significant**.	LS	None required.	LS
Impact 4.5.4 Implementation of the General Plan Update may result in the siting of future land uses that emit TACs or expose future sensitive receptors to existing TAC sources. This impact is **potentially significant**.	The proposed General Plan Update contains policies that will minimize inappropriate siting of land uses that could expose sensitive receptors to TAC sources or vice versa. Consistent with the SJVAPCD's CEQA Guidelines, proposed policies would support buffer zones around existing and proposed land uses that would emit odors and toxic air contaminants to avoid adverse impacts. *Land Use Element* Policy LU-39: Encourage industrial and business activity areas to provide room for expansion and sufficient buffers to prevent incompatibility with surrounding uses. *Open Space and Conservation Element* Policy C-5: Working in consultation with the Kern County Agricultural Commission and the Kern County Farm Bureau, establish agricultural buffer zones between urban and agricultural land uses. Design buffer zones to address the physical effects of agricultural practices, such as chemical spraying, noise, and odors and to prohibit residential incursion into agricultural areas. Policy C-7: Encourage cluster development as a means of obtaining open space to be used as a buffer. Policy C-33: Ensure that all land use decisions are equitable and protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the adverse health effects of air pollution. Policy C-34: Encourage the mitigation of significant off-site impacts when new residential development and other sensitive receptors are sited adjacent to existing and potential sources of toxic emissions. *Energy Resources Element* Policy E-8: Assure that oilfield development takes place in accordance with regulations administered by the federal Bureau of Land Management (BLM) or the state Division of Oil, Gas, and Geothermal Resources (DOGGR). Policy E-9: Maintain appropriate zoning on lands that are the subject to active or potential oil extraction. Policy E-10: Minimize conflicts between mineral and energy resource lands and urban growth. Implementation of General Plan policies listed above would help ensure adequate buffers between land uses that could expose sensitive receptors to unhealthful levels of TACs or odors. When paired with implementation of AB 2588, impacts of land use designations proposed in the General Plan Update are considered to be less than significant. In addition, incorporation of the following mitigation measures ensures that implementation of the General Plan Update reduce exposure of sensitive receptors to TACs.	PS	**MM 4.5.2** Add the following General Plan policy: Residential development projects and projects categorized as sensitive receptors shall be located an adequate distance from existing and potential sources of toxic emissions such as freeways, major arterials, industrial sites, and hazardous material locations. "Adequate distance" will be based on site-specific conditions, on the types and amounts of potential toxic emissions, and other factors. **MM 4.5.3** Add the following General Plan policy: The City shall require new air pollution point sources (such as, but not limited to, industrial, manufacturing, and processing facilities) to be located an adequate distance from residential areas and other sensitive receptors. "Adequate distance" will be based on site-specific conditions, the type and location of sensitive receptors, on the types and amounts of potential toxic emissions, and other factors.	LS
Impact 4.5.5 Implementation of the General Plan Update will lead to development that may expose sensitive receptors to short-term emissions of particulates and contribute to the region's non-	There are two key proposed General Plan policies associated with directly reducing construction emissions. These policies, listed below, directly address air quality and are not intended to represent a comprehensive list of all General Plan policies which can be related to air quality.	LS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
attainment status for the PM_{10} standard. This impact is **less than significant**.	*Open Space and Conservation Element* Policy C-27: Incorporate design, construction, and/or operational features to reduce emissions in all development projects which have the potential to result in substantial air quality impacts. Policy C-29: Development shall comply with the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts. With implementation of the proposed General Plan policies listed above, the potential impact of future construction projects on PM_{10} concentrations is considered **less than significant**.			
Impact 4.5.6 Implementation of the proposed General Plan Update may result in reduced visibility to nearby Class I areas. This impact is **less than significant**.	There are three key proposed General Plan policies associated with directly reducing emissions from major stationary sources. These policies, listed below, directly address air quality and are not intended to represent a comprehensive list of all General Plan policies which can be related to air quality. *Open Space and Conservation Element* Policy C-27: Incorporate design, construction, and/or operational features to reduce emissions in all development projects which have the potential to result in substantial air quality impacts. Policy C-28: Support San Joaquin Valley Air Pollution Control District efforts to reduce regional and localized pollutants. Policy C-29: Development shall comply with the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts. With implementation of the proposed General Plan policies listed above, the potential impact of future construction projects on PM_{10} concentrations is considered **less than significant**.	LS	None required.	LS
Impact 4.5.7 Implementation of the General Plan Update may result in occurrences of Valley Fever. This impact is **less than significant**.	In addition, the proposed General Plan Update includes the following policy ensuring compliance with all construction-phase air quality mitigation measures for future proposed projects within the GPU Planning Area: *Open Space and Conservation Element* Policy C-29: Development shall comply with the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts. With implementation of the proposed General Plan policy listed above, the potential impact of future construction projects on occurrences of Valley Fever is considered **less than significant**.	LS	None required.	LS
Impact 4.5.8 Implementation of the proposed General Plan Update, in combination with cumulative development in the San Joaquin Valley Air Basin, would contribute to a cumulative air quality impacts and could conflict with ozone and particulate matter attainment efforts. This is considered a **cumulatively considerable** impact.	The following proposed key policies and actions are consistent with best management practices identified by the State's Attorney General and Air Resources Board and would indirectly help mitigate Citywide GHG emissions by reducing activities from several key sources of GHGs, including motor vehicles, water conveyance, waste collection, and energy consumption. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Open Space and Conservation Element* Policy C-28; Action C-28a; Action C-28b; Action C-28c While implementation of the proposed General Plan policies listed above would help reduce particulate matter and ozone precursor emissions associated with future growth, buildout anticipated under the proposed General Plan Update would exceed growth protections used in attainment plan development as well as result in substantial increases in emissions. Thus, this impact is **cumulatively considerable** and **significant and unavoidable**.	CC	No additional feasible mitigation available.	CC/SU
Impact 4.5.9 Implementation of the proposed project would substantially increase emissions of CO_2e in 2035 over existing (2008) conditions. This increase in GHG emissions would be inconsistent with state efforts to reduce greenhouse gas emissions. This impact is considered to be **cumulatively considerable.**	The following proposed policies and actions that would directly help mitigate Citywide GHG emissions from five key sources, including motor vehicles, energy use, water use, waste, and construction. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Conservation & Open Space Element* Policy C-34 Encourage the use of alternative modes of transportation to reduce the amount of greenhouse gas emissions. Action C-34a Coordinate with the Kern Council of Governments and local jurisdictions to develop a multi-modal transportation system which allows convenient and efficient use of transportation alternatives and provides multi-modal transfer sites that incorporate auto, bike parking, transit, pedestrian and bicycle paths, as well as park and ride pickup points. Policy C-35: Encourage the use of alternative modes of transportation to reduce the amount of greenhouse gas emissions.	CC	No further feasible mitigation is available.	CC/SU

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	Policy C-35 Encourage a compact urban form and mixed-use development to become less auto-dependent and reduce potential air pollutants and greenhouse gas emissions. Action C-35a Amend the Zoning Ordinance to establish development standards for compact and mixed-use development. Policy C-36 Implement and enforce state and regional regulations pertaining to greenhouse gas emissions and climate change. Action C-36a Develop a Climate Action Plan by 2011 that lays out a strategy for reducing greenhouse gas emissions over time that are consistent with AB 32, SB 375, and other requirements. Action C-36b Monitor effectiveness of implemented programs and adaptively manage emission reduction measures to achieve the goals of the Climate Action Plan. Action C-36c Collaborate and coordinate with the San Joaquin Valley Air Pollution Control District, Kern Council of Governments, and other stakeholders to promote regional solutions to reducing greenhouse gas emissions that comply with SB 375, AB 32, and other requirements. Policy C-37 Work to reduce greenhouse gas emissions from its operations, specifically in the sectors of energy, transportation, waste. Action C-37a Develop a Greenhouse Gas Emissions Baseline Report by 2010 and update the inventory for every five year period beginning with the baseline year. Policy C-38 Encourage the proper design and mitigation of potential greenhouse gas emissions from proposed development projects. Policy C-39 Increase public awareness about climate change and encourage residents and businesses to make lifestyle changes that will reduce greenhouse gas emissions. Policy C-54 Continue participation in the Climate Smart program. Policy C-40: Increase public awareness about climate change and encourage residents and businesses to make lifestyle changes that will reduce greenhouse gas emissions. Policy C-41: Support development practices that conserve energy. Policy C-42: Promote energy conservation and efficiency measures. Policy C-43: Require public and private development including homes, commercial, and industrial uses to exceed Title 24 of the California Building Code standards by 15 percent. Policy C-44: Retrofit existing City buildings with energy-saving features, such as insulation, glazing, and fluorescent lighting fixtures, and participate in programs to encourage private property owners to do the same. Policy C-45: Encourage rehabilitation and reuse of buildings whenever appropriate and feasible to reduce waste, conserve resources and energy, and decrease construction costs. Policy C-46: Incorporate green building practices into the planning, design, construction, management, renovation, operations, and demolition of all facilities that are constructed, owned, managed, or financed by the City. Policy C-47: Encourage the conservation and reuse of building materials and resources and promote the use of sustainable recycled and locally sourced materials in development projects. Policy C-48: Encourage energy-efficient "green buildings" as certified by the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Program at a minimum certification level of Silver or equivalent. Policy C-49: Continue participation in the Climate Smart program. Policy C-50: Consider participation in the Bakersfield and Kern County Energy Watch program and any other future programs that encourage energy and/or water conservation. Policy C-51: Minimize obstacles to energy conservation and encourage use of sustainable energy sources and technologies such as solar and wind while promoting the economic benefits of conservation in its regulation of private activities. Policy C-52: Employ the best available practices in materials procurement, use, reuse, and recycling, where feasible, and encourage individuals, organizations, and other agencies to do likewise. "Best available practices" means behavior and technologies that, considering available equipment, life-cycle costs, social and environmental side effects, and the regulations of other agencies, use the least amount of newly refined materials for a desired outcome, direct the largest feasible fraction of used materials to future uses, and avoid undesirable effects due to further use of materials. Policy C-53: Require facilities in new developments to accommodate and encourage recycling. Policy C-54: Encourage zero waste for all development.			

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	Energy Resources Element Policy E-19: Encourage the development of sustainable energy sources and alternative energy projects. Policy E-20: Encourage domestic and commercial solar energy uses. Policy E-21: Encourage wind energy development where visual and environmental impacts can be mitigated and adequate site analysis is completed. Policy E-22: Promote a continuing dialogue with wind energy industry representatives to monitor trends in wind energy development and technology. Policy E-23: Encourage the use of clean technologies in oil and natural gas production. Implementation of the proposed project would be generally consistent with current state measures to reduce greenhouse gas emissions. However, due to the expected substantial increase in GHG emissions resulting from the growth associated with the proposed General Plan Update, this impact remains **cumulatively considerable** and is considered **significant and unavoidable.**			
Impact 4.5.10 Implementation of the proposed project could substantially increase emissions of greenhouse gas emissions over existing conditions that could result in environmental effects to the City. This impact is considered to be **less than cumulatively considerable**.		LCC	None required.	LCC
Impact 4.5.11 Implementation of the proposed General Plan Update would increase emissions of CO_2e in 2030 over existing (2008) conditions. This increase in GHG emissions is inconsistent with AB 32's goal of reducing 2020 greenhouse gas emissions to 1990 levels. This impact is considered **cumulatively considerable** and **significant and unavoidable**.	Policy LU-1 Encourage infill development in the existing urban areas of the Planning Area. Policy LU-22 Encourage residential developments and adjacent land uses to be pedestrian-oriented. Action LU-21 During review and approval of development plans, the City should require all residential developments to allow for pedestrian and bicycle connections. Policy LU-24 New commercial areas are encouraged to cluster in identified areas to prevent and discourage strip commercial development. Policy LU-27 Encourage commercial infill development in areas that are blighted. Action LU-26 Initiate incentives such as flexible zoning for commercial infill projects. Policy LU-31 Encourage commercial developments and adjacent land uses to be pedestrian-oriented. Action LU-30 During review and approval of development plans, the City should require all commercial developments to provide for pedestrian and bicycle connections. Policy LU-33 Encourage industrial infill development in areas. Action LU-32 Initiate incentives such as flexible zoning for industrial infill projects. Policy LU-40 Promote housing development in upper floors of mixed use developments to bring residents to the downtown area, creating a lifestyle center area. Policy LU-45 Redevelop under-utilized commercial areas in the Downtown to higher density residential usages and office/commercial uses. Policy LU-46 Redevelop the railroad property to the south of the Downtown and other properties in and near Downtown as opportunities for redevelopment arise. Policy LU-62 The City should actively pursue removal or rehabilitation of substandard homes. Policy LU-65 Encourage residential infill development in neighborhoods. Action LU-64 Initiate incentives such as flexible zoning for residential infill projects. *Circulation Element* Policy CI-19 The City should encourage the use of transportation alternatives that reduce the use of personal motor vehicles including public transit, bicycles and walking. Policy CI-20 Transit services should be provided to the entire planning area and should serve the needs of all persons, in particular those without access to private vehicles, the disabled, the elderly, and children. Policy CI-21 The City should encourage the use of public transit. Policy CI-22 The City should seek to provide transit service that is effective in attracting and retaining transit riders in areas with identifiable transit needs. Policy CI-24 The City should require new development to provide safe and convenient access to alternative transportation within	CC/SU	Even with the implementation of the proposed General Plan policies, the City's potential carbon footprint is expected to significantly grow through buildout of the General Plan based on the extent of growth within the City and the Expansion Area. These policies address the range of best practices policies recommended by the State's Attorney General. As such, no other feasible mitigation measures exist that could offset the carbon-based emissions anticipated from future growth in the City and the Expansion Area. As a result, the proposed General Plan Update is inconsistent with AB 32's goal of reducing GHG emissions by 2020 to 1990 levels. This impact is considered **cumulatively considerable** and **significant and unavoidable**.	CC/SU

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	the project area and safe access to public transportation. Policy CI-25 The City should demonstrate leadership in the implementation of programs encouraging the use of alternative modes of transportation by their employees, as well as the use of alternative fuels. Example programs may include: • Preferential carpool parking and other ridesharing incentives; • Flexible work hours or telecommuting where consistent with job duties and customer service needs; • A purchasing program that favors hybrid, electric or alternative fuel vehicles; • Assisting in the development of demonstration projects for alternative fuel technologies such as ethanol, hydrogen, and electricity; • Secure bicycle parking; and, • Transit incentives. Policy CI-27 Provide for safe and effective bicycle transportation in Taft. Policy CI-28 Provide a well-integrated trail system in the planning area that addresses bicycle and pedestrian uses consistent with the Bicycle and Pedestrian Trail System Plan. Policy CI-30 Require provision for safe bicycle circulation in all new developments, including bicycle parking facilities and internal bicycle and pedestrian routes. Policy CI-31 Provide adequate and secure bicycle storage in governmental, commercial, residential and open space recreational facilities. Policy CI-35 All new development should be required to provide bike lanes consistent with the Bikeway Master Plan. Policy CI-37 Widen sidewalks above the minimum Established Improvement Standards where intensive commercial, recreational or institutional activity is present and where residential densities are high. Policy CI-39 All new developments should provide sidewalks to facilitate pedestrian traffic. Policy CI-43 Improve the accessibility of and circulation within the Downtown. *Open Space and Conservation Element* Policy C-34 Encourage the use of alternative modes of transportation to reduce the amount of greenhouse gas emissions. Action C-34a Coordinate with the Kern Council of Governments and local jurisdictions to develop a multi-modal transportation system which allows convenient and efficient use of transportation alternatives and provides multi-modal transfer sites that incorporate auto, bike parking, transit, pedestrian and bicycle paths, as well as park and ride pickup points. Policy C-35 Encourage a compact urban form and mixed-use development to become less auto-dependent and reduce potential air pollutants and greenhouse gas emissions. Action C-35a Amend the Zoning Ordinance to establish development standards for compact and mixed-use development. Policy C-36 Implement and enforce state and regional regulations pertaining to greenhouse gas emissions and climate change. Action C-36a Develop a Climate Action Plan by 2011 that lays out a strategy for reducing greenhouse gas emissions over time that are consistent with AB 32, SB 375, and other requirements. Action C-36b Monitor effectiveness of implemented programs and adaptively manage emission reduction measures to achieve the goals of the Climate Action Plan. Action C-36c Collaborate and coordinate with the San Joaquin Valley Air Pollution Control District, Kern Council of Governments, and other stakeholders to promote regional solutions to reducing greenhouse gas emissions that comply with SB 375, AB 32, and other requirements. Policy C-37 Work to reduce greenhouse gas emissions from its operations, specifically in the sectors of energy, transportation, waste. Action C-37a Develop a Greenhouse Gas Emissions Baseline Report by 2010 and update the inventory for every five year period beginning with the baseline year. Policy C-38 Encourage the proper design and mitigation of potential greenhouse gas emissions from proposed development projects. Policy C-39 Increase public awareness about climate change and encourage residents and businesses to make lifestyle changes that will reduce greenhouse gas emissions. Policy C-54 Continue participation in the Climate Smart program. Policy C-34 Encourage the use of alternative modes of transportation to reduce the amount of greenhouse gas emissions.			

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	Action C-34a Coordinate with the Kern Council of Governments and local jurisdictions to develop a multi-modal transportation system which allows convenient and efficient use of transportation alternatives and provides multi-modal transfer sites that incorporate auto, bike parking, transit, pedestrian and bicycle paths, as well as park and ride pickup points. Policy C-35 Encourage a compact urban form and mixed-use development to become less auto-dependent and reduce potential air pollutants and greenhouse gas emissions. Action C-35a Amend the Zoning Ordinance to establish development standards for compact and mixed-use development. Policy C-36 Implement and enforce state and regional regulations pertaining to greenhouse gas emissions and climate change. Action C-36a Develop a Climate Action Plan by 2011 that lays out a strategy for reducing greenhouse gas emissions over time that are consistent with AB 32, SB 375, and other requirements. Action C-36b Monitor effectiveness of implemented programs and adaptively manage emission reduction measures to achieve the goals of the Climate Action Plan. Action C-36c Collaborate and coordinate with the San Joaquin Valley Air Pollution Control District, Kern Council of Governments, and other stakeholders to promote regional solutions to reducing greenhouse gas emissions that comply with SB 375, AB 32, and other requirements. Policy C-37 Work to reduce greenhouse gas emissions from its operations, specifically in the sectors of energy, transportation, waste. Action C-37a Develop a Greenhouse Gas Emissions Baseline Report by 2010 and update the inventory for every five year period beginning with the baseline year. Policy C-38 Encourage the proper design and mitigation of potential greenhouse gas emissions from proposed development projects. Policy C-39 Increase public awareness about climate change and encourage residents and businesses to make lifestyle changes that will reduce greenhouse gas emissions. Policy C-54 Continue participation in the Climate Smart program.			
Impact 4.5.12 Projected growth in the City of Taft and the Expansion Area could contribute to global increases in temperature that could increase exposure to risk related to significant storm events, extreme heat, and flooding resulting from global climate change. The projects and programs in the General Plan Update could expose people and the infrastructure to risk. However, the potential extent and severity of any such risk is speculative, given the unknown nature of potential impacts of climate change on Taft. This impact is considered to be **less than significant**.	The impact of climate change on the General Plan Update and future development in the Planning Area is considered **less than significant**. Circulation Element Policy C-34; Action C-34a; Policy C-35; Action C-35a; Policy C-36; Action C-36a; Action C-36b; Action C-36c; Policy C-37; Action C-37a; Policy C-38; Policy C-39; Policy C-54	LS	None required.	LS
4.6 Noise				
Impact 4.6.1 Activities associated with construction of land uses allowed under the proposed General Plan Update could result in elevated noise levels at noise-sensitive land uses. Increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption. This impact would be considered **potentially significant**.	Policy N-4 Minimize the impacts of construction noise on adjacent uses. Action N-4a Amend the Taft Municipal Code to establish standards for construction noise including the following: • Restrict noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to between the hours of 6 a.m. and 7 p.m. Monday through Friday, and between 6 a.m. and 5 p.m. on weekends. • Require the use of temporary construction noise control measures including the use of temporary noise barriers, if necessary, as mitigation for noise generated during construction of public and/or private projects. While the proposed General Plan policy and action item mentioned above would assist in reducing construction-related noise impacts to adjacent sensitive noise receptors, it is not likely that excessive construction noise levels can be fully mitigated in all circumstances. This impact is considered **potentially significant and significant and unavoidable**.	PS	No further feasible mitigation available.	PS/SU
Impact 4.6.2 Buildout of land uses proposed by the General Plan Update would result in increased traffic noise levels that could adversely affect existing and future	Policy N-1 Require new development to conform with to noise levels contained in [General Plan Update] Table 8.0-1 (Land Use Compatibility for New Development Near Transportation and Non-Transportation Noise Sources). Locate, construct, and/or screen all indoor and outdoor areas from noise sources to achieve compliance	S	No further feasible mitigation available.	SU

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
noise-sensitive land uses. In addition, future noise-sensitive land uses could be exposed to roadway noise levels in excess of the City's noise standards. This impact would be considered **significant**.	with the City's noise standards. Action N-1a Amend the Taft Municipal Code to reflect the noise thresholds identified in Table 8.0-1 (Land Use Compatibility for new Development Near Transportation and Non-Transportation Noise Sources). Action N-1b Require an acoustical analysis as part of the environmental review process when proposed development is likely to produce noise levels that exceed the City's noise standards. Action N-1c Identify potential noise impacts during the acoustical analysis to be mitigated in the project design to the maximum extent. Policy N-2 Use site planning, project design, and all other practical design-related noise mitigation measures as the primary means of noise mitigation. Policy N-3 Use noise barriers as a secondary means of noise mitigation. Require noise barriers, if required, to be visually attractive, complement the surroundings, and include a provision for continuing maintenance. Policy N-6 Route truck traffic around noise-sensitive areas, such as residential neighborhoods. Policy N-1 requires new development to conform to proposed land use compatibility noise criteria. The preparation of acoustical analyses would also be required for noise-sensitive land uses proposed in areas where ambient noise levels would be anticipated to exceed corresponding City noise standards. The purpose of the noise analyses would be to identify areas of significant noise impacts and mitigation to be implemented to achieve applicable City noise standards. Policies N-2 and N-3 require incorporation of noise-reduction measures for newly proposed land uses, where necessary, sufficient to comply with the noise standards established for transportation noise sources. Policy N-6 would require that truck traffic be routed away from noise-sensitive land uses. However, it may not be possible to fully mitigate in all areas, particularly in existing development that may be constrained due to age, placement, or other factors which limit the feasibility of mitigation. As a result, implementation of these recommended policies would reduce roadway traffic noise impacts, but not necessarily to a less than significant level. For this reason, noise impacts associated with future development would be considered **significant**. Implementation of recommended General Plan noise policies would reduce potential noise impacts. Future development projects would be required to analyze project-related noise impacts and incorporate necessary noise-reduction measures sufficient to achieve applicable noise standards. Implementation of these policies and actions will help to reduce impacts associated with proposed development. Noise-reduction measures typically implemented to reduce traffic noise include increased insulation, setbacks, and construction of sound barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. Policy N-3 discourages the construction of sound barriers that would be considered aesthetically intrusive. The feasibility of these measures would be determined on a project-by-project basis. However, it may not be possible to fully mitigate in all areas, particularly in existing development that may be constrained due to age, placement, or other factors which limit the feasibility of mitigation. As a result, increases in traffic noise associated with implementation of the proposed General Plan Update would be considered to have a **potentially significant** and **significant and unavoidable** impact**.**			
Impact 4.6.3 Sensitive land uses constructed near Taft-Kern County Airport could be exposed to aircraft noise in excess of applicable noise standards for land use compatibility. This is considered a **potentially significant** impact.	Policy N-1 Require new development to conform with to noise levels contained in [General Plan Update] Table 8.0-1 (Land Use Compatibility for New Development Near Transportation and Non-Transportation Noise Sources). Locate, construct, and/or screen all indoor and outdoor areas from noise sources to achieve compliance with the City's noise standards. Action N-1a Amend the Taft Municipal Code to reflect the noise thresholds identified in Table 8.0-1 (Land Use Compatibility for new Development Near Transportation and Non-Transportation Noise Sources). Action N-1b Require an acoustical analysis as part of the environmental review process when proposed development is likely to produce noise levels that exceed the City's noise standards. Action N-1c Identify potential noise impacts during the acoustical analysis to be mitigated in the project design to the maximum extent. Policy N-2 Use site planning, project design, and all other practical design-related noise mitigation measures as the primary means of noise mitigation. Policy N-3 Use noise barriers as a secondary means of noise mitigation. Require noise barriers, if required, to be visually attractive, complement the surroundings, and include a provision for continuing maintenance. Policy N-5 Encourage new development in the vicinity of the airport to be compatible with existing and projected airport noise levels as set forth in the Airport Land Use Compatibility Plan. Action N-5a Discourage residential and other noise-sensitive uses	PS	None required	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	from being located near the airport. Policies N-1 through N-3 address compatibility of sensitive land uses that would be exposed to transportation noise sources and require that they would be reviewed and appropriate mitigation measures would be incorporated to achieve acceptable noise levels. Policy N-5 would also require new development in the vicinity of the airport to be compatible with existing and projected airport noise levels. Implementation of the applicable policies and standards contained in the City's proposed General Plan Update would ensure that future development near Taft-Kern County Airport would meet applicable noise criteria for land use compatibility and/or include noise attenuation features to meet applicable noise standards. Accordingly, proposed future development projects located within air traffic patterns, corridors, and airport influence zones would be reviewed to ensure continued consistency with the Kern County Airport Land Use Compatibility Plan. With incorporation of the proposed General Plan policies, this impact would be considered **less than significant**.			
Impact 4.6.4 As additional development occurs throughout the City, the potential exists for new noise-sensitive land uses to encroach upon existing or proposed stationary noise sources. As a result, this impact is considered **significant**.	Policy N-1 Require new development to conform with to noise levels contained in [General Plan Update] Table 8.0-1 (Land Use Compatibility for New Development Near Transportation and Non-Transportation Noise Sources). Locate, construct, and/or screen all indoor and outdoor areas from noise sources to achieve compliance with the City's noise standards. Action N-1a Amend the Taft Municipal Code to reflect the noise thresholds identified in Table 8.0-1 (Land Use Compatibility for new Development Near Transportation and Non-Transportation Noise Sources). Action N-1b Require an acoustical analysis as part of the environmental review process when proposed development is likely to produce noise levels that exceed the City's noise standards. Action N-1c Identify potential noise impacts during the acoustical analysis to be mitigated in the project design to the maximum extent. Policy N-2 Use site planning, project design, and all other practical design-related noise mitigation measures as the primary means of noise mitigation. Policy N-3 Use noise barriers as a secondary means of noise mitigation. Require noise barriers, if required, to be visually attractive, complement the surroundings, and include a provision for continuing maintenance. Policy N-7 Prohibit new non-residential land uses, including energy project proposals, from creating operational noise disturbances in existing noise-sensitive areas. Policy N-8 Mitigate noise created by proposed non-transportation noise sources. Action N-8a Require the operation of loading docks, trash compactors, and other noise-producing uses that are adjacent to residential and other sensitive uses to be consistent with Table 8.0-1. Policy N-9 Discourage future noise-sensitive uses from locating in areas designated for commercial and/or industrial land uses to protect existing and proposed conforming noise-producing uses. Action N-9a Require new noise-sensitive uses proposed in or adjacent to areas designated for commercial and/or industrial land uses to be provided a disclosure statement notifying them of existing and potential noise-producing uses. Policy N-10 Maintain acceptable noise levels and adequate privacy in higher density and mixed-use development. Action N-10a Require design and construction standards that minimize noise conflicts between residents with shared walls or floors/ceilings. Policy N-1 requires new development to conform to proposed land use compatibility noise criteria. The preparation of acoustical analyses would also be required for noise-sensitive land uses proposed in areas where ambient noise levels would be anticipated to exceed corresponding City noise standards. The purpose of the noise analyses would be to identify areas of significant noise impacts and mitigation to be implemented to achieve applicable City noise standards. Policies N-2 and N-3 require incorporation of noise-reduction measures for newly proposed land uses, where necessary, sufficient to comply with the noise standards established for transportation noise sources. Policies N-7 and N-8 would prohibit new nonresidential land uses from creating operational noise disturbances that would adversely affect existing noise-sensitive land uses and would require non-transportation noise sources to incorporate noise-reduction measures, when necessary. Policies N-9 and N-10 are intended to reduce land use conflicts associated with the construction of new noise-sensitive land uses, particularly in areas where proposed noise-sensitive land uses would encroach upon existing non-transportation noise sources. Implementation of recommended General Plan noise policies and standards would reduce potential noise impacts by requiring the incorporation of necessary noise-reduction measures in the design and operation of proposed development projects sufficient to achieve	S	No further feasible mitigation available.	S

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	applicable noise standards. Implementation of these policies will help to reduce impacts associated with proposed development. Noise-reduction measures typically implemented to reduce noise levels include increased insulation, setbacks, and construction of sound barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. Policy N-2 would discourage the construction of aesthetically intrusive sound barriers. The feasibility of these measures would be determined on a project-by-project basis. However, it may not be possible to fully mitigate in all areas, particularly in existing development that may be constrained due to age, placement, or other factors which limit the feasibility of mitigation. As a result, implementation of these recommended policies would reduce noise-related impacts, but not necessarily to a less than significant level at all receptor locations. For this reason, noise impacts associated with future development would be considered **significant**. No additional feasible mitigation has been identified that would further reduce this impact. As a result, non-transportation source noise impacts would be considered **potentially significant** and **significant and unavoidable**.			
Impact 4.6.6 As additional development occurs throughout the City, the potential exists for noise-sensitive land uses to be exposed to construction-generated sources of groundborne vibration. As a result, this impact is considered **potentially significant**.	The following General Plan policy and action that address construction noise hazards are identified in the General Plan Noise Element: Policy N-4 Minimize the impacts of construction noise on adjacent uses. Action N-4a Amend the Taft Municipal Code to establish standards for construction noise including the following: • Restrict noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to between the hours of 6 a.m. and 7 p.m. Monday through Friday, and between 6 a.m. and 5 p.m. on weekends. • Require the use of temporary construction noise control measures including the use of temporary noise barriers, if necessary, as mitigation for noise generated during construction of public and/or private projects. Implementation of the applicable policies and standards contained in the City's proposed General Plan Update would restrict noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to the daytime hours of operation. Also, the applicable policies and action items would reduce construction-generated groundborne vibration associated with future development projects to an insignificant level. In addition, individual development projects will be subject to site-specific environmental review, which will necessitate identification of site-specific mitigation in the event that significant impacts are identified. Therefore, this impact is **less than significant**.	PS	None required.	LS
Impact 4.6.7 Implementation of the proposed General Plan along with potential development of the Planning Area could result in increased noise conflicts. This is considered a **cumulatively considerable** impact.	Relevant noise-related policies identified in the proposed General Plan Update include policies N-1 through N-3 and N-6. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Noise Element* Policy N-1; Action N-1a; Action N-1b; Action N-1c; Policy N-2; Policy N-3; Policy N-4; Action N-4a; Policy N-6 Policy N-1 requires new development to conform to proposed land use compatibility noise criteria. The preparation of acoustical analyses would also be required for noise-sensitive land uses proposed in areas where ambient noise levels would be anticipated to exceed corresponding City noise standards. The purpose of the noise analyses would be to identify areas of significant noise impacts and mitigation to be implemented to achieve applicable City noise standards. Policies N-2 and N-3 require incorporation of noise-reduction measures for newly proposed land uses, where necessary, sufficient to comply with the noise standards established for transportation noise sources. Policy N-6 would require that truck traffic be routed away from noise-sensitive land uses. Implementation of recommended General Plan noise policies would reduce potential noise impacts. Future development projects would be required to analyze project-related noise impacts and incorporate necessary noise-reduction measures sufficient to achieve applicable noise standards. Implementation of these policies and actions will help to reduce impacts associated with proposed development. Noise-reduction measures typically implemented to reduce traffic noise include increased insulation, setbacks, and construction of sound barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. Policy N-3 discourages the construction of sound barriers that would be considered aesthetically intrusive. The feasibility of these measures would be determined on a project-by-project basis. However, it may not be possible to fully mitigate in all areas, particularly in existing development that may be constrained due to age, placement or other factors which limit the feasibility of mitigation. As a result, the	CC	No further feasible mitigation available.	CC/SU

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	proposed project would have a **cumulatively considerable** contribution to this **significant and unavoidable** impact**.**			
4.7 Hazards and Human Health				
Impact 4.7.1 Implementation of the proposed project would include the routine transportation of hazardous materials on Planning Area roadways. Implementation of proposed General Plan policies and action items would result in a **less than significant** impact.	**Policy LU-5** Analyze all development projects in accordance with the provisions of CEQA. **Policy S-12** Continue to coordinate with the California Office of Emergency Services, the California Department of Toxic Substances Control, the California Highway Patrol, the Kern County Department of Environmental Health Services, the Kern County Fire Department, the Kern County Sheriff's Department, and other appropriate agencies in hazardous materials route planning and incident response. Action S-12a Coordinate with the oil companies to prepare emergency and contingency plans for controlling and mitigating pipeline leakage within the Planning Area. Action S-12b Support Kern County in their efforts to manage the use, movement, storage, and disposal of hazardous materials in the County and the City when they update the Hazardous Waste Management Plan and the Integrated Waste Management Plan. Action S-12c Cooperate with the Kern County Fire Department to develop, review, and revise, as necessary, the Emergency Response Plan to provide consistent and proper procedures to address pipeline ruptures. Action S-12d Coordinate with state and federal agencies having responsibilities for regulating the transportation of hazardous materials review regulations and procedures to mitigate the public safety hazard. Action S-12e As part of review and approval of development plans, consider the impact of proposed industrial development projects with respect to transport of hazardous materials. To the extent feasible, locate uses requiring substantial transport of hazardous materials so as to direct such traffic away from residential and commercial areas. Implementation of the policies and action items described above, as well as adherence to all federal, state, and local regulations regarding the transportation of hazardous materials, would reduce the environmental impacts associated with the routine transportation of hazardous materials on Planning Area roadways to **less than significant**.	LS	None required.	LS
Impact 4.7.2 The Planning Area consists of land uses having the potential to result in an increased risk of release of hazardous materials. This is considered a **less than significant** impact.	Policy LU-5 Analyze all development projects in accordance with the provisions of CEQA. Policy S-8 Work to identify and eliminate hazardous waste releases from both private companies and public agencies. Action S-8a Continue to coordinate with the Kern County Health Department. Action S-8b Work with appropriate agencies to map and document known contaminated and remediated sites. Policy S-9 Strictly regulate the storage of hazardous materials and waste, consistent with state and federal law. Action S-9a Regularly review the Taft Municipal Code to ensure that City regulations reflect the most up-to-date standards for the storage, handling, and use of hazardous and toxic materials. Action S-9b Require secondary containment and periodic examination for all storage of hazardous and toxic materials, consistent with the requirements of state or federal law. Action S-9c As part of the review and approval of development plans and building permits, assure that secondary containment is provided for hazardous and toxic materials. Policy S-10 Require industrial facilities to be constructed in accordance with up-to-date safety and environmental protection standards. Action S-10a Support continued enforcement of permitting requirements for radioactive materials and enforce public safety standards for the use of these materials, including the placarding of transport vehicles. Policy S-11 Require industries which store and process hazardous or toxic materials to provide a buffer between the source and the property boundaries sufficient to protect public safety, subject to approval by the City and any other regulatory agency. Action S-11a As part of review and approval of development plans, require adequate buffering of sensitive uses from hazardous or potential hazardous areas. Implementation of the above proposed General Plan Update policies and associated action items, and adherence to all federal, state, and local regulations regarding the storage and handling of hazardous wastes, and the use and removal of underground storage tanks, as well as the cleanup and remediation of leaking contaminants and hazardous wastes and hazardous substances, would reduce potential impacts to the environment and to public health and safety associated with the accidental release of and exposure to hazardous substances to **less than significant**.	LS	None required.	LS
Impact 4.7.3 Implementation of	Policy LU-6 Require all development to be compatible with the	LS	None required.	LS

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the proposed General Plan Update would locate development within an airport land use plan, potentially resulting in a safety hazard for people residing or working in the area. This impact is considered **less than significant**.	Airport Land Use Compatibility Plan (ALUCP). Policy CI-39 Where required by the Federal Aviation Administration, require the dedication of aviation easements for discretionary projects to provide for orderly development and as a means of preventing new noise and safety impacts. Adherence to federal regulations, the Comprehensive Land Use Plan, Kern County ALUC requirements, and implementation of the General Plan land use and circulation policies described above would reduce airport safety hazards to **less than significant.**			
Impact 4.7.4 Implementation of the proposed project could impair implementation of or physically interfere with the Kern County Multi-Jurisdictional Hazard Mitigation Plan. This is considered a **less than significant** impact.	Policy S-2 Support Kern County's efforts regarding staff levels and training for preparation and reaction to the full range of natural and man-made hazards. Action S-2a Regularly update emergency operations plans, identifying leadership, representatives, coordination and action for responding to emergencies in a timely and efficient manner. Action S-2b Coordinate emergency operations plans with the Kern County Emergency Operations Plan. Action S-2c Train City staff to handle emergency situations. Action S-2e Participate in the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS) and comply with the State of California Emergency Services Act. Adherence to the Kern County Multi-Jurisdictional Hazard Mitigation Plan and implementation of the General Plan policies and action items described above would reduce safety hazards due to the interference of emergency response plans to **less than significant.**	LS	None required	LS
Impact 4.7.5 Implementation of the proposed General Plan Update could contribute to the cumulative exposure of persons to contaminated soil or groundwater during development of previously contaminated sites or sites undergoing remediation. This impact is considered **less than cumulatively considerable**.	The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing this hazards and human health risks impact. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Land Use Element* Policy LU-5 *Circulation Element* Policy CI-38 *Safety Element* Policy S-2; Action S-2a; Action S-2b; Action S-2c; Policy S-8; Action S-8a; Action S-8b; Policy S-9; Action S-9a; Action S-9b; Action S-9c; Policy S-10; Action S-10a; Policy S-11; Action S-11a; Policy S-12; Action S-12a; Action S-12b; Action S-12c; Action S-12d; Action S-12e Implementation of the above proposed General Plan policies and associated action items, and compliance with federal, state, and local regulations regarding the handling, transportation, disposal, and cleanup of hazardous materials would fully mitigate specific hazardous material exposure issues associated with the proposed General Plan Update. As such, the General Plan Update's contribution to cumulative hazardous material impacts and other hazards to public safety are considered **less than cumulatively considerable.**	LCC	None required.	LCC
4.8 Geology and Soils				
Impact 4.8.1 Implementation of the proposed General Plan Update may expose new development to seismic hazards, including but not limited to strong ground shaking and seismically related ground failure. This impact is considered to be **less than significant.**	Policy S-2 Support Kern County's efforts regarding staff levels and training for preparation and reaction to the full range of natural and manmade hazards. Action S-2a Regularly update emergency operations plans, identifying leadership, representatives, coordination and action for responding to emergencies in a timely and efficient manner. Action S-2b Coordinate emergency operations plans with the Kern County Emergency Operations Plan. Action S-2c Train City staff to handle emergency situations. Action S-2d Budget for adequate staff and equipment. Policy S-13 Support efforts by federal, state, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards' Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible. Action S-14a Implement the Uniform Building Code and California Building Code to ensure that structures meet all applicable seismic standards. Action S-14b Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas. As discussed above, the City adopted the CBC. The CBC requires structures to be built to withstand ground shaking in areas of high earthquake hazards and the placement of strong motion instruments in	LS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	larger buildings to monitor and record the response of the structure and the site of seismic activity. Compliance with CBC regulations ensures the adequate design and construction of building foundations to resist soil movement. In addition, the CBC also contains drainage-related requirements in order to control surface drainage and reduce seasonal fluctuations in soil moisture content. All development projects associated with the proposed General Plan Update are subject to CBC standards, which require a seismic evaluation and particular seismic design criteria to reduce ground shaking effects. Furthermore, as stated above, fault rupture hazard studies are required in accordance with the Department of Conservation, California Geological Survey requirements for any structures designed for human occupancy to be constructed within this designated Fault Rupture Hazard Zone. Implementation of the above General Plan policies and associated action items and adherence to the Uniform Building Code and the California Building Code would reduce to a minimum the exposure of people and structures to potential substantial adverse effects, including the risk of loss, injury, or death, resulting from earthquakes, ground shaking, liquefaction, and other secondary hazards within the Planning Area. Therefore, seismic-related impacts are considered to be **less than significant**.			
Impact 4.8.2 Implementation of the proposed project would allow development that could result in increased soil erosion, wind and water erosion, and siltation of local drainage during and after construction. This would be a **less than significant** impact.	Policy S-7 Require all new urban development projects to incorporate runoff control measures, such as Low Impact Development (LID) techniques, to minimize peak flows of runoff. Action S-7b As part of the review of development projects, assure that runoff control measures and potential access constraints are planned and provided for. Where appropriate, require a site-specific geotechnical study to evaluate the site's soils and potential for shallow and/or deep subsidence. Action S-7c Coordinate with the Regional Water Quality Control Board and other appropriate agencies on best management practices available for incorporation into development projects. Action S-7d Develop and adopt a Grading and Erosion Control Ordinance with minimum standards of review and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects. Policy S-13 Support efforts by federal, state, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards. Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible. Action S-14b Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas. Implementation of the above General Plan Update policy and action sufficiently reduces the impact of erosion that could occur during development within the Planning Area, establishing administrative procedures, minimum standards of review, and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects. Following the implementation of the General Plan Update, accelerated erosion is reduced to a **less than significant** impact.	LS	None required.	LS
Impact 4.8.3 Implementation of the proposed project may result in development within areas subject to landslide. This impact is considered to be **less than significant.**	Policy C-59 Designate hillsides to be preserved. Action C-59a Develop standards for hillside development to ensure safety and prevent slope instability. Policy S-1 Seek to reduce to acceptable levels the risk of injury, death, and property damage resulting from all reasonably foreseeable safety hazards. Action S-1c Ensure that all new development complies with Occupational Safety and Health Administration (OSHA) rules and regulations. Policy S-13 Support efforts by federal, state, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards. Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible. Action S-14b Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas. As discussed previously, the City of Taft adopted the California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code or California Building Code (CBC). The CBC includes common engineering practices requiring special design and construction methods that reduce or eliminate potential expansive soil related impacts. Compliance with CBC regulations ensures the adequate design and construction of building foundations to resist soil	LS	None required.	LS

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	movement. In addition, the CBC also contains drainage-related requirements in order to control surface drainage and reduce seasonal fluctuations in soil moisture content. Implementation of General Plan policies and compliance with the adopted Uniform Building Code and California Building Code requirements would reduce the impacts of landslides and soil instability to **less than significant**.			
Impact 4.8.4 Implementation of the proposed project may result in development on unstable or expansive soils. This impact is considered **less than significant.**	Policy S-13 Support efforts by federal, state, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards. Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible. Action S-14b Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas. General Plan Action S-14b requires that a geotechnical investigation be conducted on new development sites. Therefore, impacts resulting from expansive and/or unstable soils would be reduced to a **less than significant** level.	LS	None required.	LS
Impact 4.8.5 Implementation of the proposed project could impact areas where soils may be incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. This would be a **less than significant** impact.	Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible. Action S-14b Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas. Compliance with the above General Plan policy would ensure that impacts due to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems within the Planning Area are mitigated to **less than significant**.	LS	None required.	LS
Impact 4.8.6 Implementation of the proposed project could result in the loss of availability of a potentially valuable mineral resource. This impact is considered **significant.**	Policy E-10 Minimize conflicts between mineral and energy resource lands and urban growth. Implementation of the above General Plan policy would support the reduction of conflicts between potential mineral resource lands and urban uses. However, the loss of availability of known mineral resource areas would still occur even after implementation of the proposed GPU policies. No mitigation is available that would prevent the permanent loss of these mineral resources. Therefore, the proposed GPU would result in the **significant and unavoidable** loss of mineral resources.	S	None available.	SU
Impact 4.8.7 Implementation of the proposed General Plan Update, in combination with existing, planned, proposed, and reasonably foreseeable development, would not contribute to cumulative geologic and soil impacts, as the impacts would be site-specific and not additive in character. Thus, the General Plan's contribution would be **less than cumulatively considerable**.	Policy C-59 Designate hillsides to be preserved. Action C-59a Develop standards for hillside development to ensure safety and prevent slope instability. Policy S-7 Require all new urban development projects to incorporate runoff control measures, such as Low Impact Development (LID) techniques, to minimize peak flows of runoff. Action S-7b As part of the review of development projects, assure that runoff control measures and potential access constraints are planned and provided for. Where appropriate, require a site-specific geotechnical study to evaluate the site's soils and potential for shallow and/or deep subsidence. Action S-7c Coordinate with the Regional Water Quality Control Board and other appropriate agencies on best management practices available for incorporation into development projects. Action S-7d Develop and adopt a Grading and Erosion Control Ordinance with minimum standards of review and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects. Policy S-13 Support efforts by federal, state, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards. Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible. Action S-14b Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas. Adherence to all federal, state, and local requirements, in addition to implementation of the above General Plan policies and their associated action items would further minimize soil-related impacts and protect water quality. The reader is referred to Section 4.10, Hydrology and Water Quality, for additional information regarding soil erosion and water quality. The General Plan's contribution to cumulative geologic and soil impacts is **less than cumulatively considerable**.	LCC	None required.	LCC
4.9 Cultural and Paleontological Resources				

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 4.9.1 Future development to implement the proposed project could potentially cause a direct substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines Section 15064.5. This would be a **potentially significant** impact.	Policy LU-5: Analyze all development projects in accordance with the provisions of CEQA. Policy C-55: Encourage the preservation of significant cultural sites and historic structures. Action C-55a: Implement the 2007 Historic Preservation Plan, including establishment of a historic district. Action C-55b: Develop and regularly update a comprehensive historic resources survey, in compliance with guidelines of the Office of Historic Preservation. Action C-55c: Seek funding sources or consider participation in programs to assist in the maintenance or restoration of historic preservation projects. Policy C-56: Discourage structures that are architecturally incompatible with existing structures in historic neighborhoods. Policy C-57: Protect and preserve paleontological, prehistoric and historic archaeological resources to honor the cultural heritage of the City of Taft. Action C-57a: Establish and promote programs that identify, maintain, and protect sites, or other features of the landscape possessing paleontological, historic or cultural significance. Action C-57b: Require an evaluation of any proposed demolition or modification to historic or architectural resources that are either listed in or determined eligible for inclusion in the National Registry of Historical Places (NHRP), the California Registry of Historic Resources (CRHR), or the local historical registry, to determine whether the project proposal would result in an adverse impact on the historic resource. If an adverse impact to the resource is identified, feasible measures shall be identified to mitigate the impact, which may include modification of the design, reuse of the structure, or avoidance of the structure. Action C-57c: Require all projects to be conditioned as follows: • The Planning Department shall be notified immediately if any prehistoric, archaeological, or fossil artifact or resource is uncovered during construction. • All construction must stop if any human remains are uncovered, and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the procedures outlined in CEQA Section 15064.5 (d) and (e) shall be followed. Implementation of the proposed General Plan policies and action items listed above will minimize impacts to historical resources by requiring an evaluation of any proposed demolition or modification to historic or architectural resources that are either listed in or determined eligible for inclusion in the National Registry of Historical Places (NHRP), the California Registry of Historic Resources (CRHR), or the local historical registry, to determine whether the project proposal would result in an adverse impact on the historic resource. This impact would be **less than significant.**	PS	None required	LS
Impact 4.9.2 Future development to implement the proposed General Plan Update could result in the potential disturbance of cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features) and human remains within the Planning Area. This would be a **potentially significant** impact.	Policy LU-5: Analyze all development projects in accordance with the provisions of CEQA. Policy C-57: Protect and preserve paleontological, prehistoric and historic archaeological resources to honor the cultural heritage of the City of Taft. Action C-57a: Establish and promote programs that identify, maintain, and protect sites, or other features of the landscape possessing paleontological, historic or cultural significance. Action C-57c: Require all projects to be conditioned as follows: • The Planning Department shall be notified immediately if any prehistoric, archaeological, or fossil artifact or resource is uncovered during construction. • All construction must stop if any human remains are uncovered, and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the procedures outlined in CEQA Section 15064.5 (d) and (e) shall be followed. Previous cultural resources investigations, Information Center comments, and the known prehistory and history of the Planning Area and surrounding region (i.e., the County and the San Joaquin Valley) indicate that future projects being approved within the Planning Area have the potential to disturb prehistoric and historic resources and human remains. Implementation of the policies and action items above would assist in reducing impacts to known and undiscovered prehistoric resources and human remains to a **less than significant** level.	PS	None required	LS
Impact 4.9.3 Adoption of the proposed General Plan Update could result in the potential disturbance of paleontological resources (i.e., fossils and fossil formations) within the	Policy LU-5: Analyze all development projects in accordance with the provisions of CEQA. Policy C-57: Protect and preserve paleontological, prehistoric and historic archaeological resources to honor the cultural heritage of the City of Taft.	PS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Planning Area. This would be a **potentially significant** impact.	Action C-57a: Establish and promote programs that identify, maintain, and protect sites, or other features of the landscape possessing paleontological, historic or cultural significance. Action C-57c: All projects shall be conditioned to require the following: • The Planning Department shall be notified immediately if any prehistoric, archaeological, or fossil artifact or resource is uncovered during construction. • All construction must stop if any human remains are uncovered, and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the procedures outlined in CEQA Section 15064.5 (d) and (e) shall be followed. Previous investigations indicate that future projects being approved within the Planning Area have the potential to disturb paleontological resources. Implementation of the policies and action items above would assist in reducing impacts to known and undiscovered prehistoric resources and human remains to a **less than significant** level.			
Impact 4.9.4 Adoption of the General Plan Update, its associated subsequent projects and specific plans within the Planning Area, in combination with all other foreseeable development projects within Kern County and surrounding areas within the San Joaquin Valley, has the potential to disturb cultural resources (i.e., prehistoric sites, historic sites, historic buildings, and isolated artifacts and features) and human remains. This would be a **cumulatively considerable** impact.	The proposed General Plan Update contains several goals, policies, and actions that would assist in reducing this potential cumulative impact to prehistoric resources, historic resources and human remains. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers. *Land Use Element* Policy LU-5 *Open Space and Conservation Element* Policy C-55; Action C-55a; Action C-55b; Action C-55c; Policy C-56; Policy C-57; Action C-57a; Action C-57b; Action C-57c The proposed General Plan policies and action items mentioned above would outline procedures and methods for the identification, avoidance, protection, and preservation of cultural resources. Implementation of these policies would reduce any impacts to cultural resources associated with development under the General Plan Update to a **less than cumulatively considerable** level for cultural and human remains.	CC	None required.	LCC
Impact 4.9.5 Adoption of the General Plan Update, its associated subsequent projects and specific plans within the Planning Area, in combination with all other foreseeable development projects within Kern County and surrounding areas within the San Joaquin Valley, has the potential to disturb paleontological resources (i.e., fossils and fossil formations). This would be a potentially **cumulatively considerable** impact.	The proposed General Plan Update contains several goals, policies, and actions that would assist in reducing this potential impact to prehistoric resources, historic resources and human remains. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Land Use Element* Policy LU-5 *Open Space and Conservation Element* Policy C-57; Action C-57a; Action C-57c The proposed General Plan policies and action items mentioned above would outline procedures and methods for the identification, avoidance, protection, and preservation of paleontological resources. Implementation of these policies would reduce any impacts to paleontological resources associated with development under the General Plan Update to a **less than cumulatively considerable** level for paleontological resources.	CC	None required.	LCC
Impact 4.10.1 Implementation of the General Plan Update could result in loss of populations or essential habitat for special-status plant and wildlife species. This would be a **potentially significant** impact.	The following General Plan Update policies, and actions proposed in the Land Use Element and the Open Space and Conservation Element would assist in reducing any potential biological impacts to special-status species: *Land Use* Policy LU-5: Analyze all development projects in accordance with the provisions of CEQA. *Conservation Policies and Actions: Natural Resource Conservation* Policy C-3: Work with public agency, private, and nonprofit partners to provide a means to preserve open space and agricultural lands. Action C-3a: Require applicants of private and public development projects that are proposing conversion of agricultural lands classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance under the Farmland Mapping and Monitoring Program to provide a 1:1 acreage replacement ratio. Policy C-13: Seek to conserve plant and animal habitat through regional planning efforts.	PS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	Action C-13a: Work with Kern County to participate in the Kern County Valley Floor Habitat Conservation Plan, Tulare Basin Riparian and Wildlife Corridor Conservation Plan, and other conservation efforts. Action C-13b: Work with other organizations and agencies to create Habitat Conservation Areas. Policy C-14: Protect natural open spaces, wetlands, watersheds, and environmentally sensitive areas such as creeks and riparian areas and other open spaces. Action C-14a: Prepare an Open Space Master Plan which identifies and prioritizes high priority preservation areas and provides minimum open space standards. Include areas such as those that support key features of the local or regional ecosystem, provide habitat for special-status species, or provide buffers for agricultural zones. Action C-14b: Work to assure that the Kern County Valley Floor Habitat Conservation Plan and the Tulare Basin Riparian and Wildlife Corridor Plan protect the interests of the City. Action C-14c: Support the restoration and enhancement of historical native plant communities within park and open space areas in support of native wildlife habitat. Action C-14d: Provide adequate buffers from the banks of creeks and rivers, where possible, in consultation with the City and appropriate agencies, such as the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and U.S. Army Corps of Engineers. Action C-14e: Require applicants of private and public development projects on sites with wetlands to prepare an evaluation pursuant to CEQA and to demonstrate compliance with state and federal regulations. The evaluation should map wetlands and waters of the U.S. and the State in delineations approved by the U.S. Army Corps of Engineers and make recommendations for avoidance. Action C-14f: Require applicants of private and public development projects that are proposing the conversion of wetlands to provide feasible mitigation on-site for land where complete avoidance of wetlands is not possible. Require appropriately times resource inventories designed to assess the presence of wetlands. Off-site wetland mitigation may occur and shall be coordinated with the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), and the Army Corps of Engineers, as appropriate. Policy C-15: Preserve areas through avoidance, when feasible, where special-status plant and animal species and critical habitat areas are known to be present or potentially occurring that may be adversely affected by public or private development projects. Where preservation through avoidance is not possible, include appropriate mitigation in the public or private project. "Special-status" species are generally defined as species considered to be rare, threatened, endangered, or otherwise protected under local, state, and/or federal policies, regulations, or laws. Action C-15a: Require applicants of private and public development projects on previously undeveloped lands to prepare a biological baseline report, evaluation, or survey to consider the potential for significant impacts on special-status species. Action C-15b: Explore the feasibility of various mitigation measures in consultation with the City and appropriate governmental agencies, such as the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG), for impacts to special-status species and habitat including conservation of similar quality and quantity of replacement habitat, enhancement of existing habitat areas, or paying in-kind funds to an approved wildlife habitat improvement and acquisition fund. Replacement habitat may occur either on-site or at approved off-site locations. Policy C-16: Employ a full suite of land conservation techniques to protect natural open spaces and resources, including but not limited to the acquisition of fee simple interest through purchase, donation, or bequest and public access and conservation easements. Policy C-17: Use site planning, project design, and all other practical design-related mitigation measures to avoid and minimize impacts on sensitive resources. Action C-17a: Develop a list of appropriate plant species that may be used in the installation of landscaping for all development projects to encourage the use of native plant species. Policy C-18: Require rehabilitation of natural ecosystems after mineral production is completed in areas zoned as Natural Resources (NR). Policy C-19: Pursue programs to address oil and natural gas production as it relates to special-status species protection laws. Action C-19a: Work with affected state and federal agencies to establish consistent policies for environmental protection activities related to oil and natural gas production and oilfield waste disposal. Implementation of the proposed General Plan update policies and actions listed above, in addition to those identified for water quality			

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	impacts under Section 4.11 (Hydrology and Water Quality), would ensure that impacts from future development that may be possible under the updated General Plan to special-status species are identified and mitigated to ensure viability of the species, and to ensure that habitat areas are avoided or mitigated if avoidance is determined to be infeasible. The proposed General Plan update policies and actions contain specific, enforceable requirements and/or restrictions that address this impact. As such, this impact is considered **less than significant**.			
Impact 4.10.2 Land uses and development consistent with the proposed project could result in the loss of riparian habitat and other sensitive natural communities including Waters of the U.S. This would be considered a **potentially significant** impact.	The General Plan Update goals, policies, and actions proposed in the Land Use Element and Open Space and Conservation Element, as described under Impact 4.10.1 above, would assist in reducing any potential biological impacts to sensitive natural communities, including waters of the U.S. These policies and actions include the following: Land Use Policy LU-5, and Conservation Policies and Actions C-3, C-3a, C-13, C-13a, C-13b, C-14, C-14a, C-14b, C-14c, C-14d, C-14e, C-14f, C-15, C-15a, C-15b, C-16, C-17, C-17a, C-18, C-19, and C-19a. Implementation of these proposed General Plan Update policies and actions would help to reduce and minimize impacts to sensitive natural communities from future development that may be possible under the updated General Plan. Therefore, impacts to sensitive natural communities, including waters of the U.S., would be reduced to a **less than significant** level.	PS	None required.	LS
Impact 4.10.3 Land uses and development consistent with the proposed General Plan Update could restrict aquatic or terrestrial wildlife movement through travel corridors. This would be considered a **potentially significant** impact.	The General Plan Update goals, policies, and actions proposed in the Land Use Element and Open Space and Conservation Element, as described under Impact 4.10.1 above, would assist in reducing any potential biological impacts to wildlife movement corridors. These policies and actions include the following: Land Use Policy LU-5, and Conservation Policies and Actions C-3, C-3a, C-13, C-13a, C-13b, C-14, C-14a, C-14b, C-14c, C-14d, C-14e, C-14f, C-15, C-15a, C-15b, C-16, C-17, C-17a, C-18, C-19, and C-19a. Implementation of these proposed General Plan Update policies and actions would help to reduce and minimize impacts to wildlife corridors from future development that may be possible under the updated General Plan. Therefore, impacts to wildlife corridors would be reduced to a **less than significant** level.	PS	None required.	LS
Impact 4.10.4 Proposed policies in the proposed General Plan Update that affect biological resources may differ from local policies and ordinances currently in effect. However, potential conflicts would be addressed by the revisions of the implementing ordinances to ensure that they conform to the proposed policies. In addition, land uses and development consistent with the General Plan Update would not conflict with any adopted Habitat or Natural Community Conservation Plans. This would be considered a **less than significant** impact.	The proposed project would update policies regarding biological resources, particularly those related to riparian corridors, wetlands, special-status species, sensitive natural communities, and wildlife movement corridors. Upon adoption of the new policies, in particular Land Use Policy LU-5 and Conservation Policies C-13, C-14, C-15, C-16, C-17, C-18, and C-19 contained within the General Plan Update, applicable City ordinances would be updated to conform to the policies so that these conflicts would no longer exist. As a result, this impact would be considered **less than significant**. No additional mitigation is required. Land uses and development consistent with the proposed project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan. No such conservation plans have been adopted encompassing all or portions of the City of Taft, and no impact is anticipated. As a result, this impact would be **less than significant**. No additional mitigation is required.	LS	None required.	LS
Impact 4.10.5 The proposed project, in combination with other reasonably foreseeable projects, would result in direct mortality and loss of habitat for special-status species, and waters of the U.S., including wetlands. This would be a **cumulatively considerable** impact.	The proposed General Plan Update contains several goals, policies, and actions that would assist in reducing this potential impact to biological resources. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers. Land Use Policy LU-5 Conservation Policies C-3, C-13, C-14, C-15, C-16, C-17, C-18, and C-19 Actions C-3a, C-13a, C-13b, C-14a, C-14b, C-14c, C-14d, C-14e, C-14f, C-15a, C-15b, C-17a, and C-19a Implementation of the above General Plan Update policies and associated actions, as described under Impact 4.10.1 above, will reduce the proposed project's impacts to these resources to a less than significant level through either resource avoidance or replacement measures. Therefore, the project's cumulative contribution to impacts on these resources would be reduced to a **less than cumulatively considerable** level.	CC	None Required.	LCC
Impact 4.11.1 Implementation of the proposed General Plan Update could result in the discharge of polluted runoff during construction and operation of future urban development potentially violating water quality standards or otherwise substantially degrading surface water quality. This impact is **less than**	The following policy and actions are included in the proposed General Plan Update in the Safety Element and would reduce impacts associated with surface water quality: Policy S-7: Require all new urban development projects to incorporate runoff control measures, such as Low Impact Development (LID) techniques, to minimize peak flows of runoff. Action S-7a: Assist in financing or otherwise implementing drainage improvements as needed and appropriate, including the recommendations of the City of Taft Sandy Creek Hydrology Study	LS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
significant.	(2005). Action S-7b: As part of the review of development projects, assure that runoff control measures and potential access constraints are planned and provided for. Where appropriate, require a site-specific geotechnical study to evaluate the site's soils and potential for shallow and/or deep subsidence. Action S-7c: Coordinate with the Regional Water Quality Control Board and other appropriate agencies on best management practices available for incorporation into development projects. Action S-7d: Develop and adopt a Grading and Erosion Control Ordinance with minimum standards of review and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects. In conformance with proposed General Plan Policy S-7, new development would be required to incorporate runoff control measures such as Low Impact Development (LID) techniques which offer significant mitigations to development impacts on stormwater quality. LID practices include measures such as bioretention and rain gardens; vegetated swales, buffers, and strips; roof leader disconnection; rain barrels and cisterns, permeable pavers, and impervious surface reduction and disconnection. LID practices affect the more frequent storm events, generally up to and including the 2-year storm event. In addition, as the City of Taft continues to grow and develop, it is likely to be listed as an NPDES Phase II program municipality by CVRWQCB. This would mean that the City's storm drain system would be subject to the requirements of the State's NPDES Phase II Program including the preparation and implementation of a Storm Water Quality Plan. Such a plan would include BMPs to protect stormwater from urban pollutants. Continued compliance with SWRCB's statewide General Permits for construction and dewatering and the Uniform Building Code and implementation of the policies of the proposed General Plan Update will minimize the potential degradation of stormwater quality and downstream surface waters associated with future development. This impact is considered to be **less than significant**.			
Impact 4.11.2 Implementation of the proposed General Plan Update could result in the degradation of groundwater quality resulting from construction and operation of future urban development. This is considered a **less than significant** impact.	The following policies and actions are included in the proposed General Plan Update in the Safety Element and Public Facilities Element and would reduce impacts associated with groundwater quality: Policy S-7: Require all new urban development projects to incorporate runoff control measures, such as Low Impact Development (LID) techniques, to minimize peak flows of runoff. Action S-7b: As part of the review of development projects, assure that runoff control measures and potential access constraints are planned and provided for. Where appropriate, require a site-specific geotechnical study to evaluate the site's soils and potential for shallow and/or deep subsidence. Action S-7c: Coordinate with the Regional Water Quality Control Board and other appropriate agencies on best management practices available for incorporation into development projects. Action S-7d: Develop and adopt a Grading and Erosion Control Ordinance with minimum standards of review and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects. Policy PF-11: Protect the quality and quantity of groundwater resources, including those that serve households and businesses which rely on private wells. In conformance with proposed General Plan Policy S-7, new development would be required to incorporate runoff control measures such as Low Impact Development techniques which offer significant mitigations to development impacts on stormwater quality. LID practices include measures such as bioretention and rain gardens; vegetated swales, buffers, and strips; roof leader disconnection; rain barrels and cisterns, permeable pavers, and impervious surface reduction and disconnection. LID practices affect the more frequent storm events, generally up to and including the 2-year storm event. Policy PF-11 is related to the protection of groundwater quality and quantity. Together these policies would help to ensure that groundwater quality is protected. This is a **less than significant** impact.	LS	None required.	LS
Impact 4.11.3 Implementation of the proposed General Plan Update would increase demand for water supply to the City, requiring increased groundwater production and potentially depleting groundwater supplies. This is considered a **significant and unavoidable** impact.	The following policies are included in the proposed General Plan Update in the Land Use Element, Open Space and Conservation Element, and Public Facilities Element and would reduce impacts associated with groundwater quantity: Policy LU-71: Promote the appropriate planting of trees and provide irrigation in existing parkways using reclaimed water. Policy C-10: Encourage efficient water use to enhance agriculture and grazing, employing techniques such as use of reclaimed water. Policy C-21: Encourage water conservation and the use of reclaimed water through the application of best management practices. Action C-21a: Work with the West Kern Water District and other	SU	No further feasible mitigation is available.	SU

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	water providers to create a master plan for a "purple-pipe" system and other mechanisms to promote water conservation. Action C-21b: Seek funding to develop a water conservation program to collect baseline data and provide education and outreach and strategic direction for water conservation efforts. Action C-21c: Establish a program to achieve a 20 percent reduction in per-capita water use by 2020 or such other reduction goal as may be set by the State. Action C-21d: Identify and implement programs for the reuse of treated wastewater, particularly in landscaping, irrigation, and public facilities. Coordinate with wastewater system operators, as appropriate. Action C-21e: Encourage xeriscape landscaping in municipal facilities, public roadway landscape, and new development projects. Action C-21f: Require development to install infrastructure to transport existing or future supplies of reclaimed water ("purple pipe") or pay an in-lieu fee equal to the cost of installation, to be used toward the implementation of a purple pipe master plan. Action C-21g: Develop a plan to utilize a "purple pipe" system that allows reclaimed water to be used to irrigate City-owned properties. Action C-21h: Develop a plan to utilize a "purple pipe" system that allows reclaimed water to be used to irrigate landscaping on private properties. Policy PF-10: Require water supply and delivery systems to be available in time to meet the demand created by new development. Action PF-10a: Amend the Taft Municipal Code to require the following for all development projects, excluding subdivisions: • That an assured water supply and delivery system be available at the time of project approval. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project. • That all required water infrastructure for the project be assured through the use of financial guarantees to the City's satisfaction prior to the issuance of any building permit. • That all required water infrastructure for a property be in place prior to the issuance for a Certificate of Occupancy for any structure or building on a site. • That water infrastructure be phased to coincide with the phased development of large-scale projects. Action PF-10b: Amend the Taft Municipal Code to require the following for all subdivisions to the extent allowed by state law. • That proposed water supply and delivery systems be identified at the time of tentative map approval to the satisfaction of the City. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project. • That the agency providing water service to the subdivision demonstrate prior to the approval of the Final Map by the City that sufficient capacity would be available to accommodate the subdivision plus existing development, other approved projects in the same service area, and other projects that have received commitments for water service. • That off-site and on-site water infrastructure sufficient to provide adequate water to the subdivision be in place prior to the approval of the Final Map, or their financing be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act. Policy PF-11: Protect the quality and quantity of groundwater resources, including those that serve households and businesses which rely on private wells. Implementation of proposed General Plan policies LU-71, C-10 and C-21 and associated actions would encourage the use of reclaimed water from the wastewater treatment plants operated by the City, thereby reducing demands for groundwater supplies. Action C-21c would reduce water demands from existing and future development. Policy PF-10 and associated actions would require an adequate water supply and all necessary infrastructure to be in place prior to implementation of new development projects and tentative map approvals. Policy PF-11 is related to the protection of groundwater quality and quantity. Together these policies would reduce potential impacts on groundwater supplies. However, due to the unreliable nature of SWP and CVP surface water allocations and the constantly increasing demand on groundwater supplies from ongoing development in the valley, as well as the anticipated effects of climate change on overall water supplies in the state, the anticipated increase in demand for groundwater resources would be considered a **significant and unavoidable** impact.			
Impact 4.11.4 Implementation of the proposed General Plan Update would increase impervious surfaces	The following policies and actions are included in the proposed General Plan Update in the Open Space and Conservation Element and Safety Element and would reduce impacts associated with storm	PS	None required	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
and alter drainage conditions and rates in the Planning Area, which could result in increased runoff and potential flooding impacts. This impact is considered to be **potentially significant**.	runoff and flooding: Policy OS-2: Ensure that development of parkland, recreation facilities, programming capacity, and natural open space capacity keeps pace with development and growth in the City's Planning Area. Action OS-2c: Collaborate with the County of Kern and the West Side Park and Recreation District to acquire, develop, and program additional regional park facilities. Policy OS-5: Pursue the shared use and management of private and public facilities, including schools, libraries, stormwater basins, and other civic locations, to meet community needs for open space, parks, recreation programs, and facilities. Policy C-14: Protect natural open spaces, watersheds, and environmentally sensitive areas such as creeks and riparian areas and other open spaces. Policy S-5: Strongly discourage the use of fill in the 100-year floodplain to create buildable areas. Review such requests to determine potential impacts on wildlife, habitat, and flooding on other parcels. Policy S-6: Prohibit the creation of parcels where the presence of easements, floodplain, marsh or riparian habitat, or other features would leave insufficient land to build, maintain, and use structures except for open space lots specifically created for dedication to the City or another appropriate party for habitat protection, flood control, drainage, or wetland maintenance. Policy S-7: Require all new urban development projects to incorporate runoff control measures, such as Low Impact Development (LID) techniques, to minimize peak flows of runoff. Action S-7a: Assist in financing or otherwise implementing drainage improvements as needed and appropriate including the recommendations of the City of Taft Sandy Creek Hydrology Study (2005). Action S-7b: As part of the review of development projects, assure that runoff control measures and potential access constraints are planned and provided for. Where appropriate, require a site-specific geotechnical study to evaluate the site's soils and potential for shallow and/or deep subsidence. Action S-7c: Coordinate with the Regional Water Quality Control Board and other appropriate agencies on best management practices available for incorporation into development projects. Action S-7d: Develop and adopt a Grading and Erosion Control Ordinance with minimum standards of review and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects. The policies in the Open Space and Conservation Element would help reduce stormwater runoff and flooding impacts by ensuring adequate open space areas and stormwater basins to help slow runoff and provide retention areas. Policy S-6 would ensure that new parcels are appropriate for development and do not conflict with flood control measures. In conformance with proposed General Plan Policy S-7, it is recommended that new development be required to incorporate runoff control measures such as Low Impact Development (LID) techniques to minimize runoff events and peak flows of runoff. LID techniques have the capability of reducing the frequency of the more common runoff events to pre-development levels. LID practices include measures such as bioretention and rain gardens; vegetated swales, buffers and strips; roof leader disconnection; rain barrels and cisterns, permeable pavers, and impervious surface reduction and disconnection. LID practices affect the more frequent storm events, generally up to and including the two-year storm event. Actions S-7a and S-7b would require implementation of the recommendations made in the Sandy Creek Hydrology Study as well as the preparation of a geotechnical study to evaluate soil conditions at proposed development sites. These measures would serve to offset the impacts of new development on stormwater flows and volumes by addressing both frequent storm events and the rarer, high-magnitude storm events. Together, these policies and actions would minimize potential impacts related to increase stormwater runoff and flooding and this impact is considered **less than significant**.			
Impact 4.11.5 Implementation of the proposed General Plan Update could result in the development of urban uses within areas subject to flooding and/or dam failure inundation. This impact is considered to be **potentially significant**.	The following policies are included in the proposed General Plan Update in the Safety Element and would reduce impacts associated with flooding hazards: Policy S-3: Limit development on land subject to flooding during a 100-year event, based on the most recent floodplain mapping prepared by the Federal Emergency Management Agency (FEMA) or updated mapping acceptable to the City. Allow potential development in areas subject to flooding to be clustered onto portions of a site which are not subject to flooding, consistent with other policies of this General Plan. Action S-3a: Prepare and operate a flood management program with the support of Kern County. Policy S-4: Require a buildable area outside the 100-year floodplain on every residential lot sufficient to accommodate a residence and accessory structures. Require fill placed to create a	PS	**MM 4.11.5** The following policy shall be added to the Safety Element of the City of Taft General Plan prior to its approval: Consider potential access constraints during a flooding event as part of the site plan review process prior to approval of development applications submitted	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	buildable area occur only if approved by the City and in accordance with all other applicable policies and regulations. Policy S-6: Prohibit the creation of parcels where the presence of easements, floodplain, marsh or riparian habitat, or other features would leave insufficient land to build, maintain, and use structures except for open space lots specifically created for dedication to the City or another appropriate party for habitat protection, flood control, drainage, or wetland maintenance. Policies S-3 and S-4 and associated action in the Safety Element relate specifically to land that is within the 100-year floodplain and require development to be placed outside of the areas subject to flooding, and the City's approval is required if fill is proposed to create a buildable area within a floodplain. Policy S-6 would ensure that new parcels are appropriate for development and does not conflict with flood control measures. These policies would help reduce potential flooding hazards; however, the impact would be **potentially significant** without mitigation.		to the City. If required to ensure adequate access during a flooding event, require construction of or the contribution of a fair share portion of the cost to construct capital improvements such as drainage culverts, bridges, elevated roadways, or other similar improvements. Implementation of mitigation measure **MM 4.11.5** will ensure that future development is designed and constructed in a manner that will provide adequate site access during flood events thereby further minimizing the risk of loss, injury, or death involving flooding. With mitigation, this impact is considered to be **less than significant**.	
Impact 4.11.6 Implementation of the proposed General Plan Update, in combination with existing, proposed, approved, and reasonably foreseeable development activities within the watershed, would contribute to a cumulative degradation of water quality from construction activities and increased urban runoff. This is considered a **less than cumulatively considerable** impact.	The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing cumulative water quality impacts. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Safety Element* Policy S-7; Action S-7a; Action S-7b; Action S-7c; Action S-7d *Public Facilities and Services Element* Policy PF-11 In conformance with proposed General Plan Policy S-7, require new development to incorporate runoff control measures such as Low Impact Development techniques which offer significant mitigations to development impacts on stormwater quality. LID practices include measures such as bioretention and rain gardens; vegetated swales, buffers, and strips; roof leader disconnection; rain barrels and cisterns, permeable pavers, and impervious surface reduction and disconnection. LID practices affect the more frequent storm events, generally up to and including the 2-year storm event. Implementation of the proposed General Plan policies listed above and continued compliance with the State's NPDES general permits for construction and dewatering would minimize the proposed project's impacts to water quality. Although the cumulative impact of water quality degradation within the greater Kern River watershed and Kern County Groundwater Subbasin may be considered significant, the proposed General Plan Update's contribution to this impact is considered to be **less than cumulatively considerable**.	LCC	None required	LCC
Impact 4.11.7 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the watershed, would increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions along the Kern River, Sandy Creek, and/or other local waterways. In addition, the proposed General Plan Update may allow for development within existing flood hazard zones, including the inundation area of Isabella Dam. This is considered a **cumulatively considerable** impact.	The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing cumulative flooding impacts. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Open Space and Conservation Element* Policy OS-2; Action OS-2c; Policy OS-5; Policy C-14 *Safety Element* Policy S-3; Action S-3a; Policy S-4; Policy S-5; Policy S-6; Policy S-7; Action S-7a; Action S-7b; Action S-7c; Action S-7d; The policies in the Open Space and Conservation Element would help reduce stormwater runoff and flooding impacts by ensuring adequate open space areas and stormwater basins to help slow runoff and provide retention areas. Policies S-3 and S-4 in the Safety Element relate specifically to land that is within the 100-year floodplain and require development to be placed outside of the areas subject to flooding, and the City's approval is required if fill is proposed to create a buildable area within a floodplain. Policy S-6 would ensure that new parcels are appropriate for development and does not conflict with	CC	Implementation of the above General Plan policies and mitigation measures **MM 4.11.4** and **4.11.5** would reduce the project's cumulative contribution to flooding impacts in the watershed to **less than cumulatively considerable.**	CC

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	flood control measures. In conformance with proposed General Plan Policy S-7, it is recommended that new development be required to incorporate runoff control measures such as Low Impact Development techniques to minimize runoff events and peak flows of runoff. LID techniques have the capability of reducing the frequency of the more common runoff events to pre-development levels. LID practices include measures such as bioretention and rain gardens; vegetated swales, buffers, and strips; roof leader disconnection; rain barrels and cisterns, permeable pavers, and impervious surface reduction and disconnection. LID practices affect the more frequent storm events, generally up to and including the 2-year storm event. These policies would help reduce storm runoff and flooding. Continued maintenance and expansion of the City's storm drainage system, particularly as areas of the Planning Area are annexed into the City and developed in accordance with the proposed General Plan, would minimize the potential for greater risk of flooding due to increased storm runoff. Incorporation of LID techniques in new development projects per Policy S-6 would further minimize flooding potential by reducing runoff volumes. Continued compliance with the NFIP and implementation of the proposed General Plan policies listed above would also minimize risks associated with developing in FEMA flood zones. However, the impact would be **cumulatively considerable** without mitigation.			
Impact 4.11.8 Implementation of the proposed General Plan Update, in combination with existing, approved, proposed, and other reasonably foreseeable development activities in the Kern County Groundwater Subbasin, would contribute to an increased demand for municipal water supply, requiring increased groundwater pumping and potentially contributing to groundwater level declines and overdraft of the aquifer. This is considered a **cumulatively considerable** impact.	The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing cumulative groundwater supply impacts. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Land Use Element* Policy LU-71 *Open Space and Conservation Element* Policy C-10; Policy C-21; Action C-21a; Action C-21b; Action C-21c; Action C-21d; Action C-21e; Action C-21f; Action C-21g; Action C-21h *Public Facilities and Services Element* Policy PF-10; Action PF-10a; Action PF-10b; Policy PF-11 Policies LU-71, C-10, and C-21 and associated actions would encourage the City to expand the use of reclaimed water from its wastewater treatment plants in lieu of groundwater or surface water supplies. Policy PF-10 and associated actions would require an adequate water supply and all necessary infrastructure to be in place prior to implementation of new development projects and tentative map approvals. Policy PF-11 would protect groundwater including well supplies. These policies would reduce the project's contribution to the environmental impacts of cumulative groundwater extraction. As such, the proposed project's contribution to the environmental impacts of cumulative groundwater extraction would be **less than cumulatively considerable**.	CC	None required.	LCC
Impact 4.12.1 There are no designated scenic highways within the Planning Area. Therefore, implementation of the proposed General Plan Update would result in **no impact** to scenic resources within a State Scenic Highway.		NI	None required.	NI
Impact 4.12.2 Implementation of the proposed project would encourage new development and redevelopment activities that could potentially degrade existing scenic vistas. This is considered a **less than significant** impact.	All new development and any redevelopment projects would be required to comply with the following General Plan policies that address degradation of scenic vistas: Policy LU-4: Support alternative development techniques to promote the conservation of land for open space, natural resource, or agricultural uses. Policy LU-61: Promote infill development that is aesthetically pleasing and compatible with existing development. Policy LU-71: Promote the appropriate planting of trees and provide irrigation in existing parkways using reclaimed water. Policy LU-75: Protect and maintain the urban tree canopy as a vital local resource. Action LU-75a Develop and implement an Urban Tree Canopy Master Plan. Action LU-75b Attain status as a Tree City USA. Action LU-75c Identify and apply for urban forestry grants to pay for the planting of trees. Policy LU-85: Improve gateways identified in Figure 4.0-1a and Figure 4.0-1b (Circulation Maps) with an entrance feature and enhanced landscaping. Action LU-86a Develop a gateway beautification plan to include landscaping and signage. Policy LU-86: Control development of commercial signage,	LS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	including restrictions of off-site signage, and set development standards for all types of commercial signage. Policy C-6: Prioritize infill development over the conversion of agricultural lands to accommodate future growth. Policy C-58: Protect watercourses for their habitat value and scenic qualities. Action C-58a Balance resource protection and improvement of watercourses with amenities such as pedestrian trails and lighting. Policy C-59: Designate hillsides to be preserved. Action C-59a Develop standards for hillside development to ensure safety and prevent slope instability.			
Impact 4.12.3 Development allowed under the proposed General Plan Update could result in the conversion of existing agricultural lands and open space to urban uses and could alter the visual character of the Planning Area. This is a **significant** impact.	All new development and any redevelopment projects would be required to comply with the following General Plan policies that address preservation of the visual character of the Planning Area: Policy LU-1: Encourage infill development in the existing urban areas of the Planning Area. Policy LU-4: Support alternative development techniques to promote the conservation of land for open space, natural resource, or agricultural uses. Policy LU-22: Promote attractive, well designed, and adequately maintained residential neighborhoods. Action LU-22a Develop Residential Design Guidelines to promote: • Tree-lined streets. • Neighborhood parks. • Architecturally pleasing dwellings. • Common areas maintained by Community Facilities Districts, Landscaping and Lighting Districts, or other financing mechanisms. Policy LU-27: Promote commercial development that is aesthetically pleasing. Action LU-27a Establish Commercial Design Guidelines. Action LU-27b Modify the development standards for commercial zone districts to upgrade improvements such as parking, landscaping, pedestrian features, transit stops, setbacks, and signage. Policy LU-28: Encourage commercial infill development. Action LU-28a Provide incentives, such as flexible zoning, for commercial infill projects. Policy LU-29: Encourage the location, size, scale, and design of neighborhood commercial uses to complement and meet the needs of the surrounding neighborhood. Policy LU-35: Encourage industrial infill development. Action LU-35a Provide incentives, such as flexible zoning, for industrial infill projects. Policy LU-40: Encourage screening of unsightly operations and landscaping of storage area perimeters. Action LU-40a Develop standards for outside industrial storage facilities. Policy LU-50: Encourage property owners and merchants to participate in the improvement of the Downtown. Action LU-50a Develop methods for financing improvements and beautification. Action LU-50b Encourage customer-oriented merchandising and operations policies. Action LU-50c Develop methods for maintaining improvements in the Downtown, such as landscaping, street furniture, parking lots, and lighting. Action LU-50d Use enforcement powers to cause properties to be brought up to code. Policy LU-53: Establish and maintain downtown Taft as the community business shopping and activity center for the west side of Kern County with clearly defined trade area boundaries, a recognizable identity, compatible and mutually supportive land uses, and a pleasant and pleasing atmosphere. Policy LU-58: Protect and enhance the integrity of historical resources as identified in the Historic Preservation Plan. Action LU-58a Encourage the adaptive reuse, protection, and/or enhancement of historical buildings. Policy LU-61: Promote infill development that is aesthetically pleasing and compatible with existing development. Action LU-61a Provide incentives, such as flexible zoning regulations, for infill projects. Policy LU-63: Upgrade public improvements in blighted neighborhoods, including sidewalks, alleys, street trees, roadways, parkways, and streetlights as opportunities arise and resources permit. Action LU-63a Establish a program of repairing or replacing broken	S	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	curbs, gutters, and sidewalks. Action LU-63b Replant vacant parkways with street trees. Action LU-63c Improve alleys with pavement. Action LU-63d Install landscaped medians where collector or arterial streets have the necessary right-of-way width. Policy LU-65: Promote maintenance of properties by property owners. Policy LU-67: Actively promote reinvestment in existing neighborhoods. Action LU-67a Seek state and federal grant funds that can assist in the elimination of blight in residential neighborhoods. Action LU-67b Use tax increment funds and low to moderate housing income funds to eliminate conditions of blight in residential neighborhoods, including use of funds for additional housing and improvements that benefit housing. Policy LU-71: Promote the appropriate planting of trees and provide irrigation in existing parkways using reclaimed water. Policy LU-74: Ensure that street sweeping, trash pickup, and the maintenance of public grounds and buildings are completed on a regular basis and require a comparable program for the maintenance of private properties, particularly commercial and industrial properties. Policy LU-75: Protect and maintain the urban tree canopy as a vital local resource. Action LU-75a Develop and implement an Urban Tree Canopy Master Plan. Action LU-75b Attain status as a Tree City USA. Action LU-75c Identify and apply for urban forestry grants to pay for the planting of trees. Policy LU-76: Facilitate a landscaping program in park strips and medians that promote shading, color, art, and interesting design. Action LU-76a Update street standards to include landscaping along all roadways. Action LU-76b Establish a street beautification and enhancement fee that pays for the construction, landscaping, and maintenance of street medians. Policy LU-78: Ensure that the provision of new or enlarged parking facilities does not adversely affect the livability and desirability of the surrounding neighborhoods. Action LU-78a Develop landscaping and tree shading standards for parking facilities, including maintenance requirements Policy LU-80: Require parking areas to be improved with paving, striping, and lighting and incorporate designated pedestrian facilities. Policy LU-84: Provide median and parkway landscaping along all landscaped roadways identified in Figure 4.0-1a and Figure 4.0-1b (Circulation Plans). Action LU-84a Update street standards to include a parkway standard. Policy LU-85: Improve gateways identified in Figure 4.0-1a and Figure 4.0-1b (Circulation Plans) with an entrance feature and enhanced landscaping. Action LU-85a Develop a gateway beautification plan to include landscaping and signage. Policy LU-86: Control development of commercial signage, including restrictions of off-site signage, and set development standards for all types of commercial signage. Policy C-6: Prioritize infill development over the conversion of agricultural lands to accommodate future growth. Policy C-55: Encourage the preservation of significant cultural sites and historic structures. Action C-55a Implement the 2007 Historic Preservation Plan, including establishment of a historic district. Action C-55b Develop and regularly update a comprehensive historic resources survey, in compliance with guidelines of the Office of Historic Preservation. Action C-55c Seek funding sources or consider participation in programs to assist in the maintenance or restoration of historic preservation projects. Policy C-56: Discourage structures that are architecturally incompatible with existing structures in historic neighborhoods. Policy C-58: Protect watercourses for their habitat value and scenic qualities. Action C-58a Balance resource protection and improvement of watercourses with amenities such as pedestrian trails and lighting. Policy C-59: Designate hillsides to be preserved. Action C-59a Develop standards for hillside development to ensure safety and prevent slope instability. Policy C-60: Retain landscape features and views from public			

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	parks and other publicly owned properties in accordance with the City's 2007 Historic Preservation Plan. Implementation of the above General Plan policies and Action Items would assist in reducing impacts associated with land use changes that have the potential to change the overall visual character of the Planning Area. Since all new development would have to comply with the General Plan policies, the scale, massing, and height of all new development would be sensitive to potential impacts on the existing visual character of the area to be developed. In addition, the City's Zoning Ordinance contains substantial protection for visual resources and aesthetic character, as discussed under Regulatory Framework. Furthermore, a large portion of the Planning Area would retain land use designations consistent with current agricultural uses. Therefore, impacts would be reduced to a **less than significant** level.			
Impact 4.12.4 Implementation of the proposed General Plan Update could increase the amount of daytime glare and nighttime lighting in developed portions of the Planning Area and create new sources in undeveloped areas. These increased daytime glare and nighttime lighting levels could have an adverse effect on adjacent areas and land uses. This is considered a **potentially significant** impact.	Policy LU-22: Promote attractive, well designed, and adequately maintained residential neighborhoods. Action LU-22a Develop Residential Design Guidelines to promote: • Tree-lined streets. • Neighborhood parks. • Architecturally pleasing dwellings. • Common areas maintained by Community Facilities Districts, Landscaping and Lighting Districts, or other financing mechanisms. Policy LU-27: Promote commercial development that is aesthetically pleasing. Action LU-27a Establish Commercial Design Guidelines. Action LU-27b Modify the development standards for commercial zone districts to upgrade improvements such as parking, landscaping, pedestrian features, transit stops, setbacks, and signage. Policy LU-29: Encourage the location, size, scale, and design of neighborhood commercial uses to complement and meet the needs of the surrounding neighborhood. The proposed policies require the implementation of design guidelines which would include standards for lighting. In addition to the above mitigation measures, the Zoning Ordinance sets development standards for lighting. The Zoning Ordinance requires that all outdoor lighting associated with both residential and nonresidential uses, excluding recreational uses, be shielded and directed away from surrounding residential uses and lighting is not allowed to blink, flash, oscillate or be of unusually high intensity or brightness. Nonresidential uses are prohibited from having lighting exceeding 0.5 foot-candles of illumination beyond the property containing the nonresidential uses and residential uses are not allowed to have outdoor pole lighting exceeding 12 feet in height. Compliance with both General Plan policies and the Zoning Ordinance would assist in reducing daytime glare nighttime light and illumination impacts to a **less than significant** level.	PS	None required.	LS
Impact 4.12.5 Implementation of the proposed project, in combination with other reasonably foreseeable projects within Kern County and the San Joaquin Valley, would contribute to cumulative impacts to visual resources in the region. The project's contribution is considered **cumulatively considerable**.	The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing the project's cumulative visual resources impacts. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers. *Land Use Element* Policy LU-1; Policy LU-4; LU-22; Action LU-22a; Policy LU-27; Action LU-27a; Action LU-27b; Policy LU-28; Policy LU-29; Policy LU-35; Action LU-35a; Policy LU-40; Action LU-40a; Policy LU-50; Action LU-50a; Action LU-50b; Action LU-40c; Action LU-40d; Policy LU-53; Policy LU-58; Action LU-58a; Policy LU-61; Action LU-61a; Policy LU-63; Action LU-63a; Action LU-63b; Action LU-63c; Action LU-63d; Action LU-64; Policy LU-67; Action LU-67a; Action LU-67b; Policy LU-71; Policy LU-74; Policy LU-75; Action LU-75a; Action LU-75b; Action LU-75c; Policy LU-76; Action LU-76a; Action LU-76b; Policy LU-78; Action LU-78a; Policy LU-80; Policy LU-84; Action LU-84a; Policy LU-86; Action LU-86a; Policy LU-86; *Open Space and Conservation Element* Policy C-6; Policy C-55; Action C-55a; Action C-55b; Action C-55c; Policy C-56; Policy C-58; Action C-58a; Policy C-59; Action C-59a; Policy C-60 Implementation of the proposed General Plan policies would assist in reducing the project's contribution to the cumulative alteration of visual character and light/glare impacts within the region. These policies would ensure that the scale, massing, and height of all new development would be sensitive to potential impacts on the existing visual character of the area. These policies would also help preserve the existing visual character of the Planning Area by requiring new development to comply with certain development standards, by	CC	No feasible mitigation is available.	CC/SU

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NI – No Impact LCC – Less Than Cumulatively Considerable CC – Cumulatively Considerable

Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	encouraging the redevelopment and improvement of existing blighted development, and by helping to protect the existing historic characteristics of the downtown area. In addition, the General Plan provides for the protection and continuation of agricultural operations in the Planning Area. However, regardless of the mitigation provided by these policies, the change in the visual character of the region from implementation of the proposed General Plan Update in addition to other anticipated development in the County, would be considerable. Therefore, the proposed project would have a **cumulatively considerable** contribution to the **significant and unavoidable** cumulative impact on visual character and light and glare.			
Impact 4.13.1.1 Implementation of the project would result in the need for additional fire protection and emergency medical staff, equipment, and facilities that could result in physical environmental impacts. This would be a **less than significant** impact.	Policy PF-6 Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council. Policy PF-7 Require new development to pay its fair share portion of its impacts on public facilities and infrastructure. Action PF-7a Establish development impact fees that fairly represent the cost of obtaining public facility improvements that serve new development and that provide a bridge for public, tax-supported services to be provided until tax revenues are received. Review the fees periodically. Action PF-7b Require the installation of improvements necessary to serve the demand created by development projects and to be consistent with infrastructure master plans, rather than collect impact fees. The cost of oversizing improvements may be eligible for reimbursement over time, as allowed by the City. Policy PF-8 Partner with other public entities such as the Kern County Fire Department, the Kern County Sheriff's Department, and other agency public safety departments in the financing and construction of public facilities. Policy PF-12 Require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs. Policy PF-16 Work with the Kern County Fire Department and local ambulance service providers to assure persons in the Taft area are well served relative to response time by fire and emergency services personnel. Policy S-20 Continue to coordinate with the Kern County Fire Department to reduce fire hazards, assist in fire suppression, and promote fire safety. Action S-20a Review new development for adequate water supply and pressure, fire hydrants, and access to structures by firefighting equipment and personnel. Action S-20b Review projects for compliance with the Fire Code as part of the building permit process. Policy S-21 Promote fire prevention methods to reduce service protection costs. Action S-21a Promote high-visibility fire prevention programs, such as those which provide voluntary home inspections and awareness of home fire prevention measures. Action S-21b Continue to educate the public about fire safety at home and in the workplace. Policy S-22 Restrict the use of fire-prone building materials in areas defined by the fire services as presenting high fire risk. Implementation of the General Plan policies listed above would ensure that new development would fund new public facilities such as those needed for fire protection and emergency medical services (PF-7 and PF-8), that development projects would be reviewed for concerns associated with the provision of fire protection services (PF-12, S-20, and S-22), and that the City would coordinate with the appropriate service providers to ensure adequate fire protection and emergency medical services (PF-16, and S-20). In addition, Policy S-21 requires the promotion of fire prevention. Compliance with these policies, along with the California Fire Code, would assist in reducing impacts associated with increased demand for fire protection and emergency services. The environmental effects of the development of additional fire protection facilities in the Planning Area have been programmatically considered in this Draft EIR as part of overall development identified in the General Plan Update Land Use Map (see Sections 4.1 though 4.13). As such, this impact is considered **less than significant**.	LS	None required.	LS
Impact 4.13.1.2 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the	The proposed General Plan policies identified under Impact 4.13.1.1 above would reduce the proposed GPU's contribution to cumulative impacts associated with providing fire protection and emergency medical services. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is	LCC	None required.	LCC

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
KCFD and HAS service areas, would increase the demand for fire protection and emergency medical services and could therefore require additional staffing, equipment, and related facilities. The project's contribution to the need for expanded fire protection and emergency medical services is considered **less than cumulatively considerable**.	limited to only listing the policy and action numbers. *Public Facilities and Services Element* Policy PF-6; Policy PF-7; Action PF-7a; Action PF-7b; Policy PF-8; Policy PF-12; Policy PF-16 *Safety Element* Policy S-20; Action S-20a; Action S-20b; Policy S-21; Action S-21a; Action S-21b; Policy S-22 Implementation of the proposed General Plan policies, along with compliance with the California Fire Code, would ensure the project's contributions to the continued provision of fire protection and emergency medical response services in the cumulative setting would be considered **less than cumulatively considerable**.			
Impact 4.13.2.1 Implementation of the proposed project would increase the Planning Area population and would result in additional residential, commercial, industrial, and recreational uses in the Planning Area, which may result in additional law enforcement protection facilities that could result in physical environmental impacts. This would be a **less than significant** impact.	Policy PF-6 Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council. Policy PF-7 Require new development to pay its fair share portion of its impacts on public facilities and infrastructure. Action PF-7a Establish development impact fees that fairly represent the cost of obtaining public facility improvements that serve new development and that provide a bridge for public, tax-supported services to be provided until tax revenues are received. Review the fees periodically. Action PF-7b Require the installation of improvements necessary to serve the demand created by development projects and to be consistent with infrastructure master plans, rather than collect impact fees. The cost of oversizing improvements may be eligible for reimbursement over time, as allowed by the City. Policy PF-8 Partner with other public entities such as the Kern County Fire Department, the Kern County Sheriff's Department, and other agency public safety departments in the financing and construction of public facilities. Policy S-18 Regularly monitor and review the level of police staffing provided in Taft to ensure that sufficient staffing and resources are available to serve local needs. Policy S-19 Encourage neighborhoods and buildings to be designed to discourage crime and provide security and safety for people and property. Action S-19a During the review and approval of development plans, encourage projects to incorporate design techniques to maximize visibility, such as the Crime Prevention Through Environmental Design (CPTED) principles. Implementation of the General Plan policies listed above would ensure that new development would fund new public facilities and personnel such as those needed for fire law enforcement services (PF-7 and PF-7), that development projects would be reviewed for concerns associated with the provision of law enforcement services (S-19), and that the City would review police services regularly to ensure adequate levels of service (S-18). Compliance with these policies would ensure that additional personnel and equipment needed as a result of the GPU would be planned for and funded. A project-level CEQA document would analyze the potential environmental impacts of a police facility project at the time that the location and design of the facility are known. Since specific projects have not been identified at this time, potential impacts are addressed at a programmatic level only. Adequate sites exist in Ione to locate the facility such that environmental impacts can be adequately avoided or mitigated, and the impacts are considered **less than significant**.	LS	None required.	LS
Impact 4.13.2.2 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the TPD service area, would increase the demand for law enforcement services which could result in the need for additional staffing, equipment, and related facilities under cumulative conditions. The project's contribution to the need for expanded law enforcement services is considered **less than cumulatively considerable**.	The proposed General Plan policies identified under Impact 4.13.2.1 above would reduce the proposed project's contribution to cumulative impacts associated with providing law enforcement services. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers. *Public Facilities and Services Element* Policy PF-6; Policy PF-7; Action PF-7a; Action PF-7b; Policy PF-8 *Safety Element* Policy S-18; Policy S-19; Action S-19a Implementation of General Plan policies would ensure that new development would fund new public facilities such as those needed for fire law enforcement services (PF-8 and PF-9), that development projects would be reviewed for concerns associated with the provision of law enforcement services (S-19), and that the City would review police services regularly to ensure adequate levels of service (S-18). The environmental effects of the development of additional law enforcement facilities in the Planning Area have been programmatically considered in this Draft EIR as part of overall development identified	LCC	None required.	LCC

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	in the General Plan update Land Use Map (see Sections 4.1 through 4.13). Therefore, the proposed General Plan update would not contribute to cumulative law enforcement service impacts, and this impact is considered **less than cumulatively considerable**.			
Impact 4.13.3.1 Implementation of the proposed project would result in increased development in the Planning Area, which would subsequently increase student enrollment in TCSD and TUHSD schools. New or expanded school facilities would be necessary to serve the increased demand. This impact is considered to be **less than significant**.	Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects. Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies. Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit. Policy PF-18 Encourage school districts to locate and site facilities in a manner integrated with the rest of the community. Policy PF-19 While recognizing that school development is not within the jurisdiction of the City, strongly encourage Taft City School District, Taft Union High School, and Taft College to consider the following criteria: • That traffic impacts on nearby roadways should be addressed and mitigated to meet City standards for Level of Service. • That schools serve as a focal point of neighborhood activity and should be interrelated with churches, parks, greenways, and off-street paths whenever possible and designed to promote joint use of appropriate facilities. • That most residences should be within walking distance of a school (one mile or less) and that all residences should be within two miles of a school whenever possible. Action PF-19a Convene a focused design effort with Taft City School District, Taft Union High School, and Taft College to establish design guidelines for new schools in accordance with City design standards. Policy LU-89 Convene an annual study session with Taft City School District, Taft Union High School, and Taft College to discuss planning matters that are of mutual interest. Action LU-89a Have the Community Development Director coordinate with Taft City School District, Taft Union High School, and Taft College to set a date for a joint meeting between the two agencies. Implementation of the above policies would encourage school siting that minimizes land use and environmental conflicts (Policies PF-18 and PF-19) and would ensure that the City would coordinate with school districts regarding new development and other planning issues (Policies PF-4, PF-9, and LU-89). In addition, future school sites would be subject to CDE standards for school sites. These standards include the consideration of certain environmental, toxic, and other student and staff safety issues during school site selection. These standards would reduce the potential for significant environmental impacts to occur in association with the construction of new school facilities in the Planning Area. Therefore, implementation of the above General Plan policies, along with payment of state and district fees, would ensure that the proposed project's impacts to public schools would be **less than significant**.	LS	None required.	LS
Impact 4.13.3.2 Implementation of the proposed General Plan update would increase population in the Planning Area, which is served by the West Kern Community College District. This is a **less than significant** impact.	Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects. Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies. Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit. Policy PF-18 Encourage school districts to locate and site facilities in a manner integrated with the rest of the community. Policy PF-19 While recognizing that school development is not within the jurisdiction of the City, strongly encourage Taft City School District, Taft Union High School, and Taft College to consider the following criteria: • That traffic impacts on nearby roadways should be addressed and mitigated to meet City standards for Level of Service. • That schools serve as a focal point of neighborhood activity and should be interrelated with churches, parks, greenways, and off-street paths whenever possible and designed to promote joint use of appropriate facilities. • That most residences should be within walking distance of a school (one mile or less) and that all residences should be within two miles of a school whenever possible. Action PF-19a Convene a focused design effort with Taft City	LS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	School District, Taft Union High School, and Taft College to establish design guidelines for new schools in accordance with City design standards. Policy LU-89 Convene an annual study session with Taft City School District, Taft Union High School, and Taft College to discuss planning matters that are of mutual interest. Action LU-89a Have the Community Development Director coordinate with Taft City School District, Taft Union High School, and Taft College to set a date for a joint meeting between the two agencies. Implementation of the above policies would encourage the retention and growth of Taft College and the location of new colleges and universities within the City. In addition, Policies PF-18 and PF-19 encourage school siting that minimizes land use and environmental conflicts and Policies PF-4, PF-9, and LU-89 would ensure that the City would coordinate with the WKCD regarding new development and other planning issues. Implementation of General Plan policies, along with the appropriate environmental review of future facilities, would reduce impacts associated with the provision of post-secondary education facilities in the Planning Area to a **less than significant** level.			
Impact 4.13.3.3 Population growth associated with implementation of the proposed General Plan update, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, would result in a cumulative increase in student enrollment and require additional schools and related facilities to accommodate the growth. This is a **less than cumulatively considerable** impact.	The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative public schools impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers. *Public Facilities and Services Element* Policy PF-4; Policy PF-9; Action PF-9a; Policy PF-18; Policy PF-19; Action PF-19a *Land Use Element* Policy LU-89; Action LU-89a Implementation of the policies listed under Impact 4.13.3.1 and Impact 4.13.3.2 would encourage the retention and growth of Taft College and the location of new colleges and universities within the City. In addition, Policies PF-19 and PF-20 encourage school siting that minimizes land use and environmental conflicts and Policies PF-5, PF-10, and LU-93 would ensure that the City would coordinate with the TCSD, TUHD and WKCCD regarding new development and other planning issues. In addition, future school sites within the TCSD and TUHD districts would be subject to CDE standards for school sites. These standards include the consideration of certain environmental, toxic, and other student and staff safety issues during school site selection. These standards would reduce the potential for significant environmental impacts to occur in association with the construction of new school facilities in the Planning Area. Implementation of General Plan policies, along with the appropriate environmental review of future facilities, would reduce impacts associated with the provision of education facilities in the Planning Area to a **less than cumulatively considerable** level.	LCC	None required.	LCC
Impact 4.13.4.1 Implementation of the proposed General Plan update would increase the demand for existing facilities and require additional parks and recreational facilities to accommodate the anticipated growth associated with the GPU. This impact is considered to be **less than significant.**	Policy OS-1 Manage parks, trails, open spaces, and recreational facilities with innovative best management practices to achieve long-term energy, water, and resource conservation. Policy OS-2 Ensure that development of parkland, recreation facilities, programming capacity, and natural open space capacity keeps pace with development and growth in the City's Planning Area. Action OS-2a In cooperation with the West Side Recreation and Park District, develop a Park and Recreation Master Plan, outlining future parkland and facility needs, goals, policies, classifications, and standards. Action OS-2b Develop and implement a Park Impact and Parkland Dedication Ordinance consistent with the Quimby Act. Action OS-2c Collaborate with the County of Kern and the West Side Recreation and Park District to acquire, develop, and program additional regional park facilities. Policy OS-4 Expand the system of multi-use paths and trails available for transportation and recreation. Action OS-4a Prioritize expansion of Rails to Trails as shown on Figure 4.0-2 (Bikeways and Pedestrian Trails Map). Policy OS-5 Pursue the shared use and management of private and public facilities, including schools, libraries, stormwater basins, and other civic locations, to meet community needs for open space, parks, recreation programs, and facilities. Action OS-5a Coordinate with the Taft City School District and West Side Recreation and Park District. Action OS-5b Utilize agreements to share facilities with the Taft City School District and West Side Recreation and Park District. Policy OS-6 Pursue Joint Use Agreements, Memoranda of Understanding, public access easements, and other means to provide additional trails in conjunction with private and public agency partners, such as the federal Bureau of Land Management (BLM), utility districts, irrigation districts, and transportation providers.	LS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	Policy OS-7 Require new residential development projects, including mixed-use projects with residential components, to provide a minimum of 2.5 acres of park land per 1,000 persons through dedication of land or payment of in-lieu fees to contribute to the acquisition and development of parks or recreation facilities consistent with the following: a) That all lands offered for dedication be of the size, orientation, location, and suitability to provide park and recreation facilities consistent with the City's park and recreation classifications and standards and with the requirements of the West Side Recreation and Park District. b) That private trails, school park and recreation facilities, and private parks or open spaces not receive full credit toward the City's land dedication requirements. Such lands may be used for partial credit, not to exceed 50 percent, with approval of the City Council. Policy OS-8 Use a range of funding and economic development tools to implement development, maintenance, and programming for City parks and recreation facilities, such as tax-increment financing, special assessment districts, and private and public grant funding. Policy OS-9 Support stewardship of existing and new facilities with volunteer labor and donations. Action OS-9a Form a public/private partnership program to obtain grants or loans through nonprofit fundraising to "adopt a park" or "adopt a trail." Policy OS-10 Ensure that all new parks, trails, and recreational facilities are designed for universal access and work to make existing parks, trails, and recreational facilities universally accessible. Policy OS-11 Ensure that the design of new parks, trails, and facilities enhances community pride by providing wayfinding signage and monumentation that celebrates the City's heritage and minimizes negative impacts to the surrounding neighborhoods. Action OS-11a Involve the community in the planning and design process for all new parks, trails, and recreational facilities. Action OS-11b Incorporate, as appropriate, in the design of parks and recreation facilities elements that reflect Taft's character and heritage. Implementation of the above GPU policies and associated action items would establish parkland standards and funding mechanisms within the Planning Area in order to meet projected growth (Policy OS-2 and Policy OS-7). In addition, the proposed GPU includes a policy requiring the City, in coordination with the WSRPD, to develop a Park and Recreation Master Plan that outlines future parkland and facility needs, goals, policies, classifications, and standards (Policy OS-2). Implementation of the above policies, along with the implementing requirements in City's Zoning Code, would ensure that adequate parkland would be provided concurrent with increased growth in the Planning Area and that parkland development and maintenance would be planned for and funded. Therefore, impacts associated with increased demand for park and recreation facilities would be reduced to a **less than significant** level.			
Impact 4.13.4.2 Implementation of the proposed project along with other existing, planned, proposed, approved, and reasonably foreseeable development within the service areas of WSRPD and Kern County Parks and Recreation Department, would result in cumulative park and recreation impacts. This impact is considered to be **less than cumulatively considerable**.	The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative public schools impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers. *Open Space and Conservation Element* Policy OS-1; Policy OS-2; Action OS-2a; Action OS-2b; Action OS-2c; Policy OS-4; Action OS-4a; Policy OS-5; Action OS-5a; Action OS-5b; Policy OS-6; Policy OS-7; Policy OS-8; Policy OS-9; Action OS-9a; Policy OS-10; Policy OS-11; Action OS-11a; Action OS-11b The proposed General Plan policies identified under Impact 4.13.4.1 above would reduce the proposed GPU's contribution to cumulative impacts associated with providing increased park and recreation services. The proposed policies would establish parkland standards and funding mechanisms within the Planning Area in order to meet projected growth (Policy OS-2 and Policy OS-7). In addition, the proposed GPU includes a policy requiring the City, in coordination with the WSRPD, to develop a Park and Recreation Master Plan that outlines future parkland and facility needs, goals, policies, classifications, and standards (Policy OS-2). Implementation of the above GPU policies and associated action items, and compliance with proposed City standards and development impact fees would reduce the proposed GPU's contribution to park and recreation impacts to **less than cumulatively considerable**.	LCC	None required.	LCC
Impact 4.13.5.1 Implementation of the proposed project would increase demand for water supply. This additional water supply demand would result in significant effects on the physical environment. This is considered a **significant** impact.	Policy PF-2 Require developers to pay their fair share of the costs associated with development and redevelopment except as authorized by the City pursuant to Economic Development goals and strategies. Policy PF-3 Except when prohibited by state law, require that infrastructure systems be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative	S	No additional feasible mitigation is available.	SU

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	effects on safety and quality of life. Action PF-3a Require financial guarantees to assure infrastructure development to the City's satisfaction. Action PF-3b Adopt master plans for the development of public facilities, including phasing of improvements in a logical manner that encourages the orderly development of roadways, water and sewer facilities, and other public facilities. Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects. Policy PF-6 Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council. Policy PF-7 Require new development to pay its fair share portion of its impacts on public facilities and infrastructure. Action PF-7a Establish development impact fees that fairly represent the cost of obtaining public facility improvements that serve new development and that provide a bridge for public, tax-supported services to be provided until tax revenues are received. Review the fees periodically. Action PF-7b Require the installation of improvements necessary to serve the demand created by development projects and to be consistent with infrastructure master plans, rather than collect impact fees. The cost of oversizing improvements may be eligible for reimbursement over time, as allowed by the City. Policy PF-8 Partner with other public entities such as the Kern County Fire Department, the Kern County Sheriff's Department, and other agency public safety departments in the financing and construction of public facilities. Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies. Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit. Policy PF-10 Require water supply and delivery systems to be available in time to meet the demand created by new development. Action PF-10a Amend the Taft Municipal Code to require the following for all development projects, excluding subdivisions: • That an assured water supply and delivery system be available at the time of project approval. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project. • That all required water infrastructure for the project be assured through the use of financial guarantees to the City's satisfaction prior to the issuance of any building permit. • That all required water infrastructure for a property be in place prior to the issuance for a Certificate of Occupancy for any structure or building on a site. • That water infrastructure be phased to coincide with the phased development of large-scale projects. Action PF-10b Amend the Taft Municipal Code to require the following for all subdivisions to the extent allowed by state law: • That proposed water supply and delivery systems be identified at the time of tentative map approval to the satisfaction of the City. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project. • That the agency providing water service to the subdivision demonstrate prior to the approval of the Final Map by the City that sufficient capacity would be available to accommodate the subdivision plus existing development, other approved projects in the same service area, and other projects that have received commitments for water service. • That off-site and on-site water infrastructure sufficient to provide adequate water to the subdivision be in place prior to the approval of the Final Map, or their financing be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act. Policy PF-11 Protect the quality and quantity of groundwater resources, including those that serve households and businesses which rely on private wells. Policy PF-12 Require that water flow and pressure be provided at			

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	sufficient levels to meet domestic, commercial, industrial, and firefighting needs. Implementation of the above General Plan policies would ensure that new development would not be approved by the City unless an assured water supply and delivery system were available. The policies would also require the City and WKWD to demonstrate prior to the approval of a final subdivision map that sufficient water supply capacity would be available to accommodate the subdivision plus existing development, other approved projects in the same service area, and other projects that have received commitments for water service. Even after implementation of the proposed General Plan Update policies, it is speculative to state that a reliable water supply source would be available to serve buildout of the entire Planning Area due to lack of firm contractual water entitlements. Given these conditions, this impact is considered **significant and unavoidable**.			
Impact 4.13.5.2 Implementation the GPU would require additional water supply infrastructure to meet the projected water demands. This is considered a **less than significant** impact.	Policy PF-2 Require developers to pay their fair share of the costs associated with development and redevelopment except as authorized by the City pursuant to Economic Development goals and strategies. Policy PF-3 Except when prohibited by state law, require that infrastructure systems be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life. Action PF-3a Require financial guarantees to assure infrastructure development to the City's satisfaction. Action PF-3b Adopt master plans for the development of public facilities, including phasing of improvements in a logical manner that encourages the orderly development of roadways, water and sewer facilities, and other public facilities. Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects. Policy PF-5 Require dedication of easements needed for infrastructure. Policy PF-6 Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council. Policy PF-7 Require new development to pay its fair share portion of its impacts on public facilities and infrastructure. Action PF-7a Establish development impact fees that fairly represent the cost of obtaining public facility improvements that serve new development and that provide a bridge for public, tax-supported services to be provided until tax revenues are received. Review the fees periodically. Action PF-7b Require the installation of improvements necessary to serve the demand created by development projects and to be consistent with infrastructure master plans, rather than collect impact fees. The cost of oversizing improvements may be eligible for reimbursement over time, as allowed by the City. Policy PF-8 Partner with other public entities such as the Kern County Fire Department, the Kern County Sheriff's Department, and other agency public safety departments in the financing and construction of public facilities. Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies. Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit. Policy PF-10 Require water supply and delivery systems to be available in time to meet the demand created by new development. Action PF-10a Amend the Taft Municipal Code to require the following for all development projects, excluding subdivisions: • That an assured water supply and delivery system be available at the time of project approval. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project. • That all required water infrastructure for the project be assured through the use of financial guarantees to the City's satisfaction prior to the issuance of any building permit. • That all required water infrastructure for a property be in place prior to the issuance for a Certificate of Occupancy for any structure or building on a site. • That water infrastructure be phased to coincide with the phased	LS	None required.	LS

LS – Less Than Significant PS – Potentially Significant S – Significant SU – Significant and Unavoidable
NI – No Impact LCC – Less Than Cumulatively Considerable CC – Cumulatively Considerable

Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	development of large-scale projects. Action PF-10b Amend the Taft Municipal Code to require the following for all subdivisions to the extent allowed by state law: • That proposed water supply and delivery systems be identified at the time of tentative map approval to the satisfaction of the City. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project. • That the agency providing water service to the subdivision demonstrate prior to the approval of the Final Map by the City that sufficient capacity would be available to accommodate the subdivision plus existing development, other approved projects in the same service area, and other projects that have received commitments for water service. • That off-site and on-site water infrastructure sufficient to provide adequate water to the subdivision be in place prior to the approval of the Final Map, or their financing be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act. Policy PF-11 Protect the quality and quantity of groundwater resources, including those that serve households and businesses which rely on private wells. Policy PF-12 Require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs. Implementation of the above General Plan policies would ensure that the new development under the proposed project would not proceed without adequate water supply infrastructure. Particularly, Action PF-10a requires that all necessary water infrastructure for the project be assured through the use of financial guarantees and Action PF-10b requires that off-site and on-site water infrastructure sufficient to provide adequate water to a subdivision be in place prior to approval of a Final Map. These policies would ensure that impacts would be **less than significant**.			
Impact 4.13.5.3 Implementation of the proposed project would contribute to the cumulative demand for water supply in the WKWD's service area. This is considered a **cumulatively considerable** impact.	The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative public schools impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers. *Public Facilities and Services Element* Policy PF-2; Policy PF-3; Action PF-3a; Action PF-3b; Policy PF-4; Policy PF-5; Policy PF-6; Policy PF-7; Action PF-7a; Action PF-7b; Policy PF-8; Policy PF-9; Action PF-9a; Policy PF-10; Action PF-10a; Action PF-10b; Policy PF-11; Policy PF-12 Implementation of the General Plan policies listed under **Impact 4.13.5.1** above would require the City to would ensure that new development would not proceed without adequate water supply and necessary infrastructure. However, given the speculative nature of the WKWD's supplies, the proposed project would contribute significantly to cumulative water infrastructure impacts. The proposed GPU would have a **cumulatively considerable** and **significant and unavoidable** impact.	CC	No additional feasible mitigation is available.	CC/SU
Impact 4.13.6.1 Implementation of the proposed project would substantially increase wastewater flows, thus increasing demand for wastewater service. Increased wastewater flows would also require additional infrastructure and treatment capacity, the construction of which could cause significant environmental effects. This impact is considered significant.	Policy PF-2 Require developers to pay their fair share of the costs associated with development and redevelopment except as authorized by the City pursuant to Economic Development goals and strategies. Policy PF-3 Except when prohibited by state law, require that infrastructure systems be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life. Action PF-3a Require financial guarantees to assure infrastructure development to the City's satisfaction. Action PF-3b Adopt master plans for the development of public facilities, including phasing of improvements in a logical manner that encourages the orderly development of roadways, water and sewer facilities, and other public facilities. Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects. Policy PF-5 Require dedication of easements needed for infrastructure. Policy PF-6 Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council. Policy PF-7 Require new development to pay its fair share portion of its impacts on public facilities and infrastructure.	LS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	Action PF-7a Establish development impact fees that fairly represent the cost of obtaining public facility improvements that serve new development and that provide a bridge for public, tax-supported services to be provided until tax revenues are received. Review the fees periodically. Action PF-7b Require the installation of improvements necessary to serve the demand created by development projects and to be consistent with infrastructure master plans, rather than collect impact fees. The cost of oversizing improvements may be eligible for reimbursement over time, as allowed by the City. Policy PF-8 Partner with other public entities such as the Kern County Fire Department, the Kern County Sheriff's Department, and other agency public safety departments in the financing and construction of public facilities. Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies. Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit. Policy PF-13 Encourage the use of new and alternative technologies, such as high tech "pocket plants" or other appropriate means, to efficiently and effectively provide sewage/wastewater treatment when it is not economically feasible to connect to the sanitary sewer system. Action PF-13a Identify additional funding sources to obtain the most favorable method of providing sewage/wastewater service. Policy PF-14 Pursue alternative methods of wastewater disposal including treatment of wastewater for use in landscaping and irrigation. Policy PF-15 Require that sewage conveyance and treatment capacity be available in time to meet the demand created by new development or be assured through the use of financial guarantees to the City's satisfaction. Action PF-15a Amend the Taft Municipal Code to require the following for all development projects, excluding subdivisions: • That sewer/wastewater treatment capacity be available at the time of project approval. • That all required sewer/wastewater infrastructure for the project be assured through the use of financial guarantees to the City's satisfaction prior to the issuance of any building permit. • That all required sewer/wastewater infrastructure for a property be in place prior to the issuance for a Certificate of Occupancy for any structure or building on a site. • That sewer/wastewater infrastructure be phased to coincide with the phased development of large-scale projects. Action PF-15b Amend the Taft Municipal Code to require the following for all subdivisions to the extent allowed by state law: • That sewage/wastewater treatment capacity be available at the time of tentative map approval. • That sufficient capacity be available to accommodate the subdivision plus existing development, other approved projects using the same conveyance lines, and projects which have received sewage treatment capacity commitment. • That on-site and off-site sewage conveyance systems required to serve the subdivision be in place prior to the approval of the Final Map or their financing be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act. • That sewage conveyance systems within the subdivision be in place and connected to the sewage disposal system prior to the issuance of any Certificates of Occupancy. Model homes may be exempted from this policy as determined appropriate by the City. As discussed above, the TWWTP and the City's wastewater conveyance infrastructure would not be adequate to accommodate wastewater service demands resulting from the proposed GPU. However, implementation of the proposed General Plan policies listed above would reduce this impact by ensuring that adequate wastewater facilities would be available to serve new development. In particular, Policy PF-15 requires that sewage conveyance and treatment capacity be available in time to meet the demand created by new development and Action PF-3b requires the City to adopt master plans for the development of public facilities. In fact, the City is currently preparing a wastewater master plan to comply with this policy. Therefore, implementation of the proposed General Plan policies and associated action items would ensure that adequate wastewater services would be available, thus reducing wastewater service impacts to less than significant. Furthermore, new or expanded wastewater conveyance and treatment facilities needed to serve new development would undergo site-specific, project-level CEQA analysis at such time as they are proposed for development and their design and alignment are known.			

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	Therefore, impacts associated with wastewater conveyance and treatment facilities would be considered **less than significant**.			
Impact 4.13.6.2 Implementation of the proposed GPU could result in wastewater discharge that would exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board. This impact is considered **less than significant.**	Policy PF-15 Require that sewage conveyance and treatment capacity be available in time to meet the demand created by new development or be assured through the use of financial guarantees to the City's satisfaction. Action PF-15a Amend the Taft Municipal Code to require the following for all development projects, excluding subdivisions: • That sewer/wastewater treatment capacity be available at the time of project approval. • That all required sewer/wastewater infrastructure for the project be assured through the use of financial guarantees to the City's satisfaction prior to the issuance of any building permit. • That all required sewer/wastewater infrastructure for a property be in place prior to the issuance for a Certificate of Occupancy for any structure or building on a site. • That sewer/wastewater infrastructure be phased to coincide with the phased development of large-scale projects. Action PF-15b Amend the Taft Municipal Code to require the following for all subdivisions to the extent allowed by state law: • That sewage/wastewater treatment capacity be available at the time of tentative map approval. • That sufficient capacity be available to accommodate the subdivision plus existing development, other approved projects using the same conveyance lines, and projects which have received sewage treatment capacity commitment. • That on-site and off-site sewage conveyance systems required to serve the subdivision be in place prior to the approval of the Final Map or their financing be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act. • That sewage conveyance systems within the subdivision be in place and connected to the sewage disposal system prior to the issuance of any Certificates of Occupancy. Model homes may be exempted from this policy as determined appropriate by the City. Policy PF-11 Protect the quality and quantity of groundwater resources, including those that serve households and businesses which rely on private wells. Implementation of the above General Plan update policies would ensure that sewage conveyance and treatment capacity would be available in time to meet the demand created by new development. In addition, the City would be required to submit a report of waste discharge and to comply with prescribed WDRs for any new or expanded wastewater treatment facilities. Furthermore, the City is not currently exceeding any WDR limits and is working closely with the RWQCB to ensure compliance with the WDR order (Gorte, 2009). Therefore, it is anticipated that the City would continue to meet water quality discharge standards in the operation of its wastewater treatment facilities and this impact would be reduced to a **less than significant** level.	LS	None required.	LS
Impact 4.13.6.3 Implementation of the proposed General Plan update, as well as existing, planned, proposed, approved, and reasonably foreseeable development within the City's wastewater service area, would substantially increase wastewater flows and require additional infrastructure and treatment capacity to accommodate anticipated demands. However, implementation of proposed General Plan policies would require that wastewater treatment and infrastructure capacity be available in time to meet the demand created by new development. Therefore, this impact is considered to be **less than cumulatively considerable**.	The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative wastewater impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers. *Public Facilities and Services Element* Policy PF-2; Policy PF-3; Action PF-3a; Action PF-3b; Policy PF-4; Policy PF-5; Policy PF-6; Policy PF-7; Action PF-7a; Action PF-7b; Policy PF-8; Policy PF-9; Action PF-9a; Policy PF-11; Policy PF-13; Action PF-13a; Policy PF-14; Policy PF-15; Action PF-15a; Action PF-15b The proposed General Plan policies identified under Impact 4.13.6.1 above would reduce the proposed GPU's contribution to cumulative impacts associated with increased demand for wastewater services. These policies specifically require that public facilities be available on time to maintain desired service levels and avoid capacity shortages and negative effects on safety and quality of life, and that public facilities be funded by new development. Therefore, the proposed GPU would not contribute significantly to cumulative wastewater infrastructure impacts, and this impact is considered **less than cumulatively considerable**.	LCC	None required.	LCC
Impact 4.13.7.1 Implementation of the proposed GPU would result in increased demand for solid waste services and facilities to serve the Planning Area. This impact would be considered a **less than significant** impact.	Policy PF-2 Require developers to pay their fair share of the costs associated with development and redevelopment except as authorized by the City pursuant to Economic Development goals and strategies. Policy PF-3 Except when prohibited by state law, require that infrastructure systems be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life. Action PF-3a Require financial guarantees to assure infrastructure	LS	None required.	LS

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
	development to the City's satisfaction. Action PF-3b Adopt master plans for the development of public facilities, including phasing of improvements in a logical manner that encourages the orderly development of roadways, water and sewer facilities, and other public facilities. Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects. Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies. Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit. Implementation of the above policies would help to reduce the GPU's impacts to solid waste services by requiring that sufficient capacity be available in all public services and facilities on time to maintain desired service levels and avoid capacity shortages. Furthermore, waste generated at buildout of the GPU would not exceed the landfill's daily permitted capacity or maximum permitted capacity. Therefore, impacts would be considered **less than significant**.			
Impact 4.13.7.2 Implementation of the proposed General Plan update, along with other existing, planned, proposed, approved, and reasonably foreseeable development within the WKWMD service area, would result in increased demand for solid waste services. This impact is **less than cumulatively considerable**.	The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative solid waste impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers. *Public Facilities and Services Element* Policy PF-2; Policy PF-3; Action PF-3a; Action PF-3b; Policy PF-4; Policy PF-9; Action PF-9a The proposed General Plan policies identified under Impact 4.13.7.1 above would reduce the proposed GPU's contribution to cumulative impacts associated with increased demand for solid waste services. As the County currently has landfill capaCity available to serve cumulative demand, and future regional landfills would undergo project-specific environmental review, the project's contribution to cumulative solid waste impacts would be considered **less than cumulatively considerable**.	LCC	None required.	LCC
Impact 4.13.8.1 Implementation of the proposed GPU would require additional electrical, natural gas, and telecommunications services, including associated infrastructure. This is considered to be a **less than significant** impact.	Policy PF-2 Require developers to pay their fair share of the costs associated with development and redevelopment except as authorized by the City pursuant to Economic Development goals and strategies. Policy PF-3 Except when prohibited by state law, require that infrastructure systems be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life. Action PF-3a Require financial guarantees to assure infrastructure development to the City's satisfaction. Action PF-3b Adopt master plans for the development of public facilities, including phasing of improvements in a logical manner that encourages the orderly development of roadways, water and sewer facilities, and other public facilities. Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects. Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies. Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit. Implementation of the proposed General Plan policies listed above would ensure that public facilities, including electrical, natural gas, and telecommunications services would be available on time to maintain desired service levels and avoid capacity shortages and that the City would coordinate with electrical, natural gas, and telecommunications service providers when planning new development. In addition, subsequent development would be required to comply with energy efficiency standards in Title 24 of the California Code intended to minimize impacts to peak energy usage periods and to reduce impacts on overall state energy needs. Therefore, impacts would be considered **less than significant.**	LS	None required.	LS
Impact 4.13.8.2 Implementation of the proposed General Plan update, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would contribute to the cumulative demand for electrical, natural gas, and	The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative electric, natural gas and telephone service impact. Since these policies have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy numbers. *Public Facilities and Services Element* Policy PF-2; Policy PF-3; Action PF-3a; Action PF-3b; Policy PF-4;	LCC	None required.	LCC

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Impact	General Plan Policies and Action Items	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
telecommunications services and associated infrastructure. This is considered a **less than cumulatively considerable** impact.	Policy PF-9; Action PF-9a The proposed General Plan policies identified under Impact 4.13.8.1 above would assist in addressing cumulative effects related to the provision of electric, natural gas, and cable/television services in the Planning Area.			

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NI – No Impact LCC – Less Than Cumulatively Considerable CC – Cumulatively Considerable

3.0
PROJECT DESCRIPTION

This section describes the location of the City of Taft General Plan update ("proposed project"; "project"; "General Plan"; "GP"; "General Plan update"; or "GPU") both regionally and locally, discusses the existing conditions of the General Plan Planning Area (Planning Area), and describes the surrounding uses. A general description of the project's technical and environmental characteristics is provided. This section also describes the objectives for the project and the approvals and entitlements necessary to implement the project. The proposed project is the adoption and implementation of an updated General Plan for the City of Taft. The updated City of Taft General Plan would replace the existing General Plan, which was last comprehensively updated in 1986 (the General Plan Land Use and Circulation Element were updated in 2004).

The purpose of a City's General Plan is to function as a "constitution" for land use planning and to provide a basis for sound decisions regarding long-term physical development. The General Plan expresses the City's development goals and establishes public policy relative to the distribution of future land uses, both public and private. The General Plan also provides the bridge between community values, visions and objectives, and physical decisions such as housing, public works projects, and growth management. The General Plan must cover a local jurisdiction's entire planning area and address the broad range of issues associated with its management.

As the City of Taft (City) will be required to make a number of decisions on this project, all decisions subject to the California Environmental Quality Act (CEQA) are listed, and the implementation process is described in the order that it will occur, including both actions the City will take now and actions that may be taken in the future in association with the proposed project.

For a description of the background, purpose, intended use, and type of environmental impact report (EIR), as well as a list of agencies that are expected to use this EIR in their decision-making or permitting process, please refer to Section 1.0, Introduction, of this document. This project description has been prepared in compliance with State CEQA Guidelines Section 15124.

3.1 REGIONAL AND LOCAL SETTING

REGIONAL SETTING

The City of Taft is located at the southern end of the Central Valley in Kern County (County), approximately 40 miles southwest of the City of Bakersfield and about 100 miles northwest of the City of Los Angeles. Kern County is bounded on the north by Kings, Tulare, and Inyo counties, on the east by San Bernardino County, and on the south and west by San Luis Obispo, Santa Barbara, Ventura, and Los Angeles counties. The City's regional location is shown in **Figure 3.0-1**.

PROJECT LOCATION

The proposed project area or the General Plan Planning Area for the City of Taft General Plan Update includes the incorporated City and land outside the City limits (Expansion Area), as shown in **Figure 3.0-2**. The Planning Area covers roughly 157,570 acres of land, or about 246.2 square miles. This includes approximately 9,622 acres of land within the existing City limits and 147,948 acres of land within the Expansion Area (147,948 + 9,622 = 157,570). **Table 3.0-1** below provides the acreage of each portion of the Planning Area.

TABLE 3.0-1
PLANNING AREA ACREAGE SUMMARY

Area	Acres	Square Miles	Percentage of Planning Area
Incorporated City Limits	9,622	15.0	6.1
Expansion Area	147,948	231.2	93.9
Planning Area	157,570	246.2	100

PROJECT SETTING

The topography of much of the Planning Area is generally flat, with a relatively constant elevation and no major topographical features. The Planning Area does, however, include "Honolulu Hills", which lies between the City of Taft and Bakersfield. The City itself generally slopes from south and southwest to the north and northeast. The Valley floor is generally flat. The Kern River, the California Aqueduct, and other minor watercourses flow through the Planning Area. There are 21,126 acres of Prime Farmland and 76,452.6 acres of farmland protected by Williamson Act contracts located within the Planning Area. The reader is referred to Section 4.2 of this Draft EIR for more information regarding agriculture.

The Planning Area is crossed by four state highways, State Route (SR) 119, SR 33, SR 43, and SR 223. SR 166 borders the southern corner of the Planning Area, and Interstate 5 lies along its eastern boundary. The Taft-Kern County Airport, a general aviation airport, is located in the City limits. The closest commercial airline service to the area is available at Meadows Field in the City of Bakersfield, approximately 40 miles northeast of central Taft. The City of Taft's 2008 population was estimated to be 9,228 (DOF, 2007).

A summary of the existing land uses within the Planning Area is provided in **Table 3.0-2** and is illustrated in **Figure 3.0-3**. A summary of the existing City and County General Plan land use designations within the Planning Area is provided in **Table 3.0-3** and illustrated in **Figures 3.0-4** and **3.0-5**. The County General Plan land use designations apply to all land outside the Taft City limits. Upon annexation, this land would come under the jurisdiction of the City and the County General Plan would no longer apply. As shown in **Table 3.0-2**, the principal existing land uses within the Planning Area are agriculture, industrial (including commercial oil production), public and institutional uses (including parks, correctional facilities, the California Aqueduct and other canals, and federal lands/petroleum reserves), and vacant/undeveloped lands.

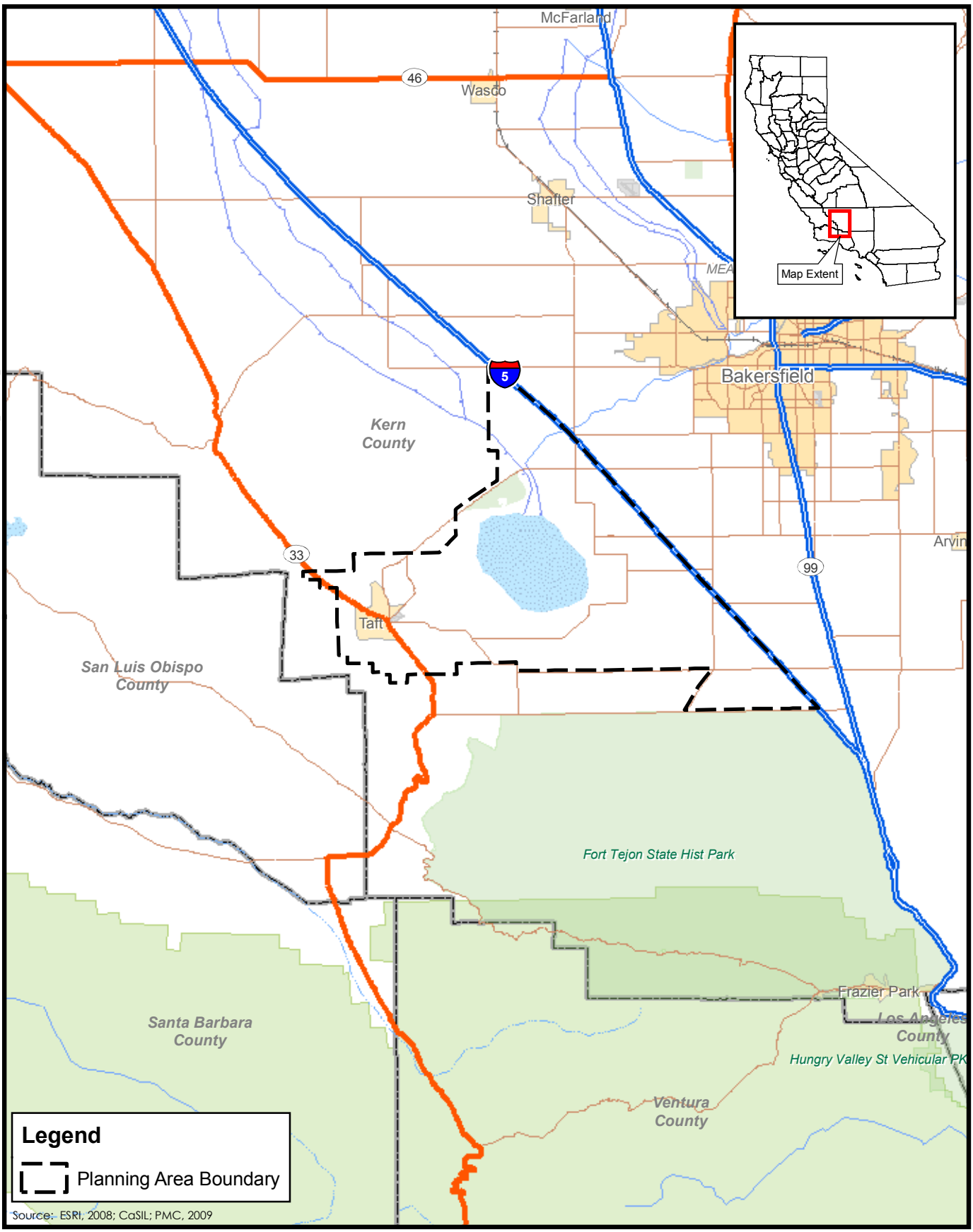

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Figure 3.0-1
Regional Location

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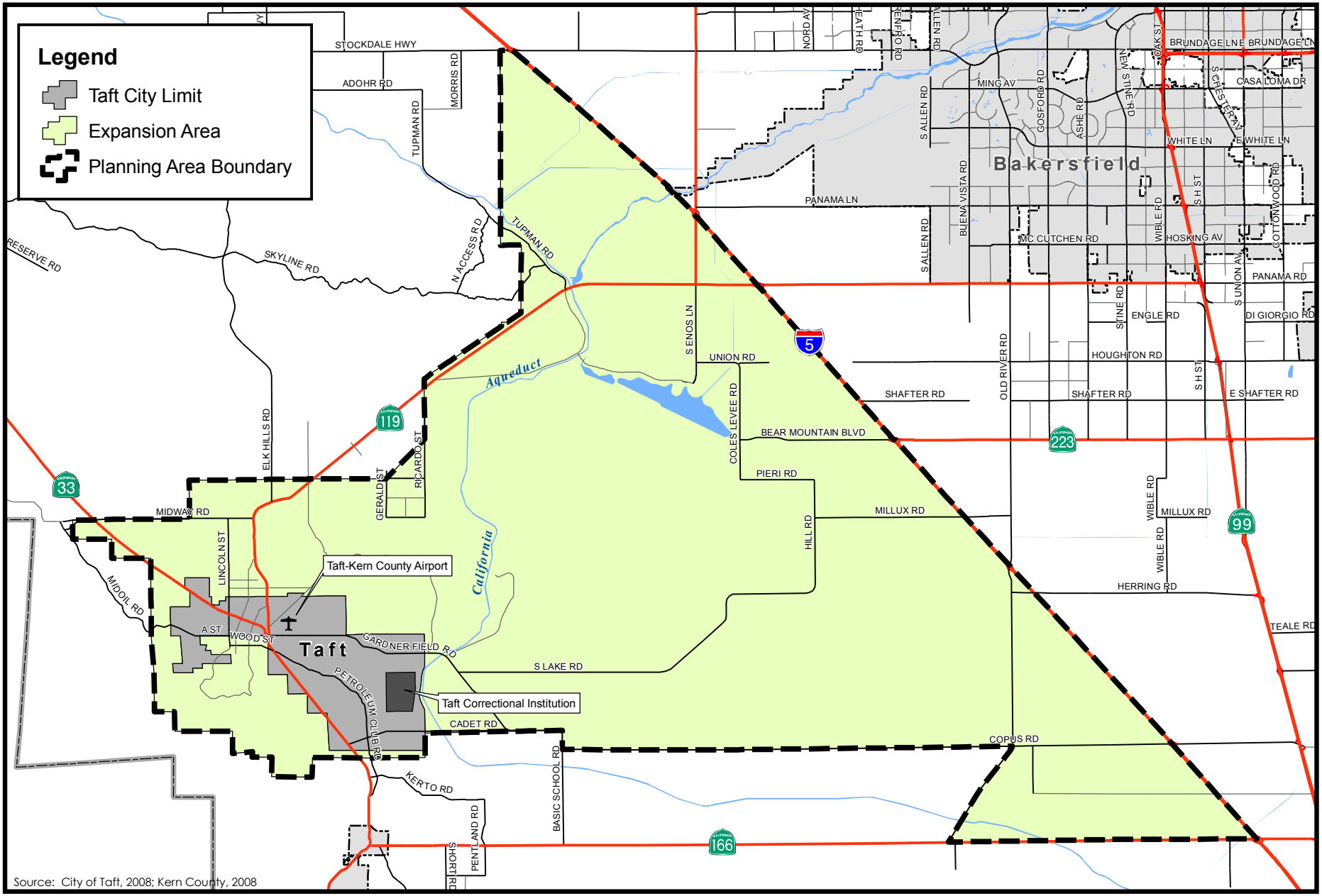

Source: City of Taft, 2008; Kern County, 2008

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Figure 3.0-2
General Plan Planning Area

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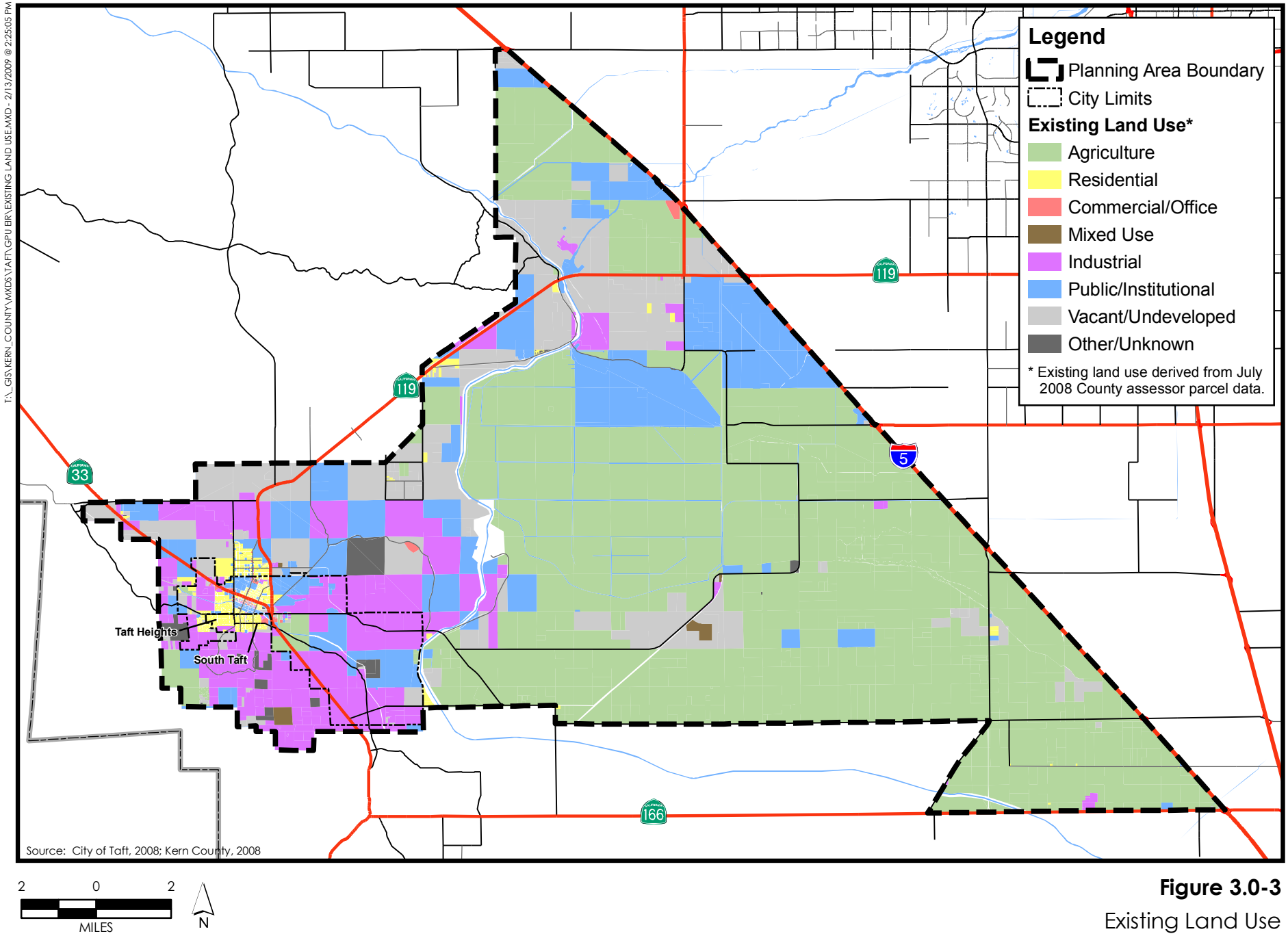

Figure 3.0-3

Existing Land Use

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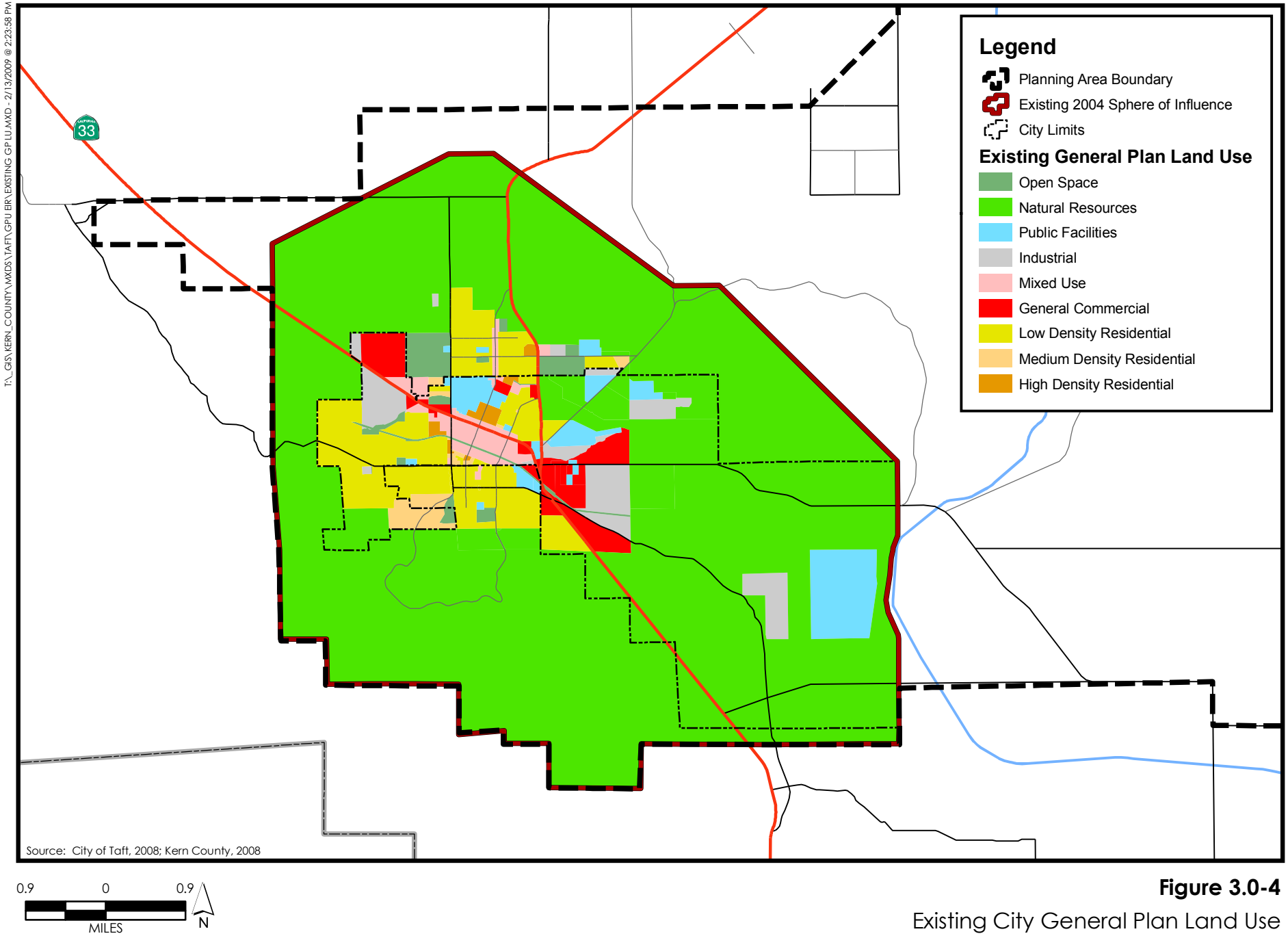

Figure 3.0-4

Existing City General Plan Land Use

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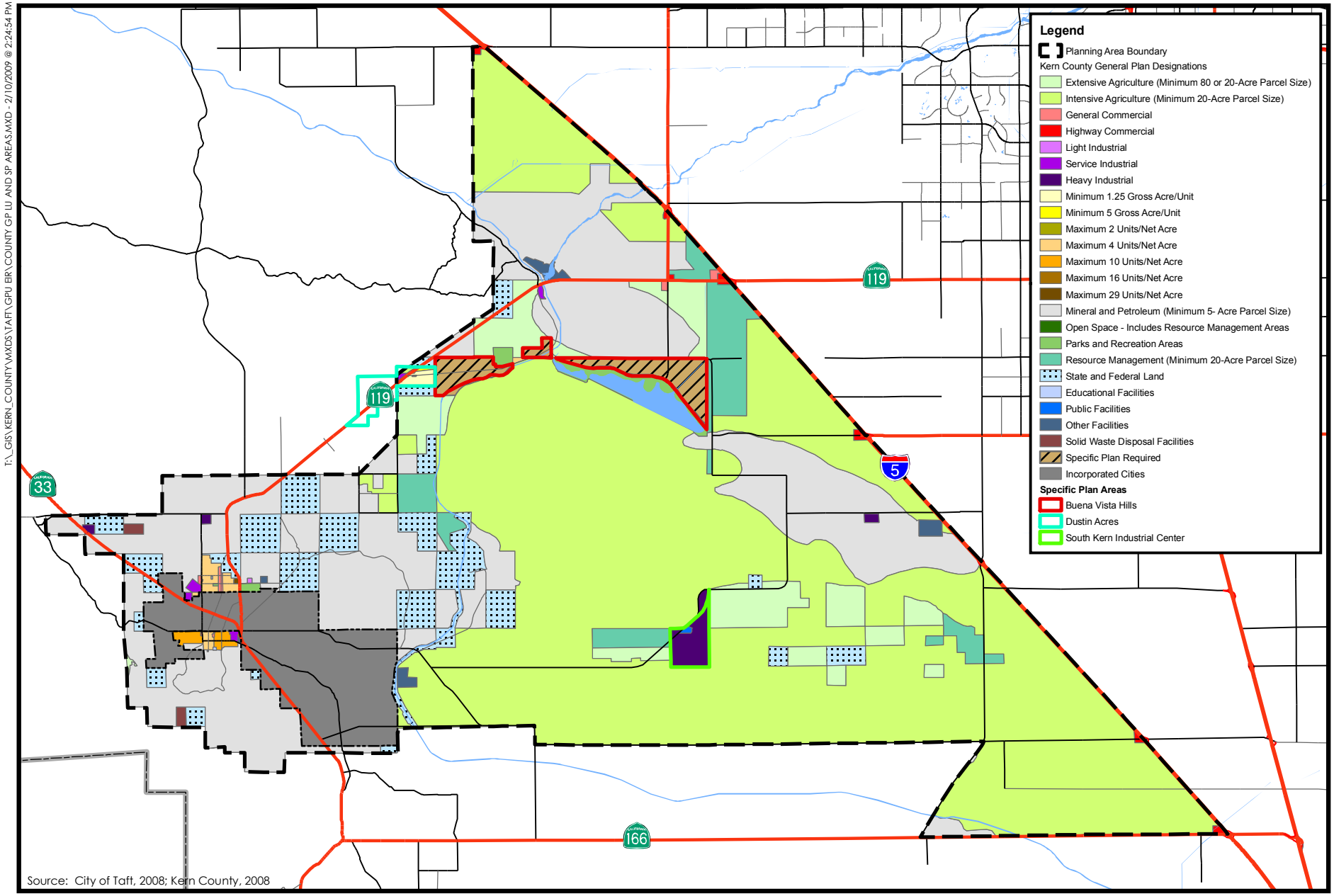

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Figure 3.0-5

Kern County General Plan & Specific Plan Areas

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TABLE 3.0-2
EXISTING LAND USES WITHIN THE PLANNING AREA (ACRES)

Land Use	City Limits	Expansion Area	Planning Area (total)	Percentage of Planning Area
Agriculture	562.3	88,796.7	89,359.0	56.7
Residential	400.1	870.5	1,270.6	0.8
Mixed Use	3.8	326.1	329.9	0.2
Commercial	84.2	151.1	235.3	0.2
Industrial (Including Oil Production)	5,072.3	11,978.4	17,050.7	10.8
Public/Institutional	2,182.0	20,047.3	22,229.3	14.1
Vacant/Undeveloped	655.3	20,461.8	21,117.1	13.4
Other/Unknown	164.1	1,210.4	1,374.5	0.9
Public Right-of-Way	497.9	4,105.7	4,603.6	2.9
Totals	**9,622**	**147,948**	**157,570**	**100**

Source: Kern County, 2009

TABLE 3.0-3
EXISTING CITY AND COUNTY GENERAL PLAN LAND USE DESIGNATIONS (ACRES)

Land Use Designation	City of Taft Existing (1986) General Plan		Kern County General Plan Land Use Designations within Expansion Area[1]
	Within City Limits	Outside City Limits, Within SOI	
Agriculture (A)	0	0	88,847
Natural Resources (NR)	5,932	12,559	51,559
Open Space (OS)	103	288	288
Rural Residential (RR)	0	0	29
Estate Residential (RE)	0	0	197
Low Density Residential (LDR)	956	928	978
Medium Density Residential (MDR)	139	64	64
High Density Residential (HDR)	70	13	13
Mixed Use (MU)	293	71	71
General Commercial (GC)	601	11	358
Industrial (IND)	738	27	1,061
Public Facilities (PF)	790	77	2,270
Specific Plan (SP)	0	0	2,213
Totals	**9,622**	**14,038**	**147,948**

Source: City of Taft, 2009; Kern County, 2009
Note: [1] Acreages in the third column are the sum of the acreages for columns one and two.

3.2 PROJECT BACKGROUND

REQUIREMENT TO ADOPT A GENERAL PLAN

California Government Code Section 65300, et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-range, and general document that describes plans for the physical development of a City or County and any land outside its boundaries that, in the City's or County's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, the following mandatory elements: land use, circulation, housing, conservation, open space, noise, and safety; further, the City or County can adopt additional optional elements. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the City's or County's vision for the area. The general plan is a long-range document that typically addresses a 20-year period. Although the general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

HISTORY OF THE GENERAL PLAN PROCESS

The City of Taft incorporated on November 7, 1910, and operates as a general law City. The last comprehensive update of the City's General Plan was certified in 1986, with subsequent amendments occurring since. A significant amendment to the City's Land Use and Circulation Elements was adopted in 2004. Additionally, the City's Housing Element was updated and adopted by the City Council in 2004. The City Council subsequently adopted an updated Housing Element in September 2008. The California Department of Housing and Community Development (DHCD) asked for certain revisions to that document, necessitating another revision by the City. On June 8, 2009, the DHCD informed the City that the revised draft will comply with the State Housing Element law (Article 10.6 of the Government Code) when adopted and submitted pursuant to Government Code Section 65585(g). The revised Housing Element was reviewed and approved by the Planning Commission on July 14, 2009 and by the City Council on July 21, 2009. The City's existing General Plan land use designations within the current City limits are shown in **Table 3.0-3** above and illustrated in **Figure 3.0-4**.

Unlike most communities in the Central Valley, Taft has not experienced significant growth in recent years. However, the City expects future growth will require the annexation of unincorporated portions of Kern County. The City acknowledges that development practices under the current General Plan have not consistently yielded high-quality development, as evidenced by the lack of innovative design features and community amenities incorporated within projects. In addition, the City desires to maintain and enhance the lifestyle of the region characterized by small cities and towns surrounded by agriculture production and natural resource protection. Furthermore, the City desires to provide the economic means to address the infrastructural needs of the unincorporated areas adjacent to Taft. For these reasons, the City has decided on a comprehensive update of its General Plan.

The General Plan for the City of Taft addresses all land within the existing City limits as well as that area beyond the City limits that bears relation to the City's planning efforts. This area is referred to as the General Plan Planning Area and encompasses 157,570 acres, as illustrated in **Figure 3.0-2**. The area outside of the current City limits represents a locale where the City of Taft has an interest in guiding land use and circulation decisions and is envisioned as the area into which the incorporated City boundaries may eventually expand. Currently, Kern County has jurisdiction and land use authority in those portions of the Planning Area outside the City limits (Expansion Area).

GENERAL PLAN UPDATE PROCESS

In 2007, the Taft City Council authorized an update to the City's General Plan. As a part of the proposed General Plan Update, an environmental impact report (EIR) assessing environmental issues associated with implementation of the proposed General Plan update was requested. The City contracted with PMC to prepare both the General Plan and the EIR for this project. Work commenced in 2008.

The updated General Plan will serve as the official policy statement for the City and guide future public and private development in the Planning Area (Government Code Section 65300).

Public participation has been an important part of the General Plan update process. The public has been involved, from the onset, with the identification of community issues and the formulation of goals. An Ad Hoc Vision Steering Committee made up of members of the public, City staff, stakeholders, and other agencies met throughout the General Plan update process to discuss issues related to economic development and housing, energy, land use and circulation, and public services, facilities, and safety. The Ad Hoc Vision Steering Committee included four subcommittees who worked on the issues noted above. Citizen groups and individuals also participated in the preparation of the General Plan through attendance at various General Plan public workshops held by PMC on October 22 and November 19 in 2008 and on February 25, 2009, as well as over 100 other public meetings.

3.3 PROPOSED CITY OF TAFT GENERAL PLAN UPDATE

The proposed project is adoption and implementation of an updated General Plan for the City of Taft. The General Plan is the constitution for the community's future. It provides a vision; goals, policies, and action items; and maps and diagrams (such as the land use and circulation diagrams) to guide the City's decisions regarding land use and growth. The updated General Plan provides policy direction regarding the City's future growth and designates land uses within the existing City limits and the Expansion Area (see **Figure 3.0-6**). While the City does not have land use authority over land areas outside of the City, the proposed General Plan Update provides direction on the City's vision of land use should those land areas be annexed to the City over the next 20 to 50 years.

PROJECT OBJECTIVES

The City of Taft has identified the following objectives or goals to be met through completion of the General Plan Update and associated EIR:

- Promote economic growth and new commercial and industrial development in the community that results in increased household income, higher wages, new jobs, and reductions in chronic unemployment;
- Enhance and increase the price-diversity of housing to attract and retain professionals and managers;
- Enhance existing and expand retail and commercial development opportunities;
- Enhance and improve the visual quality of the community through improvement of public facilities, increased landscaping standards, and gateway improvements;
- Manage plan area growth, including locations in Kern County, to preserve the economic integrity and visual quality of the non-urbanized community;
- Preserve natural resources in the community, including support for the continued use of agriculture;
- Incorporate "green" and sustainable practices into City policies and development practices; and
- Promote a housing-jobs balance to address the current daily in-commute of some 1,800 vehicles, which would also address clean air and energy savings goals.

COMPONENTS OF THE PROPOSED GENERAL PLAN

State law requires that general plans address seven topics: land use, circulation, housing, conservation, open space, noise, and safety. This General Plan covers all of these topics, with the exception of Housing, as well as three additional (optional) elements. The optional elements were chosen by the City to address specific issues that are important to the Taft community. As described previously in this section, the City adopted a new Housing Element in 2008 that is pending certification by the DHCD. On June 8, 2009, the DHCD informed the City that the revised draft will comply with the State Housing Element law (Article 10.6 of the Government Code) when adopted and submitted pursuant to Government Code Section 65585(g). The revised Housing Element was reviewed and approved by the Planning Commission on July 14, 2009 and by the City Council on July 21, 2009. As such, the proposed project does not include an update to the City's Housing Element. Following is a description of each proposed General Plan element. For a detailed description of the goals and policies for each element, the reader is referred to the City's updated General Plan (City of Taft General Plan, 2009).

Land Use Element

The proposed Land Use Element establishes the pattern of activity the Taft community envisions for the future and defines areas of the City for housing, business, industry, open space, recreation, education, public services, and other land uses. The goals and policies contained in this element address issues such as smart growth, land use compatibility, preserving and improving the community's character, open space and farmland conservation, and others.

LAND USE MAP

Land Use Categories

The proposed City of Taft General Plan includes the Land Use Map that combines specific land use designations in some areas of the City and more general descriptions of land uses in special areas planned for future growth referred to as "Planning Areas", which are described in more detail below. **Figure 3.0-6** shows the General Plan Land Use Map with Planning Area Boundary.

It is assumed that by 2035 lands within the existing City limits would be totally developed with approximately 13,837 residential units, a population of 37,374, approximately 683 acres of commercial uses and 545 acres of industrial uses, and roughly 25,257 new employees. By the General Plan buildout in 2050, the development capacity of the proposed General Plan Planning Area would be a total of 25,184 housing units, or an additional 11,347 units (25,184-13,837=11,347) post year 2035, a total population of 68,018, or an increase of 30,644 additional persons beyond year 2035 (68,018-37,374=30,644), approximately 2,024 acres (or an increase of 2,024-683=1,341 acres post year 2035) of commercial uses and 2,782 acres (or an increase of 2,782-545=2,237 acres) of industrial uses, and roughly 92,334 new employees (an increase of 92,334-25,257=67,077 employees from 2035 conditions). The total number of housing unit calculations take into account existing densities and units and assumes new development occurs at the highest potential level of density allowable within the applicable General Plan land use designation. Beyond 2035, the land uses anticipated to continue to be developed are very limited areas for residential development.

A total of 13 individual General Plan land use designations are proposed as part of the General Plan. **Table 3.0-4** provides a summary of the proposed General Plan designations for the Planning Area. **Figure 3.0-6** shows the proposed locations of each land use designation within the Planning Area. Each proposed designation is described in more detail below.

TABLE 3.0-4
SUMMARY OF PROPOSED GENERAL PLAN LAND USE DESIGNATIONS (ACRES)

Land Use Designations	City Limits	Expansion Area	Planning Area	Percentage of Planning Area
Agriculture (A)	0	86,929	86,929	55.2
Natural Resources (NR)	5,411	50,932	56,343	35.8
Open Space (OS)	100	59	159	0.1
Rural Residential (RR)	0	29	29	0.0
Estate Residential (ER)	0	197	197	0.1
Low Density Residential (LDR)	1,524	1,534	3,058	1.9
Medium Density Residential (MDR)	142	64	206	0.1
High Density Residential (HDR)	71	14	85	0.1
Mixed Use (MU)	357	256	613	0.4
General Commercial (GC)	541	1,238	1,779	1.1
Industrial (IND)	545	2,237	2,782	1.8
Public Facilities (PF)	931	2,246	3,177	2.0
Specific Plan (SP)	0	2,213	2,213	1.4
Totals	**9,622**	**147,948**	**157,570**	**100**

Source: City of Taft, 2009

Agriculture (A)

The Agriculture (A) land use designation provides areas where the predominant land use is and should continue to be agriculturally oriented and where land uses incompatible with agriculture should be precluded. This land use designation also allows the City to implement Williamson Act Land Contracts, including Farmland Security Zones, to ensure the continued viability of agriculture within the Planning Area. The maximum dwelling density for this designation is 1 dwelling unit per 20 gross acres, with the exception that a maximum density of one dwelling unit per 80 gross acres applies to land subject to Williamson Act contracts or classified as having prime agricultural soils.

Natural Resources (NR)

The Natural Resources (NR) land use designation is applied to lands that have proven petroleum, mineral, or biotic resources. Most of the land within this land use designation is utilized for oil-related uses, including exploration, reserves, pipelines, and storage facilities. Much of this land also provides secondary benefits, such as open space and wildlife habitat. The maximum dwelling density for this designation is 1 dwelling unit per 5 gross acres.

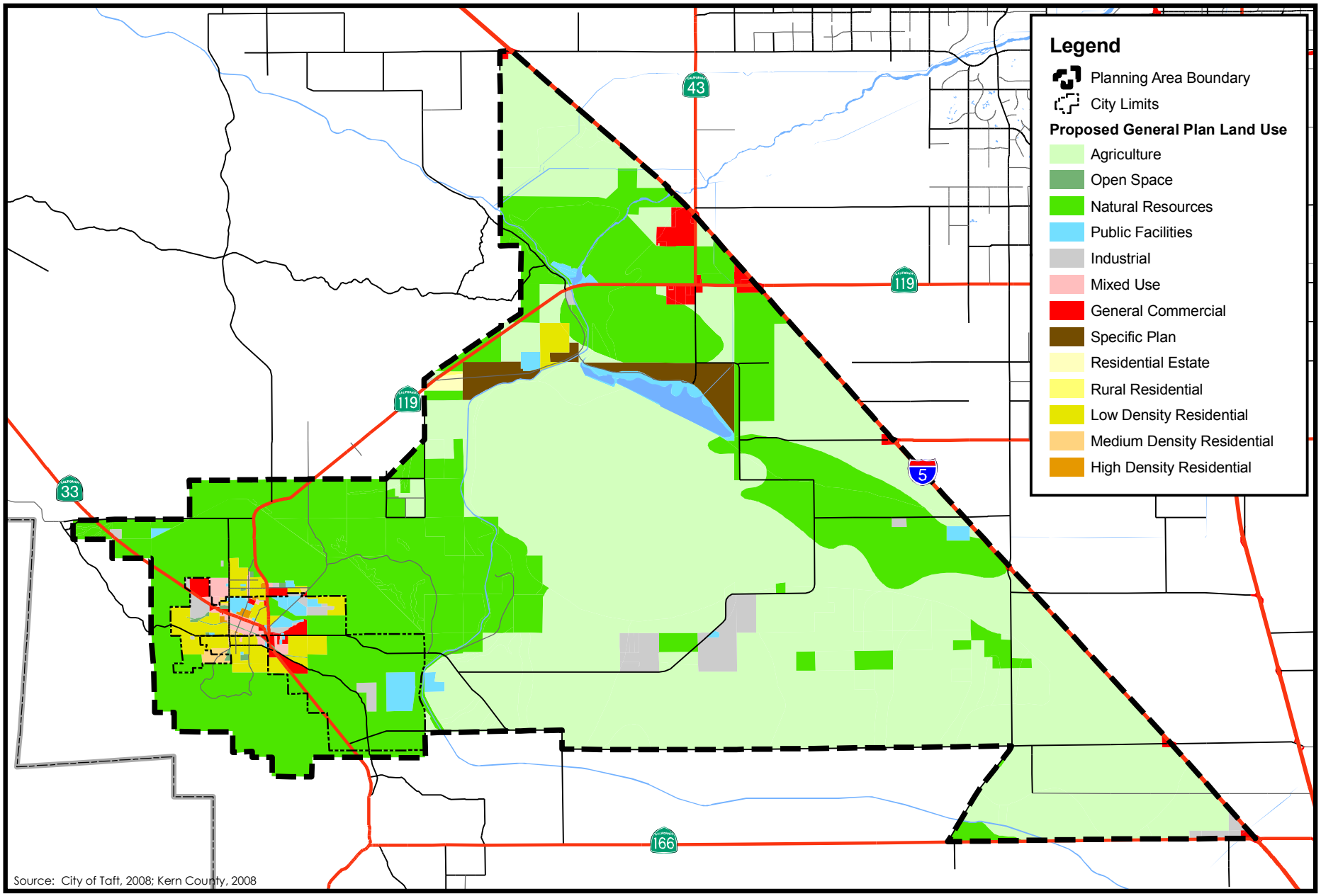

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Figure 3.0-6
Proposed General Plan Land Use

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Open Space (OS)

The Open Space (OS) land use designation is applied to lands that will remain generally free of buildings, except buildings incidental to active and passive parks. Land uses allowed include passive and active recreational facilities, including but not limited to parks, golf courses, and trails. There is no maximum dwelling density for this designation as no residential uses are allowed under this land use designation.

Rural Residential (RR)

The Rural Residential (RR) land use designation provides for and protects the rural atmosphere and lifestyle of the existing rural residential areas within the Planning Area. The maximum dwelling density for this designation is 1 dwelling unit per gross acre.

Estate Residential (ER)

The Estate Residential (ER) land use designation provides for and protects the large-lot estate atmosphere and lifestyle within the Planning Area. This land use designation is also appropriately used when estate residential developments are desired to promote larger-lot homes and where the overall density of an area should be limited because of public facility, safety, or aesthetic concerns. The maximum dwelling density for this designation is 2.5 dwelling units per gross acre.

Low Density Residential (LDR)

The Low Density Residential land use designation provides for low-density residential neighborhoods and will most likely consist of single family detached units or attached units with secondary dwelling units also permitted. Additionally, multiple family residential developments would be permitted on corner lots in single family residential neighborhoods. This designation is also intended to allow for limited neighborhood commercial development that is compatible with residential uses and located at the intersection of arterials/local streets or collectors/local streets. The maximum dwelling density for this designation is seven dwelling units per gross acre except on corner lots where the maximum density is 15 dwelling units per gross acre.

Medium Density Residential (MDR)

The Medium Density Residential (MDR) land use designation provides for medium-density residential neighborhoods consisting of more compact single-family development including detached units or attached units, or multiple-family units. This designation is also intended to allow for limited neighborhood commercial development that is compatible with residential uses and located at the intersection of arterials/local streets or collectors/local streets. The minimum dwelling density for this designation is 4 dwelling units per gross acre and the maximum dwelling density is 15 dwelling units per gross acre.

High Density Residential (HDR)

The High Density Residential (HDR) land use designation provides for high-density residential neighborhoods consisting primarily of attached units or multiple-family units. This designation is also intended to allow for limited neighborhood commercial development that is compatible with residential uses and located at the intersection of arterials/local streets or collectors/local streets. The minimum dwelling density for this designation is 8 dwelling units per gross acre and the maximum dwelling density is 29 dwelling units per gross acre.

Mixed Use (MU)

The Mixed Use (MU) land use designation encourages a mix of residential, office, and retail uses in the downtown area and other appropriate areas. The maximum dwelling density for this designation is 29 dwelling units per gross acre. The building intensity in this designation may cover the entire parcel and reach to several floors.

Commercial (C)

The Commercial (C) land use designation provides for the development of local and regional shopping centers, highway commercial land uses, general retail land uses, and office developments. The building intensity in this designation may cover the entire parcel and reach to several floors.

Industrial (IND)

The Industrial (IND) land use designation provides for development of industrial land uses including manufacturing, processing, light industrial, and alternative fuel or alternative energy land uses. This designation is also intended to allow for business park developments and limited complementary commercial land uses within light industrial developments. The building intensity in this designation may cover the entire parcel and reach to several floors.

Public Facilities (PF)

The Public Facilities (PF) land use designation is reserved for facilities that are operated by public agencies or which serve public agency functions, including state parks, schools, post offices, City hall and other government facilities, hospitals, airports, prisons, County offices, and similar uses. The building intensity in this designation may cover the entire parcel and reach to several floors.

Special Planning Area (SPA)

The Special Planning Area (SPA) land use designation applies to land within the Planning Area for which a master plan is required prior to its development. Such master plans would include land use designations, development standards, infrastructure plans, financing plans, and phasing and implementation plans for the subject area.

Circulation Element

The proposed Circulation Element was prepared to establish a safe, balanced, and efficient transportation system for the City and address issues related to motorized, non-motorized, and pedestrian traffic movement. Proposed roadway and bicycle and pedestrian trail improvements are shown on Figures 4.0-1a, 4.0-1b, and 4.0-2 of the Circulation Element. Proposed roadway improvements generally include increasing capacity of major collectors and arterials to accommodate projected growth and providing landscaping along key roadways through the City. Proposed bicycle and pedestrian trail improvements include the creation of multiple new trails through the City as well as connections to regional trails in the community of Fellows, the Buena Vista Recreation Area, and the City of Maricopa. The goals and policies contained in this element are intended to reduce air pollution and the need for parking, encourage cooperation with Caltrans to implement plans for area highways and freeways, and support continued operation of a Taft-Kern County Airport as well as private airports in the area.

Open Space and Conservation Element

The combined Open Space and Conservation Element addresses numerous issues related to natural resources, cultural/historical resources, and recreation including wildlife, vegetation, and habitat; waterways and riparian areas; water supply and quality; geology and mineral resources; agriculture; production and consumption of energy; historic buildings, archeological and paleontological resources; and parks and other recreational facilities and services within the Planning Area. The element provides goals and policies intended to protect important resources and to achieve the City's vision for open space and parks that are accessible to the community.

Energy Resources Element

This Element not only addresses energy demands within the Planning Area, but also energy production as the City has been a major oil production area since the early 1900s. The goals and policies contained in this element address issues such as urban encroachment on energy resources, waste disposal in petroleum development, environmental issues associated with energy production and consumption, and the processing and transportation of petroleum products within the Planning Area.

Noise Element

The Noise Element defines acceptable noise levels for representative types of land use (residential, office, industrial, etc.) within the City and Planning Area and provides goals and policies establishing how those levels will be achieved.

Safety Element

The Safety Element addresses present and anticipated concerns regarding the ongoing well-being of City residents, employees, and visitors related to fires, floods, earthquakes, landslides, and other hazards. Additionally, this element addresses safety and hazards related to groundwater contamination, traffic and pedestrian accidents, and the potential release of hazardous materials

into the community. The goals and policies contained in this element identify viable solutions to minimize the potential risk of death, injury, property damage, and economic hardship and social displacement that could result from these hazards.

Public Facilities and Services Element

The Public Facilities and Services Element addresses a broad range of topics related to infrastructure (i.e., the physical systems of water and wastewater lines, etc.) that allows the City to function. These topics include water, sewer, emergency and health care services, schools, and solid waste. The related topics of storm drainage and parks and recreation are addressed in the Health and Safety Element and Parks and Recreation Element, respectively.

Economic Development Element

The Economic Development Element seeks to sustain a strong economic base and is closely related to the other elements described here such as the Land Use; Open Space, and Conservation and Recreation Elements, as well as the Housing Element. The goals and policies contained in this element are intended to preserve the local economy, maintain a healthy jobs-housing balance, and attract and retain a diversity of quality businesses and jobs, while implementing smart growth planning and conserving open land.

3.4 OTHER PLANS AND POLICY STATEMENTS IN PLANNING AREA

In addition to the proposed General Plan Update, the City, Kern County, and other regional agencies have adopted or will be adopting the following additional plans and policy statements that apply to the Planning Area:

EXISTING/ADOPTED PLANS

- City of Taft Housing Element (2008 version adopted by City but not yet certified by DHCD)
- City of Taft Historic Preservation Plan (2007)
- City of Taft Downtown Specific Plan (1994)
- City of Taft Conceptual Design Guidelines for Downtown Revitalization
- City of Taft Master Grading/Drainage Plan (2002)
- Taft Community Development Agency Redevelopment Plan (1986, currently being revised)
- Taft Community Development Agency Five Year Implementation Plan and Housing Plan (2005—2009)

- Taft Five-Year Economic Development Strategy
- Kern County Regional Transportation Plan (2008)
- Kern County Airport Land Use Compatibility Plan (last updated in 2008)
- Kern County and Incorporated Cities Integrated Waste Management Plan
- Kern County and Incorporated Cities Hazardous Waste Management Program
- Bureau of Land Management, Caliente Resource Management Plan (1997)
- Kern County Disaster Preparedness Guide (2008)
- Kern County Multi-Hazard Mitigation Plan (2005)
- Kern County Terrorism Response and Recovery Contingency Plan (2003)

PLANS TO BE ADOPTED (IN PROGRESS)

- Taft Community Development Agency – Redevelopment Plan Revisions
- City of Taft/County of Kern (joint proposal) – Enterprise Zone
- City Of Taft – 2020 Municipal Service Plan
- Multiple County Councils of Government, the San Joaquin Valley Air Pollution Control District, and the Great Valley Center - San Joaquin Valley Blueprint
- Kern County - Kern Valley Floor Habitat Conservation Plan

3.5 INTENDED USES OF THE EIR AND APPROVAL PROCESS

This EIR provides a programmatic environmental review of implementation of the General Plan. Subsequent activities falling under the General Plan will use this EIR to focus the environmental review of the subsequent activity and use this EIR as the basis in determining whether the later activity may have any significant effects. If a new project is proposed that is not anticipated by the General Plan, or that may result in project-level environmental effects not addressed in this program-level EIR, the proposed project will be evaluated as required under CEQA. This EIR is not intended to prohibit consideration of future proposed projects or CEQA analysis of future proposed projects.

Following adoption of the General Plan and certification of the EIR by the City Council, all subsequent activities and development within the City will be guided by the goals and policies in

the updated General Plan. The City Council is anticipated to conduct the following subsequent activities to implement the General Plan:

The City would initiate a comprehensive amendment of the City of Taft Zoning Ordinance to achieve consistency with the adopted General Plan.

- The Zoning Ordinance would further define land uses and the development standards applicable to each of the General Plan's land use designations.
- The Zoning Ordinance would establish the land use entitlement process applicable to the land use designations.

The City would consider adopting financing programs or fee programs for public infrastructure.

The City would consider further analyzing and planning for public infrastructure such as roadway improvements consistent with the General Plan Roadway System Map, construction of parks, trails, infrastructure improvements (e.g., water distribution and treatment facilities, wastewater facilities, drainage improvements), other capital improvements, and natural resource preservation and/or restoration.

The City may conduct or consider further focused planning studies, including the preparation of a Downtown Master Plan and a set of Citywide Design Guidelines.

The City would consider approval of various private development entitlement requests (e.g., specific plans, master plans, tentative subdivision maps, design review, use permits) that are consistent with the General Plan and its Land Use Map.

CITY OF TAFT CERTIFICATION OF THE EIR

The updated City of Taft General Plan will be presented to the City of Taft Planning Commission for review, comment, and recommendations. The City of Taft City Council, as the City's legislative body, is the approving authority for the City of Taft General Plan. In order to approve the updated General Plan, the City Council would have to take the following actions:

- Certification of the City of Taft General Plan EIR.
- Adoption of required findings for the above actions, including required findings under the State CEQA Guidelines, Sections 15090, 15091, and 15093.
- Adoption of the City of Taft General Plan.

OTHER GOVERNMENTAL AGENCY APPROVALS

Additional subsequent approvals and permits that may be required from local, regional, state, and federal agencies in the processing of subsequent development permits include, but are not limited to, the following:

- Kern County Local Agency Formation Commission (LAFCo) approval of future requests to annex land into the City. LAFCo would also be responsible for approving the formation, reorganization, incorporation, or consolidation of special districts that provide services in the City or the Planning Area, approving changes to the City's Sphere of Influence (SOI), and any future updates to Municipal Service Reviews.

- San Joaquin Valley Air Pollution Control District approval of dust control plans and other permits for subsequent projects.

- California Department of Transportation (Caltrans) approval of improvements and/or funding for future improvements.

- Extension of service and/or expansion of infrastructure facilities by the City or other providers, including Kern County Fire and Emergency Services Department, California Department of Forestry and Fire Protection (CalFire), Taft Police Department, West Kern Water District, Arvin-Edison Water Storage District, Buena Vista Water Storage District, Henry Miller Water District, Kern Delta Water District, Kern Water Bank, Rosedale-Rio Bravo Water Storage District, Wheeler Ridge-Maricopa Water Storage District, Taft Community Development Agency, Taft Redevelopment Department, Taft Area Transit, Taft City School District, Pacific Gas and Electric Company (PG&E), California Public Utilities Commission (CPUC), Bright House Cable, Verizon and other telephone and wireless service providers, and others.

- Kern County review and/or approval of any activity impacting the local airport.

- State Office of Historic Preservation (SHPO) consultation for impacts to historic or cultural resources.

- California Department of Fish and Game approval of potential future streambed alteration agreements, pursuant to the Fish and Game Code. Approval of any future project with potential take of state-listed wildlife and plant species covered under the California Endangered Species Act.

- Central Valley Regional Water Quality Control Board (RWQCB) and State Water Resources Control Board (SWRCB) review and/or approval of any activity impacting Planning Area water features, including waters and wetlands of the state, and water quality certification, pursuant to the California Clean Water Act and RWQCB standards.

- U.S. Army Corps of Engineers (USCOE) approval of any future activities involving disturbance or fill of wetlands or waters of the U.S., pursuant to the federal Clean Water Act.

- U.S. Fish and Wildlife Service (USFWS) approvals involving any future potential take of federally listed wildlife and plant species and their habitats covered under the federal Endangered Species Act.

- U.S. Environmental Protection Agency (USEPA) concurrence with Section 404 of the Clean Water Act permit.

ADOPTION OF THE GENERAL PLAN

The City Council will consider adoption of the updated General Plan (essentially a General Plan amendment) following certification of the EIR. This adoption may include the addition of identified mitigation measures as policies and/or actions into the new General Plan. Before adoption, the City is required to make specific findings of fact pursuant to State CEQA Guidelines, Sections 15090, 15091, and 15093 regarding the significant environmental impacts of the project, the feasibility of measures to mitigate those impacts, and, if appropriate, a statement of overriding considerations. The City Council's action on the General Plan will be based on consideration of the recommendations of the City of Taft Planning Commission.

REFERENCES

DOCUMENTS

California Department of Finance (DOF). 2007. *E-4 Historical Population Estimates for City, County and the State, 1991-2000, with 1990 and 2000 Census Counts.*

City of Taft. 2009. *City General Plan GIS Data.*

WEBSITES

Kern County Assessor Office. 2009. *Kern Parcel GIS Data.*
URL: http://www.co.kern.ca.us/gis/downloads.asp. Accessed January 2009.

4.0
INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS AND ASSUMPTIONS USED

The following is an introduction to the environmental analysis of the project-specific as well as the cumulative impacts resulting from implementation of the proposed City of Taft General Plan Update ("GPU"; "GP"). This introduction describes the general assumptions used in the analysis. The reader is referred to the individual technical sections of the Draft Environmental Impact Report ("DEIR"; "Draft EIR"), Sections 4.1 to 4.13, regarding the specific assumptions and methodologies used in the analysis for that particular technical subject.

ANALYSIS ASSUMPTIONS GENERALLY USED TO EVALUATE THE IMPACTS OF THE CITY OF TAFT GENERAL PLAN UPDATE

BASELINE ENVIRONMENTAL CONDITIONS ASSUMED IN THE DRAFT EIR

The environmental setting conditions of the City of Taft (City) and the surrounding area are described in the individual technical sections of the Draft EIR (see Sections 4.1 through 4.13). In general, these sections describe the setting conditions of the City of Taft and the surrounding area as they existed when the Notice of Preparation (NOP) for the project was released on February 13, 2009. The Draft EIR also includes setting information that has been updated since release of the NOP, such as the status of large-scale development projects in the General Plan Planning Area (Planning Area).

This is in compliance with Section 15125(a) of the State CEQA Guidelines, which requires that an environmental impact report (EIR) include a description of the physical environmental conditions in the vicinity of a project, as they exist at the time the NOP is published. The CEQA Guidelines also specify that this description of the physical environmental conditions should serve as the baseline physical conditions by which a lead agency determines whether the impacts of a project are considered significant.

Table 4.0-1 presents the status of large-scale development projects in the proposed City of Taft General Plan Planning Area and throughout Kern County.

TABLE 4.0-1
PROPOSED AND APPROVED LARGE-SCALE DEVELOPMENT PROJECTS IN KERN COUNTY

Project Name	Location Description	Project Description	Current Status
City of Taft			
Hillard and A Street	Within City Limits; north of Midoil Rd. and west of Hillard Street	118-acre site for residential development with 254 dwelling units	Planned and Zoned; Proposed subdivision
Sunset RR/Union Pacific RR (Railway Site)	Within City Limits; south of SR 33 and east of N. Lincoln St., along Main St.	46-acre site for mixed-use development, including 900+ housing units	Purchased by City; design charrette conducted; RFQ for developer distributed; 1 developer responded
Liberty Plaza	Within City Limits; immediately west of SR 33 and south of E. Center St.	Hotel, restaurant and fueling station	City awaiting submittal of entitlement request
BCT Project	Outside City Limits; within South Taft area along 25 Hill Rd.	286-acre site proposed for residential development of approximately 500 units	Proposed
Kona Development	Within City Limits; west and east of SR 33; south of Gardner Field Rd.	1,300+ acre site proposed for golf course community with 3,500 dwelling units	Proposed
Future Regional Park	Within City Limits; east of SR 33; south of Gardner Field Rd.	452-acre site proposed for regional park	Proposed
Sanduphor Enterprises, Inc.	Outside City Limits; north and south of E. Cedar St., north of E. Ash St.	53-acre site for residential development of 132 dwelling units	Entitlements pending annexation; Annexation pending LAFCo approval which needs receipt of "will-serve" letter from West Kern Water District
City Industrial Park	Within City Limits; south of E. Ash St., east of Airport Rd.	28-acre site for city industrial park	Zoned but needs to be parcelized
Westside Industrial Park	Within City Limits; south of E. Ash St., east of Airport Rd.	72-acre site for industrial development	Entitled, but requires further parcelization as users need land
Equestrian Homes	Within City Limits; south of E. Ash St., west and east of Gas Company Rd.	185-acre site proposed for residential development, unknown dwelling unit count	Proposed

Project Name	Location Description	Project Description	Current Status
Kern County			
99 Houghton LLC by McIntosh and Assoc	Northeast corner of Houghton and 99	General Plan Amendment and Zoning Code Change for commercial and light industrial development	Active
Abdo Fadhel by Cornerstone Engineering	Northeast corner of Camanche Drive and Highway 58	General Plan amendment for commercial development	Active
Aero Energy/Cash Long	Northwest of Cameron Cyn and Tehachapi Willow	Zoning Code change	Active
Afentranger, Franz (Pine Dairy)	Standard Road and Brandt Road	Conditional Use Permit for new dairy (589 acres for dairy, 1,973 acres for crops)	Active
Ag Resources II, LLC/David Albers	½ miles north of Mrcd Road, ¾ miles west of Wildwood	Conditional Use Permit for new dairy (Moo West)	Active
Aguilare, Denise/Tehachapi Valley Ready Mix	South Street, Tehachapi	Conditional Use Permit for portable batch plant	Active
Airstreams, LLC by Don Ward	Southeast corner of Willow Springs and Jameson Road	General Plan amendment and Zoning Code change for light industrial development	Active
Al Graves by Wiley D. Hughes Surveying	½ mile west of Highway 84, end of Reynolds	General Plan amendment and Zoning Code change for residential development	Active
All Source Realtor	21011 Angel Street, Tehachapi	Real Estate Office	Active
Allyn, Greg by Don Ward	Northwest corner of Kingbird Avenue and 100th Street	Zoning Code change for estate residential	Active
Alta Windpower Development, LLC	Oak Creek Road and Cameron Road	Zoning Code change for wind energy development	Active
American Asphalt and Concrete Crushing/J Wilson	Northerly terminus of State Loop Drive	Conditional Use Permit for concrete, asphalt, and non-organic material crushing and recycling facility	Active
Amherst Investments	Stallion Springs Drive	41 Condo units	Active
Andreatta, Carla/Richard Carr	17504 and 506 Stockdale	Zoning Code change for retail development	Active

Project Name	Location Description	Project Description	Current Status
Anterra Energy Services	Highway 166, east of Maricopa	Condition Use Permit for non-hazardous waste treatment and recycle facility	Environmental Review
Arnold, Wayne	Northwest corner of Birch and Laurel/Mt. Mesa	Zoning Code change for light industrial development	Active
Arosso, LLC	East side of Arosa Road, ¼ miles south of Banducci	General Plan amendment and Zoning Code change for estate residential development	Active
Ashwood Custom Homes	East terminus of Sierra Vista Drive	Zoning Code change for residential development	Active
AV Design Group	Rosamond Boulevard between 70th and 80th	Zoning Code change commercial and residential development	Environmental Review
Babby Kurian	Northwest corner of Union and Barton Street	General Plan amendment and Zoning Code change for mini-storage facility	Active
Bakersfield Land Company	West side of Costajo Rod north of Bear Mountain Boulevard	General Plan amendment and Zoning Code change for light industrial development	Negative Declaration prepared, awaiting approval
Bakersfield Investors 280 LLC	Northwest corner of Nord and Hageman, Rosedale	General Plan amendment for residential development	Active
Bakersfield Land Investment/McIntosh and Associates	Southeast corner of Nord Avenue and Reina Road	General Plan amendment and Zoning Code change for residential development	Active
Banducci Farming, LLC	Dairy Road and Adohr Road	Conditional Use Permit for two dairies	Active
Barton, Larry by Pinnacle Civil Engineering	North side of Knox Avenue, 250 feet west of 40th Street	Zoning Code change for residential development	Active
Big Iron Construction/ D Spoor	PTN NE/4 SEC 8	Condition Use Permit for surface mine and reclamation	Active
Bittner, Edward/Jeane Harrigal	1400 West Orange Street, Rosamond	Conditional Use Permit for Salvage yard	Active
Blackhawk Land Co. II/Lonnie Oman	East and West sides of Rudd Road north of Hageman	General Plan amendment, Zoning Code change and Conditional Use Permit for residential development	Active

Project Name	Location Description	Project Description	Current Status
BLH Development, LLC	East of Interstate 5 near Kern County/Los Angeles County border	General Plan amendment and Zoning Code change for residential development	Active
Bloomfield/Tillema, Rich/John Schaap	Bear Mountain Road and Cottonwood Road	Conditional Use Permit for dairy (193 acres for dairy, 1,081 acres for crops)	Active
Blue Eagle Lode Mining Company	Seven miles north of Willow Springs	Conditional Use Permit for reclamation plan for underground mine	Active
Blue Eagle Lode Mining Company	Tropico	Conditional Use Permit and Zoning Code change for ore crushing and processing	Active
Bolanos, Vilante by Smith Tech/USA, Inc.	Round Mountain Road	General Plan amendment and Zoning Code change for low density residential development	Active
Burke Engineering	Serendipity Avenue and Lumill Street	General Plan amendment for residential development	Active
Burley, Ronald and Susan	2035 South China Lake Boulevard	General Plan amendment and Zoning Code change for commercial development	Active
Cal Cart/WZI	Northeast corner of Frazier Mountain Park Rod and Cuddy Canyon Road	Conditional Use Permit for surface mine/reclamation operation	Environmental Review
Calash, LLC/John Ferguson	Famoso Airstrip/Woody Road, Bakersfield	Conditional Use Permit for processing facility of soil amendment	Active
Caliente Sand Co.	Northeast quarter of Section 30	Conditional Use Permit for surface mine and reclamation plan – sand and gravel	Active
California Builders	South side of Poplar Street	Zoning Code change for residential development	Active
Carriage Homes	Southwest corner of Weedpatch Highway and Mountain View Road	General Plan amendment and Zoning Code change for mixed-use development	Active
Central Valley Investors	Southeast corner of Olive Drive and Victor Street	General Plan amendment, Zoning Code change and Conditional Use Permit for drug store	Active
Chau, Munn by Pinnacle Engineering	Northwest corner of Taft Highway at Michele Street	Zoning Code change for commercial development	Active
Chevron Energy Solutions	Turner Lane at China Grade Loop	Conditional Use Permit for solar energy project (2	Active

Project Name	Location Description	Project Description	Current Status
		megawatts)	
Chipres, Salvadore	West side of Weedpatch, ½ miles north of Panama R	General Plan amendment and Zoning Code change for commercial development	Active
Chisholm Ranch	South half of Section 33	Conditional Use Permit for dairy	Active
CN Holdings by San Joaquin Engineering	Southwest corner of Highway 58 and Highway 43	Zoning Code change for large lot residential and commercial development	Active
Community Recycling	1261 No. Wheeler Ridge Road	Condition Use Permit for concrete crushing and screening operation	Active
Cooper, George	2654 Nord	Zoning Code change for commercial development	Active
Copeland, Edward	3233 Placer, Ridgecrest	Conditional Use Permit and zoning variance for dairy	Active
Coram California Development	Cameron canyon Road	Zoning Code change for wind energy facility	Active
Cornerstone/PVC Plumbing	Northwest corner of Gateway and Saratoga	Zoning Code change for residential development	Active
Buena View Dairy	South side of S. Lake Road, ½ mile west of Hill Road	Conditional Use Permit for dairy (230 acres for dairy, 1,055 acres for crops)	Active
Gardner View Dairy	South side of S. Lake Road, 2.5 miles	Conditional Use Permit for dairy (194 acres for dairy, 930 acres for crops)	Active
Sunset Express Dairy	North side of S. Lake Road, 2 miles west of Sunset RR	Conditional Use Permit for dairy	Active
Daljit Singh Sidhu and Gurpeet Sidhu by JR Design CP	31121 Sherwood Avenue	General Plan amendment, Zoning Code change and Conditional Use Permit for Community Facility	Active
De Vries Dairy #3	30586 Elmo Highway, McFarland	Conditional Use Permit for dairy (38 acre dairy with 352 acres for crops)	Active
Del Toro, Joe/Jim Marino	5516 Weedpatch	Conditional Use Permit for Ag trucking facility	Active
Delgado by Jaime Sandoval	West side of Union Avenue, 5/8 miles south of Bear Mountain	General Plan amendment and Zoning Code change for residential development	Active

Project Name	Location Description	Project Description	Current Status
Denela, LLC	Southwest corner of Seventh Standard and Chester Avenue	General Plan amendment and Zoning Code change for major commercial development	Environmental Review
Denela, LLC/Dewalt Corp	Southeast corner of Airport Drive and Seventh Standard	General Plan amendment and Zoning Code change for commercial development	Active
Domingues/Cuevas by Afinar Civil Engineers	Northeast corner of Di Giorgio Road and S. Union Avenue	General Plan amendment and Zoning Code change for commercial development	Active
Downs, Gordon/Pinnacle Engineering	East side of Highway 99 at 7th Standard Road	Zoning Code change for warehouse/office development	Active
Palm Ranch Dairy	Southwest corner of Dairy Road and Adohr Road	Conditional Use Permit for dairy (121 acres for dairy, 935 acres for crops)	Active
Eagle Energy/Cornerstone	Sand Canyon, Tehachapi	Zoning Code change for 95-acre wind energy development	Active
Eagle Meadows Development by Scott Roylann	North Edwards Specific Plan area	General Plan amendment for residential development	Active
Eisenberg, Donald/Cornerstone	Southwest corner of Holiday Avenue and 55th Street West	Zoning Code change for residential development	Active
EK Development/HFM Group	North Rosamond Boulevard, 400 feet west of 50th Street West	General Plan amendment and Zoning Code change for residential development	Active
Empresa Tenedora by Dewalt Corp.	Northwest corner of Chester and Merle Haggard Drive	General Plan amendment and Zoning Code change for residential development	Active
Enos Properties, LLC	Southeast corner of Beech Avenue and San Diego Street	General Plan amendment and Zoning Code change for light and medium industrial development	Active
Erro, Edward/Porter-Robertson	East side of Interstate 5, north of Taft Highway	Zoning Code change for medium industrial development	Active
Fisher Sand and Gravel Co.	Southwest corner of 75th Street West and Reed Avenue	Conditional Use Permit for surface mining and reclamation plan	Active
Flying J/Simpson-Vancuren Inc.	Portion of southeast quarter of Section 32	Conditional Use Permit for sewage treatment plant	Active

Project Name	Location Description	Project Description	Current Status
Fowler, Tom	24885 Highway 33, Fellows	Zoning Code change for office/warehouse development	Active
Frazier Park Estates/Cornerstone	Frazier Mountain Park Road	General Plan amendment for residential and commercial development	Active
Galonska, Siegfried/Christine by French and Associates	Frazier Mountain Park Road, ¾ miles east of Mt Pinos	General Plan amendment and Zoning Code change for manufacturing facility	Active
Generations/Michael Mitchell	South side of Hanawalt Between McCoy and Gun Club	Conditional Use Permit for diary (320 acre dairy, 1,200 for crops)	Active
GF Industries	Highway 58, 4 miles west of McKittrick	Conditional Use Permit for surface mining and reclamation plan	Active
Gholam R. Saidi	20th and Patterson, Rosamond	General Plan amendment and Zoning Code change for light industrial development	Active
Gill, Punit K by GW Wilson	Northeast corner of Gosford and Chaidez	Zoning Code change for residential development	Active
Goertzen, Vernon	4358 Laval Road, Arvin	Conditional Use Permit for 5-acre wallboard processing to gypsum facility	Active
Gonzalez, Olympo/V Mariscal	11475 Garzoli Ave	Conditional Use Permit for outdoor arena including concerts	Active
Goose Lake Ranch/Andrew Samarin	Northwest of Lerdo Highway at Interstate 5	Conditional Use Permit for dairy	Active
Granite Construction Co.	South side of Selden Avenue, 1 mile west of Tejon	Condition Use Permit for surface mining and reclamation plan	Active
Granite Construction/RL Abbott	Portion of Section 9	Condition Use Permit for surface mining and reclamation plan	Active
Gravis, Corkey/Metro Ready Mix	Southeast corner of Enos Lane at Union	Conditional Use Permit for concrete batch plant	Active
Griffith Company	39439 Edmonston Pumping Plant Road	Conditional Use Permit to expand surface mining and reclamation plan	Active
Grimmway Enterprises by	North side of Copus Road, east side of	General Plan amendment and Conditional Use	Active

Project Name	Location Description	Project Description	Current Status
McIntosh	Interstate 5	Permit for composting facility	
Hageman Properties/Delmarter	West side of Dennis McCarthy Drive	Conditional Use Permit for 184-space recreational vehicle park	Active
Hearthstone Adult Services	1932 Jessie Street	General Plan amendment, Zoning Code change and Conditional Use Permit for community correctional facility	Active
Helmstetler, Douglas/Nelms Surveying	Northeast corner of Big Springs Road and Shadow Mountain Drive	Zoning Code change for residential development	Active
Hidden Oak Development by Stantec	North side of Kern Canyon Rod, east of Morning Drive	Zoning Code change for residential development	Active
Hinesly, Floyd/Porter-Robertson	4253 Renfro Road	Zoning Code change for manufacturing facility	Active
Hoffman Summit Wind Project, LLC	Jawbone Canyon	Zoning Code change for wind energy development	Active
Hopkins Real Estate/Robert Exel	Northwest corner of Rosedale and Renfro	Retail and restaurant development	Active
Indian Wells Valley Land LLC	Northeast corner of Sierra Street and Monache Mountain Avenue	General Plan amendment, Zoning Code change and Condition Use Permit for golf course expansion and reconfiguration	Active
JBRCY LLC/Richard Yang	East Mojave	Zoning Code change for solar energy development	Active
Jim's Supply by RL Abbott and Associates	16030 Driver Road	General Plan amendment for service industrial development	Active
JMM Bakersfield, LLC by SmithTech/USA	Snow and Martin Road	General Plan amendment for residential development	Active
Johnson, Harold and Rosalie/French and Associates	West side of Interstate 5 in southeast quarter	Zoning Code change for commercial development	Active
Jose Ramos by Jaime Sandoval	West side of Union Avenue, ½ mile south of Bear Mountain	General Plan amendment and Zoning Code change for residential development	Active

Project Name	Location Description	Project Description	Current Status
Jouda, Hosam/Marino and Associates	Rosedale at Nord	Zoning Code change for commercial development	Active
Juarez, Ethel	10604 South H	Zoning Code change for commercial development	Active
Kenneth Kerr	Southwest corner of Enos Lane and Highway 119	General Plan amendment and Zoning Code change for light industrial development	Active
Kern County Fire Fighters/Tim Holliday by Stantec	South side of Hageman	Zoning Code change for light manufacturing development	Active
Kern County Planning Department	1710 Golden Cat Road	General Plan amendment and Zoning Code change for heavy industrial development	Active
Kern County Waste Management	Taft Landfill, Elks Hills Road	General Plan amendment for expansion of existing landfill	Active
Kern County Waste Management	Int Sycamore Road and Wheeler Ridge Road	Zoning Code change for closure of Arvin landfill	Environmental Review
Kern Oil and Refining Co.	½ mile south of Panama Between Arvin and Weed	General Plan amendment for heavy industrial development	Active
Kilby, Sidney	North side of Highway 58, two miles east of Mojave	General Plan amendment and Zoning Code change for heavy industrial development	Active
King, Karl/Richard Beigle	Northwest corner and northeast corner of Sopp Road and Highway 14	General Plan amendment and Zoning Code change for residential development	Active
King, Woods	220 Industrial Street, Bakersfield	Conditional Use Permit for vehicle wrecking/salvage yard	Active
Kirschenman, Wayne and Virginia by Frank Slinkard	DiGiorgio and S. Comanche	Zoning Code change for commercial development	Active
Kjelstrom and Associates/Service Rock Products Co.	South side of Highway 58, ¼ mile east of Janata Street	General Plan amendment and Zoning Code change for medium industrial development	Active
Kosareff, Joseph by E&R Surveying and Consulting	North side of Rosedale Highway, 330 feet east of Jenkins	General Plan amendment and Zoning Code change for commercial development	Active

Project Name	Location Description	Project Description	Current Status
Lane, Charlene by Cornerstone Engineering	Northwest corner of Eagle Way and Poplar Street	Zoning Code change for commercial development	Active
Largent Group, LLC, Cornerstone	Northwest corner of 75th Street West and Edwards Avenue	Zoning Code change for auto repair and storage facility	Active
Lavers, Diedre by Berry and Associates	Northwest corner of State Highway 155 and Jacks Ranch Road	General Plan amendment and Zoning Code change for residential development	Active
Liberty V Biofuels Power, LLC	East side of Holloway Road, 3 miles south of Twisselman	Conditional Use Permit for 20 megawatt power plant (burns biosolids)	Environmental Review
Liquid Waste Management/Rodney Walter	56533 Highway 58 West	Conditional Use Permit to expand Class II landfill	Active
Lisciandro, Charles	2510 Calloway Drive	Zoning Code change for commercial development	Active
Loma Vista Real Estate	3130 DiGiorgio Road	Zoning code change for residential development	Active
Lopez, Salvador by Jaime Sandoval	8621 Weedpatch	General Plan amendment and Zoning Code change for residential and commercial development	Active
LTREIG, LLC by Cornerstone	Glendower and Flint, north of Edwards	Zoning Code change for residential development	Active
Lynn and Shelley Gudmundson	1730 Calloway Drive	General Plan amendment and Zoning Code change for commercial/light industrial development	Active
M&B Land	4650 Rosedale Lane	Conditional Use Permit for concrete asphalt recycling facility	Environmental Review
Marks, William/San Joaquin Engineering	Southeast of Highway 178, Lake Isabella	Zoning Code change for mini-storage facility	Active
Marshall, Doug	Northeast corner of 20th Street West and George Avenue	General Plan amendment for residential development	Active
Martin Bros. Development, Inc.	Grande Terrace Drive and Frazier Mountain Park	General Plan amendment for residential development	Active
Martin Bros. Development, Inc.	Southeast corner of Brentwood and Rosewood	Zoning Code change for residential development	Active

Project Name	Location Description	Project Description	Current Status
Martin, Curtis by Nelms Surveying	Hayride Road, east of Interstate 5	General Plan amendment and Zoning Code change for residential development	Active
Matuk, Mike and Aileen/Marino and Associates	North side of Stockdale Highway, ¼ mile east of Enos Lane	General Plan amendment and Zoning Code change for residential development	Active
McGeough, Jim	Portion of north half of northeast quarter of Section 22	Zoning Code change for residential development	Active
Mettler County Water District	W. Route 99 and W. Mettler Frontage Road	General Plan amendment and Zoning Code change for commercial development	Active
Miles, George/Pinnacle Engineering	26760 Stirrup Way, Tehachapi	Zoning Code change for residential development	Active
Millennium Energy, LLC	36157 Famoso Road	Conditional Use Permit to allow for a biomass cogeneration facility	Active
Miranda, Jimmy/A V Design Group		Zoning Code change for light industrial development	Active
Mitchell, Mara	1.5 miles south of Route 119/Enos Lane	General Plan amendment and Zoning Code change for residential and commercial development	Active
Monterey Homes, LLC	Rosamond Boulevard West of 40th Street West	General Plan amendment and Zoning Code change for residential development	Active
Monterey Homes, LLC	Elder and 30th Street West, Rosamond	General Plan amendment and Zoning Code change for residential development	Active
Monterey Homes, LLC	Southwest corner of 40th Street West and Willow Avenue	Zoning Code change for residential development	Active
Monterey Homes, LLC	West side of 52nd Street, ¼ mile south of Holiday	Zoning Code change for residential development	Active
Neighborhood Development LLC by Andreis Lewis	Rosedale Highway at Driver Road	Zoning Code change for mixed-use development	Environmental Review
Nickie Lee Silk by WRA Engineering	North side of Highway 14 and 58, Mojave	General Plan amendment and zoning Code change for residential development	Active

Project Name	Location Description	Project Description	Current Status
North Gate Development, LLC	North side of Highway 58, 1 mile east of California City Boulevard	General Plan amendment for highway commercial development	Active
North Kern (Stueve Bros.)/D Albers	West side of Rowlee Road at Cecil Avenue	Condition Use Permit for dairy	Active
Northstar Energy/Darrell Wagoner	Waterloo Road	Conditional Use Permit for non-hazardous waste facility	Active
Northwest Land Development, LLC/Stantec	East side of Heath Road, north of Noriega (section 15)	Zoning Code change and General Plan amendment for residential development	Active
NSR Investors	South side of Suckow, west of Flint	Zoning Code change for light industrial development	Active
NuVentures Properties, LLC	Welsh and Rosedale Highway	General Plan amendment and Zoning Code change for mixed-use development	Active
Old Town Ranch/Liston, Leonard	Old Town Road, Tehachapi	Zoning Code change for residential development	Active
Pace, Milton	13594 Devils Den Road, Lost Hills	Conditional use Permit for ethanol facility	Active
Pam Development/Cornerstone	Southwest corner of Inyokern Road/Brady	Zoning Code change for light industrial development	Active
Pannon Design and Development	East side of Tehachapi-Willow Springs Road	Zoning code change for residential development	Active
Patterson, Ed by Dewalt Corp	Northwest corner of Rosedale and Enos Lane	General Plan amendment and Zoning Code change to subdivide property and develop trucking facility	Active
Pender, Birch	20221 Valley Boulevard, Tehachapi	Zoning Code change to develop furniture store	Active
Petro Properties, LLC	¾ mile east of Highway 65, ½ mile north of 7th	General Plan amendment for heavy industrial development	Active
Plains LPG Services/R L Abbott	West side of Beech Avenue between Imprl and 7th Street Road	General Plan amendment and Zoning Code change for industrial development	Active
Platner, James by HMF Group	25th and Willow	General Plan amendment for residential development	Active

Project Name	Location Description	Project Description	Current Status
Poeschel Land Development	17191 Highway 46, Lost Hills	Zoning Code change for commercial development	Active
Porter and Associates	Northeast corner of Meacham at Renfro	General Plan amendment and Zoning Code change for commercial development	Active
Premier Billboard	1039 Mettler Frontage Road West	General Plan amendment and Zoning Code change for commercial development	Active
Reddy, Vikram D.	Northwest corner of Highway 99 and Highway 166	General Plan amendment and Zoning Code change for commercial development	Active, specific plan required
Rex Kelling by E&R Surveying and Consulting	Southeast corner of Dolphin and China Lake	General Plan amendment and Zoning Code change for commercial development	Active
Rick Cottrell by Cornerstone Engineering	South side of Highway 202, 350 feet west of Golden H	Genera Plan amendment and Zoning Code change for commercial development	Active
Rock Creek Ranch	Southwest corner of Steuber and Abajo	Conditional Use Permit for sewage treatment plant	Active
Rogers Family Cummings Valley, LLC by SIKAND Engineering	Northwest corner of Highline Road and Pellisier Road	General Plan amendment and Zoning change for mixed-use development	Active
Rosa Dairy/Agricultural Man Systems	South of Herring, west of Wheeler Ridge Road	Conditional Use Permit for dairy (80 acres for dairy, 560 acres for crops)	Active
Rosamond 135 LLC/Hertz	Southwest corner of Holiday at 50th Street West	Zoning change for residential development	Active
Rosamond Acres LLC, by Wiley D Hughes Surveying	Northwest corner of 40th Street West and Hook Avenue	General Plan amendment and zoning change for residential development	Active
S&J Alfalfa/Dennis Harris	7th Standard and West Day	General Plan amendment for commercial development	Active
San Joaquin Engineering	7900 Downing Road	Zoning change for office and retail development	Active
Santos Garcia by Hansen Engineering	8520 E. Panama Lane	General Plan amendment and zoning change for industrial development	Active
Savannah Farms Dairy/ R Vanderweerd	Southeast corner of Pond Road and Bella Road	Condition Use Permit for dairy	Active

Project Name	Location Description	Project Description	Current Status
Schackman, Conrad and Scott by Wiley Hughes Survey	Southeast corner of Taft Highway and Enos Lane	General Plan amendment and zoning change for light industrial development	Active
Schapheer/Doug Marshall	East of 20th W near Patterson and 20th	Zoning change for residential development	Active
Schestug, Yun by Pasquini Engineering	Verdugo and Rosedale Highway	General Plan amendment and zoning change for residential and commercial development	Active
Scofield Road Family Dairy		Condition Use Permit for 2000-unit dairy	
Selinger, Steve	Section 13 – Buena Vista Hills	General Plan amendment to specific plan area	Active
Sequoia Hills, LLC	Caliente Bodfish Road north of Havila	General Plan amendment for unspecified uses. Subdividing 855 acres.	Active
Service Rock Products/Kjelstrom and Associates	Section 25	General Plan amendment, zoning change and Condition Use Permit for surface mine and reclamation plan and asphalt batch plants	Environmental Review
Sheehey, Alison	Fay Ranch Road, Weldon	Conditional Use Permit for visitors center for Audobon Society/Nature Preserve	Active
Silver Oak/David and Douglas Kaiser	Northeast corner of Teale Road and Adobe Road	Conditional Use Permit for dairy (250 acres for dairy, 382 acres for crops)	Active
Solis, Luis Manuel	6221 E. Brundange Lane	Zoning change for light industrial facility (auto repair)	Active
Standard Management/Dewalt	Northeast corner of Panama Road at Habecker	Zoning change for residential development	Active
Statewide Properties, Inc. by Cornerstone Engineering	Northwest corner of Ridgecrest and Marvin Gardens	Zoning change for residential development	Active
Stockdale Investor, LLC/David Wood	Northwest corner of Stockdale Highway and Enos Lane	General Plan amendment and zoning change	Active
Stonefield Development	North side of Bear Mountain Boulevard, ¼ mile west of Gosford	General Plan amendment and zoning change for residential development	Active
Stonefield Development/McIntosh and	Northwest corner of Enos Lane and Highway 58	General Plan amendment and zoning change for residential development	Active

Project Name	Location Description	Project Description	Current Status
Associates			
Sully-Miller Contracting Company	Southwest corner of Goler Road and Garlock Road	General Plan amendment to allow an asphalt oil transfer and storage facility	Active
Sumners, Bill and Beth	Southeast corner of Inyokern Road and Black Mountain Boulevard	Conditional Use Permit for construction and operation of a chemical blending and manufacturing facility.	Active
Sun Coast Materials/Larry Clift	34716 Seventh Standard Road	Zoning change for industrial/manufacturing development	Active
Superior Real Estate, Inc.	Northwest corner of 25th Street West and Avenue A	General Plan amendment and zoning change for residential and commercial development	Active
T. Square LLC by Marino and Associates	East side of North Chester Avenue, north of Petrol	General Plan amendment and zoning change for industrial development	Active
Taft Corporation	1/8 miles south of Springer, ¼ mile west of Downs	General Plan amendment and zoning change for residential development	Environmental Review
Tejon Ranch Corp.	East of Interstate 5 between Lebec and Grapevine	General Plan amendment and zoning change for the Tejon Mountain Village Specific Plan	Active
Tekaat, Leonard and Brenda	10416, 10420 and 10422 Rosedale Highway	Zoning change for commercial and light industrial development	Active
Terra Five, LLC by Hall and Foreman Inc.	Southwest corner of George Avenue and 70th Street West	General Plan amendment and zoning change for residential development	Active
Thompson, Solveig	23698 Cummings Valley Road	Zoning change for commercial development	Active
TRG Development	Northwest corner of Ridgecrest Boulevard at Kips Street	Zoning change for residential development	Active
United Engineering Group	East side of Sierra Highway, 1 mile north of Rosamond	General Plan amendment and zoning change for residential development	Active
Valdez, Maria/San Joaquin Engineering	170 and 180 Berkshire Road	Zoning change for commercial development	Active
Vanderpoel Trust/Tina	East side of Gun Club Road, 2 miles north of	Conditional Use Permit for dairy (130 acre dairy,	Active

Project Name	Location Description	Project Description	Current Status
Macedo	McCombs Avenue	with 750 acres for crops)	
Vaughn Properties	South of Rosedale at Heath	Zoning change for residential development	Active
Villa Holdings by Dewalt	Northeast corner of Holiday and 30th Street West	Zoning change for residential development	Active
V-Mark Development and Lilco Financial/Dewalt Corp.	Southeast corner of Rosamond Boulevard and 10th Street West	Zoning change for residential development	Active
Wainright, James/French and Associates	Southwest corner of Lebec Road and Houser Avenue	Residential	Environmental Review
Wattenbarger, Scott Porter and Associates	22356 Rosedale Highway	Zoning change for industrial development	Active
Western Ag Realty, Inc.	Northwest corner of Beech Avenue (Highway 43) and San Diego Street	General Plan amendment and zoning change for residential development	Active
Wheeler Ridge Farms, LLC	35 miles south of Bakersfield, west of Interstate 5 and Laval	General Plan amendment and zoning change	Active
White, William	2200 Mono Street	Zoning change for commercial development	Active
Whitezell, David/Nelms Surveying	13546 Meacham Road	Zoning change for residential development	Active
Wildwood – Hettinga, Steve/ BSK Associates	Section 25	Conditional Use Permit for dairy (209 acres for dairy, 1,351 acres for crops)	Active
Wilson, James	1634 Highway 58, Mojave	Zoning change for industrial development	Active
Wray, Daniel	North side of Shadow Mountain Drive, Squirrel Valley	Zoning change for residential development	Active
Wright, Daniel and Sharon/BJ Tucker		General Plan amendment and zoning change for residential development (TPM 10985)	Active
Wyly, Sally	South side of Old State Road, ½ mile west of Burlando	General Plan amendment and zoning change for residential development	Active
Zamarripa, Victor and Han Sook by Delmarter and De	South side of E. Brundage, 700 feet east of Oswell	Zoning change for commercial development	Active

Project Name	Location Description	Project Description	Current Status
City of Arvin			
Residential Development	Southeastern portion of city	Phased residential development of 2,000 dwelling units	Application submitted, EIR needed, project on hold
City of Bakersfield			
Metropolitan Bakersfield General Plan Update	City-wide	Primary issues being addressed through the General Plan Update process include evaluation of infrastructure needs for future development and review of development fees being collected to pay for new growth with a focus on incorporating goals and policies that will better implement the General Plan. Community input has also identified many quality of life issues that will be considered through the General Plan process including provision of parks, open space and trails, increased walkability, improvement in air quality, and preservation of natural resources and agricultural lands.	In Process
West Ming (GPA/ZC 03-1544)	2,182-acre site in southwestern quadrant of city	Mixed-use development including 5,127 single-family dwelling units, 2,323 multi-family dwelling units, 478,880 square feet of commercial space, 69 acres for public schools, and 56 acres of parks	Approved
Sports Village (GPA/ZC 06-1002)	222-acre site in southwestern quadrant of city	Approximately 400,000 square feet of commercial recreational uses and 163 acres of parks	Approved
Bakersfield-Taft EIR (GPA/ZC 05-1420)	305-acre site in southwestern quadrant of city	Residential development with 1,102 single-family dwelling units	Approved
Gosford Village (GPA/ZC 02-0033)	74-acre site in southwestern quadrant of city	700,000 square feet of commercial space	Approved
Rio Bravo Ranch (GPA/ZC 06-1722)	1,863-acre site in northeastern quadrant of city	Mixed-use development to include 4,052 single-family dwelling units, 636 multi-family dwelling units, 64 acres of commercial uses, and 739 acres of parks	Approved

Project Name	Location Description	Project Description	Current Status
Panama-Ashe (GPA/ZC 06-1052)	20-acre site in southwestern quadrant of city	137,609 square feet of commercial space	Approved
Panama-99 (GPA/ZC 02-0193)	38-acre site in southeastern quadrant of city	352,583 square feet of commercial space	Approved
Woodmont Bakersfield/Bakersfield Gateway	103-acre site in southeastern quadrant of city	1,000,000 square feet of commercial space	Pending City Council approval (May 2009)
Canyons EIR	899-acre site in northeastern quadrant of city	Mixed-use development to include 1,280 single-family dwelling units, 120 multi-family dwelling units, 65,000 square feet commercial space, 10 acres of parks, and other uses	Pending City Council approval (April 2009)
SACO Ranch (06-2247)	300-acre site in northwestern quadrant of city	3,167,996 square feet of commercial and industrial space	Pending City Council approval (June 2009)
Crossroads Plaza (SPR 07-2211)	20-acre site in southwestern quadrant of city	235,992 square feet of commercial space	Pending City Council approval
Bakersfield Commons Project (GPA/ZC 06-1877)	236-acre site in northwestern quadrant of city	Mixed-use development to include 80 single-family dwelling units, 345 multi-family dwelling units, and 2,650,000 square feet of commercial space	Pending City Council approval
City of California City			
North Loop Estates, TTM 6346	48.8-acre site, APN 208-080-21, within Villages Specific Plan Area	190 residential units	Tentative map approved
VTTM 6552	15.3-acre site on Georgetown Street, APN 210-330-01	63 residential units	Tentative map approved
VTTM 6583	10-acre site within Villages Specific Plan Area	88 residential units	Tentative map approved
TTM 6595	25-acre site Villages Specific Plan Area	104 residential units	Tentative map approved
VTTM 6597	26-acre site on south side of Twenty Mule Team Parkway	59 residential units	Tentative map approved
VTTM 6598	40-acre site within Mesa Vista Estates	115 residential units	Tentative map approved

Project Name	Location Description	Project Description	Current Status
TTM 6601	50-acre site on north side of Twenty Mule Team Parkway	120 residential acres, common areas	Tentative map approved
TTM 6623	27.1-acre site on Lehigh Street	153 residential units	Tentative map approved
TTM 6632	34.6-acre site on Randsburg-Mojave Road	97 residential units	Tentative map approved
TTM 6831	27.5-acre site within Villages Specific Plan Area	110 residential units	Tentative map approved
VTTM 6864	60-acre site on south side of Twenty Mule Team Parkway, APN 350-140-01	28 residential units, park, commercial center	Tentative map approved
TTM 6524	40-acre site at Hacienda Blvd. and Ridge Blvd.	40 residential units	Tentative map pending approval
VTTM 6594	14.1-acre site at Hacienda Blvd. and South Loop Blvd.	57 residential units	Tentative Map Pending Approval
TTM 6906	158.2-acre site, APN 210-010-01	516 residential units, drainage basin/park	Tentative map approved
TTM 6113	Bound by Parkway Vista, South Loop Blvd., Verde Vista Parkway	Manufactured home development	Final Map approved
TTM 6388	13-acre site within Villages Specific Plan Area	66 residential units, drainage basin/park	Final Map approved
VTTM 6573	29.3-acre site within Villages Specific Plan Area	11 multi-family units	Final Map approved
Hacienda Elementary School	28-acre site at 1950 Hacienda Blvd.	Elementary school including administrative offices, cafeteria/multi-purpose room, 25 classrooms, library/multi-media center and sports fields	Under construction
California City High School	63.6-acre site at 8567 Bolden Avenue	High school including administrative offices, cafeteria/multi-purpose room, 26 classrooms, library/multi-media center, sports fields, and gymnasium	Under construction, completion expected October 2009
Ellison Plaza	26.3-acre site at southeast corner of California City Blvd. and California City Blvd. South	102-room hotel, 50,000 square-foot supermarket, cinema, and other mixed-use business	Construction started, on hold pending funding
Corrections Center	35-acre site within California City Corrections	550-bed Modified Community Corrections Center	Approved, construction

Project Name	Location Description	Project Description	Current Status
Expansion	Center at 22844 Virginia Blvd.		pending funding
TTM 11849	12.6-acre site northeast of California City Blvd. and Randsburg-Mojave Road intersection	Subdivision and rezoning for future commercial development	Pending final approved
City of Delano			
Delano Marketplace	45-acre site at southwest corner of intersection of Woollomes Avenue and Garzoli Avenue	450,000 square foot retail center with Wal-Mart and Lowe's anchor stores	Project approved, not constructed
Downtown Redevelopment Project	20-acre site in downtown area	235,200 square foot commercial center with retail and office space, restaurant, and 92-room hotel.	Application submitted
Retail Center	6.5-acre site in eastern Delano near the intersection of Cecil Avenue and Browning Road	65,000 square foot retail center	Application submitted
Retail Center	10-acre site at northwest corner of intersection of Woollomes Avenue and Garzoli Avenue	50,000 square foot retail center	Application submitted
Multi-Family Residential Project	5-acre site in northwestern Delano, west of SR 99 and south of 20th Avenue	70 dwelling unit multi-family residential development	Application submitted
City of Maricopa			
No pending or proposed projects at this time.			
City of McFarland			
No pending or proposed projects at this time.			
City of Ridgecrest			
Tract 6221	40-acre site on College Heights	51-lot residential subdivision	Approved, partially constructed
Tract 6471	20.5-acre site at northwest corner of Del Rosa and Javis	47-lot residential subdivision	Approved, partially constructed
Tract 6633	16-acre site at southwest corner of Rader and Sunset	59-lot residential subdivision	Engineering plan check

Project Name	Location Description	Project Description	Current Status
Tract 6635	7.66-acre site at southeast corner of Downs and Las Flores	24-lot residential subdivision	Plan check, grading permit issued
Tract 6705	4.24-acre site at southwest corner of Ward and Inyo	14-lot residential subdivision	Approved
Tract 6732	5-acre site on Dolphin Avenue	16-lot residential subdivision	Approved
Tract 6676	17.2-acre site at southeast corner of Upjohn and Gateway	74-lot residential subdivision	Approved
Tract 6679	22.5-acre site at northwest corner of Upjohn and Gateway	87-lot residential subdivision	Approved
Tract 6700	20.9-acre site at southwest corner of Springer and College Heights	56-lot residential development	Approved, grading permit issued
Tract 6710	54.7-acre site at northeast corner of Bowman and Sunland	220-lot residential development	Approved
Tract 6470	22.7-acre site at northwest corner of Kendall and College Heights	67-lot residential development	In plan check, grading permit issued
Tract 6775	24.3-acre site west of College Heights between Kendall and Springer	75-lot residential development	Approved, grading permit issued
Tract 6837	2.78-acre site at southeast corner of Upjohn and S. Norma	17-lot residential development	Approved
Tract 6867	51.3-acre site at northwest corner of Las Flores and N. Sanders	253-lot residential development	Approved
PM 11525	40.37-acre site at northeast corner of Springer and S. Norma	4-lot residential development	Approved
Tract 6814	50.45-acre site at northeast corner of Springer and S. Norma	147-lot residential development	Approved
PM 11526	60.3-acre site at southeast corner of Bataan and Sunland	4-lot residential development	Approved
Tract 6869	42.7-acre site at northwest corner of Dolphin	158-lot residential development	Approved

Project Name	Location Description	Project Description	Current Status
	and Sunland		
Tract 6805	9.6-acre site located north of Bowman and west of Sanders	45-lot residential development	Approved
Tract 6790	11.08-acre site at northeast corner of Downs and Argus	44-lot residential development	Approved
Tract 6927	13.04-acre site at southwest corner of Richmond and Upjohn	55-lot residential development	Approved
Tract 6908	13.06-acre site at Drummond and Inyo	51-lot residential development	Approved
Tract 6912	7.4-acre site at Brianna and Del Rosa	23-lot residential development	Approved
Tract 6992	7.8-acre site at northeast corner of Richmond and Upjohn	24-lot residential development	Approved
Tract 7112	20-acre site at northwest corner of Kendall and S. Norma	51-lot residential development	Approved
Tract 7184	5.2-acre site at northeast corner of China Lake East and Dolphin	21-lot residential development	Approved
Tract 6870	15.6-acre site at southeast corner of Bataan and Sunland	123-unit condominium development	Approved, no plans submitted yet
SPR	14.5-acre site at northeast corner of Bowman and Sunland	264-unit condominium development	Approved but land in default
SPR-06-13	7.64-acre site at northwest corner of Richmond and Gateway	112-unit apartment development	In building plan check, on hold
Galleria at China Lake	4.87-acre site located at North China Lake Boulevard and Drummond Avenue	Phased hotel and retail development including 2, 3-story hotels with 126 rooms totaling 66,000 square feet; 2 retail buildings totaling 33,000 square feet, and two restaurant sites	Pending approved
Super Wal-Mart	28.5-acre site located at China Lake Boulevard and Bowman Avenue	245,000-square foot major retail center	Pending approval, in environmental review
City of Shafter			

Project Name	Location Description	Project Description	Current Status
Orchard Park Specific Plan	140-acre site located east of Beech Avenue between Fresno Avenue and Tulare Avenue	Mixed-use development to include 440 single-family dwelling units, 6 acres of parkland, and a 4.7-acre petroleum drilling island	Approved, not yet constructed
Mission Lakes Specific Plan	1,357-acre site located north of 7th Standard Road, south of Zachary Road, and east of Renfro Road	Mixed-use development to include up to 5,334 single-family dwelling units, a 129-acre commercial center, two school sites, and 68 acres for parks and recreation facilities	Approved, not yet constructed
Heritage Ranch Specific Plan	263-acre site located north of 7th Standard Road, west of the Friant-Kern Canal, and east of the Calloway Canal	Mixed-use development to include 800 dwelling units, a 24-acre neighborhood commercial center, a 15-acre elementary school site, and 8 acres of parkland.	Approved, not yet constructed
Coberly West Specific Plan	957-acre site located north of 7th Standard Road, west of State Route 99, and east of Heritage Ranch Specific Plan area	Mixed-use development to include 3,432 dwelling units, 2 school sites, a 10.7-acre neighborhood commercial center, 9.8 acres of public uses, and 61.4 acres of parkland and recreation facilities	Approved, not yet constructed
Subdivision Tract 6222	40-acre site located on the southeast corner of Lerdo Highway and Poplar Avenue	103-lot residential subdivision	Map recorded; homes under construction with 30 lots remaining
Subdivision Tract 6467	80-acre site located on southeast corner of Fresno Avenue and Mannel Avenue	151-lot residential subdivision	First phase map recorded; homes under construction with 47 lots remaining
Subdivision Tract 6490	30-acre site located north of Los Angeles Street and east of Mannel Avenue	99-lot residential subdivision	Tentative map approved by CC 6/05; improvement plans approved
Subdivision Tract 6540	19.5-acre site located north of Mark Street between Schnaidt Street and North Valley Street	85-lot residential subdivision	Map recorded; homes under construction with 59 lots remaining
Subdivision Tract 6555	23-acre site located at southwest corner of Shafter Avenue and Fresno Avenue	71-lot residential subdivision	Tentative map approved by CC 12/05; improvement plants being

Project Name	Location Description	Project Description	Current Status
			reviewed
Subdivision Tract 6584	20-acre site located north of Los Angeles Street between Poplar Avenue and Schnaidt Street.	50-lot residential subdivision	Map recorded; two model homes constructed
Subdivision Tract 6614	140-acre site located east of Beech Avenue, between Fresno Avenue and Tulare Avenue	431-lot residential subdivision	Approved by CC 9/06
Subdivision Tract 6704	40-acre site located northeast of Fresno Avenue and Beech Avenue	102-lot residential subdivision	Tentative map approved by CC 3/06
Subdivision Tract 6713	23-acre site located between W. Los Angeles Avenue and Elizabeth Avenue, west of Verde Street	70-lot residential subdivision	Tentative map approved by CC 6/06; improvement plans being reviewed
Subdivision Tract 6777	Southeast of S. Shafter Avenue and E. Los Angeles Avenue	140-lot residential subdivision	Map recorded; homes under construction with 124 lots remaining
Subdivision Tract 7033	Southeast of East Fresno Avenue and North Shafter Avenue	87-lot residential subdivision	Approved by CC 6/08
Subdivision Tract 7052	38-acre site located northwest of Los Angeles Street and Poplar Avenue	94-lot residential subdivision	Approved by CC 9/07
Subdivision Tract 7072	East of Beech Avenue between East Tulare Avenue and State Avenue	136-lot residential subdivision	Approved by CC 7/07
Subdivision tract 7079	Southwest of West Lerdo Highway and South Poplar Avenue	133-lot residential subdivision	Approved by CC 7/08
City of Tehachapi			
Tehachapi Junction	Southeast corner of Tehachapi Boulevard and Tucker Road	22,400-square foot mixed-use commercial center include Starbucks, Coldstone Creamery and Que Pasa restaurant	Approved December 16, 2003
Tehachapi Garden Office Park	North of Tehachapi Boulevard, west and adjacent to the old Tehachapi Boulevard, east of Tucker Road	12,451 square feet of office space	Approved June 22, 2006

Project Name	Location Description	Project Description	Current Status
The Orchard Shopping Center	Southwest corner of Tucker Road and Conway Avenue	42,003-square foot mixed-use commercial center	Approved November 21, 2005; partially constructed, final building under construction
Amak Center	North side of Magellan drive, between Capital Hills Parkway and Zurich Street	18,250-square foot mixed-use retail center	Approved September 28, 2006, currently in plan check
Primo Plaza	Southeast corner of Tehachapi Boulevard and Hayes Street	7,090-square foot retail center	Approved June 22, 2006; currently in plan check
Phased Mini Storage Facility	East of North Mill Street, north of the future Industrial Parkway extension, west of the Tehachapi Municipal Airport	76,150-square foot mini storage facility	Approved May 25, 2004; building permits issued
Tehachapi Hospital	North of and contiguous to the existing city limits line at the terminus of Voyager Drive, north of Parcel Map 9423 within the Capital Hills Specific Plan	54,147 square-foot medical facility	Approved July 3, 2006
Mini Storage	Southwest corner of Conway Avenue and McIntosh Street, west of Tucker Road (1226 Conway Avenue)	38,000-square foot phased mini-storage development in addition to an office/caretaker's quarters	Approved September 27, 2007
Mill Street Retail Center	3.8-acre site located at the north east corner of Mill Street and Industrial Parkway	38,75-square foot mixed-use commercial center	Approved
Marriott Fairfield In and Suites	2.35-acre site located south of Tehachapi Boulevard, east of Mulberry Street, north of "F" Street	83-unit, three-story hotel	Approved October 26, 2006, currently under construction
Industrial Parkway Light Industrial Complex	South and adjacent to Industrial Parkway, east of North Mill Street	9,367-square foot light industrial building	Approved April 26, 2007
Mulberry Street Commercial Structure	East side of Mulberry Street between "E" and "F" Streets	8,871-square foot mixed-use retail and professional building	Approved May 24, 2007
Professional/Light Industrial/Mini-Storage	North and adjacent to West "J" Street and west of North Mill Street	20,916-square foot professional building, 8,211-square foot light industrial building and 24,850-	Approved May 24, 2007; currently in plan check

Project Name	Location Description	Project Description	Current Status
Complex		square foot mini-storage facility	
Riley Professional/Retail Building	310 S. Curry Street	9,080-square foot, two-story retail/professional building	Approved August 23, 2007
Kragen Auto	East and adjacent to Tucker Road, north of Bank of the West and south of Henry's Café	7,000-suare foot Kragen Auto Parts Store	Approved July 26, 2007
Wal-Mart Super Center	23-acre site east and adjacent to Tucker Road/State Highway 202 and south of Tehachapi Boulevard	185,433-square foot Wal-Mart Supercenter	Environmental review
Professional Office Buildings	1.41-acre site located at 707 Valley Boulevard, north and adjacent to Valley Boulevard, west of Mountain View Avenue	Two professional office buildings totaling 12,107-square feet	Approved January 24, 2008
Love's Truck Stop	East Tehachapi Specific Plan area, south and adjacent to Tehachapi Boulevard, east of Highway 58 off-ramp, west of Monolith Street	Travel center consisting of automobile and semi-truck fueling pumps, truck sales, a 6,151-square foot convenience store, a 2,828-square foot fast food restaurant with drive-thru, a 1,219-square foot fast food restaurant, and a semi-truck parking area	Approved January 24, 2008
Global Premier Development	6.53-acre site located at the northeast corner of West H Street and North Mill Street	81-unit apartment complex	Approved
Aspen Street Architects	5.45-acre site located in Capital Hills, north and adjacent to Athens Street, east of Voyager, west of Challenger	Three medical office buildings totaling 66,000 square feet	Approved May 29, 2008
Tract Map No. 4927	6.64-acre site located north and adjacent to Cherry Lane and south of Valley Boulevard	28-unit residential development	Approved, 12 units completed
Tract Map No. 5812	61.27-acre site located east side of Dennison Road across from Tehachapi High School	211-unit residential development	Approved, under construction, about 95 percent complete
Tract Map No. 6062	511-acre site located on south side of Pinon Street, west of Dennison Road, east of Curry Street and north of Highline Road	125-unit residential development	Approved, under construction
Tract Map No. 6216	122.7-acre site located south of Pinon Street,	384-unit residential development	Approved, on hold

Project Name	Location Description	Project Description	Current Status
	west of Curry Street and north of Highline Road		(developer in bankruptcy)
Tract Map No. 6248	7.5-acre site located at the southeast corner of South Robinson Street and East D Street	30-unit residential development	Map recorded, grading plan approved
Tract Map 6360	11-acre site located at northeast corner of South Mill Street and D Street	11-unit senior residential development	Approved, under construction
Tract Map No. 6461	9.78-acre site located north of Valley Boulevard, east of Las Colinas Street and west of Griffin Street	25 single-family unit and 2 medium density residential development	Not yet approved
Tract Map No. 6497	60.9-acre site located north of Highline Road, south of Tehachapi High School and Morris Park, west of Dennison Road	60-unit residential development	Approved 2006
Tract Map No. 6506	30.15-acre site located east and adjacent to Curry Street and north of Valley Boulevard	75-unit residential development	Approved by PC 2006; pending approval by CC, developer in bankruptcy
Tract Map No. 6909	26-acre site located north and adjacent to Valley Boulevard and south of Holly Drive	89-unit residential development	Approved by PC 2006; pending CC approval, developer in bankruptcy
Tract Map No. 6507	10.45-acre site located north and adjacent to Pinon Street and west of future extension of Applewood Drive	96-unit residential development	Approved 2005; not constructed
Tract Map No. 6554	17.6-acre site located north and adjacent to Valley Boulevard, west and adjacent to Dennison Road and north of the Tehachapi High School campus	89-unit residential development	Approved June 5, 2006
Tract Map No. 6714	24.24-acre site located north and adjacent to Pinon Street, south and adjacent to Cherry Lane	75-unit residential development	Approved by CC, annexation approved by LAFCo
Tract Map No. 6668	5.1-acre site located north and adjacent to Pinon Street, east of Fig Drive	18-unit residential development	Approved 2006

Project Name	Location Description	Project Description	Current Status
Tract Map No. 6928	44.8-acre site located south of Pinon and East of Tucker	144-unit residential development	Pending approved
City of Wasco			
Wasco Center	112-acre site located north of SR 46, west of Palm Avenue, south of Margalo Avenue and east of Magnolia Avenue	Mixed-use development including major retail, office, restaurants, movie theater, hotel, and high density residential (townhomes)	Approved
Coastal Byproduct	1-acre site located in the City's industrial park	Cooking oil recycling facility consisting of four tanks and one 3,000 sq. ft. building	Approved
Denny's Restaurant	North of SR 46 between Poplar and Palm Avenues	4,893-square foot restaurant	Approved
Jack in the Box Restaurant	North of SR 46 between Poplar and Palm Avenues	2,793-square foot restaurant	Approved
Carl's Jr. Restaurant	North of SR 46 between Poplar and Griffith Avenues	2,676-square foot restaurant	Under construction
Fresh and Easy Market	North of SR 46 between Poplar and Griffith Avenues	13,969-square foot commercial development	Under construction
Circle K Gas Station	Southeast corner of SR 46 and J Street	3,100-square foot commercial development	Under construction

BUILDOUT ASSUMPTIONS UNDER THE GENERAL PLAN

Future growth in the General Plan Planning Area is guided by the land uses identified in the General Plan Land Use Map (see **Figure 3.0-4**). The DEIR impact analysis (both temporary [i.e., construction-related] and operational effects) is based on these proposed land use patterns, including proposed transportation improvements identified in the proposed Circulation Diagram. The DEIR also evaluates the indirect environmental effects of construction and operation of the land uses and transportation improvements that may take place under the proposed General Plan update and its associated project components. **Table 3.0-1** identifies the land use acreages that currently exist within the city and in the remainder of the Planning Area. **Table 3.0-2** shows land use acreages that are being proposed under the project.

Section 5.0 of this Draft EIR, Cumulative Impacts Summary, analyzes climate change impacts resulting from greenhouse gas emissions through buildout. The traffic model developed for this EIR quantifies impacts from growth to 2035 only, but qualitatively analyzes impacts beyond 2035 through buildout. This analysis also incorporates the roadway system identified in the proposed General Plan as being implemented by the Year 2035. This corresponds to near buildout of all residential areas within the current City limits

The air quality model developed for this EIR calculates mobile source emissions to 2035, in line with the traffic model, but calculates stationary source greenhouse gas emissions beyond 2035 through buildout.

Some sections analyze the Year 2035 condition only because beyond that time horizon the City's growth patterns are more speculative and subject to change, rendering these analyses less accurate if they are based on growth projected post 2035. Other impact analyses completed as part of this EIR, such as biology, agriculture, portions of air quality as discussed above, and climate change, are based on impacts resulting from General Plan buildout rather than the Year 2035 condition because their impacts are either based on ground disturbance associated with the proposed land use patterns and types or because a buildout analysis is required under state guidelines.

For the year 2035, the General Plan Update is expected to fully develop all currently vacant parcels within the City limit therefore resulting in a population of 37,374 persons, 13,837 housing units and an employment base of 25,257 persons. Buildout of the proposed General Plan Update however is not expected to occur until roughly 2050, with future development expected to occur in that portion of the Planning Area that lies outside the current City limits. The General Plan capacity, or 2050 capacity, is expressed as the total number of people that would be accommodated within the City's Planning Area if the land within that area were developed to the maximum potential allowed by land use designations in the updated General Plan. The land use designations identified on the updated General Plan Land Use Map have the potential to ultimately support a population of approximately 68,018 persons, 25,184 housing units, and an employment base of 92,338 persons by the year 2050, i.e. full buildout of the General Plan. These housing unit projections are based on the proposed land use designations that allow for residential development and the maximum density permitted within each designation. This number was adjusted to account for existing residential units which have been developed at

lower densities and for areas that cannot be developed due to limiting factors. According to the city's occupancy rates of 2.701 persons per household, the city's population would, as a result, increase to about 68,018 persons. Employment numbers are based on what the underlying land use designations would allow for the Planning Area.

The Draft EIR analysis is based on 2050 capacity projections. Subsequent requests for increases in development potential beyond what is set forth in the General Plan would require approval of an amendment to the General Plan and are outside the scope of the analysis of this EIR.

STRUCTURE OF THE ENVIRONMENTAL IMPACT ANALYSIS

Sections 4.1 through 4.13 of this Draft EIR contain a detailed description of current setting conditions (including applicable regulatory setting), an evaluation of the direct and indirect environmental effects resulting from the implementation of the proposed General Plan, identification of proposed General Plan policies and action items that mitigate the environmental effect, additional feasible mitigation measures, and identification of whether significant environmental effects of the General Plan would remain after application of proposed policies and action items, and feasible mitigation measures. The individual technical sections of the Draft EIR follow the following format.

EXISTING SETTING

This subsection includes a description of the physical setting conditions associated with the technical area of discussion, consistent with State CEQA Guidelines Section 15125. As previously identified above, the existing setting is based on conditions as they existed when the NOP for the project was released on February 13, 2009.

REGULATORY FRAMEWORK

This subsection consists of the identification of applicable federal, state, regional, and local plans, policies, laws, and regulations that apply to the technical area of discussion.

IMPACTS AND MITIGATION MEASURES

The Impacts and Mitigation Measures subsection identifies direct and indirect environmental effects associated with implementation of the proposed General Plan update and identifies those proposed updated General Plan policies and action items that mitigate the environmental effects, as well as any other regulations and ordinances that do the same. Standards of significance are identified and utilized to determine whether identified environmental effects are considered significant and require the application of mitigation measures. Each environmental impact analysis is identified numerically (e.g., Impact 4.1.1 – Physical Division of Established Communities) and is supported by substantial evidence included in the discussion.

Potential mitigation measures for the proposed General Plan were developed through a thorough review of the environmental effects of the General Plan update by consultants with technical expertise as well as by environmental professionals. After identification of proposed

General Plan policies and action items that mitigate the environmental impact being discussed, any additional feasible mitigation measures that could minimize significant adverse impacts are discussed, after which the impact discussion notes whether the impact has been mitigated to a less than significant level or remains significant and unavoidable. Most mitigation measures identified during the project analysis were incorporated into the General Plan as policies and action items.

CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

This subsection is an analysis of the proposed General Plan's contribution to cumulative impacts to the environment. The analysis focuses on whether the General Plan update's contribution is cumulatively considerable (State CEQA Guidelines Section 15130; see also the following subsection: Approach to the Cumulative Impact Analysis and Section 5.0 Cumulative Impact Summary). A cumulative impact occurs from the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (CEQA Guidelines Section 15355(b)). Accordingly, the cumulative setting includes related past, present, and reasonably foreseeable projects in the region.

DEFINITION OF CUMULATIVE SETTING

State CEQA Guidelines Section 15130 requires that EIRs include an analysis of the cumulative impacts of a project when the project's incremental effect is considered cumulatively considerable. In general, the cumulative setting conditions considered in this Draft EIR are based on:

- **Effect of Regional Conditions.** This consists of consideration of background traffic volumes and patterns on Interstate 5 (I-5) and state highways (e.g., State Routes (SR) 119, 33, 43, 166, and 223), background air quality conditions, and other associated environmental conditions that occur within the San Joaquin Valley region, both within and outside of the Planning Area.

- **Local Adopted General Plans.** The existing land use plans in the region consisting of Kern County and the cities of Maricopa and Bakersfield.

- **Consideration of Existing Development Patterns.** This consists of consideration of the current environmental conditions of existing development and past land use activities in the region. It includes major land use activities in areas such as operation of the Taft-Kern County Airport, agricultural activities and conversion of open space and agricultural lands from existing development patterns, and mining/petroleum extraction activities in the region.

- **Large-Scale Development Projects.** Consideration of large-scale proposed and approved development projects, as shown in **Table 4.0-1** above.

- **Other Local Plans and Policy Statements**. Existing and proposed plans and policy statements that affect the Planning Area and/or the surrounding region including:
  - City of Taft Historic Preservation Plan (2007)
  - City of Taft Downtown Specific Plan (1994)
  - City of Taft Housing Element (2004, 2008 pending certification by CA HCD)
  - City of Taft Conceptual Design Guidelines for Downtown Revitalization
  - City of Taft Master Grading/Drainage Plan (2002)
  - Taft Community Development Agency Redevelopment Plan (1986, currently being revised)
  - Taft Community Development Agency Five Year Implementation Plan and Housing Plan (2005—2009)
  - Taft Five-Year Economic Development Strategy
  - Kern County Regional Transportation Plan (2008)
  - Kern County Airport Land Use Compatibility Plan
  - Kern County and Incorporated Cities Integrated Waste Management Plan
  - Kern County and Incorporated Cities Hazardous Waste Management Program
  - Bureau of Land Management, Caliente Resource Management Plan (1997)
  - Kern County Disaster Preparedness Guide (2008)
  - Kern County Multi-Hazard Mitigation Plan (2005)
  - Kern County Terrorism Response and Recovery Contingency Plan (2003)
  - San Joaquin Valley Blueprint (currently being prepared)
  - City of Taft/Kern County Enterprise Zone (currently in application process)
  - City of Taft 2020 Municipal Services Plan
  - Kern Valley Floor Habitat Conservation Plan (currently being prepared)

Each technical section of the Draft EIR includes a description of the geographic extent of the cumulative setting based on the characteristics of the environmental issue under consideration as set forth in Section 15130(b) of the State CEQA Guidelines.

CONSIDERATION OF CUMULATIVE IMPACTS

Each technical section in the Draft EIR considers whether the project's effect on anticipated cumulative setting conditions is cumulatively considerable (i.e., a significant effect). "Cumulatively considerable" means that the incremental effects of an individual project are significant, under cumulative conditions, when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (CEQA Guidelines, Section 15065(a)(3)). The determination of whether the project's impact on cumulative conditions is considerable is based on a number of factors including consideration of applicable public agency standards, consultation with public agencies, and expert opinion. The environmental effects of potential development of the individual planning areas within the General Plan Planning Area are incorporated in the cumulative impact analysis. Section 5.0, Cumulative Impacts Summary, provides a summary of the cumulative impacts associated with the General Plan.

DOCUMENT INCORPORATED BY REFERENCE IN THIS EIR

This Draft EIR utilizes technical information and analyses from previously certified EIRs that are relevant to the consideration of environmental effects of the proposed General Plan Update, which is supported by the State CEQA Guidelines (see Sections 15148 [Citation] and 15150 [Incorporation by Reference]). In addition to materials cited, the following CEQA and other technical documents have been utilized in the Draft EIR:

- City of Taft General Plan Land Use/Circulation Elements Update Initial Environmental Study, 2004 (State Clearinghouse No. 2004031029)
- City of Taft Historic Preservation Plan (2007)
- City of Taft Downtown Specific Plan (1994)
- City of Taft Conceptual Design Guidelines for Downtown Revitalization
- City of Taft Master Grading/Drainage Plan (2002)
- Taft Community Development Agency Redevelopment Plan
- West Kern Water District Urban Water Management Plan
- Kern County Airport Land Use Compatibility Plan
- City of Taft Municipal Code, including Zoning Ordinance

By utilizing these provisions of the State CEQA Guidelines, the City, in preparing this DEIR, has been able to make maximum feasible and appropriate use of the technical information in the above-mentioned documents. This EIR and other referenced materials are available for review upon request at the **City of Taft City Hall** located at **209 East Kern Street, Taft, CA 93268**.

REFERENCES

DOCUMENTS

City of California City. February 2009. *Draft California City General Plan Housing Element.*

City of Shafter. 2005a. *Coberly West Specific Plan.*

City of Shafter. 2005b. *Mission Lakes Specific Plan.*

City of Shafter. 2006a. *Heritage Ranch Specific Plan.*

City of Shafter. 2006b. *Orchard Park Final Specific Plan.*

City of Taft. 2009. *Taft Planned/Future Development Sites.*

WEBSITES

State of California, Office of Planning and Research. 2009. *CEQAnet Database.* <http://www.ceqanet.ca.gov/> Accessed March 2009.

PERSONAL COMMUNICATIONS

City of Arvin. 17 February 2009. *Personal Communication with Isaac George, City Planner.*

City of Bakersfield. 17 February 2009. *Personal Communication with Ryan Bland, Associate Planner.*

City of California City. 20 February 2009. *Personal Communication with Ronna Green, City Planner.*

City of Delano. 17 February 2009. *Personal Communication with Michael McCabe, Senior Planner.*

City of McFarland. 19 March 2009. *Personal Communication with Isaac George, City Planner.*

City of Ridgecrest. 19 March 2009. *Personal Communication with Matthew Alexander, City Planner.*

City of Shafter. 20 February 2009. *Personal Communication with Suzanne Forest, Senior Planner.*

City of Tehachapi. 2009. *Personal Communication with Marcia Smith, Supervising Planner.*

City of Wasco. 2009. *Personal Communication with Dennis McNamara, Senior Planner.*

County of Kern. 18 March 2009. *Personal Communication with Cheryl Casdorph, Supervising Planner*

4.1
LAND USE

This section describes the existing land uses in the proposed City of Taft General Plan Update Planning Area (Planning Area) and discusses adopted plans and policies pertinent to the subject and effects associated with the proposed City of Taft General Plan Update. This analysis addresses direct and indirect land use impacts and identifies mitigation measures to lessen those impacts. As mentioned throughout this section, any land use impacts directly related to other technical sections of this Draft Environmental Impact Report ("DEIR"; "Draft EIR") (e.g., hydrology and water quality, population and housing) are discussed in those relevant sections. See Sections 4.2 through 4.13 for more information regarding these impacts.

4.1.1 EXISTING SETTING

REGIONAL SETTING

The Planning Area is located entirely within Kern County (County), at the southern end of the San Joaquin Valley in Central California. Kern County is bounded on the north by Kings, Tulare, and Inyo counties, on the east by San Bernardino County, and on the south and west by San Luis Obispo, Santa Barbara, Ventura, and Los Angeles counties (see **Figure 3.0-1**). Kern County extends east beyond the southern slope of the eastern Sierra Nevada range into the Mojave Desert. From the Sierras, the County extends across the valley floor to the eastern edge of the Temblor Range, part of the Coastal Ranges. To the south, the County extends over the ridge of the Tehachapi Mountains. Kern County covers approximately 8,161 square miles (5,223,040 acres) of land. Land uses in the surrounding counties vary, with flat agricultural lands to the north, arid desert and aerospace uses to the east and south, and foothills to the west.

LOCAL SETTING

The City of Taft (Taft), which encompasses about 9,622 acres, is approximately 40 minutes southwest of the City of Bakersfield and about two hours, or about 100 miles northwest of the City of Los Angeles. The Planning Area includes both the incorporated City and land just outside the City limits, as shown in **Figure 3.0-2**. The Planning Area covers roughly 157,570 acres of land (about 246.2 square miles) or about 3 percent of the total land area of Kern County.

The Expansion Area is generally flat, with a relatively constant elevation and no major topographical features. The Expansion Area does, however, include "Honolulu Hills", which lies between the City of Taft and Bakersfield. The City itself generally slopes from south and southwest to the north and northeast. The Valley floor is generally flat. The Kern River, the California Aqueduct, and other minor watercourses wind through the Planning Area. Lake Webb and Lake Evans are also located within the Planning Area.

The Expansion Area is crossed by four state highways State Routes (SR) 119, 33, 43 and 223. In addition, Interstate 5 (I-5) lies along its eastern boundary and SR 166 lies along a portion of its southern boundary. The unincorporated communities of Taft City, South Taft and Taft Heights are located within the Planning Area just southeast of the City of Taft. The Taft-Kern County Airport, a general aviation airport, is located in the City limits. The closest commercial airline service to the area is available at Meadows Field in the City of Bakersfield, approximately 15 miles northeast of central Taft. The U.S. Bureau of Prisons operates a prison within the

Planning Area along Cadet Road southeast of the City (see **Figure 3.0-2**). The City of Taft's 2008 population was estimated to be about 9,228 (DOF, 2000).

EXISTING LAND USES

The Planning Area is characterized by a wide range of existing land uses which are summarized in **Table 4.1-1** below and illustrated in **Figure 3.0-3**. For the purposes of the analysis in this DEIR, the Planning Area for the General Plan Update is characterized by the existing land within the City limits plus the Expansion Area, or that area that lies outside the existing City limits but within the overall Planning Area (**Figure 3.0-2**). The total Planning Area accounts for 157,570 acres, with 9,622 acres within the existing City limits and 147,948 acres in the Expansion Area (9,622 + 147,948 = 157,570).

The principal land uses within the Planning Area include agriculture (56.7 percent); industrial, including commercial oil production and refining (10.9 percent); public and institutional uses, including parks, the California Aqueduct and other canals, and federal lands/petroleum reserves (14.1 percent); and vacant/undeveloped lands (13.2 percent). Most urban development, accounting for only 0.8 percent, is located within the City limits of Taft or in the areas immediately adjacent to the City while most agriculture and oil production-related uses are located in the nearby unincorporated areas. The existing City and County General Plan land use designations, as shown in **Table 4.1-2** below, correlate closely with the existing land uses within the Planning Area with the primary designations being Agriculture (A) and Natural Resources (NR), which includes undeveloped lands and public lands/oil preserves.

TABLE 4.1-1
EXISTING LAND USES WITHIN THE PLANNING AREA (ACRES)

Land Use	City Limits	Percentage of Planning Area	Expansion Area	Percentage of Planning Area	Planning Area	Percentage of Planning Area
Agriculture	562.3	0.4	88,796.7	56.4	89,359.0	56.7
Residential	400.1	0.3	870.5	5.5	1,270.6	0.8
Mixed Use	3.8	0.0	326.1	0.2	329.9	0.2
Commercial	84.2	0.0	151.1	0.1	235.3	0.2
Industrial (Including Oil Production)	5,072.3	3.2	11,978.4	7.6	17,050.7	10.8
Public/Institutional	2,182.0	1.4	20,047.3	12.7	22,229.3	14.1
Vacant/Undeveloped	655.3	0.4	20,461.8	13.0	21,117.1	13.4
Other/Unknown	164.1	0.1	1,210.4	0.8	1,374.5	0.9
Public Right-of-Way	497.9	0.3	4,105.7	2.6	4,603.6	2.9
Totals	**9,622**	**6.1**	**147,948**	**98.9**	**157,570**	**100**

Source: Kern County, 2009

TABLE 4.1-2
EXISTING CITY AND COUNTY GENERAL PLAN LAND USE DESIGNATIONS (ACRES)

Land Use Designation	City Designations within City Limits	County Designations within Expansion Area	Planning Area	Percentage of Planning Area
Agriculture (A)	0	88,847	88,847	56.4
Natural Resources (NR)	5,932	51,559	57,491	36.5
Open Space (OS)	103	288	391	0.3
Rural Residential (RR)	0	29	29	0.0
Estate Residential (ER)	0	197	197	0.1
Low Density Residential (LDR)	956	978	1,934	1.2
Medium Density Residential (MDR)	139	64	203	0.2
High Density Residential (HDR)	70	13	83	0.1
Mixed Use (MU)	293	71	364	0.2
General Commercial (GC)	601	358	959	0.6
Industrial (IND)	738	1,061	1,799	1.1
Public Facilities (PF)	790	2,270	3,060	1.9
Specific Plan (SP)	0	2,213	2,213	1.4
Totals	**9,622**	**147,948**	**157,570**	**100**

LAND USES ADJACENT TO THE PLANNING AREA

Immediately east of the Planning Area, beyond its I-5 boundary, lies extensive agricultural lands and the City of Bakersfield. South of the Planning Area are additional agricultural lands and the City of Maricopa, with the rugged mountain terrain of Fort Tejon State Historic Park beyond. West of the Planning Area is additional mountain terrain associated with the Coastal Range including Midway Peak and Caliente Mountain. North of the Planning Area is largely undeveloped with scattered unincorporated communities such as Tupman, Buttonwillow, and McKittrick.

REGULATORY FRAMEWORK

FEDERAL

Federal Aviation Administration

Federal law sets forth standards contained in Federal Aviation Regulations (F.A.R.) Part 77, "Objects Affecting Navigable Airspace." This regulation requires Federal Aviation Administration (FAA) notification of any construction or alteration located within a series of imaginary surfaces established in FAR Part 77. The law was established for use by local authorities to control the height of objects near airports. The FAR Part 77, Airport Safety Areas Map and Land Use Compatibility Chart for Aircraft Noise is a graphic depiction of this regulatory criterion.

Not all obstructions are a hazard to air navigation. The FAA presumes an obstruction to be a hazard until an FAA aeronautical study determines that it does not have a substantial adverse effect on the safe and efficient use of navigable airspace.

FAA cannot prohibit the construction of any structure determined to be a hazard. However, state law goes further and prohibits the construction of any structure that would penetrate any of a series of imaginary surfaces defined in FAR Part 77 unless the State Division of Aeronautics has issued a permit allowing its construction.

STATE

California Government Code

California law requires each city to adopt a comprehensive, long-term general plan to guide the physical development of the incorporated city and land outside city boundaries that bears a relationship to its planning activities. The city may adopt a general plan in the format that best fits its unique circumstances in an integrated, internally consistent, and compatible statement of development policies. Together, the seven mandated elements of a general plan form a comprehensive set of planning policies. In accordance with California Government Code Section 65302, the Taft General Plan addresses the issues of land use, circulation, housing, noise, safety, conservation, and open space.

The general plan also addresses additional topics of special and unique interest, including community character, economic development, historic and cultural resources, and municipal services. These topics reflect additional issues that are important to the community. While optional elements are not required by state law, once they are adopted by a city, optional elements are as legally binding and valid as the required elements. The City of Taft has chosen to adopt a General Plan that consolidates some of the mandatory elements and includes two optional elements (Economic Development and Public Facilities).

By law, the general plan is the primary document a city utilizes to regulate land use. It provides the city with a consistent framework for land use decision-making. Once a general plan is

adopted, its maps, diagrams, and development policies form the basis for city zoning, subdivision, and public works actions. Therefore, the zoning ordinance, specific plans, planned development master plans, and individual public and private development proposals must be consistent with the general plan goals, policies, and standards. Under California law, no specific plan, area plan, zoning, subdivision map, nor public works project may be approved unless the city finds that it is consistent with the adopted general plan.

California Airport Land Use Planning Handbook

The California Airport Land Use Planning Handbook is a document prepared by the State of California Department of Transportation (Caltrans), Division of Aeronautics. When an EIR is prepared for a project within two miles of a public use airport, Public Resources Code Section 21096(a) requires that the Caltrans handbook "be utilized as a technical resource to assist in the preparation of the environmental impact report as the report relates to airport-related safety hazards and noise problems." Refer to Sections 4.6, Noise, and 4.4, Hazards and Human Health, for a more detailed discussion of the handbook and airport-related safety hazards and noise issues.

LOCAL

San Joaquin Valley Blueprint

The San Joaquin Valley Blueprint Planning Process (SJV Blueprint) is a joint initiative of the Councils of Governments representing each of the region's eight counties, the San Joaquin Valley Air Pollution Control District, Caltrans, and the Great Valley Center. The goal of SJV Blueprint is to develop a cohesive regional framework that defines and offers alternative solutions to growth related issues for the Valley. The process involves the integration of transportation, housing, land use, economic development, and the environment to produce a preferred growth scenario to the year 2050.

Kern County General Plan

The Kern County General Plan was originally adopted by the County Board of Supervisors in June 2004. Minor amendments to the plan were subsequently adopted in 2006 and 2007. The plan contains policies related to development of lands currently under County jurisdiction, which include the City of Taft Expansion Area. **Figure 3.0-5** depicts the County General Plan land use designations within the Expansion Area. As described in **Table 4.1-2** above, most of the County land within the Expansion Area is designated Agriculture (A) and Natural Resources (NR).

Kern County General Plan goals, policies, and implementation measures related to land use, airport operations, and the proposed project are provided below.

Land Use, Open Space, and Conservation Element

Nonjurisdictional Land

Goal 1: To promote harmonious and mutually beneficial uses of land among the various jurisdictions and land management entities present in Kern County.

Policy 1: Coordination and cooperation will be promoted among the County, the incorporated cities, military bases, and the various special districts where their planning decisions and actions affect more than a single jurisdiction.

Policy 3: The County retains the maximum discretion allowed by law over land use issues of local concern, which impact the development of private and public property in the County.

Policy 6: The County will solicit a city's comments on land use planning proposals within the city's adopted sphere of influence or within one mile of the city limits, whichever is greater.

Measure A: Develop a procedure to assure that the County, the incorporated cities, and other jurisdictions refer major planning and land use proposals to all affected jurisdictions for review, comment, and recommendation. Comments and discussion should occur if requested by the affected jurisdiction(s).

Measure B: Review proposed revisions to or amendments of a city's General Plan in either the affected fringe area or adopted sphere of influence to ensure compatibility with County land use plans.

Residential

Goal 8: Ensure compatible land uses around airports.

Policy 12: Prior to approval, all new discretionary residential projects located in the Airport Influence Areas will be reviewed for compatibility with the Airport Land Use Compatibility Plan.

Measure D: All General Plan Amendments, zone changes, conditional use permits, discretionary residential developments of five or more dwelling units, and variations from height limits established by zoning for properties which are located in the Airport Influence Areas or near a military airport shall be reviewed by the Planning Department for compatibility with the Kern County Airport Land Use Compatibility Plan.

Commercial

Goal 6: Ensure compatible land uses around airports through the use of the Airport Land Use Compatibility Plan.

Policy 4: Prior to approval, all new discretionary commercial projects located in the Airport Influence areas will be compatible with the Airport Land Use Compatibility Plan.

Measure G: All General Plan Amendments, zone changes, conditional use permit, discretionary commercial developments, and variations from height limits established by zoning for properties which are located in the Airport Influence areas or near a military airport shall be reviewed by the Planning Department for compatibility with the Kern County Airport Land Use Compatibility Plan.

Industrial

Policy 9: Prior to approval, all new discretionary industrial projects located in the Airport Influence Areas will be reviewed for compatibility with the Airport Land Use Compatibility Plan.

Measure F: All General Plan Amendments, zone changes, conditional use permits, discretionary industrial developments, and variations from height limits established by zoning for properties which are located in the Airport Influence areas or near a military airport shall be reviewed by the Planning Department for compatibility with the Kern County Airport Land Use Compatibility Plan.

Kern County Specific Plans and Rural Community Plans

The County has adopted numerous specific plans and rural community plans for areas within its jurisdiction, some of which are located within the Planning Area. Those plans located within the Planning Area are the South Kern Industrial Center Specific Plan and the Dustin Acres Rural Community Plan. These plans are described more fully below.

South Kern Industrial Center Specific Plan

The South Kern Industrial Center Specific Plan area encompasses 744 acres and is located just east of the City of Taft within the Expansion Area (see **Figure 3.0-5**). The area is utilized for industrial uses including an organic waste recycling facility. The Kern County General Plan designates the area as A (Exclusive Agriculture). Some of the industrial operations within this plan area require conditional use permits from the County in order to operate within the agricultural land use designation (Kern County Planning Department, 2007).

Dustin Acres Rural Community Plan

The Dustin Acres Rural Community Plan was adopted by the Kern County Board of Supervisors on October 10, 1983. The plan area encompasses 918 acres and is located northwest of the City of Taft. A very small portion of the Dustin Acres RCP is located within the Expansion Area. The community plan area is designated by the Kern County General Plan primarily for single-family residential and intensive agriculture uses as well as some public recreation and service industrial uses (see **Figure 3.0-5**) (Kern County Planning Department, 1983).

Kern County/City of Taft Airport Land Use Compatibility Plan

The State Aeronautics Act was revised in 1993 to make the creation of an Airport Land Use Commission (ALUC) optional, rather than mandatory, for local jurisdictions. In response, the Kern County Board of Supervisors chose in early 1994 to eliminate the Kern ALUC. As a result, issues of airport land use compatibility review are now the responsibility of the Kern County Planning Department. Similarly, the City of Taft Planning Department is responsible for airport land use compatibility review within the City.

The Taft City Council and Kern County Board or Supervisors recently adopted an amendment to the Airport Land Use Compatibility Plan for the Taft-Kern County Airport. **Figure 4.1-1** shows the Comprehensive Land Use Plan for the airport and **Table 4.1-3** provides a summary of the various restrictions within each zone.

TABLE 4.1-3
COMPATIBILITY CRITERIA KERN COUNTY AIRPORT LAND USE COMPATIBILITY PLAN

Zone	Location[1]	Impact Elements	Maximum Densities		Required Open Land[4]
			Residential[2] (du/ac)	Other Uses[3] (people/ac)	
A	Runway Protection Zone or within Building Restriction Line	High risk High noise levels	0	10	All Remaining
B1	Approach/Departure Zone and Adjacent to Runway	Substantial risk – aircraft commonly below 400 ft. above ground level (AGL) or within 1,000 ft. of runway Substantial noise	0.1	60	30%
B2	Extended Approach/Departure Zone	Significant risk – aircraft commonly below 800 ft. AGL Significant noise	0.5	60	30%
C	Common Airport Environs	Limited risk – aircraft at or below 1,000 AGL Frequent noise intrusion	15	150	15%
D	Other Airport Environs	Negligible risk Potential for annoyance from overflights	No Limit	No Limit	No Requirements

Zone	Additional Criteria		Examples	
	Prohibited Uses5	Other Development Conditions8	Normally Acceptable Uses9	Uses Not Normally Acceptable10
A	All structures except ones with location set by aeronautical function Assemblages of people Objects exceeding FAR part 77 height limits Hazards to flight[6]	Dedication of aviation easement	Aircraft tiedown apron Pastures, field crops, vineyards Automobile parking	Heavy poles, signs, large trees, etc.
Zone	**Additional Criteria**		**Examples**	
	Prohibited Uses5	**Other Development Conditions8**	**Normally Acceptable Uses9**	**Uses Not Normally Acceptable10**
B1 and B2	Schools, day care centers, libraries Hospitals, nursing homes Highly noise-sensitive uses (e.g. amphitheaters) Storage of highly flammable materials[7] Hazards to flight[6]	Locate structures maximum distance from extended runway centerline Dedication of aviation easement	Uses in Zone A Any agricultural use except ones attracting bird flocks Warehousing, truck terminals Two-story offices Single-family homes on an existing lot	Residential subdivisions Intensive retail uses Intensive manufacturing or food processing uses Offices with more than two stories Hotels and motels
C	Schools Hospitals, nursing homes Hazards to flight[6]	Dedication of over-flight easement for residential uses	Uses in Zone B Parks, playgrounds Most retail uses Duplexes and medium-density apartments Two-story motels	Large shopping malls Theaters, auditoriums Large sports stadiums Hi-rise office buildings with more than four stories
D	Hazards to flight[6]	Deed notice required for residential development	All except ones hazardous to flight	

Source: Kern County Board of Supervisors, 2008

Notes:

1. Zones may also apply elsewhere if an airport has atypical operational procedures or specialized aircraft activities.

2. Residential parcels should not contain more than the indicated number of dwelling units per gross acre. Clustering of units is encouraged as a means of meeting the Required Open Land requirements.

3. The land use should not attract more than the indicated number of people per acre at any time. This figure should include all individuals who may be on the property (e.g., employees, customers/visitors, etc.). These densities are intended as general planning guidelines to aid in determining the acceptability of proposed land uses. Special short-term events related to aviation (e.g., air shows), as well as non-aviation special events, are exempt from the maximum density criteria.

4. Open land requirements are intended to be applied with respect to the entire zone. This is typically accomplished initially as part of the community's general plan or a specific plan.

5. May be modified by airport-specific policies or decision of local governing body with appropriate adopted findings based upon evidence in the record.

6. See Kern County Airport Land Use Compatibility Plan Policy Section 3.3, Airspace Protection.

7. Within the B1 and B2 zones, only the following flammable materials are permitted: aviation fuels, other aviation-related materials, and up to 2,000 gallons of nonaviation materials.

8. These conditions do not apply to ministerial actions.

9. These uses typically can be designed to meet the density requirements and other development conditions listed.

10. These uses typically do not meet the density and other development conditions listed. They should be allowed only if a major community objective is served by their location in this zone and no feasible alternative location exists.

Kern County Zoning Code

The Kern County Zoning Code is Title 19 of the County's Municipal Code and was last amended in March 2009. Its purpose is to promote and protect the public health, safety, and welfare through the orderly regulation of land uses throughout the unincorporated area of the County. Further, the purpose of the County's Zoning Code is to:

a) Provide the economic and social advantages resulting from an orderly planned use of land resources.

b) Encourage and guide development consistent with the Kern County General Plan.

c) Divide Kern County into zoning districts of a number, size, and location deemed necessary to carry out the purposes of the Kern County General Plan and this title.

d) Regulate the size and use of lots, yards, and other open spaces.

e) Regulate the use, location, height, bulk, and size of buildings and structures.

f) Regulate the intensity of land use.

g) Regulate the density of population in residential areas.

h) Establish requirements for off-street parking.

i) Regulate signs and billboards.

j) Provide for the enforcement of the regulations of this chapter.

Kern County Local Agency Formation Commission

The Local Agency Formation Commission (LAFCo) of Kern County is a state-mandated local agency that administers California Government Code Sections 56000 et seq., known as the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. Among the purposes of LAFCo are discouraging urban sprawl and encouraging the orderly formation and development of local government agencies based upon local conditions and circumstances (Section 56301). LAFCo regulates, through approval and denial, the boundary changes proposed by other public agencies or individuals. In reviewing proposals for boundary changes, LAFCo is required to consider certain factors such as the conformity between city and county plans, current service levels and the need for future services to the area, as well as the social, physical, and economic effects that agency boundary changes present to the community (Section 56841).

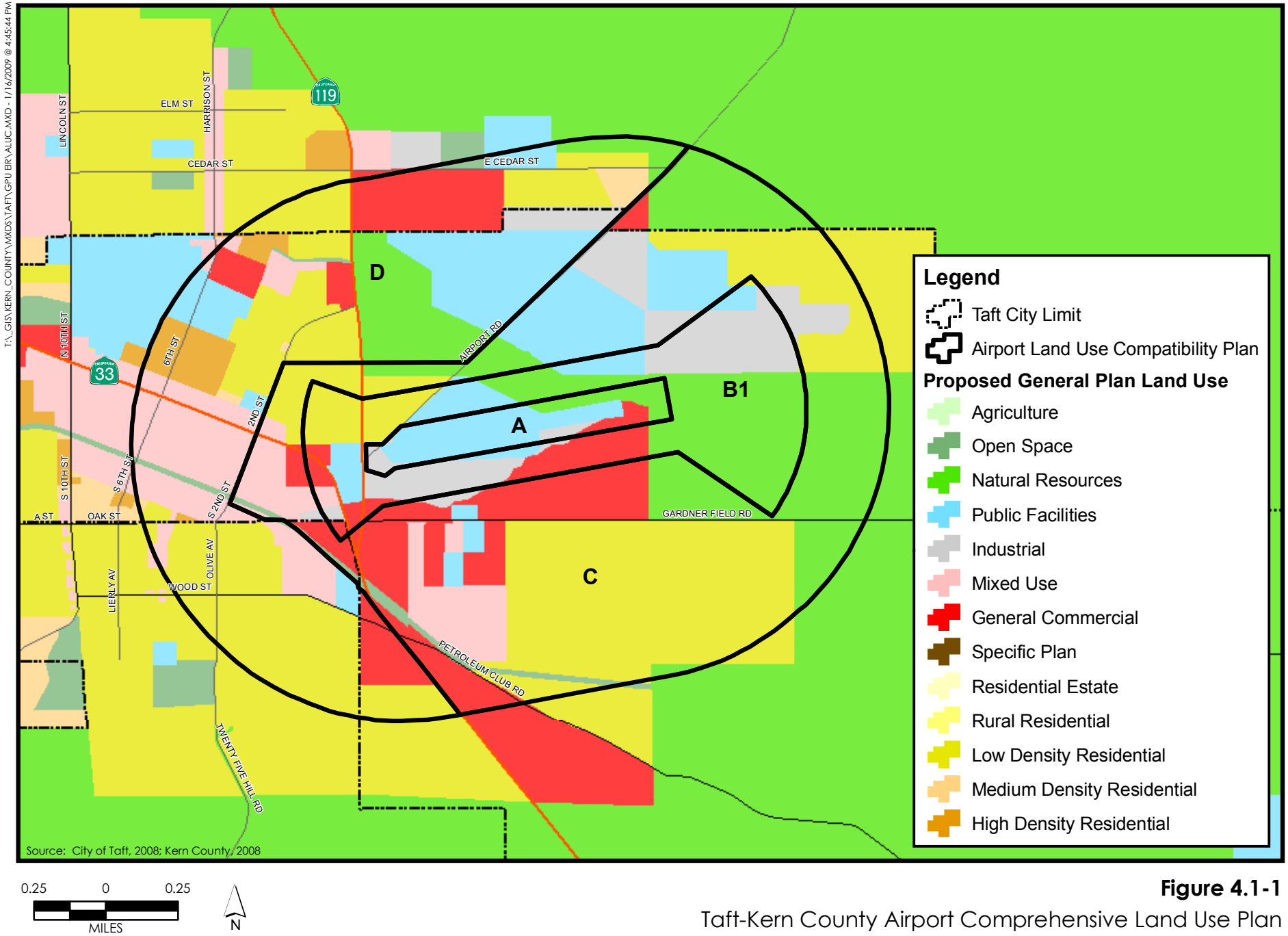

Figure 4.1-1

Taft-Kern County Airport Comprehensive Land Use Plan

PMC®

Kern County LAFCo Annexation Policy

The Kern County Board of Supervisors adopted an Annexation Policy Resolution (No. 96-239) on May 28, 1996. The resolution states the following:

Section 1. Whereas:

a) The Kern County Board of Supervisors strongly believes that the people affected by an annexation proposal are the best ones to determine the needs of their community and whether annexation best meets the needs of their community; and

b) The Government Code provides that if over 50% of the people affected by an annexation proposal oppose the annexation, and properly protest the action, the annexation cannot occur; and

c) The County of Kern is committed to providing complete and factual information to citizens regarding the annexation process and the effect of annexations on citizens in order to assist citizens in making informed decisions as to whether to support or oppose an annexation proposal; and

d) The people within an area of a proposed annexation have a number of opportunities to make their voice heard if they favor or oppose an annexation proposal; and

e) The Kern County Board of Supervisors has approved Master Property Tax Exchange Agreements with many cities within the County that mitigate the fiscal harm to the County for certain types of annexations.

Section 2. Now, therefore, it is hereby resolved by the Board of Supervisors of the County of Kern, State of California, as follows:

1. The County of Kern supports the will of the people within territory proposed to be annexed by providing information upon request regarding the annexation process, timing, requirements, and sample documents that may be used by either proponents or opponents to an annexation; and

2. To the extent available, the County will compile and make available fiscal and other information concerning a specific annexation proposal upon the request of any citizen; and

3. The County of Kern does not oppose the annexation of territory on the basis of fiscal harm that meets any of the criteria specified within any fully executed MOU that establishes a percentage transfer to property tax upon annexation.

City of Taft Ordinances/Regulations

Under state law, city ordinances would be required to be updated to achieve consistency with the proposed General Plan Update and no long-term inconsistency between the two would occur. As part of the implementation of the General Plan Update, the City would subsequently update relevant ordinances, including the Zoning Ordinance. The proposed General Plan Update does not remove of conflict with policies intended for environmental protection identified in the current General Plan. Rather, the proposed General Plan Update would build upon existing

policies intended to provide environmental protection, as discussed in each environmental issue area in this DEIR.

City of Taft Zoning Ordinance

The City of Taft Zoning Ordinance implements the goals and policies of the City's General Plan. It establishes zoning districts that guide the development and use of land in Taft by setting allowable land uses within each district. The Zoning Ordinance provides development standards such as land use limitations, building setbacks, height restrictions, and sign standards among others. By state law, the Zoning Ordinance must be consistent with an adopted General Plan. Therefore, should it adopt the proposed General Plan, the City would need to update its Zoning Ordinance accordingly.

City of Taft Downtown Specific Plan

The Taft Downtown Specific Plan was adopted by the City Council in March 1994 and revised in December 1999. The purpose of the plan is to ensure implementation of the City's General Plan with respect to the planning and development of the downtown area. This area encompasses about 145 acres located in central Taft from 1st Street to 10th Street and from Lucard Street to the Sunset Railroad lines. The plan established an Overlay Zone for the area further defining the types and forms of uses designated in the General Plan. The Overlay Zone includes such designations as Retail Core, Transitional Zone, and Revitalization Zone. In addition, to this land use plan, the Specific Plan provides goals and objectives, development regulations, and development incentives for the downtown area (City of Taft, 1999).

Conceptual Design Guidelines for the Downtown Revitalization

The Conceptual Design Guidelines for the Downtown Revitalization provide ideas and guidelines for downtown revitalization, with a focus on identifying historical styles and materials and establishing standards for the rehabilitation of existing buildings and new construction (Lesovsky Donaldson Architects, n.d., p. 1).

Historic Preservation Plan 2007

The Taft Historic Preservation Plan 2007 identifies a Historic Preservation District which encompasses the City Limits of the City of Taft and a Qualified Historic Structures List. Buildings on the list were selected by City staff either for the original architectural character of their specific time period or for the histories of the people who once lived in them. The Historic Preservation Plan sets forth basic guidelines to promote the importance of preserving and protecting historic buildings in order to enhance the architectural integrity of the district and encourages property owners to take special care in preserving, protecting, or enhancing historic buildings. While the guidelines are not mandatory, the Preservation Plan is intended to help property owners understand why any alteration or addition should reflect the historic fabric or features of the building. Property owners are encouraged to undertake any alterations in accordance with plan guidelines, and to seek financial assistance, incentives, or preservation resources made available by City staff, preservationists, and neighbors within the district, as well

as state and federal programs. The plan shall serve as the local registry of historic structures, sites, or places for the City of Taft (City of Taft, 2007, p. 3).

Draft Kern County Valley Floor Habitat Conservation Plan

The Planning Area lies within the coverage area of the draft VFHCP (Garcia and Associates 2006). The draft VFHCP is a long-term program designed to conserve federally protected species, state-protected species, and/or other species of concern. The draft VFHCP establishes the conditions under which Kern County, the California Division of Oil, Gas, and Geothermal Resources (DOGGR), and other program beneficiaries are seeking authorization to allow the taking of multiple federally and state-protected species incidental to development and other land use activities within the historical range of federally protected plant and animal species, state-protected plant and animal species, and/or other species of concern. Species covered within the VFHCP are classified as Species of Local Concern (SLC) in this report. As of the preparation of this DEIR, the City of Taft has requested participation in the VFHCP.

4.1.3 PROJECT IMPACT ANALYSIS

STANDARDS OF SIGNIFICANCE

The land use analysis evaluates the consistency of the proposed General Plan Update according to the following standards, which are based on State California Environmental Quality Act (CEQA) Guidelines Appendix G. A land use impact is considered to be significant if implementation of the project would:

1. Physically divide an establish community;

2. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or

3. Conflict with any applicable habitat conservation plan or natural community conservation plan.

In regard to number three above, the project's relationship with any applicable habitat conservation plan or natural community conservation plan will be addressed in Section 4.10, Biological Resources, of this DEIR. The proposed General Plan Update's relationship to any such plans is not discussed further in this section.

METHODOLOGY

An evaluation of the potential land use impacts associated with the implementation of the proposed City of Taft General Plan Update was based on a review of planning documents, including City of Taft regulations affecting planning and implementation of the proposed project, the County of Kern General Plan, other applicable community plans and specific plans,

the Kern County Airport Land Use Compatibility Plan, the City and County Zoning Ordinances and Municipal Codes, aerial photographs of the City and entire General Plan Planning Area, and consultation with appropriate agencies. The analysis contained herein is based on buildout conditions for the General Plan Planning Area and does not assess impacts associated with the phasing of individual development projects or interim improvements, except when the timing of such projects creates reasonably foreseeable environmental impacts.

As discussed in detail in Section 1.0, Introduction, of this EIR, this document has been prepared as a Program EIR pursuant to State CEQA Guidelines Section 15168. Accordingly, this EIR will be used to evaluate subsequent projects and activities under the proposed General Plan Update. When subsequent individual project and activities under the General Plan are proposed, the City would evaluate whether their effects were adequately analyzed in this Program EIR. If the projects or activities would have no effects beyond those analyzed in this EIR, no further CEQA documentation would be required.

The focus of the land use analysis in this section is on land use impacts that would result from the proposed General Plan Update, i.e., the policy document, Land Use Map, and other General Plan components. Specific impacts and General Plan consistency issues associated with biological resources, visual resources, noise, traffic, public services and utilities, hydrology (including water supply and water quality), cultural resources, agricultural resources, population and housing, and/or geology and soils are address in each applicable technical section (Sections 4.2 through 4.13).

This DEIR addresses areas both within the incorporated boundaries of the City and unincorporated areas of the County that are within the Planning Area. As required by CEQA, this DEIR also examines any impacts of the proposed General Plan Update that may be "cumulatively considerable" when viewed in connection with the effects of past, present, and projected future projects, in accordance with State CEQA Guidelines Section 15064. The County of Kern General Plan and the County's various community plans and specific plans were used to analyze the cumulative land use impacts associated with implementation of the proposed General Plan Update.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the updated General Plan. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

IMPACTS AND MITIGATION MEASURES

Physical Division of Established Communities

Impact 4.1.1 Implementation of the proposed Taft General Plan Update would not result in the physical division of any established communities because the General Plan focuses on redevelopment and infill within existing underdeveloped areas and preservation and revitalization of the existing neighborhoods within the City, rather than developing in a way that might divide an established community. The impact is considered **less than significant**.

The Planning Area includes existing mixed urban development, primarily within the City of Taft as well as in some portions of the outlying unincorporated areas. For instance, the communities of Ford City, Taft Heights, and South Taft are immediately adjacent to the City limits and have been developed with mixed urban uses. In addition, northeast of the City, there is existing development within the Dustin Acres and Valley Acres Rural Community Plan areas, as well as some industrial development within the South Kern Industrial Center Specific Plan area, east of the City. However, for the most part, there are large tracts of undeveloped, vacant land, surrounding the City, primarily utilized for agricultural and oil and gas production purposes (see **Figures 3.0-3** and **3.0-5**). **Tables 4.1-1** and **4.1-2** provide an overview of the existing land uses and zoning designations within the current City limits, and the Expansion Area, which is currently under Kern County jurisdiction. As indicated by these tables, existing residential uses account for approximately 0.3 percent of the City's land, while commercial and mixed use areas account for less than 0.1 percent. Within the Expansion Area, these land uses currently only account for 5.5 percent, 0.2 percent, and 0.1 percent of the Planning Area, respectively.

The proposed General Plan land use designations are summarized in **Table 4.1-4** below and are illustrated in **Figure 3.0-6**. As shown, potential development under the proposed GPU could result in the expansion of urban uses into existing undeveloped or vacant areas. However, any such proposed expansion would cluster residential areas close together without separating any established communities or neighborhoods with large-scale commercial centers, industrial uses, or major transportation corridors, such as freeways or railroads, which have the possibility of dividing areas and impeding local circulation. Furthermore, the majority of the proposed land use designations within the Expansion Area would remain dedicated to agricultural (59 percent) and natural resource (33 percent) production.

TABLE 4.1-4
SUMMARY OF PROPOSED GENERAL PLAN LAND USE DESIGNATIONS (ACRES)

Land Use Designations	City Limits	Expansion Area	Planning Area	Percentage of Planning Area
Agriculture (A)	0	86,929	86,929	55.2
Natural Resources (NR)	5,411	50,932	56,343	35.8
Open Space (OS)	100	59	159	0.1
Rural Residential (RR)	0	29	29	0.0
Estate Residential (ER)	0	197	197	0.1
Low Density Residential (LDR)	1,524	1,534	3,058	1.9
Medium Density Residential (MDR)	142	64	206	0.1
High Density Residential (HDR)	71	14	85	0.1
Mixed Use (MU)	357	256	613	0.4
General Commercial (GC)	541	1,238	1,779	1.1
Industrial (IND)	545	2,237	2,782	1.8
Public Facilities (PF)	931	2,246	3,177	2.0
Specific Plan (SP)	0	2,213	2,213	1.4
Totals	**9,622**	**147,948**	**157,570**	**100**

Source: City of Taft, 2009

The proposed General Plan focuses on infill development within the City as a priority but contains numerous policies that encourage such infill development to be in keeping with the character of other existing development and appropriately scaled to meet the needs of the surrounding neighborhoods. These policies also encourage the preservation of the historic features and nature of the City, particularly in the downtown area. Policy LU-90 specifically encourages the annexation of the Taft Heights, South Taft and Ford City neighborhoods in order to create one cohesive and well-planned community and to effectively remove any division between these areas. Finally, the General Plan contains policies that encourage public participation in the planning process in order to achieve a well-planned community.

Development under the proposed General Plan Update would not result in the division of or substantial changes in the character of existing communities, because the goals, policies, and actions proposed in the General Plan seek to phase growth in an orderly manner based on infrastructure capacity, infrastructure financing, transportation facilities, and other infrastructure. This policy and action item are identified below. This impact is considered **less than significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The below policies are contained in the proposed General Plan to reduce the effects of the General Plan Update on the cohesiveness of the existing community of Taft.

Policy LU-1 Encourage infill development in the existing urban areas of the Planning Area.

Policy LU-28 Encourage commercial infill development.

Action LU-28a Provide incentives, such as flexible zoning, for commercial infill projects.

Policy LU-29 Encourage the location, size, scale, and design of neighborhood commercial uses to complement and meet the needs of the surrounding neighborhood.

Policy LU-32 Encourage clustered, smaller scale office and professional land uses throughout the community to meet the needs of nearby neighborhoods.

Policy LU-35 Encourage industrial infill development.

Action LU-35a Provide incentives, such as flexible zoning, for industrial infill projects.

Policy LU-56 Promote a mix of compatible land uses contributing to the historic nature and economic viability of the Downtown area.

Policy LU-58 Protect and enhance the integrity of historical resources as identified in the Historic Preservation Plan.

Policy LU-61 Promote infill development that is aesthetically pleasing and compatible with existing development.

Action LU-61a Provide incentives, such as flexible zoning regulations, for infill projects.

Policy LU-67 Actively promote reinvestment in existing neighborhoods.

Policy LU-78 Ensure that the provision of new or enlarged parking facilities does not adversely affect the livability and desirability of the surrounding neighborhoods.

Policy LU-79 Discourage the proliferation of surface parking as an interim land use when sound residential, commercial or industrial buildings would be demolished pending other development.

Policy LU-87 Encourage public involvement in deciding the future of Taft.

Policy LU-90 Annex of Taft Heights, South Taft and Ford City.

Through the implementation of the policies listed above, the proposed General Plan Update encourages development within the Planning Area that is designed and implemented in a way

that will not divide, disrupt, or otherwise negatively affect the existing, surrounding development and will instead enhance and revitalize existing communities. As such, this impact is considered to be **less than significant**.

Mitigation Measures

None required.

Land Use Incompatibilities

Impact 4.1.2 Implementation of the proposed project could result in incompatibilities or conflicts between existing and future land uses within the Planning Area. However, implementation of policy provisions of the General Plan would reduce this potential impact to a **less than significant** level.

The proposed General Plan Land Use Map was developed with the intent to designate areas for the most appropriate type of land use based on specific environmental constraints and opportunities, existing land uses, the existing and planned circulation system, and the specific needs of the Taft community. As such, implementation of the proposed Land Use Map would not be expected to result in many significant land use conflicts.

However, some designated land uses have the potential to result in conflicts, such as where industrial uses abut residential uses and where active agriculture and/or petroleum production abut any type of urban development. In particular, the unincorporated communities of Taft Heights, South Taft, and Dustin Acres are adjacent to petroleum production uses and the Buena Vista Specific Plan area is adjacent to both petroleum production and agricultural uses. As such, each of these areas may experience land use incompatibilities which could be worsened by the intensification of urban uses under the proposed General Plan Update. These areas are currently under the jurisdiction of the County but would be annexed into the City of Taft within the planning horizon of the proposed General Plan.

The proposed General Plan contains policies that are intended to address these potential land use conflicts. In addition, the Taft Zoning Ordinance would be updated to comply with the proposed General Plan, should it be approved, further defining and segregating incompatible uses.

Potential land use conflicts include excessive noise; hazardous materials use, storage, and transport; toxic air emissions and odors; and light pollution and undesirable views in close proximity to sensitive receptors such as residences, schools, hospitals, and libraries. Each of these issues is addressed in detail in the appropriate sections of this DEIR (Sections 4.2 through 4.13).

The proposed General Plan also contains policies to protect agricultural land from potential conflicts with new or intensified urban development. The reader is referred to Section 4.2, *Agricultural Resources*, and Impact 4.2.2 for further discussion of potential conflicts between agricultural operations and urban development. The reader is also referred to Impact 4.3.4

below, Section 4.4, Hazards and Human Health, and Section 4.5, Traffic and Circulation for discussion of potential airport land use conflicts.

Proposed General Plan Policies and Action Items that Provide Mitigation

The below policies are contained in the proposed General Plan to reduce the effects of the General Plan Update on incompatibilities or conflicts between existing and future land uses in the Planning Area.

Policy LU-2 Protect existing businesses within areas designated by the General Plan for existing or future industrial and commercial uses from conflicts with and encroachment by non-compatible land uses.

Policy LU-27 Promote commercial development that is aesthetically pleasing.

Action LU-27a Establish Commercial Design Guidelines.

Action LU-27b Modify the development standards for commercial zone districts to upgrade improvements such as parking, landscaping, pedestrian features, transit stops, setbacks, and signage.

Policy LU-39 Encourage industrial and business activity areas to provide room for expansion and sufficient buffers to prevent incompatibility with surrounding uses.

Policy LU-40 Encourage screening of unsightly operations and landscaping of storage area perimeters.

Action LU-40a Develop standards for outside industrial storage facilities.

Policy LU-53 Establish and maintain downtown Taft as the community business shopping and activity center for the west side of Kern County with clearly defined trade area boundaries, a recognizable identity, compatible and mutually supportive land uses, and a pleasant and pleasing atmosphere.

Policy LU-56 Promote a mix of compatible land uses contributing to the historic nature and economic viability of the Downtown area.

Policy LU-69 Encourage businesses to create minimal and/or mitigable levels of noise, fumes, odors, hazardous waste, traffic, and other negative factors for the community as a whole and their location in particular.

Policy LU-78 Ensure that the provision of new or enlarged parking facilities does not adversely affect the livability and desirability of the surrounding neighborhoods.

Policy LU-81 Continue to actively enforce the City's sign ordinance.

Policy LU-83 Do not allow legal, non-conforming land uses to be enlarged physically or operationally, without careful consideration of long-term impacts associated with revitalizing the use.

Action LU-83a Actively enforce existing zoning and building regulations that preclude or eliminate uses of land or buildings that present conflicts for adjacent properties.

Policy LU-86 Control development of commercial signage, including restrictions of off-site signage, and set development standards for all types of commercial signage.

Policy C-5 Working in consultation with the Kern County Agricultural Commission and the Kern County Farm Bureau, establish agricultural buffer zones between urban and agricultural land uses. Design buffer zones to address the physical effects of agricultural practices, such as chemical spraying, noise, and odors, and to prohibit residential incursion into agricultural areas.

Action C-5a Adopt a buffer zone policy to designate specific setbacks on developing land from existing agricultural land.

Policy C-7 Encourage cluster development as a means of obtaining open space to be used as a buffer.

Policy C-8 Encourage the use of innovative techniques and emerging research on integrated pest control methods to minimize the impact of pesticide and herbicide use on the City's human and natural communities.

Policy C-32 Promote land use policies that minimize public exposure to sources of toxic air contaminants, ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, and lead.

Policy C-33 Ensure that all land use decisions are equitable and protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the adverse health effects of air pollution.

Policy C-34 Encourage the mitigation of significant off-site impacts when new residential development and other sensitive receptors are sited adjacent to existing and potential sources of toxic emissions.

Policy N-1 Require new development to conform with noise levels contained in Table 8.0-1 (Land Use Compatibility for New Development Near Transportation and Non-Transportation Noise Sources). Locate, construct, and/or screen all indoor and outdoor areas from noise sources to achieve compliance with the City's noise standards.

Action N-1a Amend the Taft Municipal Code to reflect the noise thresholds identified in Table 8.0-1 (Land Use Compatibility for new

Development Near Transportation and Non-Transportation Noise Sources).

Action N-1b Require an acoustical analysis as part of the environmental review process when proposed development is likely to produce noise levels that exceed the City's noise standards.

Action N-1c Identify potential noise impacts during the acoustical analysis to be mitigated in the project design to the maximum extent.

Policy N-2 Use site planning, project design, and all other practical design-related noise mitigation measures as the primary means of noise mitigation.

Policy N-3 Use noise barriers as a secondary means of noise mitigation. Require noise barriers, if required, to be visually attractive, complement the surroundings, and include a provision for continuing maintenance.

Policy N-4 Minimize the impacts of construction noise on adjacent uses.

Action N-4a Amend the Taft Municipal Code to establish standards for construction noise including the following:

- Restrict noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to between the hours of 6 a.m. and 7 p.m. Monday through Friday, and between 6 a.m. and 5 p.m. on weekends.

- Require the use of temporary construction noise control measures including the use of temporary noise barriers, if necessary, as mitigation for noise generated during construction of public and/or private projects.

Policy N-5 Encourage new development in the vicinity of the airport to be compatible with existing and projected airport noise levels as set forth in the Airport Land Use Compatibility Plan.

Action N-5a Discourage residential and other noise-sensitive uses from being located near the airport.

Policy N-6 Route truck traffic around noise-sensitive areas, such as residential neighborhoods.

Policy N-7 Prohibit new non-residential land uses, including energy project proposals, from creating operational noise disturbances in existing noise-sensitive areas.

Policy N-8 Mitigate noise created by proposed non-transportation noise sources.

Action N-8a Require the operation of loading docks, trash compactors, and other noise-producing uses that are adjacent to residential and other sensitive uses to be consistent with Table 8.0-1.

Policy N-9 Discourage future noise-sensitive uses from locating in areas designated for commercial and/or industrial land uses to protect existing and proposed conforming noise-producing uses.

Action N-9a Require new noise-sensitive uses proposed in or adjacent to areas designated for commercial and/or industrial land uses to be provided a disclosure statement notifying them of existing and potential noise-producing uses.

Policy N-10 Maintain acceptable noise levels and adequate privacy in higher density and mixed-use development.

Action N-10a Require design and construction standards that minimize noise conflicts between residents with shared walls or floors/ceilings.

Policy S-11 Require industries which store and process hazardous or toxic materials to provide a buffer between the source and the property boundaries sufficient to protect public safety, subject to approval by the City and any other regulatory agency.

Action S-11a As part of review and approval of development plans, require adequate buffering of sensitive uses from hazardous or potential hazardous areas.

The proposed General Plan policies listed above would reduce the potential for land use conflicts to occur within the Planning Area by encouraging the development of compatible land uses and discouraging the encroachment of non-compatible uses. These policies will also reduce conflicts related to noise by establishing noise standards for areas near sensitive receptors, by requiring proper design and construction of new development to minimize noise, and by requiring acoustical studies prior to development of new noise generators and new sensitive receptors. The proposed General Plan policies also address conflicts related to light pollution and undesirable views by requiring screening and landscaping at property boundaries, where appropriate. Finally, the proposed General Plan policies reduce risks associated with the use, transport, and storage of hazardous materials by actively enforcing existing regulations and coordinating with other agencies to ensure that such materials are handled properly within the Planning Area.

In addition, the City's Zoning Code includes requirements that would assist in reducing conflicts, particularly land use conflicts with oil-related uses. For example, Section 9.50 (Development Standards and Conditions) of the Zoning Code restricts oil or gas wells from being drilled within 100 feet of the right-of-way of any public highway, proposed public highway, Official Plan Line, or Specific Plan Line. The Zoning Code also has requirements for 300 foot setbacks between oil

wells and commercial or other structures. Furthermore, Chapter 9 of the Zoning Code contains procedures and standards for the recovery of oil, gas, and other hydrocarbon substances in a manner compatible with surrounding land uses and to protect the public health and safety.

After implementation of the above General Plan policies, as well as the City's Zoning Code, this impact is considered to be **less than significant**.

Mitigation Measures

None required.

Conflicts with Relevant Land Use Plans, Policies, or Regulations

Impact 4.1.3 Implementation of the proposed General Plan Update would not conflict with other applicable land use plans, policies, or regulations of agencies with jurisdiction over parts of the Planning Area that provide for environmental protection. This is considered a **less than significant** impact.

As part of the proposed General Plan Update, the City is proposing a new Land Use Map which designates all parts of the Planning Area for specific uses such as agriculture, open space, residential, commercial, and industrial. These proposed designations may not be consistent with the existing County land use designations as identified in the County's General Plan and various Specific Plans and Community Plans located within the Planning Area. The proposed General Plan Land Use map is shown on **Figure 3.0-6** and is summarized in **Table 4.1-4** above.

As shown in **Figure 3.0-6**, the majority of the Planning Area is proposed for designation as Agriculture (A) and Natural Resources (NR) which reflects the rural character of the Planning Area outside the City. Urban use designations, such as Low, Medium and High Density Residential (LDR, MDR, HDR), Mixed Use (MU), and General Commercial (GC), would be concentrated within the City of Taft and at major interchanges along I-5. The Industrial (IND) designation would be concentrated within the South Kern Industrial Center Specific Plan Area and throughout the City. Following are brief discussions of how these proposed uses would conflict with existing plans and ordinances that apply within the Planning Area. The issue of potential conflicts with the Taft-Kern County Airport Comprehensive Land Use Plan (CLUP) is addressed under Impact 4.1.4.

Kern County General Plan

The Kern County General Plan land use designations and policies are applicable to those areas of the Planning Area currently located outside the Taft City limits (i.e., the Expansion Area). The County's General Plan Land Use Map designates the majority of the Expansion Area for various levels of agricultural use as well as mineral and petroleum production. In addition, several areas within the Expansion Area are state and federal lands which are outside the jurisdiction of both the County and the City. The remaining areas are designated for various rural and urban uses including a range of residential, commercial, industrial, and public uses (see **Figure 3.0-5**).

The proposed General Plan Land Use Map has designated the Expansion Area for uses that are generally consistent with those of the County General Plan. The majority of the Expansion Area is proposed for designation as Agriculture (59 percent) and Natural Resource (33 percent) which is consistent with the County's designations for these areas. However, there are some inconsistencies (see **Figure 3.0-6**). Where SR 119 meets I-5, where SR 43 meets I-5, and where SR 43 meets SR 119, the proposed General Plan Update has expanded the commercially designated areas, as compared to the County General Plan. The County General Plan currently designates these areas for agriculture, resource management, and mineral/petroleum production uses. In addition, the proposed General Plan expands upon the industrial designations associated with the South Kern Industrial Center Specific Plan to the west, an area that is currently designated by the County General Plan for resource management and agricultural uses.

Other proposed designations that are in conflict with the County General Plan occur in the unincorporated communities of Taft Heights, South Taft, and Ford City, which are located immediately adjacent to the Taft City limits but are currently under Kern County jurisdiction. In the Taft Heights area, the proposed General Plan designates the area currently designated by the County for mineral/petroleum production as Medium Density Residential. In the South Taft area, the proposed General Plan again eliminates the mineral/petroleum production uses currently designated by the County and designates the area as Low Density Residential as well as Open Space adjacent to the Public Facility (school) designation, which it maintains. The proposed General Plan also designates the northeastern portion of South Taft as Mixed Use and General Commercial while the County General Plan designates it for service industrial uses. Finally, the proposed General Plan designates the Ford City area west of N. Lincoln Street as Mixed Use while the County General Plan designates the area for service commercial and mineral/petroleum production uses. Further, the proposed General Plan eliminates the County's parks/recreation designation in the Ford City area east of SR 119 and designates it as General Commercial.

Although the proposed General Plan land use designations in some areas are not consistent with the County's existing land use designations and could represent conflicts between the two plans, these areas would require annexation into the City prior to any development under the City's proposed General Plan. Proposed General Plan Policy LU-90 specifically encourages annexation of the Taft Heights, South Taft, and Ford City communities. Upon annexation, the County would no longer have jurisdiction over these areas and any potential conflicts would thus be resolved. Where the proposed General Plan designates a more intense use as compared to the County General Plan (i.e., General Commercial rather than Resource Management), potential environmental impacts could occur related to aesthetics, air quality, biological resources, cultural resources, soil erosion, hazardous materials, water quality, noise, growth inducement, public services and utilities, and traffic. These potential environmental impacts are addressed in the appropriate sections of this DEIR (Sections 4.2 though 4.13). The proposed General Plan Update would conflict with the Kern County General Plan as they relate to land use and planning, and this impact is considered to be **less than significant**.

South Kern Industrial Center Specific Plan

The County currently designates the South Kern Industrial Center Specific Plan Area almost entirely for heavy industrial uses with a small area designated for public facility uses (see **Figure 3.0-5**). The proposed City of Taft General Plan designations for this area are Industrial and Public Facility and are consistent with the County designations (see **Figure 3.0-6**). Regardless, as described above, this area would require annexation into the City prior to any development under the City's General Plan. Upon annexation, the County would no longer have jurisdiction over the area and any potential conflicts would thus be resolved. The proposed General Plan Update would be consistent with the South Kern Industrial Center Specific Plan, and this impact is considered to be **less than significant**.

Dustin Acres Rural Community Plan

The County currently designates the portion of the Dustin Acres Rural Community Plan Area that is located within the Expansion Area for agricultural and service industrial uses north of SR 119 (see **Figure 3.0-5**). The proposed City of Taft General Plan designations for this area are consistent with these County designations with Residential Estate and Rural Residential designations north of SR 119 and Agriculture and Industrial designations south of the highway (see **Figure 3.0-3**). Regardless, as described above, this area would require annexation into the City prior to any development under the City's General Plan. Upon annexation, the County would no longer have jurisdiction over the area and any potential conflicts would thus be resolved. The proposed General Plan Update would be consistent with the Dustin Acres Rural Community Plan, and this impact is considered to be **less than significant**.

City of Taft Zoning Ordinance

Upon adoption of the proposed General Plan Update, the City's Zoning Ordinance would be updated to be consistent with the General Plan. The General Plan is the dominant planning and development guide for the City, and the restrictions and regulations contained in the Zoning Ordinance are always considered to be subordinate to those contained in the General Plan. Upon update of the City's Zoning Ordinance, any potential conflicts between it and the updated General Plan would be resolved. Until that time, the General Plan would take precedence over the Zoning Ordinance should conflicts arise. As such, this impact is considered to be **less than significant**.

City of Taft Downtown Specific Plan

As described in Regulatory Setting above, the City's Downtown Specific Plan is intended to implement the City's General Plan within the downtown area by providing more specific, detailed guidance on the types and forms of uses permitted. Both the proposed General Plan and the Downtown Specific Plan designate the downtown area as a mix of uses including retail, service commercial, public uses, and high-density residential. These plans are intended to work together and are therefore considered to be consistent. Should conflicts arise, the General Plan would take precedence over the Downtown Specific Plan. This impact is **less than significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following policy is contained in the proposed General Plan to reduce the effects of conflicts between the General Plan and all other relevant land use plans, policies, and regulations.

Policy LU-90 Annex of Taft Heights, South Taft and Ford City.

Mitigation Measures

None required.

Conflicts with Taft-Kern County Airport

Impact 4.1.4 Implementation of the proposed General Plan Land Use Map has the potential to conflict with the development restrictions established in the Taft-Kern County Airport Land Use Compatibility Plan. This impact is considered to be **less than significant**.

The current Comprehensive Land Use Plan (CLUP) for the Taft-Kern County Airport as well as the proposed General Plan designations within the CLUP area are shown in **Figure 4.1-1**. Although some of the proposed land use designations could allow for uses that are prohibited within the individual airport safety zones (as described in **Table 4.1-3** above), the airport has been annexed into the City limits and is subject to City regulations. As such, future development projects proposed within the CLUP area would be reviewed by the City of Taft Planning Department prior to approval to ensure that they are appropriate and that they comply with City regulations including the height restrictions of the City's Zoning Ordinance. No runway extensions, changes in traffic patterns, or other improvement plans that could impact the surrounding existing and planned land uses are currently planned at the airport. This impact is considered to be **less than significant**. The reader is referred to Sections 4.7, Hazards and Human Health, 4.4, Traffic and Circulation, and 4.6, Noise, for further discussion of potential conflicts related to the operation of the Taft-Kern County Airport.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following policy is contained in the proposed General Plan to reduce the effects of conflicts between the General Plan and the Taft-Kern County Airport.

Policy LU-6 Require all development to be compatible with the Airport Land Use Compatibility Plan (ALUCP).

Policy CI-39 Where required by the Federal Aviation Administration, require the dedication of aviation easements for discretionary projects to provide for orderly development and as a means of preventing new noise and safety impacts.

Mitigation Measures

None required.

4.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The land use policies in the proposed General Plan Update would provide direction for growth within the City limits, while the Kern County General Plan policies provides direction for growth outside the City limits, but within the Planning Area boundaries (until land areas are annexed into the City). Thus, the setting for this cumulative analysis includes existing, proposed, approved, and planned projects in the Planning Area and immediately surrounding portions of unincorporated Kern County as well as full buildout of the City of Taft General Plan Planning Area as proposed in the General Plan Update (occurring after year 2035). Development in the region identified in Section 4.0 would change the intensity of land uses in the region and increase housing, employment, shopping, and recreational opportunities (the physical effects of providing new housing, employment, shopping, and recreation within the Planning Area and the region are addressed in other sections of this Draft EIR).

Potential environmental effects associated with cumulative land use conditions for the region are considered in Sections 4.2 through 4.13 of this Draft EIR and generally consist of the following:

- **Aesthetics** – Further conversion of rural, agricultural and natural open space landscape characteristics to urban conditions.
- **Agricultural Resources** – Continued loss of farmland to urban uses as well as increased conflicts with agricultural operations and urban uses.
- **Air Quality** – Increases in air pollutant emissions potentially conflicting with air quality attainment efforts under State and federal Clean Air Acts. Also increased potential for the exposure to toxic air contaminants.
- **Biological Resources** – Loss of special-status plant and animal species habitats, degradation of habitats and loss of special-status species.
- **Cultural Resources** – Impacts to known and unknown archaeological and historic resources in the region.
- **Geology and Soils** – Loss of access to known valuable mineral resources.
- **Hydrology and Water Quality** – Additional sources of point and non-point sources of surface water quality pollutants to region waterways.
- **Noise** – Increased transportation noise levels from increased traffic volumes. Increased non-transportation noise levels from development of new noise-producing uses.
- **Public Services and Utilities** – Increased demand for the development and expansion of public services and facilities and associated environmental issues.

- **Traffic** – Increased traffic volumes on the region's highways and regional roadways resulting in deficient levels of service of operation.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Land Use Impacts

Impact 4.1.5 When considered with existing, proposed, approved and planned development in the region, implementation of the proposed Taft General Plan Update has the potential to contribute to cumulative land use conditions in the region that result in significant impacts to the physical environment. This is considered a **cumulatively considerable** impact.

The land use patterns and development within the Planning Area would contribute to the environmental effects of growth expected to occur in the region over the next 30 – 65 years. The proposed project does provide environmental benefits by accommodating a larger population and employment base within the Planning Area through the intensification of development, revitalization of underutilized development, and provision of transit and opportunities for alternative transportation. This would reduce the conversion of additional land area under lower development intensities. However, the proposed General Plan land use pattern and development intensity would still substantially contribute to the conversion of vacant/undeveloped land in the region resulting in significant effects to the environment. In addition, future development under the proposed GPU could bring development closer to the City of Bakersfield, to the northeast of Taft. These potential environmental effects are discussed and analyzed in greater detail in the sections relating specifically to those particular issue areas (see Sections 4.2 through 4.13 of the Draft EIR). The proposed General Plan goals, policies, and actions intended to minimize the environmental effects of future land development are also provided in these sections of this Draft EIR.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing cumulative land use impacts. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Land Use Element

Policy LU-1; Policy LU-2; Policy LU-27; Action LU-27a; Action LU-27b; Policy LU-28; Action LU-28a; Policy LU-29; Policy LU-32; Policy LU-35; Action LU-35a; Policy LU-39; Policy LU-40; Action LU-40a; Policy LU-53; Policy LU-56; Policy LU-58; Policy LU-61; Action LU-61a; Policy LU-67; Policy LU-69; Policy LU-78; Policy LU-79; Policy LU-81; Policy LU-83; Action LU-83a; Policy LU-86; Policy LU-87; Policy LU-90

Open Space and Conservation Element

Policy C-5; Action C-5a; Policy C-7; Policy C-8; Policy C-32; Policy C-34

Noise Element

Policy N-1; Action N-1a; Action N-1b; Action N-1c; Policy N-2; Policy N-3; Policy N-4; Action N-4a; Policy N-5; Action N-5a; Policy N-6; Policy N-7; Policy N-8; Action N-8a; Policy N-9; Action N-9a; Policy N-10; Action N-10a

Safety Element

Policy S-11; Action S-11a

Circulation Element

Policy CI-39

Though the above proposed General Plan policies would assist in reducing the environmental effects of the proposed development under the GPU, urban development would still occur under the proposed General Plan, and currently undeveloped lands would still be converted to urban uses. This would also occur in other parts of the County over which the City has no jurisdiction, either under the County's GP development potential, or the development potential of other jurisdictions' General Plans. Therefore, the anticipated cumulative impacts described previously would take place, although the GP policies would reduce the City's cumulative contribution. This impact is considered **cumulatively considerable** and a **significant and unavoidable impact**.

Mitigation Measures

No additional feasible mitigation is available.

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4.2
AGRICULTURAL RESOURCES

This section of the Draft Environmental Report ("Draft EIR"; "DEIR") describes the existing agricultural resources within the City of Taft General Plan Planning Area (Planning Area). This section also identifies the potential impacts of implementing the proposed project on such resources as well as the appropriate proposed General Plan policies that reduce the identified impacts. Sources utilized in the preparation of this section include the Kern County General Plan, the California Department of Conservation Farmland Conversion Report (2002 and 2004), the California Department of Conservation Important Farmlands Map, and the USDA 2007 Census of Agriculture.

4.2.1 EXISTING SETTING

REGIONAL AGRICULTURAL OPERATIONS

Kern County

Kern County is a state leader in agricultural production, ranking fourth in the top four California counties behind Fresno, Tulare, and Monterey counties (Kern County Dept. of Agriculture, 2009). In 2007 there were 2,117 farms in the County with an average farm size of 1,116 acres (USDA, 2007a). A total of 923,022 acres were harvested in the County in 2007 (Kern County Dept. of Agriculture, 2008, p. 13).

Kern County leads the state in the production of almonds, pistachios, carrots, watermelons, sheep and wool (Kern County Dept. of Agriculture, 2009). **Table 4.2-1** below shows the top ten agricultural commodities in the County in 2007. The top five commodities – milk, grapes, citrus, almonds, and carrots – make up more than 61 percent of the total value of all agricultural commodities in the County (Kern County Dept. of Agriculture, 2008, p. i).

TABLE 4.2-1
KERN COUNTY LEADING AGRICULTURAL COMMODITIES, 2007

Commodity	Total Acres Harvested	Value
Milk, Market and Manufacturing	N/A	692,173,000
Grapes, All	73,400 acres	579,378,000
Citrus, All	49,726 acres	449,962,000
Almonds, Including By-Products	118,000 acres	441,532,000
Carrots, Fresh and Processed	Unknown	315,849,000
Pistachios	48,200 acres	274,440,000
Hay, Alfalfa	165,000 acres	225,386,000
Cattle and Calves	N/A	219,247,000
Cotton, Including Processed Cottonseed	150,750 acres	161,685,000
Silage and Forage	105,000 acres	61,219,000

Source: Kern County Dept. of Agriculture, 2008

In 2007, Kern County topped the four billion dollar gross value for all agricultural commodities produced for the first time, with a total gross value of $4,092,166,180. This value represented an 18 percent increase from the 2006 gross value for agricultural commodities produced of $3,474,272,500. Favorable market value and increased production accounted for a 72 percent increase in livestock and poultry products (mainly milk), while expanded acreages and maturation of trees accounted for a 14 percent increase in fruit and nut crops and a 38 percent increase in field crops. By contrast, loss of acreage and unfavorable market prices led to a 14 percent decrease in vegetable crops and a four percent decrease in nursery crops (Kern County Dept. of Agriculture, 2008, p. i).

AGRICULTURAL EMPLOYMENT

Agriculture makes up a large part of the economy in Kern County. In fact, the Kern County Economic Development Strategy identifies the agriculture "cluster," or group of related businesses who export products and services from the County, as the largest and most significant of the clusters in Kern's economy (ICF, 2005, p. 2-1). In 2007 there were 858 farms with hired labor employing 29,283 workers in Kern County (USDA, 2007b). As shown in **Table 4.2-2**, during the 10-year period between 1997 and 2007, farm industry jobs accounted for 15 to 20 percent of all employment in the County.

TABLE 4.2-2
KERN COUNTY LEADING AGRICULTURAL COMMODITIES, 2007

Year	Employment in Farm Industry	Total Employment	Percentage of Total Employment	Change in Farm Industry Employment
2007	45,200	283,900	15.9%	-100
2006	45,300	278,600	16.3%	900
2005	44,400	266,500	16.7%	4,900
2004	39,500	251,300	15.7%	-2,400
2003	41,900	249,000	16.8%	1,500
2002	40,400	245,500	16.5%	-1,400
2001	41,800	244,000	17.1%	-6,500
2000	48,300	242,400	19.9%	3,400
1999	44,900	233,700	19.2%	-1,600
1998	46,500	230,800	20.1%	-2,500
1997	49,000	179,200	27.3%	N/A

Source: EDD, 2008

TABLE 4.2-3
KERN COUNTY MAJOR AGRICULTURE INDUSTRY EMPLOYERS

Farm/Company	Number of Employees	Crops/Products
Giumarra Farms	4,200*	Grapes, Avocados, Tomatoes, Berries, Citrus, Cucumbers, Eggplant, Melons, Peppers, or Stone Fruit
Grimmway Farms	2,500	Carrots, Carrot Juice, Misc Carrot Products, Potatoes, Citrus
Marko Zaninovich, Inc. (Sunview Vineyards)	4,999	Grapes
J.G. Boswell Tomato Company	2,000	Tomatoes, Tomato Paste
Bolthouse Farms, Inc	2,000*	Carrots, Beverages, Dressings
Sun World, Inc.	1,025	Apricots, Colored Sweet Peppers, Grapes, Nectarines, Peaches, Plums, Seedless Watermelons
Pandol	900*	Grapes, Persimmons, Blueberries, Apples, and Cherries
Seventh Standard Ranch Co.	800	Crops and Animals
Paramount Farms	800*	Almonds and Pistachios
Sun Pacific	775	Grapes, Tomatoes, Kiwi, Citrus, Clementines
Nestle/Dryers (Dreyers acquired the Nestle Ice Cream Co. in 2003 and became a wholly owned subsidiary of Nestle in 2006)	517	Ice Cream
Frito Lay	470	Snacks Foods
Cal Farm Invest Inc.	400	Misc Crops
Kern Ridge Growers	320*	Carrots, Peppers
Famoso Vineyards	300	Grapes
Pactiv Corporation	300*	Consumer and Foodservice/Food Packaging
Sunridge Nurseries	256	Grape Vines (including rootstock or scion wood)
Bidart Brothers	200*	Almonds, Apples, Citrus, Cotton, Olives, Potatoes, Table Grapes, Wheat, Cattle, Sheep
King Pak Farms, Inc	200*	Fruits and Vegetables

** Includes seasonal workers.*
Source: EDD, 2009; Greater Bakersfield Chamber of Commerce,2009

Within Kern County, "value-added agriculture" companies are an important segment of the agriculture industry and are a considerable source of agriculture employment. Value-added agriculture is the processing, packaging, and/or marketing of agricultural commodities and farm resources in a way that allows a greater portion of the revenue derived from the product to be earned by the producer (eXtension, 2009). One example of value-added agriculture is carrots which are processed into smaller, "baby" carrots, or using carrots in the production of vegetable juice. Large-scale value-added agriculture companies in Kern County include Grimmway Farms, the J.G. Boswell Tomato Company (formerly the Rio Bravo Tomato Plant), Bolthouse Farms, Nestle/Dreyers, and Frito-Lay (Kern EDC, 2009). Similarly, companies such as Pactiv provide packaging materials needed by the agricultural community.

LOCAL AGRICULTURAL OPERATIONS – PLANNING AREA

City of Taft

The existing City limits of Taft do not include any major agricultural operations or agricultural land uses, with the exception of 562.3 acres of dry farmland located to the southeast of the downtown portion of the City (see **Figure 3.0-3**). This land, which is owned by the City of Taft (City), is used as a place to spray treated wastewater effluent, which replaces the need for other irrigation methods on these acres. The land is utilized for the growing of trees for use by the City, as well as for growing sorghum and three-way grain hay for use as fodder for livestock.

Expansion Area

The Expansion Area currently contains 88,796.7 acres of agricultural land uses that support a variety of agricultural operations (see **Figure 3.0-3**). Currently the largest agricultural crops and operations within the Expansion Area include cotton, wheat, alfalfa, tomato processing, grapes/wine, almonds, corn (for food), onion, wheat (for food), carrots, and tangerines. Agricultural permit holders with 500 or more acres within the Expansion Area are shown in **Table 4.2-4** below.

TABLE 4.2-4
AGRICULTURAL PERMIT HOLDERS WITH 500+ ACRES CITY OF TAFT EXPANSION AREA

>2,000 Acres	1,000 – 2,000 Acres	500 – 1,000 Acres
J.G. Boswell Tomato Company	John Crump Farms	Robert S. Andrews Farms
R &G Fanucchi Farms	Harry Banducci Farms	Bel-An Farms
Bonanza Farms	Greenlee Farms	Palla Rosa Farms
Maple Dairy	Willow Ridge Ranch	Doug Kophamer Farms
Maricopa Orchards	Andrews Ag, Inc.	R&G Farms
Rodney Palla Farm	J & W Farming	Southlake Ranch
	R.M. Mettler (METCO)	Opal Fry & Son
	Jimmie Icardo Farms, Inc.	Sun Pacific Farming

In addition to the above farms and/or agricultural operations, there are several agricultural permit holders within the Expansion Area with less than 500 acres.

FARMLAND CLASSIFICATIONS AND RATING SYSTEM

The two systems used by the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) to determine a soil's agricultural productivity include the Land Capability Classification System and the Storie Index Rating System. The Land Capability Classification System takes into consideration soil limitations, the risk of damage when the soils are used, and the way in which soils respond to treatment. The Storie Index Rating System ranks soils based on their suitability for agriculture.

Land Capability Classification System

Land capability classification is a system of grouping soils primarily on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time. Capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils, which are unsuitable for agriculture. Generally, as the ratings of the capability classification system increase, the yields and profits are more difficult to obtain. A general description of land classification, as defined by the NRCS Soil Survey Handbook, is provided in **Table 4.2-5**.

TABLE 4.2-5
LAND CAPABILITY CLASSIFICATIONS

Class	Definition
I	Soils have slight limitations that restrict their use.
II	Soils have moderate limitations that reduce the choice of plants or require moderate conservation practices.
III	Soils have severe limitations that reduce the choice of plants or require special conservation practices, or both.
IV	Soils have very severe limitations that restrict the choice of plants or require very careful management, or both.
V	Soils have little or no hazard of erosion but have other limitations, impractical to remove, that limit their use mainly to pasture, range, forestland, or wildlife food and cover.
VI	Soils have severe limitations that make them generally unsuited to cultivation and that limit their use mainly to pasture, range, forestland, or wildlife food and cover.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use mainly to grazing, forestland, or wildlife.
VIII	Soils and miscellaneous areas have limitations that preclude their use for commercial plant production and limit their use to recreation, wildlife, or water supply or for esthetic purposes.

Source: USDA-NRCS, 2007, p. 622-2

Capability subclasses are soil groups within any one soil class that indicate the specific limitation of that soil class. They are designated by adding a small letter, e, w, s, or *c*, to the class numeral, for example, 2e. The capability subclasses are defined in **Table 4.2-6** below.

TABLE 4.2-6
LAND CAPABILITY CLASSIFICATION SYSTEM – SUBCLASS DEFINITIONS

Subclass	Definition
e	Indicates that the main hazard is the risk of erosion unless close-growing plant cover is maintained
w	Indicates that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage
s	Indicates that the soil is limited mainly because it is shallow, droughty, or stoney
c	Indicates that the chief limitation is climate that is very cold or very dry (used in only some parts of the United States)

Source: USDA, 2007a

Capability subclasses are further delineated into capability units that group soils which are similar enough to be suited to the same crops and pasture plants, require similar management, and have similar productivity.

Storie Index Rating System

The Storie Index Rating System is based on soil characteristics that govern the land's potential utilization and productive capacity. The Storie Index Rating System ranks four factors – soil profile, surface soil texture, slope of the land, and other conditions exclusive of profile such as drainage, alkali content, or erosion – with a percentage value up to 100 for the most ideal conditions. The percentage values for the four factors to get the Storie Index Rating (University of California, 1978, p.1). Ratings range from Grade 1 soils (80 to 100 rating), which have few or no limitations for agricultural production, to Grade 6 soils (less than 10), which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed. The six grades, ranges in index rating, and definition of grades are provided in **Table 4.2-7**.

TABLE 4.2-7
STORIE INDEX RATING SYSTEM

Grade	Index Rating	Definition
1 – Excellent	80 through 100	Soils are well suited to intensive use for growing irrigated crops that are climatically suited to the region.
2 – Good	60 through 79	Soils are good agricultural soils, although they may not be so desirable as Grade 1 because of moderately coarse, coarse, or gravelly surface soil texture; somewhat less permeable subsoil; lower plant available water holding capacity, fair fertility; less well drained conditions, or slight to moderate flood hazards, all acting separately or in combination.
3 – Fair	40 through 59	Soils are only fairly well suited to general agricultural use and are limited in their use because of moderate slopes; moderate soil depths; less permeable subsoil; fine, moderately fine or gravelly surface soil textures; poor drainage; moderate flood hazards; or fair to poor fertility levels, all acting alone or in combination.
4 – Poor	20 through 39	Soils are poorly suited. They are severely limited in their agricultural potential because of shallow soil depths; less permeable subsoil; steeper slope; or more clayey or gravelly surface soil textures than Grade 3 soils, as well as poor drainage; greater flood hazards; hummocky micro-relief; salinity; or fair to poor fertility levels, all acting alone or in combination.
5 – Very Poor	10 through 19	Soils are very poorly suited for agriculture, are seldom cultivated and are more commonly used for range, pasture, or woodland.
6 – Nonagricultural	Less than 10	Soils are not suited for agriculture at all due to very severe to extreme physical limitations, or because of urbanization.

Source: USDA, 1988a and 1988b

Planning Area Soil Characteristics

Table 4.2-8 lists the soils found in the City limits, along with their Land Capability Classification and Storie Rating, if available. **Table 4.2-9** lists the soils found in the Expansion Area, along with their Land Capability Classification and Storie Rating, if available. The location of these soils is shown in **Figure 4.2-1**.

TABLE 4.2-8
SOILS IN THE CITY LIMITS AND LAND CAPABILITY CLASSIFICATION AND STORIE INDEX RATING

Soil Name	Map Unit	Land Capability Classification[1]	Storie Rating	Acreage in City Limits
Granoso loamy sand, 2 to 5 percent slopes	121	IIIe	ND	40.97
Granoso gravelly loamy sand, 0 to 2 percent slopes	124	IIIe	ND	6.12
Excelsior sandy loam, 0 to 2 percent slopes	150		ND	15.42
Tupman gravelly sandy loam, 0 to 2 percent slopes	153	II e	ND	757.59
Tupman-Urban land complex, 0 to 5 percent slopes	154	III e	ND	99.96
Guijarral-Klipstein complex, 2 to 5 percent slopes	192		ND	34.80
Guijarral gravelly sandy loam, 2 to 5 percent slopes	193	IIIe	ND	243.84
Kimberlina fine sandy loam, 0 to 2 percent slopes	210	I	95	419.78
Kimberlina fine sandy loam, 2 to 5 percent slopes	211	II e	ND	2,485.74
Kimberlina fine sandy loam, saline-sodic, 0 to 2 percent slopes	212	IIs	60	35.79
Kimberlina gravelly sandy loam, 5 to 9 percent slopes	215	II e	38	265.04
Kimberlina-Urban land complex 0 to 5 percent slopes	217		ND	911.85
Pits and dumps	270		ND	56.14
Riverwash	290		3	229.04
Littlesignal-Cochora association, 30 to 50 percent slopes	431		ND	66.18
Sodic Haplocambids, coarse-loamy, thick- Elkhills complex, 9 to 30 percent slopes	441		ND	1,166.18
Elkhills sandy loam, 5 to 15 percent slopes	442		ND	2,121.39
Elkhills-Badlands complex, 30 to 50 percent slopes	443		ND	118.78
Elkhills sandy loam, 15 to 30 percent slopes	444		ND	77.48
Pyxo-Cochora association, 15 to 30 percent slopes	470		45	0.58
Welport-Elkhills association, 9 to 30 percent slopes	550		ND	77.40
Elkhills-Legray complex, 15 to 30 percent slopes	660		ND	19.49
Milham sandy loam, 0 to 5 percent slopes	680	IIIe	ND	159.84
Haplocambids, thick-Elkhills complex, 15 to 30 percent slopes	731		ND	117.49
Sodic Haplocambids, thick-Torriorthents, very thin, eroded-Elkhills complex, 15 to 50 percent slopes	734		ND	95.11
Total				9,622

Note: 1. Capability subclasses are soils within one class. They are designated by adding a small letter e, w, s or c, to the class numeral. The letter e shows that the main hazard is erosion unless close-growing plant cover is maintained. The letter w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage).. The letter s shows that the soil is limited mainly because it is shallow, droughty, or stoney. The letter c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.
ND = Not Determined
Source: United States Department of Agriculture. September, 1988. Soil Survey of Kern County, California, Northwestern Part. Soil Survey of Kern County, California, Southwestern Part. PMC, 2009.

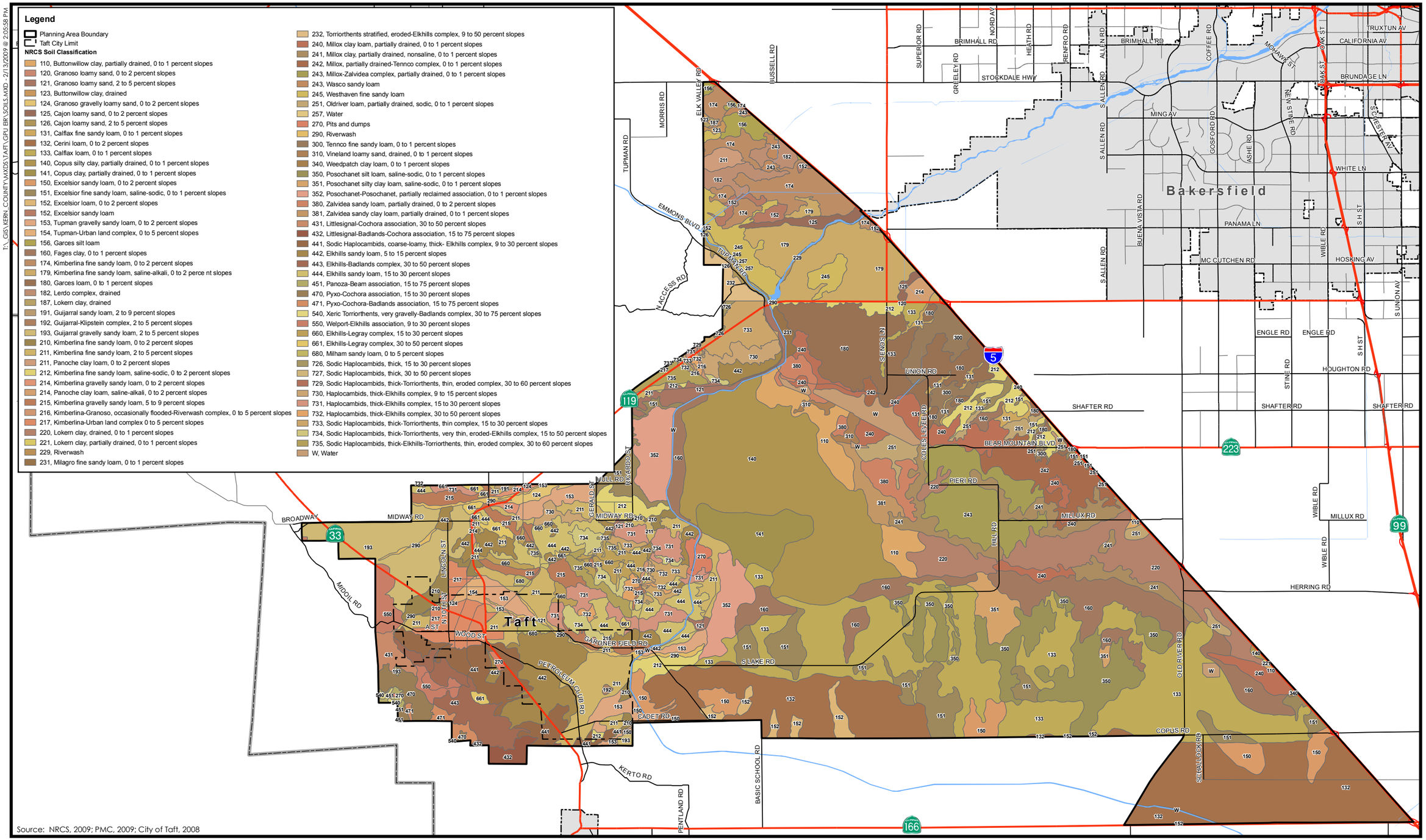

Figure 4.2-1
Soils

PMC

TABLE 4.2-9
SOILS IN THE EXPANSION AREA AND LAND CAPABILITY CLASSIFICATION AND STORIE INDEX RATING

Soil Name	Map Unit	Land Capability Classification[1]	Storie Index Rating	Acreage in Expansion Area
Buttonwillow clay, partially drained, 0 to 1 percent slopes	110	IIw	0	2,274.45
Granoso loamy sand, 0 to 2 percent slopes	120	IIIe	0	2.23
Granoso loamy sand, 2 to 5 percent slopes	121	IIIe	0	922.11
Buttonwillow clay, drained	123	IIs	36	88.81
Granoso gravelly loamy sand, 0 to 2 percent slopes	124	IV s	0	257.31
Cajon loamy sand, 0 to 2 percent slopes	125	IIIs	60	552.79
Cajon loamy sand, 2 to 5 percent slopes	126		58	229.95
Calflax fine sandy loam, 0 to 1 percent slopes	131	IIIs	0	402.48
Cerini loam, 0 to 2 percent slopes	132	II e	0	14,191.05
Calflax loam, 0 to 1 percent slopes	133	IIIs	0	16,353.32
Copus silty clay, partially drained, 0 to 1 percent slopes	140	IIw	0	11,823.72
Copus clay, partially drained, 0 to 1 percent slopes	141	IIw	0	2,169.23
Excelsior sandy loam, 0 to 2 percent slopes	150		0	2,232.55
Excelsior fine sandy loam, saline-sodic, 0 to 1 percent slopes	151	IIs	0	4,534.85
Excelsior loam, 0 to 2 percent slopes	152	IIs	81	1,275.87
Tupman gravelly sandy loam, 0 to 2 percent slopes	153	II e	0	1,150.64
Tupman-Urban land complex, 0 to 5 percent slopes	154	III e	0	163.95
Garces silt loam	156	IIIs	24	536.97
Fages clay, 0 to 1 percent slopes	160	IV s	0	6,724.21
Kimberlina fine sandy loam, 0 to 2 percent slopes	174	I	95	2,775.86
Kimberlina fine sandy loam, saline-alkali, 0 to 2 percent slopes	179	IIs	60	4,564.78
Garces loam, 0 to 1 percent slopes	180	IIIs	0	5,657.26
Lerdo complex, drained	182	IIIs	51	919.18
Lokern clay, drained	187	IIs	51	42.92
Guijarral sandy loam, 2 to 9 percent slopes	191	IIIe	0	49.92
Guijarral gravelly sandy loam, 2 to 5 percent slopes	193	IIIe	0	3,469.30
Kimberlina fine sandy loam, 0 to 2 percent slopes	210	I	95	581.48
Kimberlina fine sandy loam, 2 to 5 percent slopes	211	II e	85	2,473.00
Kimberlina fine sandy loam, saline-sodic, 0 to 2 percent slopes	212	IIs	60	2,590.55
Kimberlina gravelly sandy loam, 0 to 2 percent slopes	214	II e	48	508.19

Soil Name	Map Unit	Land Capability Classification[1]	Storie Index Rating	Acreage in Expansion Area
Kimberlina gravelly sandy loam, 5 to 9 percent slopes	215	II e	38	1,321.65
Kimberlina-Granoso, occasionally flooded-Riverwash complex, 0 to 5 percent slopes	216	IIIe	0	96.09
Kimberlina-Urban land complex 0 to 5 percent slopes	217		0	673.03
Lokern clay, drained, 0 to 1 percent slopes	220	II s	0	5,241.00
Lokern clay, partially drained, 0 to 1 percent slopes	221	IIIw	0	23.56
Riverwash	229		3	164.26
Milagro fine sandy loam, 0 to 1 percent slopes	231	II s	0	209.76
Torriorthents stratified, eroded-Elkhills complex, 9 to 50 percent slopes	232		23	509.14
Millox clay loam, partially drained, 0 to 1 percent slopes	240	IIIs	0	3,115.91
Millox clay, partially drained, nonsaline, 0 to 1 percent slopes	241	II s	0	3,147.66
Millox, partially drained-Tennco complex, 0 to 1 percent slopes	242	IIIs	0	2,284.40
Millox-Zalvidea complex, partially drained, 0 to 1 percent slopes	243	II s	90	3,882.32
Westhaven fine sandy loam	245	I	90	1,871.29
Oldriver loam, partially drained, sodic, 0 to 1 percent slopes	251	IIw	0	1,331.46
Water	257		0	55.61
Pits and dumps	270		0	378.99
Riverwash	290		0	390.31
Tennco fine sandy loam, 0 to 1 percent slopes	300	IV s	0	1,597.59
Vineland loamy sand, drained, 0 to 1 percent slopes	310	III s	0	306.21
Weedpatch clay loam, 0 to 1 percent slopes	340	III s	0	27.76
Posochanet silt loam, saline-sodic, 0 to 1 percent slopes	350	II s	0	5,596.60
Posochanet silty clay loam, saline-sodic, 0 to 1 percent slopes	351	II s	0	1,019.99
Posochanet-Posochanet, partially reclaimed association, 0 to 1 percent slopes	352	IVe	0	2,790.16
Zalvidea sandy loam, partially drained, 0 to 2 percent slopes	380	II s	0	1,361.55
Zalvidea sandy clay loam, partially drained, 0 to 1 percent slopes	381	II s	0	702.54
Littlesignal-Cochora association, 30 to 50 percent slopes	431		0	396.78
Littlesignal-Badlands-Cochora association, 15 to 75 percent slopes	432		0	419.04
Sodic Haplocambids, coarse-loamy, thick- Elkhills complex, 9 to 30 percent slopes	441		0	1,380.79

Soil Name	Map Unit	Land Capability Classification[1]	Storie Index Rating	Acreage in Expansion Area
Elkhills sandy loam, 5 to 15 percent slopes	442		0	2,128.03
Elkhills-Badlands complex, 30 to 50 percent slopes	443		0	1,613.80
Elkhills sandy loam, 15 to 30 percent slopes	444		0	2,481.69
Panoza-Beam association, 15 to 75 percent slopes	451		11	126.69
Pyxo-Cochora association, 15 to 30 percent slopes	470		45	762.84
Pyxo-Cochora-Badlands association, 15 to 75 percent slopes	471		22	320.58
Xeric Torriorthents, very gravelly-Badlands complex, 30 to 75 percent slopes	540		16	50.44
Welport-Elkhills association, 9 to 30 percent slopes	550		0	942.21
Elkhills-Legray complex, 15 to 30 percent slopes	660		0	974.35
Elkhills-Legray complex, 30 to 50 percent slopes	661		0	467.55
Milham sandy loam, 0 to 5 percent slopes	680	IIIe	0	71.22
Sodic Haplocambids, thick, 15 to 30 percent slopes	726		0	69.56
Sodic Haplocambids, thick, 30 to 50 percent slopes	727		0	3.65
Sodic Haplocambids, thick-Torriorthents, thin, eroded complex, 30 to 60 percent slopes	729		0	2.97
Haplocambids, thick-Elkhills complex, 9 to 15 percent slopes	730		0	939.28
Haplocambids, thick-Elkhills complex, 15 to 30 percent slopes	731		0	1,737.60
Haplocambids, thick-Elkhills complex, 30 to 50 percent slopes	732		0	341.17
Sodic Haplocambids, thick-Torriorthents, thin complex, 15 to 30 percent slopes	733		0	1,820.41
Sodic Haplocambids, thick-Torriorthents, very thin, eroded-Elkhills complex, 15 to 50 percent slopes	734		0	859.70
Sodic Haplocambids, thick-Elkhills-Torriorthents, thin, eroded complex, 30 to 60 percent slopes	735		0	983.43
Water	W		0	1,437.16
Total				**147,948**

Note: 1. Capability subclasses are soils within one class. They are designated by adding a small letter e, w, s or c, to the class numeral. The letter e shows that the main hazard is erosion unless close-growing plant cover is maintained. The letter w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage).. The letter s shows that the soil is limited mainly because it is shallow, droughty, or stoney. The letter c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

Source: United States Department of Agriculture. September, 1988. Soil Survey of Kern County, California, Northwestern Part. Soil Survey of Kern County, California, Southwestern Part.

As indicated in **Tables 4.2-8** and **4.2-9** above**,** approximately 13,280 acres, or 9 percent of the soils within the Planning Area (420 acres within the City limits and 12,860 acres within the Expansion Area), have a Storie rating of 80 or above (Storie grade of 1 or 2). The soils within the remaining portions of the Planning Area and Storie grades ranging from 0 to 60, indicating significant constraints to agricultural production.

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) was established in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the NRCS (formerly the Soil Conservation Service). The intent of the NRCS was to produce agricultural resource maps based on soil quality and land use across the nation. As part of the nationwide agricultural land use mapping effort, the NRCS developed a series of definitions known as Land Inventory and Monitoring (LIM) criteria. The LIM criteria classified the land's suitability for agricultural production; suitability included both the physical and chemical characteristics of soils and the actual land use. Important Farmland Maps are derived from the NRCS soil survey maps using the LIM criteria (DOC, 2004, p. 5).

Since 1980, the State of California has assisted the NRCS with completing its mapping in the state. The FMMP was created in the State Department of Conservation (DOC) to continue the mapping activity with a greater level of detail. DOC applied a greater level of detail by modifying the LIM criteria for use in California. The LIM criteria in California utilize the NRCA and Storie Index Rating systems, but also consider physical conditions such as a dependable water supply for agricultural production, soil temperature range, depth of the groundwater table, flooding potential, rock fragment content, and rooting depth.

Important Farmland Maps for the State of California are compiled using the modified LIM criteria, as described above, and current land use information. The minimum mapping unit is 10 acres unless otherwise specified. Units of land smaller than 10 acres are incorporated into the surrounding classification. The Important Farmland Maps identify five agriculture-related categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land, as well as three categories of non-agricultural land types. The categories are described below (DOC, 2004, pp. 6-7):

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

Farmland of Statewide Importance (S): Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Unique Farmland (U): Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or

vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance (L): Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. The Board of Supervisors determined that there will be no Farmland of Local Importance for Kern County.

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

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

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

Water (W): Perennial water bodies with an extent of at least 40 acres.

It should be noted that Important Farmland classifications are not the same as land designated for Agriculture by a General Plan or other land use planning document. For example, land uses designated by the City of Taft General Plan Land Use Map as Agriculture are areas where agricultural land uses are allowed by right, but are not necessarily lands designated by the Department of Conservation as Important Farmland.

IMPORTANT FARMLAND MAP

The Important Farmland Map for the Planning Area is shown in **Figure 4.2-2**. **Table 4.2-10** below shows the breakdown of farmland acreages between the City and the Planning Area. As shown, there is currently no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the City limits. There are, however, 4,532 acres of Grazing Land within the City limits. The Expansion Area contains 21,126 acres of Prime Farmland, 33,037 acres of Farmland of Statewide Importance, 28,182 acres of Unique Farmland, and 35,982 acres of Grazing Land.

As noted above, the Kern County Board of Supervisors decided not to establish a Farmland of Local Importance designation for the County. Therefore, there is no Farmland of Local Importance in the Planning Area.

TABLE 4.2-10
IMPORTANT FARMLAND MAP ACREAGES - PLANNING AREA (IN ACRES)

Farmland Category	Taft City Limits	Expansion Area	Planning Area (City Limits + Expansion Area)
Prime Farmland	0	21,126	21,126
Farmland of Statewide Importance	0	33,037	33,037
Unique Farmland	0	28,182	28,182
Farmland of Local Importance	0	0	0
Grazing Land	4,532	35,982	40,514
Urban and Built-up land	1,524	2,072	3,595
Other Land	3,566	26,519	30,085
Water	0	1,031	1,031
Totals*	**9,622**	**147,948**	**157,570**

**Totals may not add exactly due to rounding.*
Source: DOC, 2006

KERN COUNTY FARMLAND CONVERSION

One of the basic underlying premises of agricultural conversion is that the proximity of agricultural land to urban uses increases the value of the agricultural land either directly through formal purchase offers or indirectly through recent sales in the vicinity, and through the extension of utilities and other urban infrastructure into productive agricultural areas.

As discussed above, the FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources, with agricultural land being rated according to soil quality and irrigation status. The conversion of Important Farmlands within the state is mapped by the FMMP and maps are updated every 2 years (DOC, 2009). Prior to the 2004–2006 Land Use Conversion Report, NRCS soil surveys were not complete for the southwestern and northeastern portions of Kern County. Therefore, Important Farmland ratings were not available and land use conversions were only tracked for 49 percent of the County prior to the 2004–2006 Land Use Conversion Report (DOC, 2004–06). **Table 4.2-11** below shows the 2004 to 2006 land use conversion by farmland type for the entire County, while **Table 4.2-12** shows the 2004 to 2006 land use conversion by farmland type for Planning Area. As shown, Important Farmland in Kern County decreased by 3,509 acres between 2004 and 2006, while Important Farmland in the Planning Area increased by 1,284 acres during the same time period. It should be noted that all Important Farmland in the Planning Area, with the exception of Grazing Land, is located outside of the City limits, within the Expansion Area (see **Table 4.2-9**).

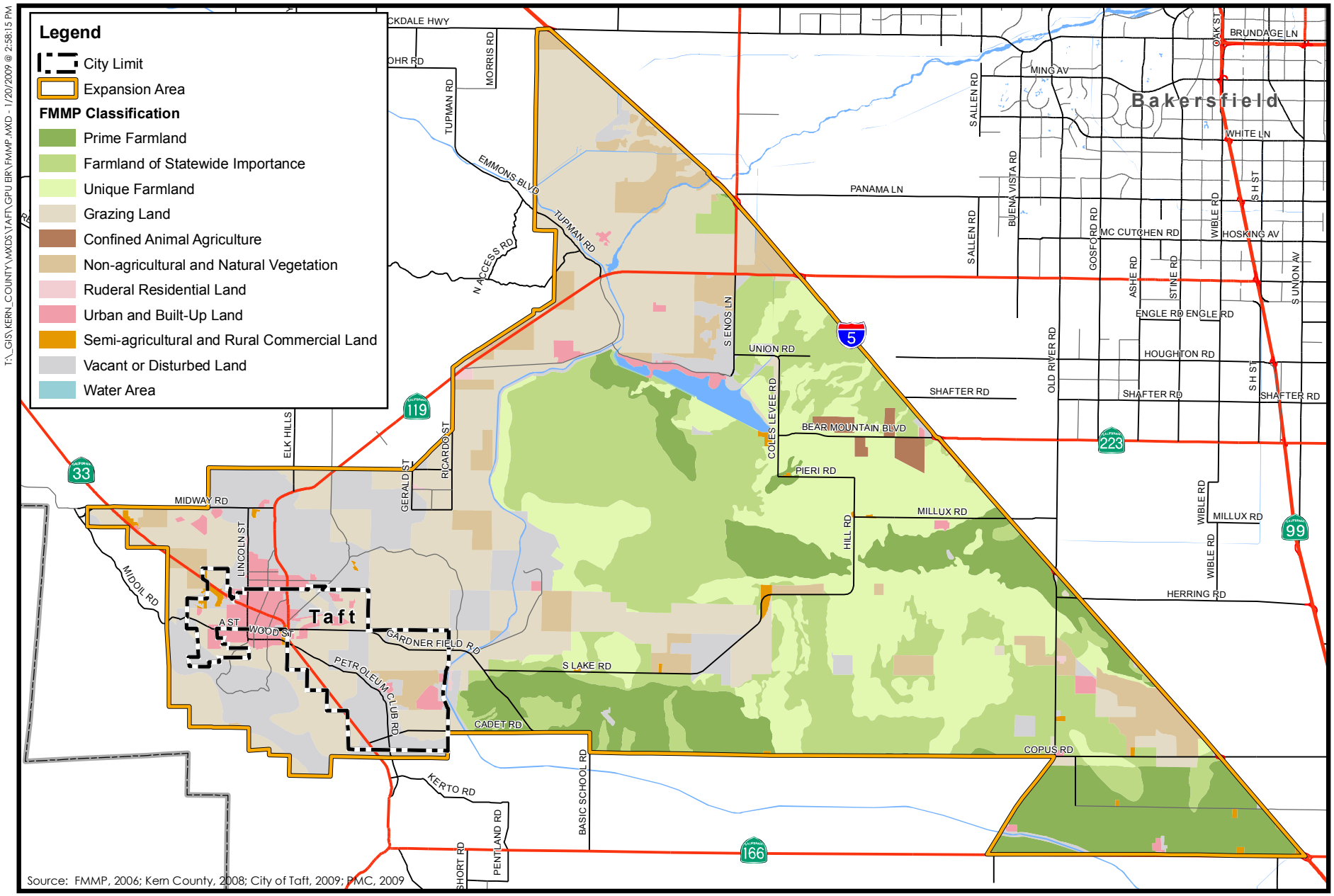

Figure 4.2-2
Important Farmlands

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TABLE 4.2-11
IMPORTANT FARMLANDS CONVERSION IN KERN COUNTY, 2004 TO 2006

Farmland Type	2004 Acres	2006 Acres	Difference (in acres)	Difference (Percentage)
Prime Farmland	643,128	640,039	-3,089	-0.48
Farmland of Statewide Importance	214,705	214,847	+142	+0.07
Unique Farmland	109,318	107,295	-2,023	-1.85
Farmland of Local Importance	0	0	N/A	N/A
Grazing Land	1,791,467	1,792,928	+1,461	+0.08
Important Farmland Total	**2,758,618**	**2,755,109**	**-3,509**	**-0.13**

Source: California Department of Conservation, Division of Land Resource Protection. Kern County 2004-2006 Land Use Conversion.

TABLE 4.2-12
IMPORTANT FARMLANDS CONVERSION IN THE PLANNING AREA, 2004 TO 2006

Farmland Type	2004 Acres	2006 Acres	Difference (in acres)
Prime Farmland	21,099	21,126	+26
Farmland of Statewide Importance	31,768	33,037	+1,269
Unique Farmland	28,002	28,182	+181
Farmland of Local Importance	0	0	-
Grazing Land	40,705	40,513	-192
Important Farmland Total	**121,574**	**122,858**	**+1,284**

Source: California Department of Conservation, Division of Land Resource Protection. Kern County 2004-2006 Land Use Conversion.

As shown in **Table 4.2-11**, the total acreage of Important Farmland in Kern County decreased by 3,509 acres between 2004 and 2006, with the most substantial loss to Prime Farmland and Unique Farmland. According to the associated FMMP 2006 Field Report, the conversion from irrigated farmland to urban land in Kern County during this period was very common and very large in a few instances. Most of the changes from irrigated farmland to urban land were attributed to new homes in units of less than 50 acres. As shown in **Table 4.2-12**, Important Farmlands within the Planning Area actually increased by 1,476 acres between 2004 and 2006. According to the FMMP 2006 Field Report, the majority of this increase occurred just southwest of the intersection of Interstate 5 and SR 119 where about 1,400 acres of grazing and other land were converted to alfalfa and sudan grass (DOC, 2006a).

In Addition, The Total Acreage Of Important Farmland Within The Northwestern And Southeastern Portions Of The County Decreased By Almost Seven Percent During The Ten-Year Period From 1992 To 2002, With The Largest Decreases Occurring To Prime And Unique Farmland. The Majority Of Conversions From Irrigated Farmland To Urban Land Between 2000 And 2004 Were Due To New Home Construction And New Commercial Development, As Well As Schools, An Industrial Center, A Prison, An Expanded Golf Course, And Water Control Ponds (DOC, 2004, 2002, And 2000).

WILLIAMSON ACT CONTRACT LANDS AND FARMLAND SECURITY ZONES

The Williamson Act is a mechanism for protecting agricultural and open space land from premature and unnecessary urban development whereby landowners receive property tax assessments which are much lower than normal in exchange for restricting their land to agricultural or related open space use (see the Regulatory Setting below for further details). As of 2007, Kern County had a total of 1,707,006 acres under Williamson Act and Farmland Security Zone contracts (DOC, 2007). **Figure 4.2-3** illustrates the location of properties within the Planning Area which currently are or have recently been under Williamson Act contracts, and **Table 4.2-13** shows the acreage of Williamson Act lands in the Planning Area. As shown, there are approximately 46,251 acres of Prime, Non-prime, and Mixed Enrollment Agricultural land under active contracts within the Planning Area. In addition, there are 29,625 acres of land under FSZ contracts within the Planning Area. A Notice of Nonrenewal has been filed by property owners for 576 acres within the Planning Area. Since there are no Important Farmlands within the City limits, all Williamson Act Contract lands are located within the Expansion Area.

TABLE 4.2-13
WILLIAMSON ACT LANDS IN THE PLANNING AREA

Williamson Act Class	Acres in Planning Area
Prime Agricultural Land	38,399.6
Non-prime Agricultural Land	5,924.7
Non-prime Agricultural Land – Nonrenewal	121.4
Prime Agricultural Land – Nonrenewal	454.8
Mixed Enrollment Agricultural Land	1,926.8
Farmland Security Zone	29,625.3
Total Williamson Act Acreage	**76,452.6**

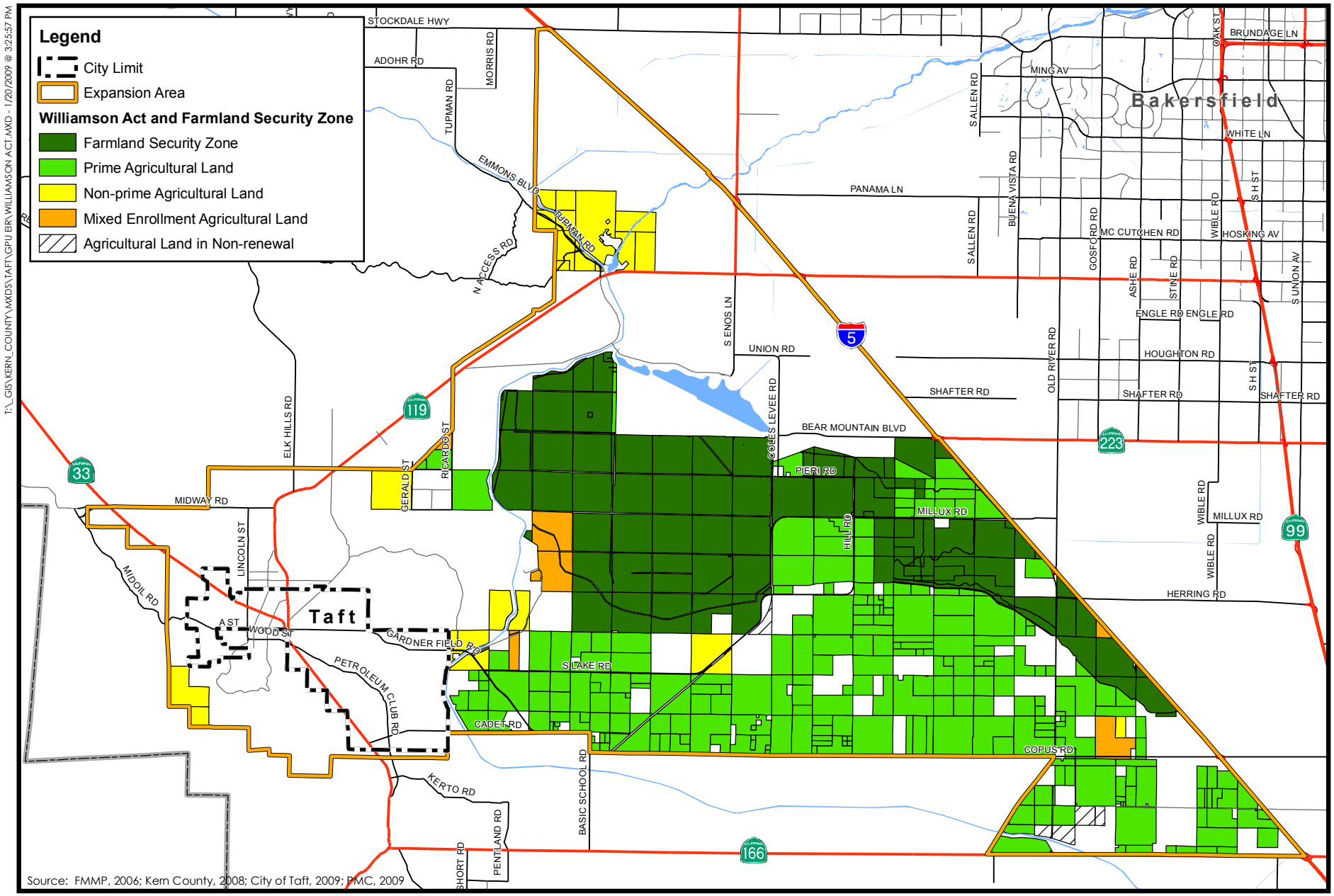

Figure 4.2-3

Williamson Act and Farmland Security Zone

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4.2.2 REGULATORY FRAMEWORK

FEDERAL

Farmland Protection Policy Act

The Natural Resources Conservation Service, a federal agency within the U.S. Department of Agriculture, is the agency primarily responsible for implementation of the Farmland Protection Policy Act (FPPA). The FFPA was enacted after the 1981 Congressional report, Compact Cities: Energy-Saving Strategies for the Eighties, indicated that a great deal of urban sprawl was the result of programs funded by the federal government. The purpose of the FPPA is to minimize federal programs' contribution to the conversion of farmland to non-agricultural uses by ensuring that federal programs are administered in a manner that is compatible with state, local, and private programs designed to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years (USDA-NRCS, 2009).

Farm and Ranch Land Protection Program

The Farm and Ranch Land Protection Program (FRPP) provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses. Working through existing programs, USDA partners with state, tribal, or local governments and non-governmental organizations to acquire conservation easements or other interests in land from landowners. USDA provides up to 50 percent of the fair market easement value of the conservation easement. The FRPP is managed by NRCS.

To qualify, farmland must be part of a pending offer from a state, tribe, or local farmland protection program; be privately owned; have a conservation plan for highly erodible land; be large enough to sustain agricultural production; be accessible to markets for what the land produces; have adequate infrastructure and agricultural support services; and have surrounding parcels of land that can support long-term agricultural production (USDA-NRCS, 2009).

Land Evaluation and Site Assessment

The LESA system ranks lands for suitability and inclusion in the FPP. LESA evaluates several factors, including soil potential for agricultural use, location, market access, and adjacent land use. These factors are used to numerically rank the suitability of parcels based on local resource evaluation and site considerations. The LESA system has spawned many variations, including the California LESA model, described below.

STATE

California Environmental Quality Act (CEQA) Definition of Agricultural Lands

Public Resources Code Section 21060.1 defines "agricultural land" as:

> *Agricultural land means prime farmland, farmland of statewide importance or unique farmland, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California.*

This DEIR utilizes this definition for evaluating impacts associated with the loss of agricultural lands as a result of the project.

California Department of Conservation

The California Department of Conservation provides services and information that promote environmental health, economic vitality, informed land-use decisions, and sound management of the state's natural resources. The Department of Conservation's Division of Land Resource Protection (DLRP) works with landowners, local governments, and researchers to conserve agricultural and diverse open space resources (DOC, 2009). DOC administers and supports a number of programs, including the California Farmland Conservancy Program (CFCP), the FMMP, the California Land Evaluation and Site Assessment Model, the Resource Conservation District Assistance Program, and the Williamson Act Program. These programs are discussed in more detail in the Existing Setting portion of this section, as well as below.

<u>California Farmland Conservancy Program</u>

The California Farmland Conservancy Program (CFCP) is a statewide grant funding program that supports local efforts to establish agricultural conservation easements and planning projects for the purpose of preserving important agricultural land resources. An agricultural conservation easement is a voluntary, legally recorded deed restriction that is placed on a specific property used for agricultural production. The goal of an agricultural conservation easement is to maintain agricultural land in active production by removing the development pressures from the land. Such an easement prohibits practices that would damage or interfere with the agricultural use of the land. Because the easement is a restriction on the deed of the property, the easement remains in effect even when the land changes ownership (DOC, 2009).

The CFCP provides grants to local governments and qualified nonprofit organizations for the following purposes:

- Voluntary acquisition of conservation easements on agricultural lands that are under pressure of being converted to non-agricultural uses;
- Temporary purchase of agricultural lands that are under pressure of being converted to non-agricultural uses, as a phase in the process of placing agricultural conservation easements on farmland;

- Agricultural land conservation policy and planning projects; and
- Restoration of and improvements to agricultural land already under easement.

Farmland Mapping and Monitoring Program

As discussed above, the FMMP is a non-regulatory program that provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The first Important Farmland Maps produced in 1984 covered 30.3 million acres (38 counties). The first Farmland Conversion Report was released in 1988 and detailed farmland changes from 1984 to 1986. Nine subsequent reports have included additions to the project area as modern soil surveys became available. The FMMP now maps agricultural and urban land use on nearly 96 percent of the state's privately held land and the coverage area is 47.9 million acres in 49 counties. It is the only statewide land use inventory conducted on a two-year basis that identifies agricultural and urban land conversions (DOC, 2009).

The Important Farmland Map for the Planning Area is shown in **Figure 4.2-2** and discussed in **Table 4.2-7** above.

Williamson Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is a non-mandated state program that is intended to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. The act creates an arrangement whereby private landowners contract with counties and cities to voluntarily restrict land to agricultural and open-space uses. The vehicle for these agreements is a rolling term 10-year contract, whereby if neither party files a "notice of nonrenewal" by the 9th year of the contract, it is automatically renewed annually for an additional year. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value. The Williamson Act is estimated to save agricultural landowners from 20 percent to 75 percent in property tax liability each year (DOC, 2006b).

Participation in the Williamson Act is on a voluntary basis by both landowners and local governments and is implemented through the establishment of agricultural preserves and the execution of Williamson Act contracts. An agricultural preserve defines the boundary of an area within which a city or county will enter into contracts with landowners. The boundary is designated by resolution of the board of supervisors or city council having jurisdiction. Only land located within an agricultural preserve is eligible for a Williamson Act contract. Agricultural preserves must be a minimum size of 100 acres. Prime farmland under Williamson Act includes land that qualifies as Class I and II in the Land capability classification and land that qualifies for a rating of 80 to 100 in the Storie Index. A Williamson Act contract is the legal document that obligates the property owner, and any successors of interest, to the contract's enforceable restrictions.

A notice of nonrenewal starts the 9-year nonrenewal period. During the nonrenewal process, the annual tax assessment gradually increases. At the end of the 9-year nonrenewal period, the

contract is terminated. Termination of a Williamson Act contract through the nonrenewal process is the preferred method to remove the enforceable restriction of the contract. Cancellation is not appropriate when objectives served by cancellation could be served by nonrenewal. Cancellation is reserved for unusual, "emergency" situations. Only the landowner can petition to cancel a contract. To approve a tentative contract cancellation, a county or city must make specific findings that are supported by substantial evidence. The existence of an opportunity for another use of the property is not sufficient reason for cancellation, nor is the uneconomic character of an existing agricultural use.

Pursuant to Government Code Section 51243, a city is required to provide for the exclusion of uses other than agricultural, and other than those compatible with agricultural uses, for the duration of a Williamson Act contract. If a city annexes land under a Williamson Act contract, the city must succeed to all rights, duties, and powers of the county unless conditions in Government Code Section 512343.5 apply to give the city the option to not succeed the contract.

Farmland Security Zones

Since 1998, another option within the Williamson Act Program is the creation of Farmland Security Zones and contracts. A Farmland Security Zone (FSZ) is an area created within an agricultural preserve by a board of supervisors upon request by a landowner or group of landowners. A FSZ contract is a contract between a private landowner and a county that enforceably restricts land to agricultural or open space uses. The minimum initial term is 20 years. Like a Williamson Act contract, FSZ contracts renew annually unless either party files a "notice of nonrenewal" (DOC, 2003). Farmland Security Zone contracts offer landowners greater property tax reduction. Land restricted by a Farmland Security Zone contract is valued for property assessment purposes at 65 percent of its Williamson Act valuation or 65 percent of its Proposition 13 valuation, whichever is lower.

Although cities and special districts that provide non-agricultural services are generally prohibited from annexing land enrolled under an FSZ contract, California Government Code Section 56426 does allow for FSZs to be included in an expanded sphere of influence (SOI) as follows:

> *The [LAFCo] commission shall not approve or conditionally approve a change to the sphere of influence of a local government agency of territory that is subject to a* ***farmland security zone*** *contract pursuant to Article 7 (commencing with Section 51296) of Chapter 7 of Part 1 of Division 1, if that local government agency provides or would provide facilities or services related to sewers, nonagricultural water, or streets and roads to the territory, unless these facilities or services benefit land uses that are allowed under the contract and the landowner consents to the change to the sphere of influence.*

Furthermore, Government Code Section 56426.5(b) and (c) provides exceptions for approval of FSZs within a proposed SOI even if both of the above conditions are not met:

> *(b) Notwithstanding subdivision (a), the [LAFCO] commission may nevertheless approve a change for that territory if it finds either of the following:*

(1) That the change would facilitate planned, orderly, and efficient patterns of land use or provision of services, and the public interest in the change substantially outweighs the public interest in the current continuation of the contract beyond its current expiration date.

(2) That the change is not likely to adversely affect the continuation of the contract beyond its current expiration date.

In making this determination, the commission shall consider all of the following:

(A) The policies and implementation measures adopted by the city or county that would administer the contract both before and after any ultimate annexation, relative to the continuation of agriculture or other uses allowable under the contract.

(B) The infrastructure plans of the annexing agency.

(C) Other factors that the commission deems relevant.

(c) This section shall not apply to any of the following:

(1) Territory that is subject to a contract for which a notice of nonrenewal has been served pursuant to Section 51245.

(2) Territory that is subject to a contract for which a tentative cancellation has been approved pursuant to Section 51282.

(3) Territory for which the governing body of the county or city administering the contract has given its written approval to the change and the landowner consents to the change.

In addition, California Government Code Section 51296.3 allows for FSZs to be annexed into city limits as follows:

Notwithstanding any provision of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Division 3 (commencing with Section 56000)), a local agency formation commission shall not approve a change of organization or reorganization that would result in the annexation of land within a designated **farmland security zone** *to a city. However, this subdivision shall not apply under any of the following circumstances:*

(a) If the **farmland security zone** *is located within a designated, delineated area that has been approved by the voters as a limit for existing and future urban facilities, utilities, and services.*

(b) If annexation of a parcel or a portion of a parcel is necessary for the location of a public improvement, as defined in Section 51290.5, except as provided in Section 51296.5 or 51296.6.

(c) If the landowner consents to the annexation.

Assembly Bill (AB) 2881 – Right to Farm Disclosure

AB 2881 was passed by the State Legislature in 2008 and became effective January 1, 2009. This bill requires that as a part of real estate transactions, land sellers and agents must disclose whether the property is located within one mile of farmland as designated on the most recent Important Farmland Map. Any of the five agricultural categories – Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land – on the map qualifies for disclosure purposes.

REGIONAL

Kern County Local Agency Formation Commission (LAFCo)

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 establishes procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations. Local agency formation commissions (LAFCos) have numerous powers under the act, but those of primary concern are the power to act on local agency boundary changes and to adopt spheres of influence (SOI) for local agencies. Among the purposes of LAFCos are the discouragement of urban sprawl and the encouragement of the orderly formation and development of local agencies (Assembly Committee on Local Government, 2008).

The act required each LAFCo to have established written policies and procedures by January 1, 2002, that incorporated the Legislature's intent to encourage and provide for a planned, well-ordered, efficient urban development pattern which discourages urban sprawl, preserves open space and prime agricultural lands, provides housing for persons and families of all incomes, and addresses the efficient extension of government services (Assembly Committee on Local Government, 2008, p. 38). In response, Kern LAFCo has developed the Kern LAFCo Procedures, Standards and Policies. Kern LAFCo gives directive related to the maintenance of agricultural lands, particularly those in an agricultural preserve, as follows:

> *Kern LAFCo, through its actions, desires to maintain the physical and economic integrity of lands in an agricultural preserve as may be established by either the Board of Supervisors of the County of Kern or a city council within the county (*Section G.1 Kern LAFCo Procedures, Standard and Policies).

The LAFCo Procedures identify the following criteria that a jurisdiction must demonstrate in order to include agricultural lands in an SOI:

> *Annexation or incorporation proposals which would allow or likely lead to the conversion of prime agricultural land or other open-space land to other than open-space uses shall be discouraged by the commission unless such an action would promote the planned, orderly efficient development of an area or the affected land use planning jurisdiction has accomplished the following:*
>
> a. *Identified within its sphere of influence all "prime agricultural land" as defined under Government Code Section 56064.*

b. *Demonstrated to LAFCO that effective measures have been adopted to preserve for agricultural use those prime agricultural lands identified in (a). Such measures may include, but not be limited to, establishing agricultural preserves pursuant to the California Land Conservation Act; designating land for agricultural or other open-space uses on that jurisdiction's general plan, adopted growth management plan, or applicable specific plan; adopting an agricultural element to its general plan; and undertaking public acquisition of prime agricultural lands for the purpose of leasing back such lands for agricultural use.*

c. *Prezoned pursuant to Government Code Section 56375(a) (3), both territory within the agency's general planning area to be maintained for agricultural use, and also territory within the annexation area to indicate anticipated level of development.* (Section G.6 Kern LAFCo Procedures, Standard and Policies)

County of Kern General Plan

The Kern County General Plan, adopted on March 13, 2007, is a policy document designed to give long-range guidance regarding the growth and resources of the unincorporated Kern County jurisdiction, excluding the metropolitan Bakersfield planning area. One objective of the Kern County General Plan is to ensure the protection of environmental resources and the development of adequate infrastructure with specific emphasis on conserving agricultural areas, discouraging unplanned urban growth, ensuring water supplies and acceptable quality for future growth, and addressing air quality issues. It contains the following policies and implementation measures related to the encouragement and preservation of agricultural activities within the Expansion Area.

<u>Land Use, Open Space and Conservation Element</u>

Policy 5: Discourage premature urban encroachment into areas of intense agriculture areas.

Policy 9: When evaluating General plan Amendment proposals to change a Map Code 8.1 (Intensive Agriculture) designation to accommodate residential, commercial, or industrial development, the County shall consider the following factors:

a. Approval of the proposal will not unreasonably interfere wit agricultural operations on surrounding lands.

b. Necessary public services (fire, sheriff, etc.) and infrastructure are available to adequately serve the project.

c. There is a demonstrated need for the proposed project location based upon population projections, market studies and other indicators.

d. The requested change in land use designation is accompanied by a zone change and other implementing land use applications for a specific development proposal.

e. The site is contiguous to properties that are developed or characterized by nonagricultural land uses.

f. Past agricultural use of the site ahs led to soil infertility or other soil conditions which render the property unsuitable for long-term agricultural uses.

g. Approval of the proposed project outweighs the need to retain the land for long-term agricultural use.

h. Where adjacent or within proximity (1/2 mile) to existing urban areas, the County shall discourage agricultural conversion that is discontinuous with urban development.

Policy 12: Areas identified by the Natural Resource Conservation Service (formerly Soil Conservation Service) as having high range-site value should be conserved for Extensive Agriculture uses or as Resource Reserve, if located within a County water district.

Kern County Right to Farm Ordinance

Chapter 8.56 of the Kern County Code is the County's Right to Farm and Right to Business Ordinance. The ordinance states that no agricultural, ranching, hydrocarbon extraction or refining, energy production or mining activity, operation, or facility shall be or become a nuisance, public or private, due to any changed condition in or about the locality, including, but not limited to, unrelated residences, if it was not a nuisance at the time it began. The ordinance is intended to prevent complaints of nuisance against existing agricultural, ranching, and other business operations in the County. The ordinance would apply to existing agricultural and ranching lands within the Expansion Area until they are incorporated into the City through the LAFCo process.

LOCAL

City of Taft Municipal Code

Title XI of the City of Taft Municipal Code contains the City's procedures for agricultural preserves. The intent of the chapter is to authorize the City of Taft to designate suitable areas of the city as agricultural preserves pursuant to the Williamson Act and the Farmland Security Zone, for the purpose of establishing agricultural and compatible land uses and to administer Williamson Act and Farmland Security Zone contracts when land under said contracts are annexed into the City of Taft.

City of Taft Zoning Ordinance – Right to Farm Provisions

The City of Taft Zoning Ordinance, found in Title 6 of the Municipal Code, contains the City's Right to Farm Provisions. The intent of the provisions is to:

Conserve, protect, and encourage the development, improvement, and continued viability of agricultural land and industries for the long-term production of food and other agricultural products;

Support the economic well-being of the City's residents;

Balance the rights of farmers to produce food and other agricultural products with the rights of non-farmers who own, occupy, or use land within or adjacent to agricultural areas; and

Reduce the loss to the City of its agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance.

The provisions protect existing agricultural operations from nuisance complaints and require that a notice of right to farm provisions be included on any proposed land division that lies partly or wholly within, or within 300 feet, of any land zoned for primarily agricultural purposes.

4.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. An agricultural resource impact is considered significant if implementation of the project 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) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland to non-agricultural use.

METHODOLOGY

Evaluation of potential agricultural impacts of the proposed City of Taft General Plan Update was based primarily on information gathered from the California Department of Conservation and the United States Department of Agriculture Natural Resources Conservation Service. A detailed list of resources used in the completion of the analysis in this section can be found under References located at the end of the section. Implementation of the proposed project was compared to the existing conditions to determine the impacts due to loss of agricultural resources and conflicts with existing or designated agricultural resources.

The City of Taft General Plan is intended to be a "self-mitigating" document in that General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the updated General Plan. To that end, the relevant General Plan policies

providing mitigation have been identified for each impact in this section. If the applicable General Plan policies were determined not to feasibly mitigate or avoid impacts, then additional mitigation measures have been included. These additional mitigation measures have been written as policy statements that can be incorporated in the General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

PROJECT IMPACTS AND MITIGATION MEASURES

Loss and Conversion of Important Farmland

Impact 4.2.1 Implementation of the proposed General Plan Update would result in the loss of Important Farmlands (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance) as designated under the Farmland Mapping and Monitoring Program. This is considered a **significant** impact.

According to the California State Department of Conservation Important Farmland Map (2006), as indicated in **Table 4.2-9** and depicted in **Figure 4.2-2**, the Planning Area contains a total of approximately 122,859 acres of Important Farmland or, 21,126 acres of Prime Farmland, 28,182 acres of Unique Farmland, 33,037 acres of Farmland of Statewide Importance, and 40,514 acres of Grazing Land (21,126+28,182+33,037+40,514 = 122,859). The majority of this farmland is located within the Expansion Area.

Farmland within City Limits

As previously mentioned, there is no Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance or major agricultural operations located within the City limits. There are, however, approximately 4,532 acres of Grazing Land located within the City limits. There are also 562.3 acres of dry farmland located to the southeast of the downtown portion of the City. However, this land, which is used to grow trees, sorghum, and wheat for fodder, is owned by the City. It is anticipated that the land would continue in its current use after implementation of the General Plan Update. Under the proposed General Plan, build out of the existing City limits is anticipated to occur by about 2035 and would result in the conversion of the entire 4,532 acres of Grazing Land to urban uses (see **Table 4.2-14**). This is considered a **significant** impact.

TABLE 4.2-14
POTENTIAL FARMLAND CONVERSIONS WITHIN CITY LIMITS BY PROPOSED LAND USE DESIGNATION

Important Farmland Classification	Acres Existing within City Limits	Proposed Non-Agricultural Land Use Designations	Acres of Potential Conversion
Grazing Land	4,532	General Commercial	356.6
		Industrial	100.9
		Public Facilities	146.5
		Natural Resources	2,775.0
		Low Density Residential	936.7
		Medium Density Residential	107.0
		Mixed Use	57.2
		Open Space	52.5
Total			**4,532**

Source: DOC, 2006

Farmland within the Expansion Area

As discussed above, the majority of agricultural land uses in the Planning Area are located within the Expansion Area. The proposed General Plan Land Use Map has, for the most part, designated the Expansion Area for uses intended to preserve existing Important Farmland. In particular, the proposed General Plan Update designates 82,345 acres (over 50 percent of the entire Planning Area) within the Expansion Area for Agriculture. This designation is intended to identify areas in the Planning Area in which agriculture is now, and should continue to be the predominant land use, where land uses incompatible with agriculture should be precluded, and where the development of urban type land uses would be detrimental to the continuance of agriculture which is an economic and aesthetic attribute to the area. The Agriculture land use designation also allows the City to implement Williamson Act Land contracts, including Farmland Security Zones, to ensure the continued viability of agricultures.

However, the proposed project also designates areas of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Grazing Land for various urban uses including Commercial, Industrial, Public Facilities, Specific Plan, Natural Resource, Residential, Mixed Use, and Open Space uses. To be exact, the proposed General Plan Update would result in 2,827 acres of Prime Farmland, 2,670 acres of Farmland of Statewide Importance, 7,466 acres of Unique Farmland, and 24,117 acres of Grazing Land, or a total of 37,080 acres (2,827+2,670+7,466+24,117 = 37,080) of Important Farmland (approximately 30 percent of Important Farmland inventoried in the Planning Area) being designated for uses other than agriculture. These potential farmland conversions are shown in more detail in **Table 4.2-15** below. **Figure 4.2-4** shows the locations of these potential areas of farmland conversion within the Expansion Area. As previously noted, the DOC classification of Important Farmland is not the same as a General Plan designation for an agricultural use. Therefore, while over 50 percent of the Planning Area is designated for

Agriculture, the acreage of land designated by the DOC as Important Farmland within the Expansion Area does not necessarily coincide with those areas.

TABLE 4.2-15
POTENTIAL FARMLAND CONVERSIONS WITHIN EXPANSION AREA BY PROPOSED LAND USE DESIGNATION

Important Farmland Classification	Acres Existing within Expansion Area	Proposed Non-Agricultural Land Use Designations	Acres of Potential Conversion
Prime Farmland	21,126	General Commercial	27.6
		Industrial	226.8
		Public Facilities	43.2
		Specific Plan	5.4
		Natural Resources	2,514.0
		Subtotal	**2,827**
Farmland of Statewide Importance	33,037	General Commercial	492.8
		Industrial	157.2
		Public Facilities	108.2
		Specific Plan	309.4
		Natural Resources	1,573.4
		Subtotal	**2,670**
Unique Farmland	28,182	General Commercial	21.4
		Industrial	199.3
		Public Facilities	10.6
		Specific Plan	346.6
		Natural Resources	6,887.6
		Subtotal	**7,466**
Grazing Land	35,982	General Commercial	46.6
		Industrial	907.5
		Public Facilities	364.6
		Specific Plan	850.0
		Natural Resources	21,007.7
		Low Density Residential	711.1
		Medium Density Residential	36.7
		Mixed Use	5.8
		Open Space	27.8
		Residential Estate	130.8
		Rural Residential	27.6
		Subtotal	**24,117**
	118,327		**37,080**

Source: DOC, 2006

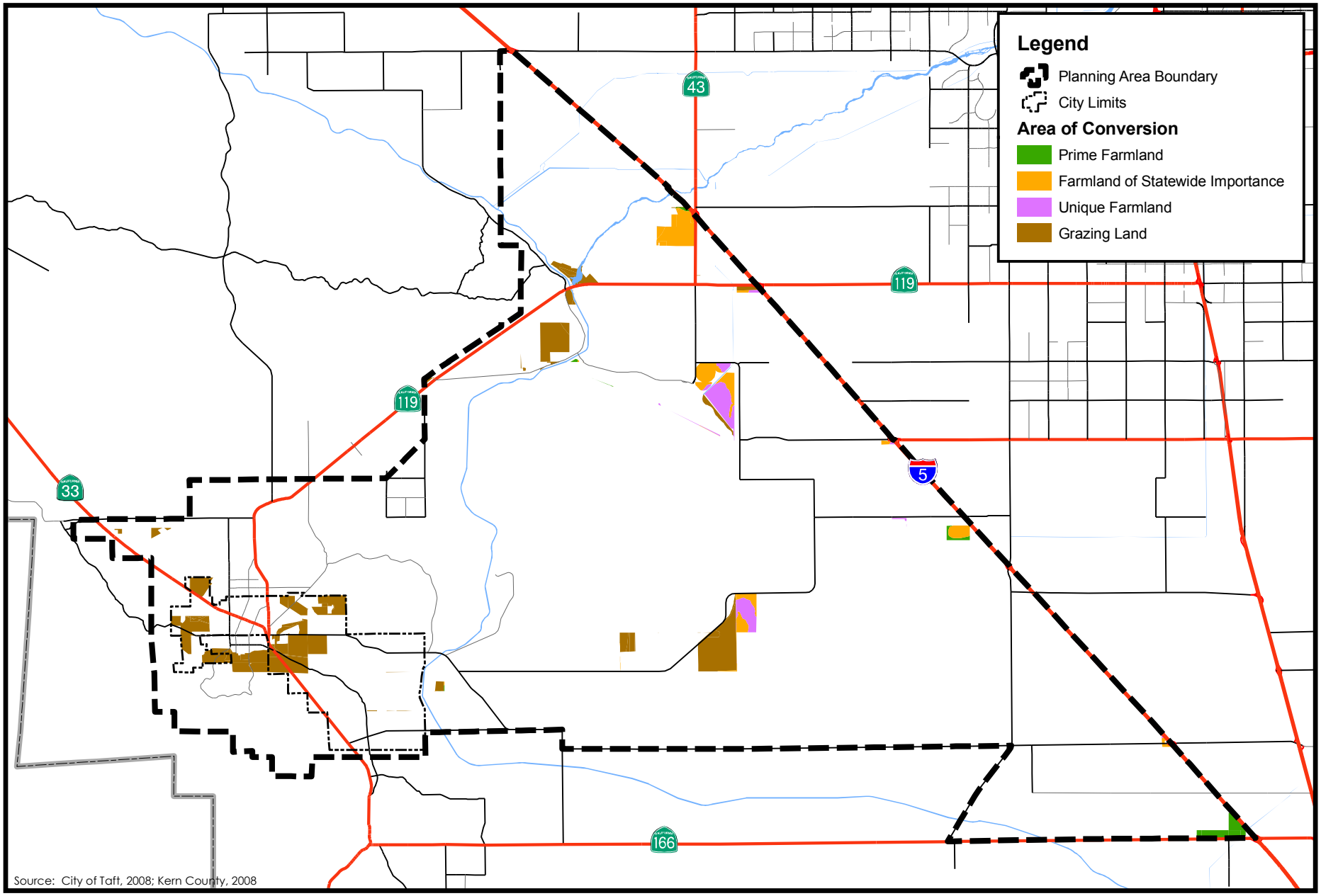

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Figure 4.2-4

Locations of Potential Important Farmland Conversions

PMC

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Although any land outside of the City must be annexed and annexations to the City of Taft must be approved by LAFCo, it is anticipated that these lands will be annexed and developed consistent with proposed General Plan land use designations at some point in the future. Loss of this Important Farmland is considered a **significant** impact.

It should be noted that portions of land designated as Important Farmland within the Expansion Area are designated for uses other than agriculture under the Kern County General Plan and have the potential to be converted if developed under the County General Plan designations as well. For further discussion of the potential effects on agricultural resources that could result from continued implementation of the County's General Plan, see Section 6.3 No Project Alternative.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following policies are included in the proposed General Plan Update and would reduce impacts associated with the loss of agricultural lands:

Policy C-1 Support the continued use of agriculture in the Planning Area.

Policy C-2 Preserve agricultural lands for agricultural uses, prioritizing the protection of lands with prime and other important soil classifications.

Policy C-3 Work with public agency, private, and nonprofit partners to provide a means to preserve open space and agricultural lands.

Action C-3a Amend the Zoning Ordinance to require a 1:1 acreage replacement ratio for conversion of agricultural lands classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance under the Farmland Mapping and Monitoring Program.

Policy C-4 Facilitate and support agricultural conservation easements, Williamson Act and Farmland Security Zone contracts, and land conservation programs used to protect agricultural resources.

Action C-4a Adopt ordinances necessary to allow the continuation of Williamson Act and Farmland Security Zone contracts and land conservation programs after annexation

Policy C-5 Working in consultation with the Kern County Agricultural Commission and the Kern County Farm Bureau, establish agricultural buffer zones between urban and agricultural land uses. Design buffer zones to address the physical effects of agricultural practices, such as chemical spraying, noise, and odors, and to prohibit residential incursion into agricultural areas.

Action C-5a Adopt a buffer zone policy to designate specific setbacks on developing land from existing agricultural land.

Policy C-6 Prioritize infill development over the conversion of agricultural lands to accommodate future growth.

Policy C-7 Encourage cluster development as a means of obtaining open space to be used as a buffer.

Policy C-9 Encourage organic and sustainable agricultural practices and crop diversification.

Policy C-10 Encourage efficient water use to enhance agriculture and grazing, employing techniques such as use of reclaimed water.

Policy C-11 Encourage the growth of environmentally sustainable agricultural businesses and support services.

Policy C-12 Encourage the marketing of local agricultural products to local residents, vendors, and restaurants through farmers markets and other direct farm-to-table sales.

Action C-12a Partner with private and nonprofit partners to manage a "Buy Local" program for local agricultural projects.

These policies would encourage the conservation and continued use of agricultural lands. In particular, the policies that prioritize infill development and the protection of lands with prime and other important soil classifications would guide development away from agricultural lands. Nevertheless, the General Plan Update does propose land use designations that could result in non-agricultural uses on 41,612 acres of existing Important Farmland within the entire Planning Area (4,532 within City limits + 37,080 within Expansion Area). While implementation of the above General Plan policies would reduce impacts to agricultural land conversion, it would not fully avoid conversion and loss of Important Farmlands as these farmlands would remain designated for non-agricultural uses. Thus, impacts to Important Farmland would remain **significant and unavoidable**.

Mitigation Measures

No further feasible mitigation measures available.

Agricultural/Urban Interface Conflicts

Impact 4.2.2 Implementation of the proposed General Plan Update could result in indirect farmland conversion due to agricultural/urban interface conflicts. This is considered a **significant** impact.

As mentioned under **Impact 4.2.1** above, the General Plan Update designates 82,345 acres of land in the Planning Area for agricultural uses. While the updated General Plan Land Use Map proposes large tracts of natural resources areas adjacent to the majority of the agricultural uses, the map would also allow urban uses adjacent to agricultural lands in areas of the Planning Area. The reader is referred to **Figure 3.0-6**, in Section 3.0, Project Description, of this Draft EIR for

the location of proposed land use designations in the Planning Area. Allowing for future urban growth adjacent to any farmland under production may result in agricultural/urban interface conflicts. Subsequent land use activities associated with implementation of the proposed General Plan Update may involve the placement of residential and other non-agricultural land uses adjacent to agricultural uses that could result in agricultural/urban interface. Conflicts are expected to be limited to types of inconveniences or discomforts associated with agricultural operations. Such conflicts generally include, but are not limited to, the following:

- Inconveniences or discomforts associated with dust, smoke, noise, and odor from agricultural operations;
- Restrictions on agricultural operations, such as pesticide application, along interfaces with urban uses;
- Shared use of roadways by farm equipment and passenger vehicles;
- Noise pollution from farm equipment, such as trucks, wind turbines, and aircraft used in pesticide application; and
- Trespassing and vandalism on active farmlands.

These potential land use interface conflicts can individually or cumulatively decrease the efficiency of farming operations which can cause production costs to rise and make farming operation less appealing. The increase in production costs can eventually force a farmer into a land use conversion. As such, the project may result in **significant** impacts due to the impairment of productivity and land use conflicts.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following policies are included in the proposed General Plan Update and would reduce impacts associated with agricultural/urban interface conflicts:

Policy C-1 Support the continued use of agriculture in the Planning Area.

Policy C-2 Preserve agricultural lands for agricultural uses, prioritizing the protection of lands with prime and other important soil classifications.

Policy C-3 Work with public agency, private, and nonprofit partners to provide a means to preserve open space and agricultural lands.

Action C-3a Amend the Zoning Ordinance to require a 1:1 acreage replacement ratio for conversion of agricultural lands classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance under the Farmland Mapping and Monitoring Program.

Policy C-4 Facilitate and support agricultural conservation easements, Williamson Act and Farmland Security Zone contracts, and land conservation programs used to protect agricultural resources.

Action C-4a Adopt ordinances necessary to allow the continuation of Williamson Act and Farmland Security Zone contracts and land conservation programs after annexation

Policy C-5 Working in consultation with the Kern County Agricultural Commission and the Kern County Farm Bureau, establish agricultural buffer zones between urban and agricultural land uses. Design buffer zones to address the physical effects of agricultural practices, such as chemical spraying, noise, and odors, and to prohibit residential incursion into agricultural areas.

Action C-5a Adopt a buffer zone policy to designate specific setbacks on developing land from existing agricultural land.

Policy C-6 Prioritize infill development over the conversion of agricultural lands to accommodate future growth.

Policy C-7 Encourage cluster development as a means of obtaining open space to be used as a buffer.

Implementation of the above General Plan policies would encourage existing agricultural uses to continue and would require agricultural uses to be buffered from urban uses. Such buffers would lessen physical effects to urban uses such as chemical spraying, noise, and odors and would, in turn, reduce effects to agricultural operations such as nuisance complaints, trespassing and vandalism. The City's right to farm provisions would further protect existing agricultural uses from nuisance complaints associated with encroaching urban uses by making residents aware of potential nuisances prior to purchasing properties adjacent to agricultural uses. The vast majority of land within the Planning Area designated for agricultural use would not be located adjacent to proposed urban uses and would not be subject to agriculture/urban interface conflicts. However, where such interface conflicts could occur, ongoing urban develop would continue to place pressure on active agricultural operations and could result in the conversion of farmland to urban uses. This impact is considered **significant and unavoidable**.

Mitigation Measures

No further feasible mitigation is available.

Conflicts with Williamson Act and FSZ Contracts

Impact 4.2.3 Implementation of the proposed General Plan Update could result in conflicts with existing Williamson Act and FSZ contracts. This is considered a **significant** impact.

Within the City of Taft Planning Area, there are approximately 46,251 acres of Prime, Non-prime, and Mixed Enrollment Agricultural land under active Williamson Act contracts. In addition, there are 29,625 acres of land under FSZ contracts within the Planning Area. A Notice of Nonrenewal has been filed by property owners for 576 acres within the Planning Area. While the vast majority of the land under Williamson Act and FSZ contracts are located in areas that are conducive to their continued agricultural use, subsequent land uses permitted by right under implementation of the proposed General Plan Update could have the potential to conflict with existing Williamson Act and FSZ lands. The proposed General Plan Update would result in 8,908 acres of land currently under Williamson Act contracts and 5,569 acres of land under FSZ contracts being designated for uses other than agriculture, which could lead to the removal of this land (a total of 14,477 acres) from active contracts. All lands under Williamson Act and FSZ contracts are located within the Expansion Area.

As discussed under Regulatory Framework, the California Government Code prohibits annexation of Williamson Act and FSZ contracted land unless specific criteria are met but does not preclude annexation entirely. Therefore, lands within the expansion area could be annexed and developed consistent with the proposed General Plan Update, providing those criteria were met. This potential conflict with lands under WAC and FSZ contracts is therefore a **significant** impact.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following policies are included in the proposed General Plan Update and would reduce impacts associated with agricultural/urban interface conflicts:

Policy C-1 Support the continued use of agriculture in the Planning Area.

Policy C-2 Preserve agricultural lands for agricultural uses, prioritizing the protection of lands with prime and other important soil classifications.

Policy C-3 Work with public agency, private, and nonprofit partners to provide a means to preserve open space and agricultural lands.

Action C-3a Amend the Zoning Ordinance to require a 1:1 acreage replacement ratio for conversion of agricultural lands classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance under the Farmland Mapping and Monitoring Program.

Policy C-4 Facilitate and support agricultural conservation easements, Williamson Act and Farmland Security Zone contracts, and land conservation programs used to protect agricultural resources.

Action C-4a Adopt ordinances necessary to allow the continuation of Williamson Act and Farmland Security Zone contracts and land conservation programs after annexation

Policy C-5 Working in consultation with the Kern County Agricultural Commission and the Kern County Farm Bureau, establish agricultural buffer zones between urban and agricultural land uses. Design buffer zones to address the physical effects of agricultural practices, such as chemical spraying, noise, and odors, and to prohibit residential incursion into agricultural areas.

Action C-5a Adopt a buffer zone policy to designate specific setbacks on developing land from existing agricultural land.

Policy C-6 Prioritize infill development over the conversion of agricultural lands to accommodate future growth.

Policy C-7 Encourage cluster development as a means of obtaining open space to be used as a buffer.

Implementation of the above General Plan policies would reduce potential conflicts between Williamson Act lands and future development, particularly Policy C-4 which requires the City to facilitate and support Williamson Act and Farmland Security Zone contracts. In addition, Title XI of the Municipal Code facilitates the administration of Williamson Act and Farmland Security Zone contracts when land under contracts is annexed into the City. Nevertheless, the proposed General Plan designates 14,478 acres of Williamson Act and FSZ contract lands for uses other than agriculture and it is anticipated that such lands would eventually be converted to urban uses as designated by the General Plan Update, irrespective of any measures that could be taken. Therefore, this impact is considered **significant and unavoidable**.

Mitigation Measures

No further feasible mitigation measures available.

4.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

As indicated in **Table 4.2-11** above, Kern County has experienced a net loss of approximately 3,089 acres of Prime Farmland and 2,023 acres of Unique Farmland, and a net gain of 142 acres of Farmland of Statewide Importance and 1,461 acres of Grazing Land, between 2004 and 2006. The existing and projected future urban development throughout the state is expected to further contribute to the continued loss of Important Farmlands. The cumulative setting includes reasonably foreseeable development, including planned and proposed development, anticipated throughout Kern County (see Section 4.0, Assumptions, for a further description of cumulative growth conditions) and throughout the state under buildout conditions (occurring after year 2035). Loss of agricultural lands has been identified as a statewide issue. Urban development in California is expected to further contribute to the loss of Important Farmland. Therefore it is acknowledged that cumulative conversion of Important Farmland associated with the proposed project is of statewide concern. While the focus of the cumulative impact analysis is Kern County, it is acknowledged that cumulative Important Farmland conversion contributions by the

proposed project are of a statewide concern. To this end, analysis of the cumulative impact of the proposed project incorporates statewide data, as described in "Methodology" above.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Agricultural Resources

Impact 4.2.4 Implementation of the proposed project, along with other proposed development in Kern County, would contribute to the cumulative conversion of Important Farmlands to other uses and may increase agriculture/urban interface conflicts. This is a **cumulatively considerable** impact.

Urban development within Kern County resulted in the loss of approximately 3,509 acres of Important Farmland (that is, Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and Grazing Land) between 2004 and 2006. Additional agricultural acres have been converted to other uses since 2006; however, specific conversion acreage figures are not yet available. As previously discussed, implementation of the General Plan Update would result in the conversion of agricultural resources within the Planning Area. Approximately 41,612 acres of Important Farmland within the Planning Area potentially would be converted to urban uses under proposed General Plan designations. This would represent approximately 34 percent of the total Important Farmland inventoried in the Planning Area and about 1.5 percent of the total Important Farmland inventoried in Kern County in 2006, or 2,755,109 acres (DOC, 2004-06).

While the acreage converted would represent only a small percentage of Important Farmland in Kern County, this would be in addition to Important Farmland conversions associated with development anticipated under the applicable land use plans of Kern County and each of the incorporated cities within the County. Thus, the General Plan Update would contribute to a potentially significant amount of Important Farmland in Kern County being removed from agricultural use.

Furthermore, the City of Taft is located in the San Joaquin Valley. Since the San Joaquin Valley is more dependent on agriculture than California as a whole, changes in agricultural production and sales would have a greater economic impact. It also means that the conversion of agricultural lands to other uses would have a greater impact on the economy in the San Joaquin Valley (including the City of Taft and Kern County) than in California overall. Under cumulative conditions, agricultural land would continue to be converted to urban uses as the population increases in Kern County and the San Joaquin Valley. Therefore, this impact is **cumulatively considerable**.

<u>Proposed General Plan Policies and Action Items that Provide Mitigation</u>

The following policies are included in the proposed General Plan Update and would reduce cumulative impacts to agricultural lands:

The proposed General Plan Update contains several goals, policies, and actions that would assist in reducing this cumulative agricultural resource impact. The following list contains those

policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Conservation Element

Policy C-1; Policy C-2; Policy C-3; Action C-3a; Policy C-4; Action C-4a; Policy C-5; Action C-5a; Policy C-6; Policy C-7; Policy C-9; Policy C-10; Policy C-11; Policy C-12; Action C-12a

Implementation of the above General Plan policies would reduce the General Plan Update's contribution to cumulative impacts to agricultural resources. However, implementation of the General Plan would still irrevocably convert Important Farmland, and land under Williamson Act and FSZ contracts, to other uses. Therefore, the project would have a **cumulatively considerable** contribution to this impact and is therefore considered **significant and unavoidable.**

Mitigation Measures

Implementation of the proposed General Plan policies would reduce the General Plan Update's contribution to the additional conversion of Important Farmlands to other uses and increased agriculture/urban interface conflicts. However, proposed General Plan policies would not fully avoid conversion of farmland and agriculture/urban interface conflicts as agricultural lands would be designated for urban uses and non-agricultural uses. Therefore, there are no further feasible mitigation measures are available.

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4.3
POPULATION/HOUSING/ EMPLOYMENT

This section of the City of Taft General Plan Update Draft Environmental impact Report ("Draft EIR"; "DEIR") discusses the current population characteristics, housing, and employment conditions within the City of Taft General Plan Planning Area (Planning Area) and analyzes the potential changes and employment opportunities within the Planning Area that would occur as a result of implementation of the proposed City of Taft General Plan Update ("General Plan Update"; "GPU"; "proposed project"; "project"). Population, housing and employment data for this section was obtained from websites of public agencies such as the U.S. Census Bureau (Census) and the California Department of Finance (DOF), and from 2000 Census of Population and Housing, (ESRI) forecasts for 2008 and 2013 generated for the Planning Area (ESRI 2009).

4.3.1 EXISTING SETTING

REGIONAL SETTING

The City of Taft (City) is located in southwestern Kern County at the southern end of the San Joaquin Valley. The County encompasses 11 incorporated cities: Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. The County's 2009 population was estimated at 827,173, a 1.5 percent increase from 2008. Of this total population, about 36.4 percent reside in the unincorporated County and the remaining 63.6 percent reside in the County's incorporated cities (DOF, 2009). Population growth in Kern County has been rapid over the past decade with most growth occurring in its incorporated cities. The Westside area of the County, which surrounds the City of Taft, was one of the fastest growing areas of unincorporated Kern County (Kern County, 2008). The County's 2030 population is projected to be about 1,352,627 persons with an average projected growth rate of about 3.4 percent. However, due to the current declines in the housing market and the economic climate as a whole, these projections may currently be overstated.

The growth projections for surrounding counties, as provided by the Department of Finance, are generally slightly lower than that of Kern County with the exception of Kings and Tulare counties. **Table 4.3-1** below provides the growth projections for the surrounding counties of Inyo, Kings, Los Angeles, San Bernardino, San Luis Obispo, Santa Barbara, Tulare, and Ventura through 2040. The City's updated General Plan assumes the year 2035 to be when it reaches the General Plan development capacity. However, population projections for this specific year were not available.

TABLE 4.3-1
CURRENT AND PROJECTED POPULATION – KERN AND SURROUNDING COUNTIES

County	2000 Population	Projected Population				Average Annual Growth Rate
		2010	2020	2030	2040	
Kern	665,519	871,728	1,086,113	1,352,627	1,707,239	3.9
Inyo	18,181	19,183	20,495	22,132	23,520	0.7
Kings	130,202	164,535	205,707	250,516	299,770	3.3
Los Angeles	9,578,960	10,514,663	11,214,237	11,920,289	12,491,606	0.8
San Bernardino	1,721,942	2,177,596	2,581,371	2,958,939	3,309,292	2.3
San Los Obispo	248,322	269,734	293,540	316,613	338,760	0.9
Santa Barbara	401,115	434,497	459,498	484,570	509,920	0.7
Tulare	369,873	466,893	599,117	742,969	879,480	3.5
Ventura	758,884	855,876	956,392	1,049,758	1,135,684	1.2

Source: Department of Finance, 2007

LOCAL SETTING

Population Overview

The City covers roughly 15.1 square miles of land in southwestern Kern County (County). The City is situated in a major petroleum and natural gas production region in California and is one of the few remaining towns in the United States which exists exclusively because of nearby oil reserves. The operational activities within these fields have been the economic base for the City for over 100 years. The population of Taft was estimated to be 8,811 persons in 2000 and 9,228 in 2008, according to the California Department of Finance (DOF). However, these population estimates also include the Taft prison population of approximately 2,970 incarcerated persons in 2000, and 2,828 incarcerated persons in 2008. Therefore, in reality the City's population increased from 5,841 in 2000 to about 6,400 persons in 2008. This represents an approximate 1.2 percent annual growth rate over this eight year period. The entire Planning Area (including the City of Taft and the Expansion Area) had a 2008 estimated population of 18,070. Current and projected populations for the City, County and the state are provided in **Table 4.3-2**.

TABLE 4.3-2
POPULATION ESTIMATES 1980-2008 – CITY OF TAFT, KERN COUNTY, STATE OF CALIFORNIA

	1980	1990	Percent Change (1980-1990)	2000	Percent Change (1990-2000)	2008	Percent Change (2000-2008)	Average Annual Growth Rate (1980-2008)
City of Taft[1]	5,316	5,900	+11.0%	8,811	+49.3%	9,228	+4.7%	+2.6%
Kern County (including cities)	403,089	537,300	+33.3%	665,519	+23.9%	814,995	+22.5%	+3.7%
California	23,667,565	29,558,000	+25%	33,873,086	+14.6%	38,049,462	+12.3%	+2.2%

Notes:

1 – Population numbers from 1990 to 2008 include the population of the Mule Creek State Prison, which is currently estimated at about 4,254 persons or 57.4% of the City's total population.

Source: Department of Finance, 1980; Department of Finance, 1990; Department of Finance, 2009

Existing Land uses

The existing City limits encompass about 9,622 acres. The proposed General Plan Planning Area consists of 157,570 acres resulting in an Expansion Area of 147,948 acres. The General Plan Planning Area contains a mix of existing land use designations: Residential, General Commercial, Industrial, Mixed Use, Public Facilities, Open Space, Natural Resource, Agriculture and Specific Plan, as shown in **Table 3.0-3**. The majority of the land is undeveloped and vacant land, some of which contains existing agricultural uses. The reader is referred to Section 4.1, Land Use, for a further description of land uses and applicable land use plans in the Planning Area.

DEMOGRAPHICS

Population Trends

According to the California DOF 2008 estimates, the 2008 population for the City of Taft was 9,228, while the entire Planning Area (including the City of Taft and the Expansion Area) had an estimated population of 18,070 (DOF, 2008).

The City of Taft experienced rapid population growth between 1990 and 2000, with a growth rate of 49.3%, primarily due to increases in the population of the Taft Correctional Institution located within the City limits. Growth in the City appears to have slowed between 2000 and 2008, with a 4.7% change in the City's population. The population of the Expansion Area also grew relatively slowly, by 1.21% annually, between 1990 and 2000. Since 2000, the Expansion Area population has actually decreased by 13.8%. By comparison, the average annual population growth rate of California was 1.46% during the same time period.

TABLE 4.3-3
CITY OF TAFT AND EXPANSION AREA POPULATION TRENDS

Year	City of Taft			Expansion Area			Planning Area		
	Population	Change	% Change	Population	Change	% Change	Population	Change	% Change
1990	5,902	--	--	9,100	-	-	15,448	--	--
2000	8,811	+2,909	+49.3	10,263	+1,163	12.8%	16,663	+1,215	+7.9%
2008*	9,228	+417	+4.7	8,842	-1,421	-13.8%	18,070	+1,407	+8.4%

** Estimate; Sources: California Department of Finance (DOF), 2007; U.S. Bureau of the Census, 2000; ESRI, 2009.*

Household Trends

According to the 2000 Census, there were 2,235 households in the City of Taft. There were an estimated 2,426 households in the City in 2008. In the Expansion Area, the 2000 U.S. Census identified 2,706 households, while the estimated number of households in 2008 was 2,928 – an increase in excess of eight percent. It should be noted that while the population in the Expansion Area decreased between 2000 and 2008, the number of households increased in the same time-frame. **Table 4.3-4** shows the household growth trends in Taft and the Expansion Area since 1990.

TABLE 4.3-4
CITY OF TAFT AND EXPANSION AREA HOUSEHOLD TRENDS

Year	City of Taft			Expansion Area			Planning Area		
	Households	Change	% Change	Households	Change	% Change	Households	Change	% Change
1990	2,335	--	--	3,019	-	-	5,354	-	-
2000	2,237	-98	-4.2%	2,706	-313	-10.4%	4,943	-411	-1.9%
2008*	2,426	189	8.4%	2,928	222	8.2%	5,354	411	8.3%

Source: ESRI, 2009.

Household Size

The term household size refers to the average number of persons in a household. In 2000, the average household size for the City was 2.7 persons, compared with 3.21 persons per household for the Expansion Area (ESRI, 2009). Statewide in California in 2000, there was an average of 2.87 persons per household (US Census Bureau, 2000). In 2008, the household size was estimated to be 2.82 persons for the City, and 2.99 persons within the Expansion Area.

Household Income

In 2008, the median household incomes for Taft and the Expansion Area were lower than household incomes state-wide. The median household income for the City of Taft was $38,984

and $36,198 for the Expansion Area (ESRI, 2009). By comparison, the median income in California was $55,450 (DOF, 2009). This indicates a concentration of lower-income households in Taft.

Although stated incomes in the City of Taft and the Expansion Area have shown a moderate increase since 1990, real incomes, when adjusted for inflation have shown a considerable decrease over the past 18 years (see **Table 4.3-5**).

TABLE 4.3-5
MEDIAN HOUSEHOLD INCOMES, CURRENT AND ADJUSTED

Median Household Income	City of Taft		Expansion Area	
	Current	Adjusted[1]	Current	Adjusted
1990	31,341	-	26,094	-
2000	33,559	25,471	30,330	23,020
2008	38,984	23,665	36,198	21,974

Source: ESRI, 2009; BLS, 2009.

HOUSING

Tenure

Tenure describes the status of a household in a housing unit it occupies – either owner or renter. As shown in **Table 4.3-6**, the majority of households in Taft and the Expansion Area are in owner-occupied housing units. The renter occupied percentage in Taft (38%) is less than the Expansion Area (41%). The Expansion Area has a greater percentage of renters than Kern County as a whole (38%).

TABLE 4.3-6
CITY OF TAFT AND EXPANSION AREA HOUSEHOLD TENURE

Housing Units	City of Taft (2008)		Expansion Area (2008)		Kern County (2000)	
	Number	Percent	Number	Percent	Number	Percent
Total Occupied	2,426	100%	2928	100%	208,652	100.00%
Owner Occupied	1516	62%	1719	59%	129,609	62%
Renter Occupied	910	38%	1209	41%	79,043	38%

Source: ESRI, 2009

1 Actual median household incomes were adjusted for inflation using the CPI Inflation calculator to 1990 dollars, BLS, 2009.

Age of Housing Units

Table 4.3-7 shows the age of housing units in the City of Taft and the Expansion Area. Data was obtained from the 2000 U.S. Census, which is the most recent source available. Most of the housing units in the City of Taft and the Expansion Area are older. Approximately 62.7% of Taft's and almost 85% of the Expansion Area's housing stock was built prior to 1969. Housing constructed since 1990 has comprised of only 6% of the housing units within the City of Taft and of less than 3% within the Expansion Area.

TABLE 4.3-7
AGE OF HOUSING UNITS IN TAFT AND EXPANSION AREA, AS OF 2000

Year Built	City of Taft		Expansion Area	
	Number	Percentage of Total	Number	Percentage of Total
1999 to March 2000	2	0.1	12	0.4
1995 to 1998	102	4.1	22	0.7
1990 to 1994	50	2.0	31	1.0
1980 to 1989	310	12.5	134	4.3
1970 to 1979	461	18.6	284	9.1
1969 or Earlier	1556	62.7	2633	84.5
Total	2,481	100	3,116	100

Source: ESRI, 2009

Housing Unit Vacancy

Vacancy trends in housing are analyzed using a "vacancy rate," which established the relationship between housing supply and demand. For example, if the demand for housing is greater than the supply, then the vacancy rate is low, and the price of housing will most likely increase. According to "*Raising the Roof, California Housing Development Projections and Constraints, 1997-2020*" (Landis, 2000), the desirable vacancy rate in a community is considered to be five percent. Generally, when the vacancy rate drops below five percent, the demand for housing exceeds the supply of housing. Subsequently, prospective buyers and renters may experience an increase in housing costs. According to the 2000 Census, the vacancy rate for Taft was 10.1% and 13% for the Expansion Area. Vacancy in the Planning Area decreased slightly between 2000 and 2008. Estimated vacancy rates for 2008 for the City of Taft and the Expansion Area were 9.6% and 12.7%, respectively (ESRI, 2009).

EMPLOYMENT

ESRI's 2008 estimates place the number of employed people 16 years of age and older at 2,553 for the City of Taft and at 2,972 for the Expansion Area (ESRI, 2009). The California Economic Development Department (EDD), Labor Market Information Division maintains databases containing labor statistics for jurisdictions throughout the state. According to the

EDD's *Monthly Labor Force Data for Cities and Census Designated Places (CDP)* (January 2009 – preliminary) data, the unemployment rate for Kern County in January 2009 was 13.8%. The unemployment rate for the City of Taft was 13.4%. City and Expansion Area rates were both higher than the state unemployment rate of 10.6% (EDD, 2009). **Table 4.3-8** provides a breakdown of employed residents by industry in Taft and the Expansion Area.

TABLE 4.3-8
POPULATION EMPLOYED (16+) BY INDUSTRY FOR 2008

Industry	City of Taft		Expansion Area	
	Number	Percentage	Number	Percentage
Agriculture, Forestry, Fishing, Mining	625	24.5	657	22.1
Construction	220	8.6	366	12.3
Manufacturing	74	2.9	107	3.6
Wholesale Trade	110	4.3	80	2.7
Retail Trade	184	7.2	253	8.5
Transportation, Warehousing, Utilities	110	4.3	163	5.5
Information	15	0.6	15	0.5
Finance/Insurance/Real Estate	105	4.1	140	4.7
Services (Professional, Scientific, Mgmt, Admin)	873	34.2	1088	36.6
Public Administration	237	9.3	101	3.4
Total	2,553	100.0	2,972	100.0

Source: ESRI, 2009.

As indicated in **Table 4.3-8**, the predominant employment sector in the City of Taft is the services sector, the same is true in the Expansion Area. Remaining employment is fairly evenly dispersed among sectors within the City. Besides services, a large portion of the employment in the Planning Area is attributed to agriculture, forestry, fishing and mining. As stated previously in this section, oil and gas is a particularly important industry to the economy of the City and surrounding area. Within **Table 4.3-8** above, oil and gas extraction is included within the agriculture, forestry, fishing and mining category while petroleum refining is included in the manufacturing category.

Table 4.3-9 lists the major manufacturing and processing plants in the Taft area. Food processing and related industries are the predominant manufacturing activities. Other major employers in the Taft area include the Taft Unified School District, the Taft Community Hospital, and the City and County of Taft and other major oil and petroleum manufacturers in the area.

TABLE 4.3-9
TOP MANUFACTURING EMPLOYERS IN TAFT

Employer	Product or Service	Number of Employees
Royal Taft Vineyards	Fruit Packers	10-600*
Constellation Wines, U.S.	Wine and Brandy	430
Saint-Gobain Containers	Glass Bottles	370
Rain Creek Bakery	European Pastries	60-350*
Lamanuzzi and Pantaleo	Raisin Manufacturing	75-325*
Baltimore Aircoil Company of California	Cooling Systems	235
Certainteed Corporation	Fiberglass Insulation	225
Evapco West	Evaporative Cooling/Industrial Refrigeration	199
Brake Parts, Inc.	Motor Vehicle Brake Systems	150
Georgia-Pacific LLC	Corrugated Boxes	150
JBT Food Tech	Food Processing Machinery	150
Warnock Food Products	Tortilla Chips, Taco Shells	130

** Seasonal employment*
Source: Taft Chamber of Commerce

4.3.2 REGULATORY FRAMEWORK

FEDERAL

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970

The Uniform Act, passed by Congress in 1970, is a federal law that establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms. The Uniform Act's protections and assistance apply to the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects. 49 CFR Part 24 is the government-wide regulation that implements the URA.

Title 24--Housing and Urban Development Part 42

Displacement, Relocation Assistance, and Real Property Acquisition for HUD And HUD-Assisted Programs

Section 104(d) of the Housing and Community Development Act (HCD) provides minimum requirements for federally funded programs or projects when units that are part of a community's low-income housing supply are demolished or converted to a use other than low or moderate-income dwellings.

Section 104(d) requirements include:

- Replacement, on a one-for-one basis, of all occupied and vacant occupiable low- or moderate-income dwelling units that are demolished or converted to a use other than low- or moderate-income housing in connection with an activity assisted under the HCD Act, and

- Provision of certain relocation assistance to any lower income person displaced as a direct result of the following activities in connection with federal assistance:

- Demolition of any dwelling unit, or

- Conversion of a low- or moderate-income dwelling unit to a use other than a low or moderate-income residence.

Section 104(d) requirements are triggered by the use of HOME, CDBG, Section 108 Loan Guarantee, or UDAG funding in a project involving the demolition or conversion of low- or moderate-income housing.

STATE

California Relocation Statute - Government Code Section 7260

The California Relocation Statue is a California law that establishes minimum standards for state funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms. The Statute's protections and assistance apply to the acquisition, rehabilitation, or demolition of real property for state funded projects. The Statute is intended for the benefit of displaced persons, to ensure that such persons receive fair and equitable treatment and do not suffer disproportionate injuries as the result of programs designed for the benefit of the public as a whole. Title 25, Division 1, Chapter 6 of the California Code of Regulations provides the regulatory guidelines to enforce the Statute.

<u>Title 25 Division 1 Chapter 6 Subchapter 1- Relocation Assistance and Real Property Acquisition</u>

This section of Title 25 provides guidelines to assist public entities in the development of regulations and procedures implementing GC Section 7260. The guidelines are designed to carry out the following policies of Section 7260:

- To ensure that uniform, fair and equitable treatment is afforded persons displaced from their homes, businesses or farms as a result of the actions of a public entity in order that such persons shall not suffer disproportionate injury as a result of action taken for the benefit of the public as a whole; and

- In the acquisition of real property by a public entity, to ensure consistent and fair treatment for owners of real property to be acquired, to encourage and expedite

acquisition by agreement with owners of such property in order to avoid litigation and relieve congestion in courts, and to promote confidence in public land acquisition.

Proposition 46

In November 2002, the Housing and Emergency Shelter Trust Fund Act of 2002 was passed by the voters of California. Prop. 46 created a trust fund to provide shelters for battered women, clean and safe housing for low-income senior citizens, emergency shelters for homeless families with children, housing with social services for homeless and mentally ill persons, repairs/accessibility improvements to apartments for families and handicapped citizens, veteran homeownership assistance, and security improvements/repairs to existing emergency shelters. Funded by a bond issue of $2.1 billion, Prop. 46 makes cities and counties eligible to receive specified funds and subjects expenditures to independent audit. Prop. 46 also appropriates money from the state General Fund to repay bonds.

The City of Taft is currently preparing an update to its Housing Element. The element will comply with the Workforce Housing Reward Program funded by Proposition 46, which provides grants eligible to local governments for every qualifying unit permitted starting January 1, 2005 (California Department of Housing and Community Development).

State Housing Policies

State policies affecting land use regulations in cities throughout California are included in housing policies as established by the Housing Element of the City of Taft General Plan, which is currently being updated by the City. The Housing Element is the primary policy document regarding the development, rehabilitation, and preservation of housing for all economic segments of the population within a jurisdiction and is required by law. Accordingly, the Housing Element update will identify and analyze the existing and projected housing needs and provide goals toward providing sufficient housing. The element will contain policies, quantified objectives, and implementation programs for the preservation, improvement, and development of housing in the City of Taft.

State law sets out a process for determining each local jurisdiction's fair share of regional housing needs, called the Regional Housing Needs Determination (RHND). As a first step in the process, the State Department of Housing and Community Development assigns each regional council of governments a needed number of new housing units for that region, including affordable housing.

LOCAL

Kern County General Plan

The Kern County General Plan was originally adopted by the County Board of Supervisors in June 2004. Minor amendments to the plan were subsequently adopted in 2006 and 2007. The plan contains policies related to development of lands currently under County jurisdiction, which include the City of Taft Expansion Area. **Figure 3.0-5** depicts the County General Plan land use

designations within the Expansion Area. As described in **Table 4.1-2** above, most of the County land within the Expansion Area is designated Agriculture (A) and Natural Resources (NR).

Kern County General Plan goals, policies, and implementation measures related to population, housing, and the proposed project are provided below.

Land use, Open Space and Conservation Element

Public Facilities and Services

Policy 2: The efficient and cost-effective delivery of public services and facilities will be promoted by designating areas for urban development which occur within or adjacent to areas with adequate public service and facility capacity.

Ensure that water quality standards are met for existing users and future development

1. Ensure that adequate storage, treatment, and transmission facilities are constructed concurrently with planned growth.
2. Ensure the maintenance and repair of existing water systems.
3. Encourage the utilization of wastewater treatment facilities which provide for the reuse of wastewater.
4. Encourage the consolidation or elimination of small water systems.
5. Encourage the conversion of private sewer systems (septic tanks) to public systems.

Residential

Policy 2: The County will encourage the creation of residential developments as provided for in the Cluster Combining District of the Zoning Ordinance as a means of preserving open space.

Policy 5: Discourage premature urban encroachment into areas of intense agriculture areas.

Policy 9: Development in areas without adequate infrastructure or development that places a burden on public services (i.e. fire, sheriff, parks, and libraries) shall be discouraged.

Policy 10: Encourage new development to infill existing development areas such as bypassed parcels.

Policy 11: Provide for an orderly outward expansion of new urban development so that it maintains continuity of existing development, allows for the incremental expansion of infrastructure and public service, minimizes impacts on natural environmental resources, and provides a high-quality environment for residents and businesses.

Commercial

Policy 2: Future commercial uses will be encouraged where residential development exists or is occurring. Designations will not be made far in advance of actual current demand in isolated, remote, or rural areas.

Industrial

Policy 2: Map code designations for future industrial development shall not be made far in advance of demand.

Resource

Policy 8: Provide for the orderly expansion of new urban-scale infrastructure and development and the creation of new urban-scale centers in a manner that minimizes adverse effects on agriculture and natural resource uses.

General Provisions

Policy 5: Higher density development and in-filling should be encouraged within urbanized and built-up areas of the County.

Policy 49: Discretionary development projects should be encouraged to incorporate innovative or "smart growth" land use planning techniques as design features, as follows:

a. Higher density development, where compatible, to maximize the efficient use of land.

b. Mixed use developments that promote reduced vehicle trips by having residential, commercial, and public uses proximate to each other.

c. Variety of housing types, including those using energy efficient design, and densities to address Kern County's housing needs.

d. Master planned communities that feature interconnected roads, transit stops, sidewalks, landscaping, and trails to encourage efficient vehicle and pedestrian movement.

e. Compact development that conserves open space, agricultural land, flood-prone areas, creeks, hillsides, ridge tops, wetlands, and other natural features.

f. Adequate infrastructure (i.e. roads, sewer, water, parks, etc.) is provided as a condition of development approval by the project proponent.

g. Aesthetically pleasing and unifying design features that promote a visually pleasing environment.

4.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

According to the CEQA Guidelines Section 15131(a), economic or social effects of a project are not treated as significant effects on the environment. If the proposed project were to cause physical changes as a result of economic or social changes, then the physical effects (such as the destruction of habitat resulting from housing construction to accommodate increased population) could be considered a significant environmental effect. A population and housing impact is considered significant if implementation of the project would result in any of the following:

1) Induce substantial growth or concentration of population in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure) that results in a physical effect on the environment.

2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Growth inducement effects are specifically addressed in Section 7.0 of this document.

METHODOLOGY

Several sources were utilized for this analysis, including the City of Taft Housing Element, which was previously updated for the period of 2002 through 2007, and contains research on demographic and housing conditions. Existing and projected demographic, housing and employment information was obtained from ESRI profiles prepared using U.S. Census data (1990, 2000). Demographic Information and data also was obtained from various governmental agencies through their web sites and discussions with agency staff members. Agencies and websites consulted included the U.S. Bureau of the Census, the California Department of Finance, Taft County, and the California Employment Development Department. The California Department of Finance prepares growth projections for all counties in California.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan polices are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant GPU policies providing mitigation have been identified for each significant impact in this section. If the applicable

General Plan polices were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

PROJECT IMPACTS AND MITIGATION MEASURES

Population, Housing, and Employment Increases

Impact 4.3.1 Implementation of the proposed General Plan Land Use Map would include land uses that promote the increase in population, housing, and employment in the Planning Area, and thus induce substantial growth. This is a **potentially significant** impact.

When considering the potential impacts a project may have on the physical environment, the existing conditions must be compared to the expected outcome the project may produce and the potential environmental impacts this change may cause. The projected increase in the City of Taft General Plan Planning Area population, housing, and employment would result in direct and indirect environmental effects such as noise, demand for services and utilities, traffic, and air quality. These effects associated with buildout of the General Plan are discussed in the relevant chapters of this EIR. The following is a discussion of implementation of the General Plan and its potential to induce substantial growth.

Based on the propose General Plan Update land use densities, the City is anticipated to have substantial growth in population, housing and employment, under the development horizon of the GPU (2050). An expected population of approximately 68,018 persons under buildout conditions is anticipated; this is an increase of about 276% from existing population levels (**Table 4.3-10**). Employment and housing are anticipated to increase as well under GP buildout conditions (**Table 4.3-10**). This represents substantial growth in the area and will have a potentially significant physical effect on the environment.

TABLE 4.3-10
POPULATION, HOUSING AND EMPLOYMENT PROJECTIONS - GENERAL PLAN PLANNING AREA

	Existing	Development of Existing City Limits (2035)	Build Out of Planning Area (2050)
Residential Units	6,038	13,837	25,184
Population	18,070	37,374	68,018
Employment	5,525	25,257	92,334

Source: ESRI, 2009

The City is expected to fully develop all potential developable areas within the existing City limits by the year 2035. Therefore by 2035, the City's population is expected to reach 37,374 persons, with a corresponding 13,837 housing units and an employment base for 25,257 jobs. Development of the Expansion Area, or those portions of the Planning Area beyond the existing City limits is anticipated to occur beyond 2035 and by the General Plan buildout year of 2050.

At General Plan buildout (2050), a population of 68,018 persons, 25,184 housing units and 92,334 jobs are anticipated for the Planning Area. This anticipated buildout population represents a 276% increase over current population levels. This represents substantial growth in the area and will have a potentially significant physical effect on the environment. Implementation of the Taft General Plan and the associated land use designations would directly cause growth in areas that are currently rural in nature by allowing urban development. Therefore, implementation of the Taft General Plan and the associated land use designations would directly cause growth. This is considered a **significant** impact.

Proposed General Plan Policies and Action Items That Provide Mitigation

The following General Plan policies are contained in the General Plan Land Use, Circulation, and Public Facilities Elements to ensure that proposed land uses associated with the General Plan provide for growth in the City that would have the least affect on the natural environment:

Policy LU-1: Encourage infill development in the existing urban areas of the Planning Area.

Policy LU-3: Promote sustainable development practices.

Policy CI-2: Require projects subject to discretionary review to minimize new vehicle trips.

Action CI-2a: Work with transportation agencies to create a template for a Transportation Demand Management program that can be used by businesses or modified to meet the needs of the businesses. The template could include a variety of methods to minimize trips and incentives for participation.

Action CI-2b: Amend the Zoning Ordinance to require secure bicycle racks or storage facilities at a ratio of 1 per every 10 vehicle spaces in new commercial and public buildings.

Policy PF-1: Attain a minimum LEED (Leadership in Energy and Environmental Design) certification of Silver or equivalent for all new public facilities.

Policy PF-6: Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council.

Mitigation Measures

Implementation of the above General Plan policies and associated action items provide for intensification of land uses, mixed-use development, and housing in infill locations in close proximity to employment centers and or transit, thereby reducing the increase in vehicle traffic and its associated air and noise impacts associated with the proposed General Plan, as well as assist in the reduction of traffic, air and noise impacts by providing for community design that promotes alternative transportation resources. All of these policies and actions would aid in the reduction of impacts to the environment, nevertheless, implementation of the General Plan would allow for a substantial increase in population, housing units, and employment in the City and Planning Area, as illustrated in **Table 4.3-11**, which would have a considerable impact on the surrounding environmental regardless of the above listed policies and actions. As noted in Section 7.0, implementation of the General Plan and its associated growth is expected to result in several significant and avoidable effects to the environment. Therefore, this impact is considered **significant and unavoidable.**

Displacement of a Substantial Number of Persons or Housing

Impact 4.3.2 Implementation of the General Plan may result in the displacement of housing and/or persons due to the construction of infrastructure necessary to serve new development or revitalization efforts. This is considered a **less than significant** impact**.**

While implementation of the General Plan does not, in and of itself, provide for the construction of any new development, it would change land use designations in areas thereby allowing future growth that may require additional and/or enlargement of infrastructure such as roadways and pipelines. Additionally, the General Plan identifies a circulation system that would require the construction of new roadways within the Planning Area. Construction of these roadways may be the impetus for the removal of some housing units and/or businesses, thereby displacing persons. However, such displacement is expected to be minor, given that roadway sizing and alignment set forth in the General Plan was designed to largely avoid impacts to existing development areas.

Implementation of the General Plan would not, in and of itself, displace substantial numbers of housing units or people. State and federal law require due compensation for persons required to relocate as a result of redevelopment projects carried out by the City or any projects that use federal or state funding. Any private development that may occur would pay the fair market price for any land/housing acquired as a result of project development. Therefore, although displacement of persons or housing may result, due compensation offsets any cost related effects. Therefore, impacts related to a substantial displacement of housing units or people as a result of implementation of the General plan are **less than significant**.

Mitigation Measures

None required.

CUMULATIVE IMPACT ANALYSIS

CUMULATIVE SETTING

The land use policies in the proposed City of Taft General Plan Update would provide direction for growth within the City limits, while the Kern County General Plan policies provide direction for growth outside the City limits, but within the Planning Area boundaries (until land areas are annexed into the City). Thus, the setting for this cumulative analysis includes existing, proposed, approved, and planned projects in the General Plan Planning Area and surrounding portions of unincorporated Kern County as well as full buildout of the City of Taft General Plan Planning Area as proposed in the General Plan Update (occurring after year 2035). In particular, the proposed project's cumulative setting for population and housing includes the City of Taft and all of Kern County including the remaining incorporated cities of Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Tehachapi, and Wasco, as well as the larger eight county area of the surrounding Counties of Inyo, Kings, Los Angeles, San Bernardino, San Luis Obispo, Tulare, and Ventura.

For the year 2035, the General Plan Update is expected to fully develop all currently vacant parcels within the City limit therefore resulting in a population of 37,374 persons, 13,837 housing units and an employment base of 25,257 persons. Buildout of the proposed General Plan Update however is not expected to occur until roughly 2050, with future development expected to occur in that portion of the Planning Area that lies outside the current City limits. The General Plan capacity, or 2050 capacity, is expressed as the total number of people that would be accommodated within the City's Planning Area if the land within that area were developed to the maximum potential allowed by land use designations in the updated General Plan. The land use designations identified on the updated General Plan Land Use Map have the potential to ultimately support a population of approximately 68,018 persons, 25,184 housing units, and an employment base of 92,338 persons by the year 2050, i.e. full buildout of the General Plan. These housing unit projections are based on the proposed land use designations that allow for residential development and the maximum density permitted within each designation. This number was adjusted to account for existing residential units which have been developed at lower densities and for areas that cannot be developed due to limiting factors. According to the city's occupancy rates of 2.701 persons per household, the city's population would, as a result, increase to about 68,018 persons. Employment numbers are based on what the underlying land use designations would allow for the Planning Area.

In addition to the population growth that could be accommodated under the City's General Plan buildout, development in the region identified in Section 4.0 would change the intensity of land uses in the region and would provide additional housing, employment, shopping, and recreational opportunities. However, this projected regional growth represents substantial growth in the area and will result in significant environmental effects to the environment. The reader is referred to the other technical sections of the Draft EIR for a complete analysis of the anticipated cumulative environmental effects of anticipated regional growth in combination with the proposed project.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Population and Housing Increases

Impact 4.3.3 Subsequent land use activities associated with implementation of the proposed General Plan Update, in addition to existing, approved, proposed, and reasonable foreseeable projects, could result in a cumulative increase in population and housing growth in the City of Taft as well as in the surrounding Cities and unincorporated areas of the County, along with associated environmental impacts. This is considered a **cumulatively considerable** and **significant and unavoidable** impact.

As discussed earlier in this section, development under the proposed General Plan would lead to an increase in population in the City. Development and growth in the City, as a result of the implementation of the proposed General Plan, would contribute to cumulative population and housing conditions in the unincorporated areas of Kern County, as well as surrounding Cities.

The impacts of population and housing growth in the region are both direct and indirect, and include the following:

- **Aesthetics** – Further conversion of rural, agricultural and natural open space landscape characteristics to urban conditions.
- **Agricultural Resources** – Continued loss of farmland to urban uses as well as increased conflicts with agricultural operations and urban uses.
- **Air Quality** – Increases in air pollutant emissions potentially conflicting with air quality attainment efforts under state and federal Clean Air Acts. Also increased potential for the exposure to toxic air contaminants.
- **Biological Resources** – Loss of special-status plant and animal species habitats, degradation of habitats and loss of special-status species.
- **Cultural Resources** – Impacts to known and unknown archaeological and historic resources in the region.
- **Geology and Soils** – Loss of access to known valuable mineral resources.
- **Hydrology and Water Quality** – Additional sources of point and non-point sources of surface water quality pollutants to region waterways. Further demand on groundwater resources and potential overdraft issues.
- **Noise** – Increased transportation noise levels from increased traffic volumes.

- **Public Services and Utilities** – Increased demand for the development and expansion of public services and facilities and associated environmental issues.

- **Traffic** – Increased traffic volumes on the region's highways and regional roadways resulting in deficient levels of service of operation.

These effects, associated with development under the General Plan, have been identified and considered within relevant sections of this document. However, it should be noted that the implementation of General Plan's growth strategy of increased development intensities to accommodate growth efficiently (in regards to the utilization of land area) would provide environmental benefits to the region by minimizing further conversion of land to urban uses (sprawl) based on current land use patterns of the region.

The Taft General Plan includes policies and actions that serve to mitigate the impact of development and population growth and the related demand for jobs and a variety of housing types that accompany a larger population. However, these policies and actions do not restrict the growth in the area nor remove the potential environmental impacts due to a substantial population or housing increase in the Planning Area, or the General Plan's contribution to the cumulative environmental effects noted above. Therefore, the General Plan's contribution to cumulative impacts is considered cumulatively considerable.

Proposed General Plan Policies and Action Items That Provide Mitigation

The following General Plan policies are contained in the General Plan Housing Element and the Land Use Element, to ensure that proposed land uses associated with the General Plan provide for growth in the City that would have the least affect on the natural environment:

Policy LU-1: Encourage infill development in the existing urban areas of the Planning Area.

Policy LU-3: Promote sustainable development practices.

Policy CI-2: Require projects subject to discretionary review to minimize new vehicle trips.

Action CI-2a: Work with transportation agencies to create a template for a Transportation Demand Management program that can be used by businesses or modified to meet the needs of the businesses. The template could include a variety of methods to minimize trips and incentives for participation.

Action CI-2b: Amend the Zoning Ordinance to require secure bicycle racks or storage facilities at a ratio of 1 per every 10 vehicle spaces in new commercial and public buildings.

Policy PF-1: Attain a minimum LEED (Leadership in Energy and Environmental Design) certification of Silver or equivalent for all new public facilities.

Policy PF-6: Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council.

These policies provide for housing in close proximity to employment centers and or transit, therefore reducing the vehicle traffic and its associated air and noise impacts. The General Plan growth boundary also minimizes impacts to agricultural and biological resources by creating more compact, dense development that results in fewer land acres being impacted. These policies and actions would aid in the reduction of increased impacts to the environment. Nevertheless, implementation of the General Plan would allow for a substantial increase in population and housing units in the City and Planning Area, as illustrated in **Table 4.3-10** and **Table 4.3-11**, which would have a considerable impact on the surrounding environment regardless of the above listed policies and actions. Therefore, this impact is **cumulatively considerable** and a **significant and unavoidable** impact**.**

Mitigation Measures

No further feasible mitigation available.

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4.4
TRAFFIC AND CIRCULATION

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") provides a description of the existing transportation conditions in the City of Taft General Plan Planning Area (Planning Area) and identifies the potential environmental impacts and development constraints on the transportation system associated with adoption of the proposed City of Taft General Plan. The impact analysis evaluates the local and regional roadway, transit, bicycle, pedestrian, and aviation components of the overall transportation system.

This section is organized by transportation system component, which includes roadway and transportation facilities within the Planning Area. For the purposes of the discussion and analysis of traffic and circulation impacts of the City's General Plan Update, the study area is assumed to include the City, the Expansion Area or that portion of the Planning Area outside of the current City limits, as well as consideration of facilities and regional traffic conditions outside of the Planning Area, or the cumulative setting.

4.4.1 EXISTING SETTING

PHYSICAL ENVIRONMENT

Regional Roadway System

The City's transportation system has been focused around its roadway network. Although automobile travel is the primary function for the network, it also serves a variety of other modes: trucks, buses, bicycling, and walking. Taft is working diligently to improve walkability, including the installation of a Rails-to-Trails pathway which serves both bicyclists and pedestrians as the first part of a major trails system. The City's roadway network is generally urban; however, along the City's edge, the roadway network surrounding the City is predominantly rural. Work, shopping, recreation, school, and goods movement trips are responsible for most of the travel demand on the transportation system. Recreation attractions include regional parks within or adjacent to the City. The roadway system within and near the Planning Area is presented on **Figure 4.4-1**. Major roadways are described below.

Interstates

Interstate 5 (I-5) is a north-south multilane freeway, beginning in San Diego County at the U.S.-Mexico border and continuing north to the state of Washington at the U.S.-Canada border. Within Kern County (County), I-5 runs east of the City of Taft as a four-lane facility. I-5 is the primary regional facility providing access to the remainder of the state. I-5 is the easterly boundary of the Taft Planning Area.

State Highways

State Route 33 (SR 33) is a north-south state highway, beginning in Ventura County and continuing north into San Joaquin County as a two- to four-lane facility. Within the County, SR 33 runs through Maricopa, Taft, Derby Acres, and McKittrick. SR 33 provides sub-regional access to areas east of I-5.

State Route 43 (SR 43) is a north-south state highway, beginning within the Planning Area and continuing north into Fresno County. SR 43 is a two-lane roadway in the Planning Area.

State Route 119 (SR 119) is an east-west state highway which runs through Kern County. SR 119 is a two-lane roadway, beginning at its junction with SR 33 in Taft and continuing east to Pumpkin Center, just south of the City of Bakersfield. SR 119 provides sub-regional access between the City of Taft and destinations east of I-5, such as the City of Bakersfield.

State Route 166 (SR 166) begins in Guadalupe (near the Pacific Coast) and extends east, through Santa Maria and Maricopa, and terminates at I-5 south of the Bakersfield area. In the study area, SR 166 is generally a two-lane rural highway providing limited access to primarily agricultural and industrial uses.

State Route 223 (SR 223) connects I-5 (south of Bakersfield) with SR-58 (east of Bakersfield). SR 223 is also designated as Bear Mountain Road and is a two-lane rural highway near its interchange with I-5.

Major Roadways

Ash Street extends from west of Lincoln Street/Tenth Street to Airport Road. It is a two-lane, undivided roadway which traverses east-west through the Taft area, forming the northerly boundary of the City between 10th Street and SR 119.

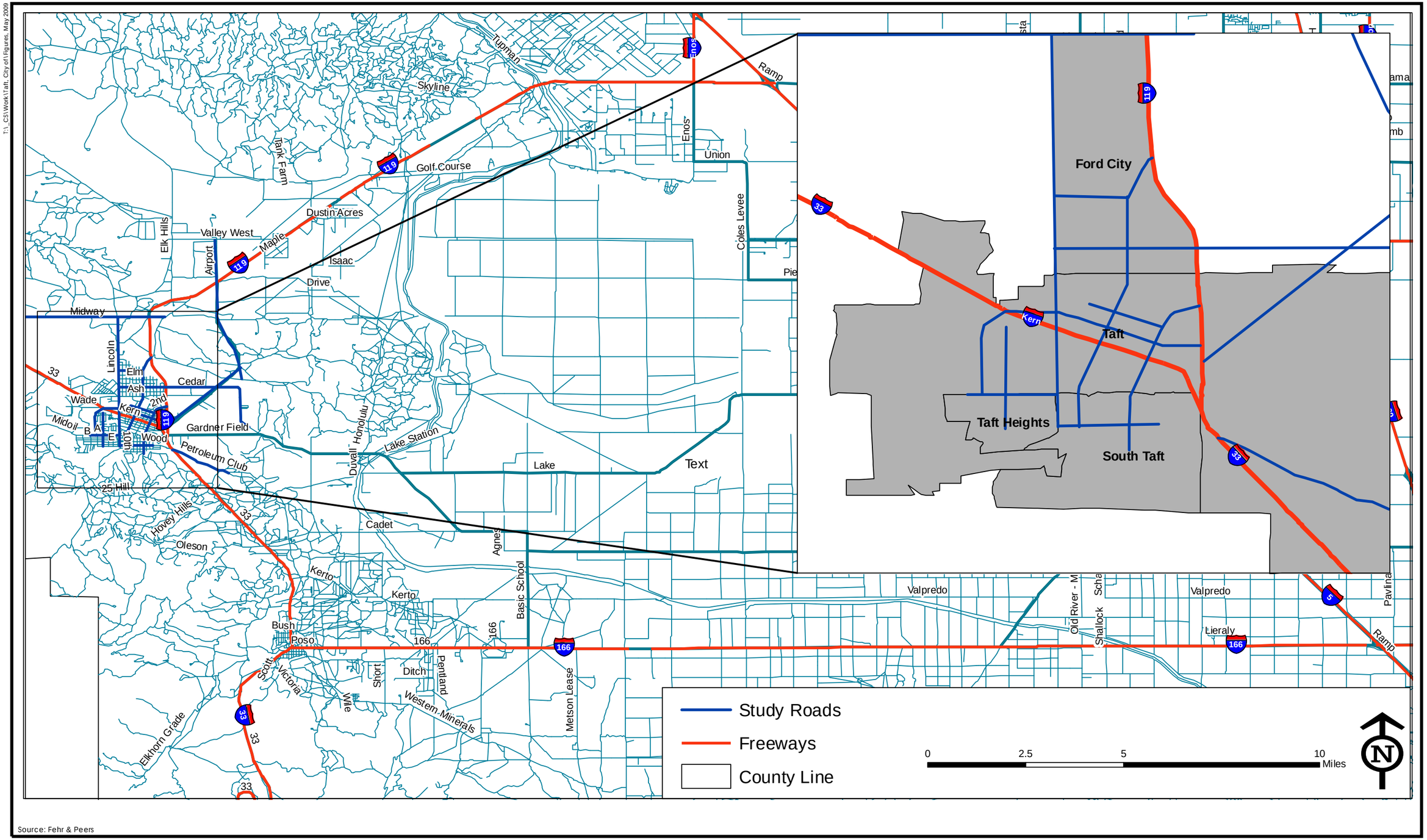
Basic School Road runs north-south, beginning at SR 166 and extending northward. Near the City of Taft, it becomes Gardner Field Road which extends into the City. Within the City, Gardner Field Road becomes Main Street. It is a two-lane, undivided road.

Harrison Street/Lierly Avenue/Sixth Street is a north-south arterial that extends from South Street, just south of the City of Taft, to SR 119 in Ford City. The roadway is generally undivided four lanes in the urbanized areas of Taft, where it is designated as Sixth Street, and then reduces to a two-lane, undivided roadway north and south of the City limits, where it is designated as Lierly Avenue (to the south) and Harrison Street (to the north).

Lincoln Street/Tenth Street is a north-south arterial that extends from F Street, south of the City of Taft, to Midway Road in Ford City. It is generally an undivided, four-lane facility, but reduces to undivided three lanes north of Main Street, and to undivided two lanes north of Ash Street and south of Pilgrim Street. Tenth Street continues as an undivided two-lane roadway south of F Street where it becomes 25 Hill Road which loops over Twenty-Five Hill to Olive Avenue/Second Street.

Main Street/Gardner Field Road is an east-west arterial that extends from Lincoln Street/Tenth Street eastward and southeastward to Basic School Road. It is a two-lane undivided roadway.

Midway Road is an undivided two-lane arterial road that runs east-west, north of the City of Taft. It connects SR 33 to SR 119.



Source: Fehr & Peers

Figure 4.5-1
Taft Study Area

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T:_CS\Work\Taft, City of\Figures, May 2009

Olive Avenue/Second Street is a north-south roadway that extends from South Street in South Taft, where it becomes Twenty-Five Hill Road, to its junction with SR 119 in Ford City. Olive Avenue/Second Street is an undivided two-lane roadway for its entire length.

South Lake Road is an undivided two-lane east-west roadway that extends from Gardner Field Road to Hill Road and ultimately to Millux Road and Old River Road.

STUDY AREA

A detailed analysis was conducted of the following roadway segments and freeway facilities under existing conditions within the study area. As noted above, the study area includes roadway and transportation facilities within the City and the Expansion Area or that portion of the Planning Area outside of the current City limits, and considers facilities and regional traffic conditions outside of the Planning Area. These roadway facilities were identified based on the availability of data with input from City staff.

ROADWAY SEGMENTS

- SR 33 – SR 166 to Petroleum Club Road
- SR 33 – Petroleum Club Road to Cadet Road
- SR 33 – Cadet Road to SR 119
- SR 33 – SR 119 to First Street
- SR 33 – First Street to Sixth Street
- SR 33 – Sixth Street to Tenth Street
- SR 33 – Tenth Street to Midway Road
- SR 43 – SR 119 to I-5
- SR 119 – SR 33 to East Kern Street
- SR 119 – East Kern Street to Second Street
- SR 119 – Second Street to Harrison Street
- SR 119 – Harrison Street to Midway Road
- SR 119 – Midway Road to Elk Hills Road
- SR 119 – Elk Hills Road to Airport Road
- SR 119 – Airport Road to Valley West Road
- SR 119 – Valley West Road to Tupman Road
- SR 119 – Tupman Road to SR 43
- SR 119 – SR 43 to I-5
- SR 166 – I-5 to Old River Road
- Millux Road –I-5 to Hill Road
- Hill Road – Millux Road to South Lake Road
- South Lake Road – Hill Road to Gardner Field Road
- Old River Road – SR 166 to Copus Road
- Copus Road – I-5 to Old River Road
- Copus Road – Old River Road to Basic School Road
- Basic School Road – Copus Road to South Lake Road
- Gardner Field Road – South Lake Road to SR 119
- Petroleum Club Road – SR 33 South to Cadet Road
- Petroleum Club Road – Cadet Road to SR-33 North
- Airport Road – SR 119 South to Cedar Street
- Airport Road – Cedar Street to SR 119 North
- Cedar Street – Airport Road to SR 119
- Elk Hills Road – SR 119 to Valley West Road
- Valley West Road – SR 119 to Elk Hills Road
- Midway Road – SR 119 to Lincoln Street
- Midway Road – Lincoln Street to SR 33
- Lincoln Street – Midway Road to Ash Street
- Lincoln Street – Ash Street to SR 33
- Ash Street – SR 119 to Sixth Street
- Ash Street – Sixth Street to Lincoln Street

FREEWAY SEGMENTS

- I-5 – SR 166 to Old River Road
- I-5 – Old River Road to SR 223/Bear Mountain Boulevard
- I-5 – SR 223/Bear Mountain Boulevard to SR 119
- I-5 – SR 119 to SR 43

EXISTING TRAFFIC VOLUMES AND CONDITIONS

All of the study roadway segments operate at an acceptable level of service.

Levels of Service

The operations of roadway facilities are described with the term *level of service*. Level of service (LOS) is a qualitative description of traffic flow from the perspective of motorists based on factors such as speed, travel time, delay, freedom to maneuver, volume, and capacity. Six levels are defined from LOS A, as the least congested operating conditions, to LOS F, or the most congested operating conditions (**Table 4.4-1**). LOS E represents "at-capacity" operations. When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F. LOS can be calculated for different types of facilities including highways and intersections, and published methodologies for determining LOS are predicated on hourly traffic volumes on these facilities. A traffic impact is considered significant if it renders an unacceptable LOS on a street segment or at a signalized intersection deficient, or if it appreciably worsens already unacceptable conditions on a street segment or at a signalized intersection.

TABLE 4.4-1
LEVEL OF SERVICE DEFINITIONS/CHARACTERISTICS

Level of Service (LOS)	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
A	Uncongested operations, all queues clear in a single signal cycle. Delay < 10.0 seconds (sec) volume/capacity (v/c) < 0.60	Little or no delay. Delay < 10 seconds/vehicle (sec/veh)	Completely free flow.
B	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and < 20.0 sec 0.60 < v/c < 0.70	Short traffic delays. Delay > 10 sec/veh and < 15 sec/veh	Free flow, presence of other vehicles noticeable.
C	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and < 35.0 sec 0.70 < v/c < 0.80	Average traffic delays. Delay > 15 sec/veh and < 25 sec/veh	Ability to maneuver and select operating speed affected.
D	Significant congestion of critical approaches but intersection functional. Cars required to	Long traffic delays.	Unstable flow, speeds and ability to maneuver

Level of Service (LOS)	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
	wait through more than one cycle during short peaks. No long queues formed.		restricted.
	Delay > 35.0 sec and < 55.0 sec 0.80 < v/c < 0.90	Delay > 25 sec/veh and < 35 sec/veh	
E	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es).	Very long traffic delays, failure, extreme congestion.	At or near capacity, flow quite unstable.
	Delay > 55.0 sec and < 80.0 sec 0.90 < v/c < 1.00	Delay > 35 sec/veh and < 50 sec/veh	
F	Total breakdown, stop-and-go operation. Delay > 80.0 sec v/c > 1.00	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.

Overall level of service for unsignalized intersections is "worst case" of delay experienced by all motorists.

Sources: Transportation Research Board of the National Academies (TRB). 1994. TRB Special Report 209: Highway Capacity Manual, 3rd Edition (updated in 2000 as the 2000 Highway Capacity Manual)

The proposed General Plan Update proposes LOS D as the applicable minimum design standard for roadways and intersections. A traffic impact is considered significant if it renders an unacceptable LOS on a street segment or at a signalized intersection deficient, or if it appreciably worsens already unacceptable conditions on a street segment or at a signalized intersection.

Daily roadway segment traffic counts were conducted during the fourth quarter of 2008. Available daily counts from the Kern County Council of Governments (Kern COG) and California Department of Transportation (Caltrans) traffic count database were also collected (Caltrans, 2008). All daily counts from these two external sources were collected between 2005 and 2007. **Figure 4.4-2** shows existing daily roadway segment traffic volumes for local roadways in the Planning Area. Existing operation of study area roadway segments, freeways, transit system, and bicycle/pedestrian facilities are discussed in **Table 4.4-2**. Based on field observations, all of the study roadways were assumed to have moderate access control (limitations on local access points onto roadway).

TABLE 4.4-2
ROADWAY LEVEL OF SERVICE - EXISTING CONDITIONS

Roadway Segment	Existing Conditions			
	Lanes	Volume	V/C	LOS
1. SR 33 – SR 166 to Petroleum Club Road[1]	2	6,700	0.34	A
2. SR 33 – Petroleum Club Road to Cadet Road[1]	2	6,700	0.34	A
3. SR 33 – Cadet Road to SR 119[1]	2	6,700	0.34	A
4. SR 33 – SR 119 to First Street[1]	2	5,800	0.29	A
5. SR 33 – First Street to Sixth Street	4	9,400	0.26	A
6. SR 33 – Sixth Street to Tenth Street	4	13,000	0.36	A
7. SR 33 – Tenth Street to Midway Road	4	13,800	0.38	A
8. SR 43 – SR 119 to I-5[1]	2	5,800	0.29	A
9. SR 119 – SR 33 to East Kern Street/SR 33[1]	2	5,400	0.27	A
10. SR 119 – East Kern Street/SR 33 to Second Street	4	5,900	0.30	A
11. SR 119 – Second Street to Harrison Street	2	7,300	0.40	A
12. SR 119 – Harrison Street to Midway Road[1]	2	13,200	0.66	B
13. SR 119 – Midway Road to Elk Hills Road[1]	2	13,200	0.66	B
14. SR 119 – Elk Hills Road to Airport Road[1]	2	13,200	0.66	B
15. SR 119 – Airport Road to Valley West Road[1]	2	13,200	0.66	B
16. SR 119 – Valley West Road to Tupman Road[1]	2	13,200	0.66	B
17. SR 119 – Tupman Road to SR 43[1]	2	13,000	0.65	B
18. SR 119 – SR 43 to I-5[1]	2	8,600	0.43	A
19. SR 166 – I-5 to Old River Road[1]	2	3,400	0.17	A
20. Millux Road – I-5 to Hill Road	2	1,150	0.06	A
21. Hill Road – Millux Road to S. Lake Road	2	810	0.05	A
22. S. Lake Road – Hill Road to Gardner Field Road	2	490	0.03	A
23. Old River Road – SR 166 to Copus Road	2	5,723	0.32	A
24. Copus Road – I-5 to Old River Road	2	2,907	0.16	A
25. Copus Road – Old River Road to Basic School Road	2	920	0.05	A
26. Basic School Road – Copus Road to S. Lake Road	2	550	0.04	A
27. Gardner Field Road – S. Lake Road to SR 119	2	940	0.05	A
28. Petroleum Club Road – SR 33 South to Cadet Road	2	190	0.01	A
29. Petroleum Club Road – Cadet Road to SR 33 North	2	1422	0.08	A
30. Airport Road – SR 119 South to Cedar Street	2	280	0.02	A
31. Airport Road – Cedar Street to SR 119 North	2	280	0.02	A

Roadway Segment	Existing Conditions			
	Lanes	Volume	V/C	LOS
32. Cedar Street – Airport Road to SR 119	2	655	0.07	A
33. Elk Hills Road – SR 119 to Valley West Road	2	1,009	0.06	A
34. Valley West Road – SR 119 to Elk Hills Road	2	1,400	0.08	A
35. Midway Road – SR 119 to Lincoln Street	2	5,214	0.29	A
36. Midway Road – Lincoln Street to SR 33	2	1,800	0.10	A
37. Lincoln Street – Midway Road to Ash Street	4	6,830	0.19	A
38. Lincoln Street – Ash Street to SR 33	4	9,700	0.27	A
39. Ash Street – SR 119 to Sixth Street	2	1,300	0.09	A
40. Ash Street – Sixth Street to Lincoln Street	2	2,532	0.14	A
41. I-5 – SR 166 to Old River Road	4	35,500	0.36	A
42. I-5 – Old River Road to SR 223/Bear Mountain Boulevard	4	36,500	0.37	A
43. I-5 – SR 223/Bear Mountain Boulevard to SR 119	4	43,000	0.43	A
44. I-5 – SR 119 to SR 43	4	43,000	0.43	A

Notes: [1] Roadway segment assumed to have high access control.
Source: Fehr & Peers, 2008.

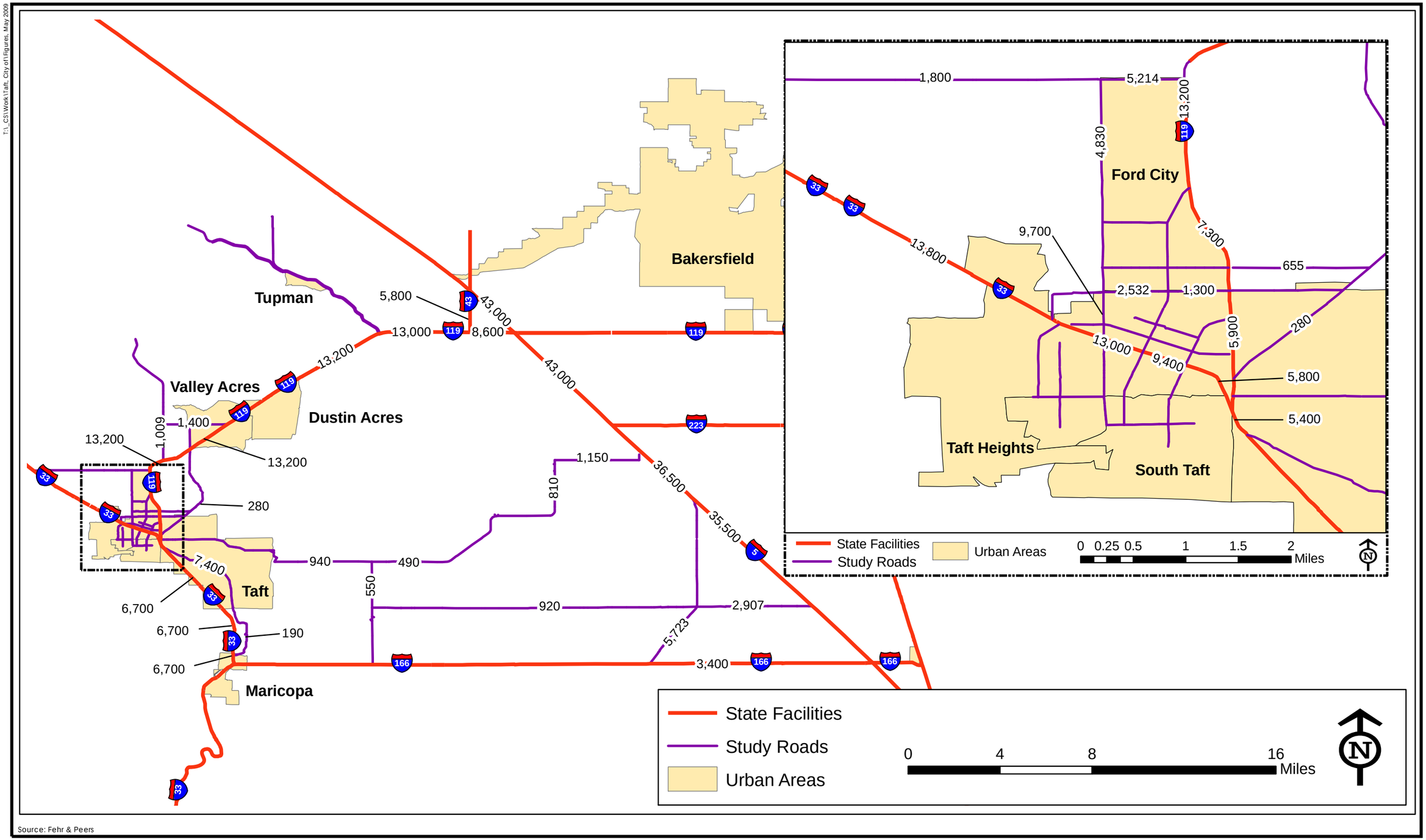
TRAFFIC SAFETY

Recent accident history (October 1, 2006 to November 22, 2008) for the City of Taft was researched to identify the locations in the City with the highest number of accidents. The roadway segments and intersections with the highest number of accidents are summarized in **Table 4.4-3** below:

TABLE 4.4-3
HISTORICAL TRAFFIC ACCIDENT DATA - OCTOBER 1, 2006 – NOVEMBER 22, 2008

Location	Number of Accidents
Intersections	
SR 33/Tenth Street	11
SR 33/Sixth Street	8
Center Street/Tenth Street	6
SR 119/Gardner Field Road	6
SR 33/Second Street	6
Adkisson Way/E. Main Street	5
Gardner Field Road/Gas Company Road	5
Cadet Road/Kern Street	3
Cadet Road/Petroleum Club Road	3
Cascade Place/Kern Street	3
Fourth Street/Lucard Street	3
SR-33/Third Street	3
Sixth Street/Warren Street	3
Roadways	
SR 33: Tenth Street and Midway Road	17
Center Street: SR 119 and Sixth Street	6
Fourth Street: San Emidio Street and Ash Street	5
Sixth Street: San Emidio Street and Ash Street	5
SR 33: Sixth Street and Tenth Street	5
SR 33: SR 119 and Sixth Street	5
Seventh Street: San Emidio Street and Ash Street	4
Gardner Field Road: SR 119 and South Lake Road	3
Pilgrim Avenue: Tenth Street and Church Street	3
Finley Drive: Fourth Street and Sixth Street	2
Fourth Street: Main Street and SR 33	2

Source: Fehr and Peers, 2009



Source: Fehr & Peers

T:_CS\Work\Taft, City of\Figures, May 2009

Figure 4.5-2

Existing Daily Traffic Volumes

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TRANSIT SYSTEM

The City of Taft operates a demand-responsive transit service (the Taft Area Transit) within the City and nearby areas, while Kern Regional Transit (KRT) offers intercity service between the Cities of Taft and Bakersfield. The City and region's transit service is described below.

Demand-Responsive Transit Service

The Taft Area Transit (TAT) provides public transit in the form of demand-responsive transit shuttles, which operate as a "shared ride" service using a fleet of buses. Demand-responsive transit does not have fixed routes, but instead provides door-to-door service in the greater Taft area, including Taft, Taft Heights, Ford City, and South Taft. Two days a week, Taft Area Transit provides transportation to Derby Acres, Fellows, and McKittrick. Upon request, service can be provided to other areas, such as Maricopa. The demand-responsive transit service operates on weekdays from 7:15 A.M. to 8:15 P.M. Residents may access Taft Area Transit by calling the transit provider at the time in which a ride is needed or by making a reservation up to one-week in advance.

Regional Transit Service

Kern Regional Transit (KRT) service operates bus service between Bakersfield and Taft six days a week. The buses run five times per day during weekdays and three times per day on Saturdays. The bus route begins at the Amtrak station in Bakersfield and makes stops at the Jefferson School, the County Administrative Building, Taft College, Roosevelt/Lincoln School, Taft Union High School, Parkview School, Conley School, and City Hall within the Taft area. The route then continues toward Bakersfield, terminating at either the Golden Empire Transit – Downtown Transit Center or the Greyhound Station in Bakersfield.

Bicycle/Pedestrian Facilities

Bicycle facilities include Class I (off-street facilities), Class II (on-street bicycle lanes identified with signage and markings), and Class III (on-street bicycle routes identified by signage). Pedestrian facilities comprise paths, sidewalks, and pedestrian crossings.

A Class I off-street bike path exists along the Sunset Railway route from Hilliard Street to 2nd Street.

Class II bicycle lanes are located on several east-west and north-south roadways throughout the City, especially south of SR 33. Roadways with these bicycle facilities are:

- San Emidio between 2nd Street and 10th Street
- 2nd Street between Wood Street and San Emidio
- Calvin Street between 2nd Street and 4th Street
- Ash Street between Willliams Street and 4th Street
- Finley Street between 4th Street and 6th Street

Aviation System

Within the City, the Taft-Kern County airport provides general aviation service. The airport is located in the City of Taft. Taft-Kern County Airport is a general aviation airport that covers 71 acres and has one runway. There are 18 aircraft tiedowns, 22 T-hangars, and five hangar spaces. This facility serves business and personal aviation needs for the City and southwestern Kern County. The 1994 Kern Regional Aviation Plan states:

> While there is significant demand for an airport in this region, the existing facility has for some years been considered unsatisfactory. The runway heading is poorly oriented to wind direction, the runway gradient of 2.2 percent exceeds FAA standards, and there is insufficient land for improvements. In addition, the land is held by the County under a lease subject to 90-day cancellation notice.

Land use zoning around the airport is identified in City Zoning Ordinance and Zoning Map, supplemented by the Airport Land Use Compatibility Plan (Kern County, 2008). Specifically, land use designations east of the airport are primarily agricultural; land use south and southwest of the airport is generally commercial/industrial; and land use west of the airport it is generally low density residential. Industrial uses are located to the northeast of the airport. Land uses to the north include parks and ball fields.

4.4.2 REGULATORY FRAMEWORK

STATE

State of California Transportation Concept Reports

As described previously, Caltrans prepares a Transportation Concept Report (TCR) for each of its facilities in the area. The TCR is a long-term planning document that each Caltrans district prepares for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of a TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period. These are indicated in the "route concept." In addition to the 20-year route concept level, the TCR includes an "ultimate concept," which is the ultimate goal for the route beyond the 20-year planning horizon.

- SR 33 in the study area has a route concept level of LOS D. The route concept is for SR 33 will continue to operate as a two-lane facility throughout most of Taft, with no identified roadway improvements. The ultimate concept for SR 33 corridor is to widen it to a four-lane facility for its entire extent.

- SR 43 in the study area has a route concept level of LOS D. SR 43 is currently a two-lane facility in the Taft area, which is consistent with the route concept. The ultimate

concept for year 2030 and beyond is to widen SR 43 to four-lanes throughout the roadway length. (Caltrans 2007)

- SR 119 in the study area has a route concept level of LOS C. SR- 19 is currently a four-lane facility south of Kern Street and a two-lane facility north of Kern Street. The route concept is a four-lane facility throughout Taft. (Caltrans 2006)

- SR 166 in the study area has a route concept level of LOS C. The route concept for SR 166 is the same as the existing facility, which is currently a two-lane conventional highway. (Caltrans 2007)

- Caltrans does not have a current TCR for SR 233 in the study area.

LOCAL

Kern County General Plan

The existing Kern County General Plan was adopted in March of 2007. Key General Plan policies regarding transportation and circulation that are applicable to the Planning Area outside of the City limits include:

- Regional land use and transportation planning (policies 1.10-5, 2.3.4-4, 2.3.4-6 and 2.3.4-7)

- Provisions for transit (policy 2.3.4-3)

- Level of service standards (LOS D for County roadways and LOS C for Caltrans facilities) and mitigation of traffic impacts (policies 2.3.4-2, 2.3.10-2 and 2.4.7-3)

Kern County Bikeway Master Plan

The Bikeway Master Plan identifies existing and planned bicycle routes through and near the Planning Area. The Master Plan also contains design, safety, and traffic control standards for use in constructing and/or upgrading facilities.

Kern Council of Governments Bicycle Facilities Plan

In 2001, the Kern COG completed a Bicycle Facilities Plan for the County. Proposed facilities for the City of Taft are listed below.

Proposed Bicycle Facilities

- 25 Hill Road
- Wood Street from 10th Street to General Petroleum Street
- Petroleum Club Road from General Petroleum Street to City Limits
- Pico Street from 10th Street to Lierly Avenue
- A street from Hilliard Avenue to 10th Street
- Hope Street from 10th Street to 6th Street
- Supply Row from 6th Street to 2nd Street
- Main Street from 6th Street to 7th Street
- Center Street from 2nd Street to 1st Street
- Kern Street from 6th Street to 1st Street
- Kern Street from 1st Street to Highway 119
- Airport Road from Highway 119 to Airport Terminal
- San Emidio Street from cul-de-sac to 7th Street
- Ash Street from 10th Street to Emmons Park Drive
- Finley Drive from 6th Street to 4th Street
- Calvin Street from 4th Street to 1st Street
- Emmons Park Drive from Ash Street to 6th Street
- Perimeter of Ford City Park
- 10th Street from 25 Hill Road to A Street
- 6th Street from Pico Street to Ash Street
- Harrison Street from Ash Street to Greuillea Street
- 7th Street from Main Street to Emmons Park Drive
- 4th Street from Calvin Street to Finley Drive

Kern Council of Governments Regional Rural Transit Strategy

Kern COG's Regional Rural Transit Strategy (Strategy) was produced in 2003. Within the Planning Area, the Strategy suggests replacing demand-responsive transit service with a Volunteer Driver Reimbursement Program for the Taft-Fellows-Derby Acres-McKittrick area. Additionally, the Strategy suggests that Taft implement a Flexroute service. This is described as a streamlined demand-responsive transit/deviated fixed route service, which could improve productivity and reduce trip denials.

Kern County Blueprint

The Kern County Blueprint summarizes the growth of the County and challenges that it may face over the next forty years. The document was adopted on November 20, 2008. The process evaluated a Year 2050 land use horizon for the following development scenarios:

- Base Case Scenario (Scenario 1) – Future development within the region that is similar to current growth trends (fairly low density). This scenario has an outward growth pattern, with jobs-housing imbalances in sub-areas, which promotes urban sprawl.

- Scenario 2 – More housing choices than in the Base Case Scenario with some growth through re-investment. The scenario incorporates a mix of land uses with core areas getting some growth.

- Scenario 3 – Slightly higher housing densities and re-investment than Scenario 2. This scenario assumes more moderate growth in the same core areas identified in Scenario 2.

- Scenario 4 – Highest housing densities and re-investment levels when compared to the other scenarios. Scenario 4 incorporates a mix of land uses with core areas accounting for the most growth.

Scenario 3 has been chosen by most jurisdictions in the region as the preferred alternative to guide land use planning and transportation for the future and was adopted by Kern COG in 2008.

Kern Council of Governments 2030 Regional Transportation Plan

The RTP 2030 (Kern COG 2007) is a long-range planning document for identifying and programming roadway improvements throughout Kern County. The RTP 2030 identifies goals, policies, and actions both in the near term (2007-2010) and in the long term (2011-2030). There are two tiers of projects: Constrained and Unconstrained. Constrained Projects are projects that are budgeted and completely funded within the RTP and have undergone air quality conformity analyses, while Unconstrained Projects are within the region's vision but cannot be implemented within the current fiscal constraints. A summary of projects within the Planning Area that are identified in the RTP are as follows:

- Widen SR 119 between Cherry Avenue and Tupman Road to four lanes (Near Term, Constrained)
- Construct bicycle facilities in Taft (Long Term, Constrained)
- Widen SR 33 to four lanes between Wood Street and Midway Road (Long Term, Unconstrained)
- Widen SR 119 between Tupman Road and I-5 to four lanes (Long Term, Unconstrained)
- Capital Improvements at the Taft-Kern County Airport (Long Term, Unconstrained)

It should be noted that the widening of SR 119 between Cherry Avenue and Tupman Road was in the process of undergoing environmental review at the time of the RTP publication. Additionally, SR 33 between First Street and Tenth Street is currently a four-lane facility; the two-lane segments which would be affected by the widening are between Wood Street and First Street and between Tenth Street and Midway Road.

Projects identified in the RTP 2030 are summarized in the **Appendix 4.4.**

Kern County Congestion Management Plan

Consistent with California Government Code Section 65089, the Kern COG, acting as the County's Congestion Management Agency (CMA), was responsible for preparing, monitoring, and enforcing the County's Congestion Management Plan (CMP).

Kern County Regional Aviation System Plan

The Kern County Regional Aviation System Plan was prepared by the Kern Council of Governments in 1994 and is a component of the Central California Aviation System Plan (CCASP) which, in turn, is a component of the statewide California Aviation System Plan (CASP). Each component of the CCASP will ultimately consist of: (1) a regional setting; (2) a summary of air transportation issues; (3) goals, objectives and policies; (4) an inventory element; (5) a forecast element; (6) a system requirements element; (7) a financial plan; (8) an action plan; and (9) an executive summary. The Kern County Regional Aviation System Plan currently contains only the first four sections listed above.

Kern County Airport Land Use Compatibility Plan

The Kern County Airport Land Use Compatibility Plan was prepared to identify and assist appropriate agencies in developing land use plans which do not create conflicts with airport operations. Specific zones are identified in the compatibility plan identifying allowable land uses based on noise generated and safety considerations of airport operations. The land use designations include allowable land use designations and densities within these zones.

The Airport Land Use Compatibility Plan was updated by the County in 2008 for the Taft-Kern County Airport.

Measure I

Kern County proposed Measure I on the November 2006 Ballot. Measure I was to provide additional transportation funding and transportation improvement projects beyond the Confined Projects if passed. Funding for these projects would come from a one-half of one percent sales tax increase between 2007 and 2027. This measure failed and, therefore, additional transportation funding through a sales tax increase is not provided.

4.4.3 PROJECT IMPACT ANALYSIS

This subsection describes the transportation analysis of the proposed project, and identifies potential impacts and mitigation measures that would be associated with the implementation of the various components of the proposed project.

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the State CEQA Guidelines Appendix G. A transportation/traffic impact is considered significant if implementation of the proposed General Plan would result in any of the following:

1) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections).
2) Exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highways.
3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
5) Result in inadequate emergency access.
6) Conflict with adopted policies, plans or programs supporting alternative transportation.

Significant impacts of the proposed General Plan Update were identified according to the following criteria:

1. Degrade LOS based on the following criteria for significance (threshold of significance [1] above):

   - LOS reaching E or F, if existing LOS is D or better[1]

- Any measurable increase in traffic[1] if existing LOS is D, E or F

2. Conflict with policies, plans, or programs supporting alternative transportation or increase demands for transit facilities greater than planned capacity (e.g., transit service, carpooling, bicycling, walking) (thresholds of significance [2] and [6] above).

3. Increase demand in air traffic patterns or change the airport location that results in substantial safety risks (threshold of significance [3] above).

4. The project is considered to have a significant effect on bike and pedestrian facilities if it would result in adverse affects to existing bikeways or pedestrian facilities that would discourage their use or result in safety issues (thresholds of significance [3] and [4] above.

Impacts associated with potential conflicts with air traffic (threshold of significance [3] above) are addressed in Section 4.1, Land Use and Section 4.7, Hazards and Human Health.

METHODOLOGY

The transportation impact analysis is focused on potential LOS impacts that would occur from increased travel demand associated with new land development under the proposed General Plan Update. Preparation of the transportation analysis for the roadway system followed the steps described below. For other components of the transportation system, the policies and implementation measures were evaluated against the significance thresholds.

As discussed below, daily traffic volume forecasts for the study roadways and freeway segments address the growth that could potentially be expected by year 2035. For the year 2035, the General Plan Update is expected to fully develop all currently vacant parcels within the City limits, therefore resulting in a population of 37,374 persons, 13,837 housing units and an employment base of 25,257 persons. Buildout of the proposed General Plan Update however is not expected to occur until roughly 2050, with future development expected to occur in that portion of the Planning Area that lies outside the current City limits.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures were provided. These additional mitigation measures were written as policy statements, and incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

[1] Measurable increase is defined as an increase in the volume-to-capacity ratio (V/C) of 0.05 for roadway segments.

Analysis Methodology and Results

For this General Plan analysis, LOS was determined by comparing existing and forecasted traffic volumes for selected roadway segments with daily LOS capacity thresholds. These thresholds are shown in **Table 4.4-4**.

TABLE 4.4-4
ROADWAY SEGMENT DAILY VOLUME THRESHOLDS

Facility Type	Number of Lanes	Daily Volume Threshold				
		LOS A	LOS B	LOS C	LOS D	LOS E
Residential	2	600	1,200	2,000	3,000	4,500
Residential collector with frontage	2	1,600	3,200	4,800	6,400	8,000
Residential collector without frontage	2	6,000	7,000	8,000	9,000	10,000
Arterial, low access control	2	9,000	10,000	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial, moderate access control	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Arterial, high access control	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	42,000	48,000	54,000	60,000
Freeway	4	60,000	70,000	80,000	90,000	100,000
	6	90,000	105,000	120,000	135,000	150,000
Expressway	4	16,200	26,500	37,800	48,600	54,000
	2	8,100	13,300	18,900	24,300	27,000
Rural, 2-lane highway	2	2,400	4,800	7,900	13,500	22,900
Rural, 2-lane road, paved shoulders	2	2,200	4,300	7,100	12,200	20,000
Rural, 2-lane road, no shoulders	2	1,800	3,600	5,900	10,100	17,000

Source: Fehr & Peers, 2008

The proposed General Plan Update proposes LOS D as the applicable minimum design standard for roadways and intersections. Policy CI-7 from the City's proposed Circulation Element sets forth LOS standards for the City:

Policy CI-7: Maintain the Level of Service on roadways and at intersections in the Planning Area as follows:

a) Assure that roadway congestion generally does not exceed Level of Service D except where:

- Providing Level of Service D would be infeasible due to physical constraints.
- Maintaining Level of Service D would require an unreasonable expansion of the roadway or intersection as determined by the City.

b) Maintain a Level of Service D at all signalized intersections except where:

- The level of congestion already exceeds this standard; or
- Where increased intersection capacity cannot be provided due to physical constraints.

c) Maintain the Level of Service at unsignalized intersections at D or better; intersections may be evaluated on a case-by-case basis to determine if signal warrants are met.

Based on the policy identified above, LOS D is considered the target acceptable level of service for area roadways, unless constraints exist consistent with the City's policies described above.

It should be noted that the TCR for state routes in the study area identify either LOS C (SR 119, SR 166) or LOS D (SR 33, SR 43) as the concept service level on these roadways. However, it should also be noted that ultimate concepts should be used cautiously because it is often difficult to forecast beyond a 20-year horizon due to unforeseen changes in land use and other variables.

TDF Model Development

For the purposes of the analysis for traffic and circulation impacts, a modified, qualitative version of the Kern COG regional travel demand forecasting (TDF) model[2] was used to develop daily traffic volume forecasts for the study roadways and freeway segments for the "analysis scenarios", or the growth that could potentially be expected by year 2035.

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[2] Kern COG Transportation Model Disclaimer for Modeling Documentation

The transportation model output uses data and software code received from Kern Council of Governments (Kern COG). Kern COG provides no assurance as to the accuracy or consistency with Kern COG's latest planning assumptions, and in no way can this run be consider official Kern COG Model output. The associated software code may not be redistributed, modified or re-used for any purpose other than those authorized by Kern COG in writing. Kern COG provides modeling services and data to local developers as a courtesy and reserves the right to deny use of the software code. The Kern COG Model was developed for the regional air quality conformity analysis. The Kern COG Model contains millions of variables that could be modified to alter results. It is difficult to verify that all the model assumptions are identical to the latest planning assumptions used in the Kern COG model at the time the files were provided. Kern COG is not responsible and shall be held harmless for any accidental or intentional miss use of this transportation model output. This disclaimer shall be printed in all accompanying model documentation and the words "This is NOT an official Kern COG model" shall be legibly displayed on all model output.

The evaluation of roadway segments is a common approach in addressing the long-term circulation system needs where specific parcel level data (e.g., trip generation differences between a convenience store and a automobile repair shop) and access information are unknown. Detailed analysis of intersection configurations are commonly conducted at the project level for a specified development project. The TDF model is a tool that estimates future traffic volumes and roadway sizing (i.e., number of lanes) for major roadway segments based on anticipated future growth. The TDF model has been used for a variety of transportation planning processes such as the Regional Transportation Plan, circulation element updates, regional impact fee programs, and transportation impact studies. The TDF model was updated to reflect the most up-to-date information regarding transportation projects and countywide approved and pending development.

The TDF model was specifically calibrated through the City of Taft and its existing Sphere of Influence (SOI). The calibration effort consisted of adding detail to the Kern COG model by disaggregating traffic analysis zones (TAZs), updating roadway connectivity in the area to reflect existing conditions, and updating existing land use in the area. The model was validated to Year 2006 Conditions within the City of Taft. A memorandum summarizing the results of the model calibration effort in this area is provided in **Appendix 4.4**.

- General Plan Buildout Conditions (Year 2035 Roadway Network) – Buildout of the City's Planning Area with Year 2035 development for the rest of Kern County. Assumes roadway connectivity consistent with RTP 2030 roadway improvements in the region and roadway facilities identified in the proposed General Plan as being implemented by Year 2035.

The TDF model was used to forecast growth on the roadway facilities between the base year and future year conditions. The incremental volume increase was added to existing volumes (obtained from counts) to develop forecasts for use in this analysis.

Land Use Data

Land use data for the Planning Area was developed by the City of Taft in 2008. The land use data was provided by TAZ for General Plan Buildout Conditions. TAZs are geographic polygons used to organize land use data for input into a TDF model. The TAZs are defined by natural borders such as roads, waterways, and topography that typically represent areas of homogenous travel behavior.

Land use outside the Planning Area was consistent with the Year 2035 horizon from the Kern COG model.

Roadway Network Modifications

Roadway improvements included into the forecasting model outside the Planning Area are based on Tier 1 (funded) roadway improvements identified in the RTP 2030. Roadway improvements within the City limits are based on roadway network connectivity identified in the City's Circulation Plan.

Transit Enhancements

Bus routes were appropriately incorporated into the travel demand model as identified in the proposed General Plan. These facilities were accounted for in the City's mode choice prior to assignment of project trips to the roadway network.

Environmental Effects of Proposed Project's Circulation Improvements

As noted above and in Section 3.0 (Project Description), the proposed project includes roadway expansion and capacity improvements. The anticipated environmental effects of these circulation improvements are programmatically considered in this EIR based on available environmental documentation, field review at a reconnaissance level and review of aerial photography. The anticipated environmental effects are listed below and are discussed in each applicable topical chapter. Subsequent site-specific environmental review of circulation improvements would be conducted once the improvements have been designed and precise alignments have been established.

- Temporary construction-related land use conflicts on adjacent uses associated with noise, construction traffic/access conflicts and visual impacts.
- Conversion of agricultural land from roadway extension and widening.
- Temporary construction traffic impacts from construction vehicles and construction traffic control.
- Hazardous material exposure impacts from construction of facilities (roadways, trails and transit).
- Air quality impacts from construction and operation of facilities (roadways, trails and transit).
- Noise impacts from construction and operation of facilities (roadways, trails and transit).
- Soil erosion and geologic stability impacts from construction and operation of facilities (roadways, trails and transit).
- Water quality (surface and groundwater) and drainage impacts from construction and operation of facilities (roadways, trails and transit).
- Biological resource impacts associated with construction and operation of facilities (roadways, trails and transit). This would include direct and indirect impacts to special-status species, vernal pools and wildlife corridors.
- Cultural and paleontological resource impacts associated with construction activities that could impact undiscovered resources.

- Conflicts with existing and planned alignments of infrastructure facilities (water supply, wastewater conveyance, electrical distribution, natural gas, telephone and cable).

- Visual impacts with the construction of urban-type circulation improvements (e.g., 4-lane and larger roadways, transit facilities, urban interchanges).

Mitigating policies and action items in the proposed project identified in Sections 4.1 through 4.13 of this EIR would be applied (where applicable) to minimize these environmental effects.

IMPACTS AND MITIGATION MEASURES

Deficient LOS Conditions on Study Roadway Segments

Impact 4.4.1 Implementation of the proposed project would result in an increase in traffic volumes beyond traffic volumes associated with the existing General Plan that would result in deficient level of service conditions in year 2035 and would conflict with Caltrans standards for level of service. This is a **significant** impact.

The daily roadway segments traffic volumes shown on **Figure 4.4-3** were compared to the roadway segment thresholds summarized in **Table 4.4-4** to analyze traffic operations on the study area roadway segments for the future analysis scenario. **Table 4.4-5** summarizes significant operation impacts to roadway segments using the proposed City of Taft LOS D standard. In addition, significant traffic impacts would also likely occur prior to year 2035 as development proceeds under the General Plan Update.

TABLE 4.4-5
ROADWAY LEVEL OF SERVICE – PROPOSED GENERAL PLAN YEAR 2035 CONDITIONS

Roadway Segment	2035 General Plan Conditions			
	Lanes	Volume	V/C	LOS
1. SR 33 – SR 166 to Petroleum Club Road	2 – High Access Control	10,300	0.52	A
2. SR 33 – Petroleum Club Road to Cadet Road	2– High Access Control	15,800	0.79	C
3. SR 33 – Cadet Road to SR 119	4– High Access Control	26,900	0.67	B
4. SR 33 – SR 119 to First Street[1]	2– High Access Control	9,100	0.51	A
5. SR 33 – First Street to Sixth Street	4– Moderate Access Control	19,000	0.53	A
6. SR 33 – Sixth Street to Tenth Street	4– Moderate Access Control	23,400	0.65	A
7. SR 33 – Tenth Street to Midway Road	4– Moderate Access Control	22,600	0.63	A
8. SR 43 – SR-119 to I-5	4– Moderate Access	26,500	0.66	B

Roadway Segment	2035 General Plan Conditions			
	Lanes	Volume	V/C	LOS
	Control			
9. SR 119 – SR 33 to East Kern Street/SR-33	4– High Access Control	21,200	0.53	A
10. SR 119 – East Kern Street/SR 33 to Second Street	4– Moderate Access Control	17,400	0.48	A
11. SR 119 – Second Street to Harrison Street	4– Moderate Access Control	19,100	0.53	A
12. SR 119 – Harrison Street to Midway Road	4– Moderate Access Control	19,500	0.54	A
13. SR 119 – Midway Road to Elk Hills Road	4 – High Access Control	36,000	0.90	D
14. SR 119 – Elk Hills Road to Airport Road	4 – High Access Control	33,900	0.85	D
15. SR 119 – Airport Road to Valley West Road	4 – Expressway	41,700	0.86	D
16. SR 119 – Valley West Road to Tupman Road	6 – High Access Control	49,900	0.83	D
17. SR 119 – Tupman Road to SR 43	6 – High Access Control	66,600	1.11	F
18. SR 119 – SR 43 to I-5	6 – High Access Control	69,400	1.16	F
19. SR 166 – I-5 to Old River Road	2 – Moderate Access Control	5,700	0.32	A
20. Millux Road – I-5 to Hill Road	2 – Moderate Access Control	1,300	0.07	A
21. Hill Road – Millux Road to S. Lake Road	2 – Moderate Access Control	900	0.05	A
22. S. Lake Road – Hill Road to Gardner Field Road	2 – Moderate Access Control	9,900	0.55	A
23. Old River Road – SR 166 to Copus Road	2 – Moderate Access Control	9,000	0.50	A
24. Copus Road – I-5 to Old River Road	2 – Moderate Access Control	13,300	0.74	C
25. Copus Road – Old River Road to Basic School Road	2 – Moderate Access Control	12,300	0.68	B
26. Basic School Road – Copus Road to S. Lake Road	2 – High Access Control	17,100	0.855	D
27. Gardner Field Road – S. Lake Road to SR 119	2 – Moderate Access Control	11,800	0.66	B
28. Petroleum Club Road – SR 33 South to Cadet Road	2 – Moderate Access Control	200	0.01	A

Roadway Segment	2035 General Plan Conditions			
	Lanes	Volume	V/C	LOS
29. Petroleum Club Road – Cadet Road to SR 33 North	2 – Moderate Access Control	7,400	0.41	A
30. Airport Road – SR 119 South to Cedar Street	2 – Moderate Access Control	300	0.02	A
31. Airport Road – Cedar Street to SR 119 North	2 – High Access Control	16,600	0.83	D
32. Cedar Street – Airport Road to SR 119	2 – Moderate Access Control	4,600	0.26	A
33. Elk Hills Road – SR 119 to Valley West Road	2 – Moderate Access Control	3,300	0.18	A
34. Valley West Road – SR 119 to Elk Hills Road	2 – Moderate Access Control	10,100	0.56	A
35. Midway Road – SR 119 to Lincoln Street	2 – High Access Control	17,500	0.88	D
36. Midway Road – Lincoln Street to SR 33	2 – Moderate Access Control	1,800	0.10	A
37. Lincoln Street – Midway Road to Ash Street	4– Moderate Access Control	18,200	0.51	A
38. Lincoln Street – Ash Street to SR 33	4– Moderate Access Control	28,500	0.79	C
39. Ash Street – SR 119 to Sixth Street	2 – Moderate Access Control	8,300	0.46	A
40. Ash Street – Sixth Street to Lincoln Street	2 – Moderate Access Control	5,500	0.31	A
41. I-5 – SR 166 to Old River Road	4 - Freeway	62,500	0.63	B
42. I-5 – Old River Road to SR 223/Bear Mountain Boulevard	4 - Freeway	56,900	0.57	A
43. I-5 – SR 23/Bear Mountain Boulevard to SR 119	4 - Freeway	66,000	0.66	B
44. I-5 – SR 119 to SR 43	4 - Freeway	64,700	0.65	B

Notes: Shaded areas indicate deficiency.
Source: Fehr & Peers, 2009

As shown in **Table 4.4-5**, the following roadway segments would operate at an unacceptable LOS E or LOS F:

- SR 119 – Tupman Road to SR 43 – Projected to operate at LOS F as a six-lane arterial with high access control
- SR 119 – SR 43 to I-5 – Projected to operate at LOS F as a six-lane arterial with high access control

Implementation of the proposed project could result in a decline of service for these two segments of SR 119, from LOS B to LOS F for SR 119 between Tupman Road to SR 43, and from Los A to LOS F for SR 119 between SR 43 to I-5, respectively. These two segments currently operate as two-lane roads and are located in the Expansion Area (that portion of the Planning Area outside the current City limits). Lands in this portion of the Expansion Area are largely undeveloped and are currently designated by the County General Plan primarily for mining and petroleum uses, agricultural uses, and as resource management areas. The proposed General Plan Update would allow these segments to be widened to six-lane facilities, and proposed land uses would allow for the intensification of commercial uses along these segments.

Additionally, this decline in LOS for these two segments of SR 119 would also conflict with Caltrans' TCR for state routes in the study area that establishes a minimum of LOS C for SR 119, and LOS D for SR 43.

Other segments of SR 119 located in the Expansion Area that would conflict with Caltrans' TCR established LOS of C include SR 119 between Midway Road and Elk Hills Road, SR 119, between Elk Hills Road and Airport Road, and SR 119 between Valley West Road and Tupman Road. Under the proposed General Plan Update levels of service for these segments along SR 119 would decline from LOS b to LOS D.

Impacts to study area segments due to implementation of the General Plan Update are therefore considered **significant** impacts.

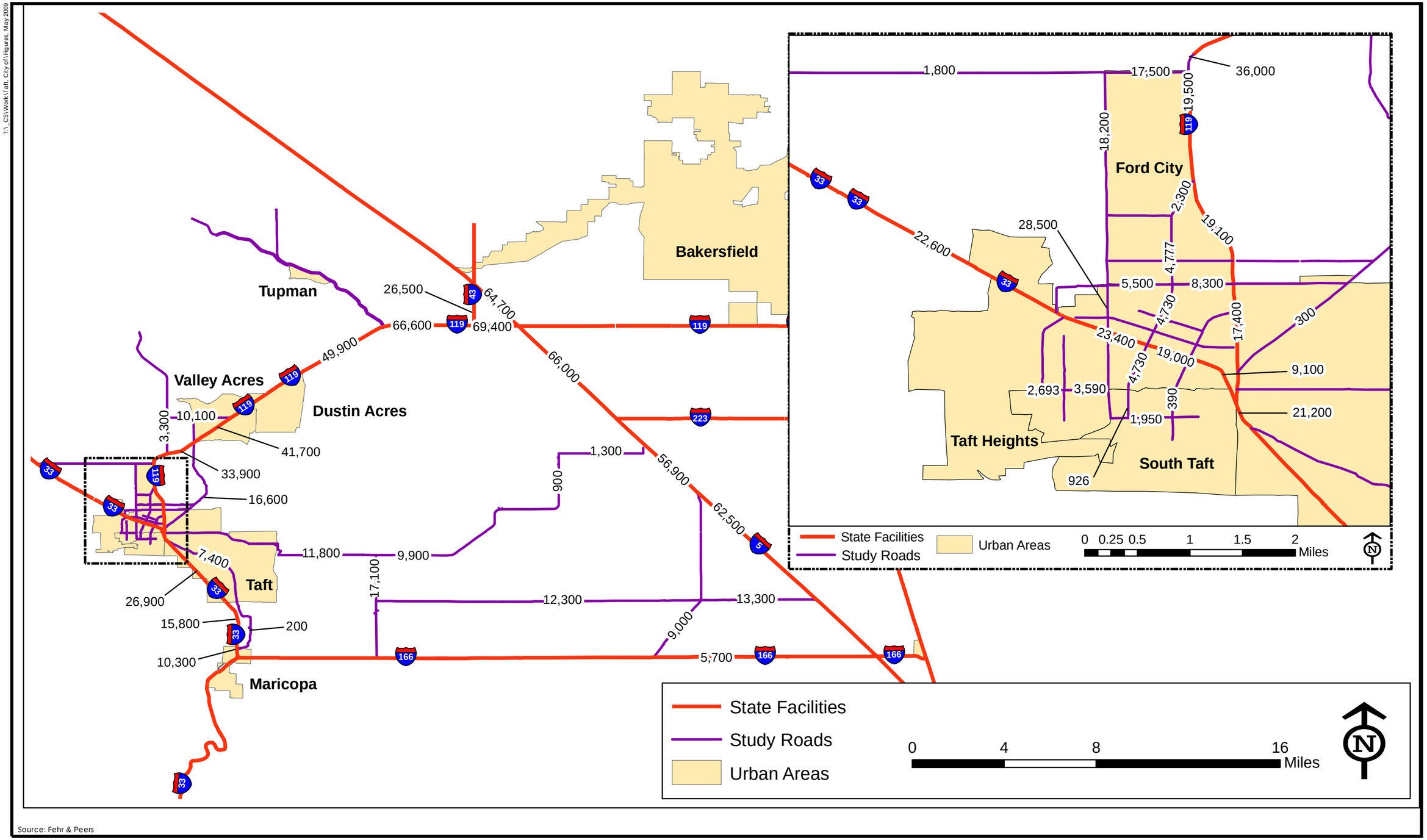


Figure 4.5-3
Daily Traffic Volumes
PMC

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update contains several goals, policies, and actions that would assist in reducing this impact. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that and reduce potential LOS impacts to study roadway segments.

Policy CI-2: Require projects subject to discretionary review to minimize vehicle trips.

Action CI-2a: Work with transportation agencies to create a template for a Transportation Demand Management program that can be used by businesses or modified to meet the needs of the businesses. The template could include a variety of methods to minimize trips and incentives for participation.

Action CI-2b: Amend the Zoning Ordinance to require secure bicycle racks or storage facilities at a ratio of 1 per every 10 vehicle spaces in new commercial and public buildings.

Policy CI-7: Maintain the Level of Service on roadways and at intersections in the Planning Area as follows:

a) Assure that roadway congestion generally does not exceed Level of Service D except where:

- Providing Level of Service D would be infeasible due to physical constraints.
- Maintaining Level of Service D would require an unreasonable expansion of the roadway or intersection as determined by the City.

b) Maintain a Level of Service D at all signalized intersections except where:

- The level of congestion already exceeds this standard; or
- Where increased intersection capacity cannot be provided due to physical constraints.

c) Maintain the Level of Service at unsignalized intersections at D or better; intersections may be evaluated on a case-by-case basis to determine if signal warrants are met.

Policy CI-8: Adopt and maintain a circulation system evaluation methodology that establishes Levels of Service and determines significance thresholds for impacts to intersections and roadways within the Planning Area. Where a project would cause or contribute to congestion exceeding the Level of Service and/or

significance threshold, require on- or off-site transportation improvements as a condition of approval as appropriate. Examples include, but are not limited to:

- Improvements to on- or off-site roadways;
- Improvements to intersections in the vicinity of the project;
- Installation of transit, bicycle, or pedestrian facilities, including facilities which exceed the minimum standards imposed by City regulations;
- Restriction of access to roadways;
- Limitations on hours of operation or use.

Policy CI-9: Improve the operating efficiency of the roadway system through transportation system management strategies (e.g., signal timing, restricted access).

Policy CI-14: Eliminate unnecessary cross-traffic conflicts and reduce traffic disruptions to improve the traffic flow along arterial and collector streets.

Action CI-14a: Install raised medians as necessary to restrict turning movements and maintain an acceptable Level of Service.

Action CI-14b: Minimize the number of driveways serving commercial or industrial development.

Action CI-14c: Prohibit individual residential driveways from directly accessing arterial and collector streets.

Action CI-14d: Limit direct access to arterial highways wherever possible.

Policy CI-16: Recognizing that access to Interstate 5 and State Routes 33, 43, 119, 166, and 223 in the Planning Area is controlled by the State of California, work with Caltrans to implement that agency's desired roadway system. Work with Caltrans to identify interchange locations and preliminary designs, and require right-of-way dedication for future highway construction and widening.

Policy CI-24: Support efforts by businesses, schools, and government to reduce peak travel demand.

Action CI-24a: Support implementation of flexible or staggered work hours and work from home programs so that travel demand is spread more evenly throughout the day.

Action CI-24b: Support efforts to promote ridesharing and other programs to reduce vehicle travel and encourage walking, bicycling, and telecommuting.

Mitigation Measures

Implementation of the proposed General Plan policies and actions listed above would reduce significant impacts to transportation and circulation. However, the impacts of the proposed General Plan Update to levels of service within the Planning Area and those portions of the study area outside the Planning Area, cannot be mitigated to a less-than-significant level at the locations discussed below because the mitigation measures are considered to be infeasible (see discussion below)(see also CEQA Guidelines Section 15126.4). Because of the infeasibility of mitigation measures, this impact is considered **significant and unavoidable**.

SR 119 – Tupman Road to SR 43

Widening of this portion of SR 119 beyond six lanes would improve operations consistent with City LOS standards. However, there are crossings of the California Aqueduct which will require coordination and approval with appropriate oversight agencies. In addition, as reflected in the City's level of service policy, a lower level of service should be considered if maintaining LOS D would result in an unreasonable expansion of the roadway or intersection as determined by the City. As shown on the Circulation Map, the City does not desire this roadway to be widened beyond six lanes. The City believes that the addition of housing in the Taft area will change traffic patterns by allowing oil workers who now commute from Bakersfield to live in Taft with a shorter commute that does not involve this segment. Thus, the City determined that the facility should be planned as a six-lane arterial. Therefore, implementation of the mitigation measure is considered infeasible, since it is in violation with the proposed General Plan vision for this facility.

SR 119 - SR 43 to I-5

Widening of this portion of SR 119 beyond six lanes would improve operations consistent with City LOS standards. However, there are crossings of the California Aqueduct which will require coordination and approval with appropriate oversight agencies. In addition, as reflected in the City's level of service policy, a lower level of service should be considered if maintaining LOS D would result in an unreasonable expansion of the roadway or intersection as determined by the City. As shown on the Circulation Map, the City does not desire this roadway to be widened beyond six lanes. The City believes that the addition of housing in the Taft area will change traffic patterns by allowing oil workers who now commute from Bakersfield to live in Taft with a shorter commute that does not involve this segment. Thus, the City determined that the facility should be planned as a six-lane arterial. Therefore, implementation of the mitigation measure is considered infeasible, since it is in violation with the proposed General Plan vision for this facility.

Due to the infeasibility of mitigation measures, this impact is considered **significant and unavoidable**.

Mitigation Measures

No feasible mitigation measures are available.

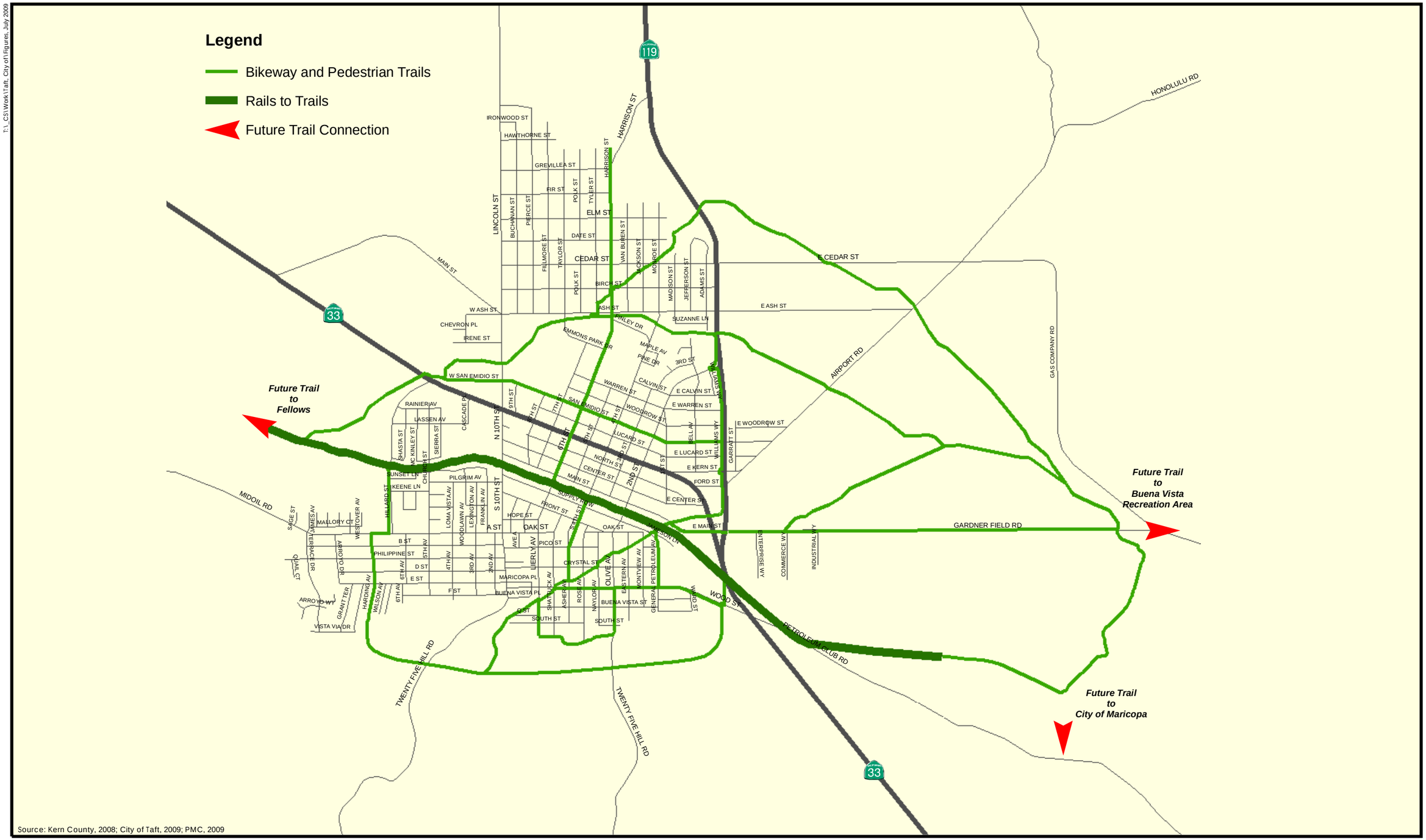
Bicycle and Pedestrian System

Impact 4.4.2 Implementation of the proposed project would result in an increase in the demand for pedestrian and bicycle infrastructure. This is considered a **less than significant** impact.

Implementation of the proposed General Plan Update would result in increased pedestrian and bicycle use in the Planning Area. However, the proposed project would be consistent with proposed pedestrian and bicycle facilities in the area and would allow for a mix of residential densities and commercial uses to promote options for movement other than the use of motor vehicles, as shown in the proposed Bikeways and Pedestrian Trails map (see **Figure 4.4-4).**

The central portion of lands within the existing City limits of Taft is largely built out with institutional/public, commercial businesses and residential uses around the downtown core, particularly south of SR 33 and east of Lincoln Street, and near the intersection of SRs 33 and 119. The proposed General Plan Update allows for the intensification of retail, office, and residential uses in the downtown core area, as well as new residential, commercial, and mixed-use development in the undeveloped areas within the existing City limits and within portions of the Expansion Area. As discussed above, implementation of the proposed General Plan Update may lead to increased walking and bicycling for recreation, shopping, and employment purposes. However, the Circulation Element contains numerous policies and actions to guide the implementation of the bicycle and pedestrian system. This would be a **less than significant** impact.

T:_CS\Work\Taft, City of\Figures, July 2009



Source: Kern County, 2008; City of Taft, 2009; PMC, 2009

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Figure 4.4-4
Bikeways and Pedestrian Trails Map

PMC®

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update incorporates the following policy that provides mitigation and reduces impacts to bicycle and pedestrian systems:

Policy CI-22: Require new development to provide safe and convenient access to alternative transportation within the project area.

Action CI-22a: Amend the Taft Municipal Code to require all new development to provide for pedestrian and bicycle connections and facilities.

Action CI-22b: Encourage new development to provide weatherproof bicycle parking and storage facilities and ensure long-term maintenance of such facilities.

Policy CI-25: Provide for safe and effective bicycle transportation for recreational and commuting cyclists in Taft.

Action CI-25a: Develop a Bikeway Master Plan that coordinates with the regional bikeway system and is in accordance with State Bikeway Design Criteria.

Action CI-25b: Periodically review and update street standards to accommodate bicycle lanes where indicated on the Bikeway Master Plan.

Action CI-25c: Amend the Taft Municipal Code to require all new development to provide for safe bicycle connections and facilities, including bicycle parking.

Action CI-25d: Design bicycle paths so that interaction with vehicular traffic is minimized.

Action CI-25e: Establish effective programs for financing the construction and maintenance of bicycle paths.

Action CI-25f: Provide an information/education program to encourage use of the regional bicycle system and to promote safe riding.

Policy CI-26: Provide a well-integrated trail system in the Planning Area that addresses bicycle and pedestrian uses consistent with the bicycle and pedestrian trail system as shown on Figure 4.0-2 (Bikeways and Pedestrian Trails Map).

Action CI-26a: Pursue local, state, and federal grants and other funding sources for development of bicycle and pedestrian paths.

Policy CI-30: Widen sidewalks above the minimum established Improvement Standards where intensive commercial, recreational, or institutional activity is present and where residential densities are 8 DU/Ac and above.

Action CI-30a: Update street standards to include an urban sidewalk pattern above the minimum established Improvement Standards

Policy CI-31: Provide convenient pedestrian crossings at roadways.

Policy CI-32: Require sidewalks in new developments.

Policy CI-33: In existing developed areas where sidewalks do not exist, support existing programs and pursue new programs for sidewalk construction.

Policy CI-34: Design development projects to promote pedestrian movement through direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area.

Policy CI-36: Consider pedestrian-sensitive areas when planning circulation systems and seek to avoid impacts to these areas.

Action CI-36a: Designate the existing and planned locations of pedestrian-sensitive areas.

The Circulation Element in the proposed GPU contains numerous policies and actions to guide the implementation of the bicycle and pedestrian system such as requiring development projects to provide sidewalks and crosswalks in new development areas and on roadways that are being expanded, provide funding or to construct roadway/intersection improvements to develop and implement a Bikeways Master Plan, and promote improved pedestrian and cyclist movements throughout the City. Therefore, this impact would be **less than significant.**

Mitigation Measures

None required

Transit System

Impact 4.4.3 Implementation of the proposed General Plan would result in an increase in demand for public transit services in the Planning Area. This is considered a **less than significant** impact.

Implementation of the proposed General Plan Update would result in increased transit use in the Planning Area. However, the proposed General Plan also accommodates a mix of residential densities, commercial uses, and pedestrian and bicycle facilities to promote options for movement beyond the use of motor vehicles and includes proposed enhancements to existing transit services. No conflicts with current transit provisions or plans are expected as a result of

implementation of the proposed General Plan Update. This impact is considered **less than significant**.

Proposed General Plan Policies that Provide Mitigation

The proposed General Plan Update incorporates numerous policies and actions that provide mitigation to reduce impacts to transit. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that address this impact.

Policy CI-18: Provide transit services to the entire Planning Area to serve the needs of all persons, in particular those without access to private vehicles, the disabled, the elderly, and children.

Policy CI-19: Encourage the use of public transit.

Action CI-19a: Provide for transit service in the design of the arterial and collector street system.

Action CI-19b: Coordinate with Kern Regional Transit to require appropriately designed bus stops along arterials and collectors and in other locations as appropriate.

Action CI-19c: Provide for transit service in the site plan review process.

Action CI-19d: Coordinate with Kern Regional Transit to locate bus stops as close as possible to the facilities they serve.

Action CI-19e: Work with Kern Regional Transit to provide scheduled transit services.

Action CI-19f: Work with Taft Area Transit to provide social services transportation.

Action CI-19g: Pursue local, state, and federal funding for transit services.

Action CI-20b: Encourage ridership of Taft Area Transit among disabled persons through disabled and senior citizen fare discounts.

The proposed General Plan's consistency with local transit plans as well as implementation of the proposed General Plan policies and actions listed above would reduce this impact to a **less than significant** level.

Mitigation Measures

None required

Aviation System Impacts

Impact 4.4.4 Implementation of the proposed General Plan Update would result in an increase in the demand for airport use in the area. This is considered a **potentially significant** impact.

The project would increase demand at the local airport. As identified in the Existing Setting, the current Kern County Regional Aviation System Plan identified that:

> While there is significant demand for an airport in this region, the existing facility has for some years been considered unsatisfactory. The runway heading is poorly oriented to wind direction, the runway gradient of 2.2 percent exceeds FAA standards, and there is insufficient land for improvements. In addition, the land is held by the County under a lease subject to 90-day cancellation notice.

Development that could be accommodated under the proposed General Plan Update has the potential to attract more residents and workers into the Planning Area, particularly from surrounding cities such as Bakersfield, and other unincorporated portions of the County. This may increase demand at the Taft-Kern County Airport which currently operates with one runway and has been deemed an unsatisfactory facility for the area. This is a **potentially significant** impact.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update contains several goals, policies, and actions that would assist in reducing this impact. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that address this impact.

Policy CI-37: Support the continued operation and possible relocation of the Taft-Kern County Airport.

Policy CI-38: Allow for the establishment of private airports in the Planning Area.

Despite the proposed General Plan policies listed above, increasing demand for aviation travel to an airport which currently is not satisfactory is considered a **potentially significant** impact.

Mitigation Measures

To mitigate the identified impact, the airport could be reconstructed or relocated to a new area. It should also be noted that there is an on-going study investigating the feasibility of improving the airport and, if the study identifies that improving the airport is infeasible, the study would be expanded to identify an alternative airport location. However, until the study is completed, the feasibility to either relocate or upgrade the airport is unknown. Therefore, in the short term the impact remains **significant and unavoidable**.

4.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for the proposed project as it relates to transportation and circulation includes buildout of the Planning Area (anticipated to occur beyond year 2035), roadway and transit projects in the City, as described in the proposed General Plan policies and action items. The setting also assumes anticipated and planned development within the City of Taft's Sphere of Influence as well as growth planned for under the general plan, community plans and specific plans for Kern County as well as existing, proposed and approved projects including those listed in **Table 4.0-1** in Section 4.0 of this EIR. Development in this region would change the intensity of land uses in the region and increase housing, employment, shopping and recreational opportunities. This analysis also accounts for regional traffic volume conditions anticipated for year 2035 for I-5, SR 33, SR 43, and SR 119.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Traffic Impacts on Local Roadways and State Highways

Impact 4.4.5 When considered with existing, proposed, approved and planned development in the region, implementation of the proposed project has the potential to contribute to an increase in traffic volumes that would result in deficient level of service conditions under cumulative conditions (including buildout of the Planning Area) resulting in significant impacts to the physical environment. This is considered a **cumulatively considerable** impact.

The traffic impact analyses provided in Impact 4.4.1 is based on cumulative conditions (year 2035) that take into account anticipated traffic volumes from development in the region. However, the General Plan would still add substantial traffic volumes on local roadways and state highway facilities that would result in significant traffic impacts within the Planning Area as well as in adjoining jurisdictions. As discussed under Impact 4.4.1, implementation of the proposed project would result in some service levels exceeding proposed standards and policies of Caltrans and the County by resulting in declining levels of service on roadway segments within the General Plan planning horizon. This would be true under cumulative conditions as well unless a feasible solution is found to reduce LOS impacts on the state highways.

Potential issues with funding, the effect of regional traffic through the City, timing of required permits and coordination with the County and Caltrans could result in delays in delivering roadway improvements prior to deficient LOS conditions having developed in the interim. As noted in the proposed General Plan policies and action items under Impact 4.4.1, the General Plan does include provisions that attempt to keep similar timing for development and the provision of roadway improvements, and these improvements to regional transportation facilities associated with cumulative traffic conditions are intended to be addressed through implementation of regional programs, such as the Kern COG RTP. However, the City cannot ensure these improvements will be timely in all circumstances (for the reasons noted above and

as discussed under Impact 4.4.1). Therefore, this is considered a **cumulatively considerable** impact.

Proposed General Plan Policies that Provide Mitigation

The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing the project's contribution to cumulative impacts to study roadway segments and levels of service. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Circulation Element

Policy CI-2; Action CI-2a; Action CI-2b; Policy CI-7; Policy CI-8; Policy CI-9; Policy CI-14; Action CI-14a; Action CI-14b; Action CI-14c; Action CI-14d; Policy CI-16; Policy CI-24; Action CI-24a; Action CI-24b

Mitigation Measures

Implementation of proposed General Plan policies and action items would assist in reducing its cumulative contribution to regional traffic effects. However, this impact would still be considered **cumulatively considerable** and a **significant and unavoidable impact**. The City does not have jurisdiction over improvements outside of the City's jurisdiction (e.g., facilities within Kern County and Caltrans facilities) and the City cannot ensure that these improvements would be completed. With the exception of funding sources for regional traffic improvements associated with the Kern COG RTP, there are no other regional traffic mitigation programs that the City could participate in to minimize its regional traffic impact.

Bicycle and Pedestrian System

Impact 4.4.6 Implementation of the proposed project would contribute to cumulative demands for pedestrian and bicycle infrastructure. The General Plan's contribution is considered **less than cumulatively considerable**.

The project would increase pedestrian and bicycle use in the Planning Area in addition to anticipated growth in pedestrian and bicycle usage in the region. However, the proposed General Plan Update accommodates a mix of pedestrian and bicycle facilities to promote options for movement other than the use of motor vehicles. Given the plans to provide better and increased facilities for these modes of travel, implementation of the proposed General Plan Update would accommodate its increase in demand for pedestrian and bicycle infrastructure and would have a **less than cumulatively considerable** contribution to pedestrian and bicycle infrastructure.

Proposed General Plan Policies that Provide Mitigation

The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing the project's contribution to cumulative impacts to pedestrian and bicycle infrastructure. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Circulation Element

Policy CI-22; Action CI-22a; Action CI-22b; Policy CI-25; Action CI-25a; Action CI-25b; Action CI-25c; Action CI-25d; Action CI-25e; Action CI-25f; Policy CI-26; Action CI-26a; Policy CI-30; Action CI-30a; Policy CI-31; Policy CI-32; Policy CI-33; Policy CI-34; Policy CI-36; Action CI-36a

The proposed mixed of land uses within the Planning Area and consistency with planned bicycle and pedestrian facilities as well as implementation of the proposed General Plan policies and action listed above would reduce this impact to a **less than significant** level.

Mitigation Measures

None required

Transit System

Impact 4.4.7 Implementation of the proposed General Plan Update would contribute to the cumulative demand for public transit service (e.g., bus and demand-responsive transit services). The proposed project's contribution is considered **less than cumulatively considerable**.

The project would increase demand for transit services in the Planning Area as well as demands for such services in the region. However, it accommodates for all travel modes to minimize reliance on one specific mode. No conflicts with current transit provisions or plans are expected as a result of implementation of the proposed General Plan Update. Thus, implementation of the proposed project would accommodate its increase in transit demand and would have a **less than cumulatively considerable** contribution to public transit impacts.

Proposed General Plan Policies that Provide Mitigation

The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing the project's contribution to cumulative impacts to the transit system. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior

impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Circulation Element

Policy CI-18; Policy CI-19; Action CI-19a; Action CI-19b; Action CI-19c; Action CI-19d; Action CI-19e; Action CI-19f; Action CI-19g; Action CI-20b

The proposed General Plan's consistency with local transit plans as well as implementation of the proposed General Plan policies and actions listed above would reduce this impact to a **less than significant** level.

Mitigation Measures

None required.

Aviation System Impacts

Impact 4.4.8 When considered with existing, proposed, planned and approved development in the region, implementation of the proposed General Plan Update would result in an increase in the demand for airport use in the area. This is considered a **cumulatively considerable** impact.

The project would increase demand at the local airport. As identified in the existing setting, the current Kern County Regional Aviation System Plan identified that:

> While there is significant demand for an airport in this region, the existing facility has for some years been considered unsatisfactory. The runway heading is poorly oriented to wind direction, the runway gradient of 2.2 percent exceeds FAA standards, and there is insufficient land for improvements. In addition, the land is held by the County under a lease subject to 90-day cancellation notice.

As discussed under Impact 4.4.4, the project would increase demand for aviation services in the Planning Area as well as demands for such services in the region. However, the Kern-Taft Airport would need to be improved and expanded to accommodate increased travel demand at its facility. The City does not have ultimate decision authority on the airport and all decisions about the airport must be coordinated through the FAA. Additionally, the feasibility study assessing the future of the airport has not yet been completed, thus the City cannot plan for the future of the existing airport or plan for a new airport. This impact is a **cumulatively considerable** impact.

Proposed General Plan Policies that Provide Mitigation

The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing the project's contribution to cumulative impacts to the aviation system. The following list contains those policies and actions that contain specific, enforceable requirements

and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Circulation Element

Policy CI-37; Policy CI-38

Despite the proposed General Plan policies listed above, increasing demand for aviation travel to an airport which currently is not satisfactory is considered a **cumulatively considerable** impact.

Mitigation Measures

Implementation of the proposed General Plan policies and action items would support reconstruction of the existing facility or support relocation of the facility to improve service to the area. Since it is the FAA and not the City that has the ultimate decision making power on the future of the airport, and since there have not been any feasibility studies assessing potential future demand at the airport conducted by the FAA or the City, expansions or even possible relocation of the airport cannot be planned by the City under its General Plan growth scenario. Therefore this impact would still be considered **cumulatively considerable** and **significant and unavoidable**.

REFERENCES

DOCUMENTS

Fehr and Peers. 2009. *City of Taft General Plan Update Traffic Study*.

Kern Council of Governments. September 1994. *Kern County Regional Aviation System Plan*.

WEBSITES

California Department of Transportation (Caltrans). 2008. http://traffic-counts.dot.ca.gov/.

4.5
AIR QUALITY

This section of the Draft EIR ("Draft EIR"; "DEIR") examines the air quality of the proposed City of Taft General Plan Update Planning Area (Planning Area) and its environs, includes a summary of applicable air quality regulations, and analyzes potential air quality impacts associated with the proposed project. Mitigation measures are recommended, as necessary, to reduce significant air quality impacts. A Climate Change and Green House Gas emissions discussion is also included in this section.

4.5.1 EXISTING SETTING

The proposed General Plan Update Planning Area is located in Kern County (County) and in the San Joaquin Valley Air Basin (SJVAB). The SJVAB is the second largest air basin in the State of California, 250 miles long and averaging 35 miles wide. The proposed Planning Area is within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SVJAPCD). Existing air quality conditions in the SJVAB and the factors affecting air quality conditions in the SJVAB are discussed below.

TOPOGRAPHY

The SJVAB occupies the southern half of California's Central Valley. The Coast Ranges, which have an average elevation of 3,000 feet, are located on the western border of the SJVAB. The San Emigdio Mountains, which are part of the Coast Ranges, and the Tehachapi Mountains, which are part of the Sierra Nevada, are both located on the south side of the SJVAB. The Sierra Nevada forms the eastern border of the SJVAB. There is no topographic feature delineating the northern edge of the basin. The SJVAB is generally flat with a downward gradient in terrain to the northwest.

METEOROLOGY AND CLIMATE

The SJVAB has an "inland Mediterranean" climate, averaging over 260 sunny days per year. The valley floor is characterized by warm, dry summers and cooler winters. Summer highs often exceed 100 ºF, averaging in the low 90s in the northern valley and high 90s in the south. In the entire San Joaquin Valley, daily high temperature readings in summer average 95 ºF. Over the last 30 years, the valley averaged 106 days a year 90 ºF or hotter, and 40 days a year 100 ºF or hotter. The daily summer temperature variation can be as great as 30 ºF.

During the summer, wind speed and direction data indicate that summer wind usually originates at the north end of the valley and flows in a south-southeasterly direction through Tehachapi Pass into the Southeast Desert Air Basin. In addition, the Altamont Pass also serves as a funnel for pollutant transport from the San Francisco Bay Area Air Basin into the region.

In winter, as the cyclonic storm track moves southward, the storm systems moving in from the Pacific Ocean bring a decidedly maritime influence to the valley. The high mountains to the east prevent the cold, continental air masses of the interior from influencing the valley. Thus, winters are mild and humid. Temperatures below freezing are unusual.

Average high temperatures in the winter are in the 50s, but highs in the 30s and 40s can occur on days with persistent fog and low cloudiness. During winter, the average daily low temperature is 45 ºF.

Temperature and solar radiation are particularly important in the chemistry of ozone formation. Ozone is formed in a photochemical reaction requiring sunlight. Generally, the higher the temperature, the more ozone formed, since reaction rates increase with temperature. However, extremely hot temperatures can "lift" or "break" the inversion layer. Typically, if the inversion layer doesn't lift to allow the buildup of contaminants to be dispersed into the region, the ozone levels will peak in the late afternoon, sometimes as late as 3 to 7 p.m. If the inversion layer breaks and the resultant afternoon winds occur, the ozone will peak in the early afternoon and decrease in the late afternoon as the contaminants are transported to the region.

AIR POLLUTANTS OF CONCERN AND HEALTH EFFECTS

There are six pollutants with health-based standards specifying pollutant levels of air quality that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. These six "criteria" pollutants discussed below, include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter 10 microns in size and smaller (PM_{10}), and lead. In addition, several other air pollutants are also discussed below.

Ozone

Ground-level ozone, commonly referred to as smog, is highest on warm, windless, sunny days. Ozone is not emitted directly into the air from point sources (e.g., mobile or stationary); rather, they are formed through a complex series of chemical reactions between reactive organic gases (ROG) and nitrogen oxides (NOx). These reactions occur over time in the presence of sunlight. The principal sources of ozone precursors ROG are the evaporation of solvents, paints, and fuels, while NOx is primarily the result of fuel combustion.

Ozone is a public health concern because it is a respiratory irritant that increases susceptibility to respiratory infections and diseases, and because it can harm lung tissue at high concentrations. In addition, ozone can cause substantial damage to leaf tissues of crops and natural vegetation, and can damage many natural and manmade materials by acting as a chemical oxidizing agent.

Carbon Monoxide

Carbon monoxide is an odorless, colorless gas that is formed by the incomplete combustion of fuels. Motor vehicle emissions are the dominant source of CO in the Planning Area. CO emissions and ambient concentrations have decreased significantly in recent years. These improvements are due largely to the introduction of cleaner burning motor vehicles and motor vehicle fuels. The San Joaquin Valley area has attained the state and national

CO standard. CO is still a pollutant that must be closely monitored, however, due to its severe effect on human health.

At high concentrations, CO reduces the oxygen-carrying capacity of the blood and can cause dizziness, headaches, unconsciousness, and even death. CO can also aggravate cardiovascular disease. Relatively low concentrations of CO can significantly affect the amount of oxygen in the bloodstream because CO binds to hemoglobin 220–245 times more strongly than oxygen.

Nitrogen Oxides

Nitrogen oxides refer to a family of nitrogen-based compounds, including nitric oxide, nitrogen dioxide, and other oxides of nitrogen. NO_x are produced from burning fuels, including gasoline, diesel, and coal. Nitrogen oxides react with volatile organic compounds to form ozone and are also major components of acid rain.

NO_2 is a brown-colored gas readily visible during periods of heavy air pollution. Mobile sources and oil and gas production account for nearly all of the Planning Area and Kern County's NO_x emissions, most of which are NO_2.

Sulfur Oxides

Sulfur oxides (SO_x) are composed mainly of sulfur dioxide and sulfates. Sulfur oxides are pungent, colorless gases (sulfates are solids) formed primarily by combustion of sulfur-containing fossil fuels, especially coal and oil. Some industrial processes, such as production of paper and smelting of metals, produce sulfur dioxide. Sulfur dioxide is closely related to sulfuric acid and plays an important role in the production of acid rain. Fuel combustion for oil and gas production and petroleum refining account for nearly all SO_2 emissions within the City's Planning Area and Kern County.

Particulate Matter

Particulate matter (PM) can be divided into several size fractions. Coarse particles are between 2.5 and 10 microns in diameter and arise primarily from natural processes, such as wind-blown dust or soil. Fine particles are less than 2.5 microns in diameter and are produced mostly from combustion, or burning activities. Fuel burned in cars and trucks, power plants, factories, fireplaces, and wood stoves produces fine particles.

The level of fine particulate matter in the air is a public health concern because it can bypass the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. The health effects vary depending on a variety of factors, including the type and size of particles. Research has demonstrated a correlation between high PM concentrations and increased mortality rates. Elevated PM concentrations can also aggravate chronic respiratory illnesses such as bronchitis and asthma.

Lead

Lead (Pb) is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Lead was used until recently to increase the octane rating in auto fuel. Since gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels and the use of leaded fuel has been mostly phased out, the ambient concentrations of lead have dropped dramatically. In fact, lead is no longer monitored in the region.

Non-Criteria Pollutants

In addition to the criteria pollutants discussed above, there are other pollutants for which there are no explicit criteria that are often air pollution issues of concern for communities. These include toxic air contaminants, odors, and wood smoke, which can produce localized health risks or nuisances for sensitive nearby land uses, also known as "sensitive receptors." Community health risk assessments and regulatory programs have produced important air quality information about certain types of facilities that should be considered when siting new sensitive receptors. Sensitive land uses deserve special attention because children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the non-cancer effects of air pollution. There is also substantial evidence that children are more sensitive to cancer-causing chemicals.

Visibility Reducing Particles

Sections 169A and 169B of the Clean Air Act contain requirements for states to protect and improve visibility in national parks and wilderness areas in the country. In 1977 Congress designated certain national parks and wilderness areas as "mandatory Class I federal areas", where visibility was identified as an important value. Currently in the United States there are 156 of these Class I areas, including 47 national parks, 108 wilderness areas, and one international park.

The term visibility refers to the clarity with which scenic vistas and landscape features are perceived at great distances. Visibility impairment, quantified as light extinction, is caused by the scattering and absorption of light by particles and gases in the atmosphere. Without the effects of human-caused air pollution, a natural visual range is estimated to be about 140 miles in the western U.S. (EPA, 2001).

Class I areas, which are defined as areas of the country such as national parks, national wilderness areas, and national monuments that have been set aside under Section 162(a) of the Clean Air Act to receive the most stringent degree of air quality protection. Class I federal lands fall under the jurisdiction of three federal agencies, the National Park Service, the Fish and Wildlife Service, and the Forest Service.

Although the term "visibility" has a simple meaning, it is a difficult phenomenon to measure in scientific terms. Visibility relates to human perception of the environment and includes color, the contrast of viewed objects against the background sky, the clarity of the

atmosphere, and psychological interpretation of the person viewing the scene. Visibility impairment is caused by the presence of particles and gases in the air which either absorb or scatter light. Even under the best conditions, there is some "natural" light scattering that occurs that limits visibility. The degree to which absorption and scattering affects visibility is referred as "light extinction". Light extinction can vary as a function of sun angle and cloud cover, and can be affected by relative humidity. In addition, natural impairment of visibility is caused by clouds, fog, rain and snow.

Visibility Reducing Particles are a standard measure of visibility. The California Air Resources Board does not yet have a measuring method with enough accuracy or precision to designate areas in the State attainment or non-attainment. The entire State is labeled unclassified (PMC, 2008).

No Class I designated sites occur within the proposed GPU Planning Area. The closest Class I sites include the San Rafael Wilderness in Santa Barbara County, and the San Gabriel Wilderness in Los Angeles County. Other nearby Class I sites are the Dome Land Wilderness which falls partially within the northeastern portion of Kern County, and the Ventana and Cucamonga Wilderness, located in Monterey and San Bernardino Counties, respectively (EPA, 2009,) .

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Unlike criteria pollutants, no safe levels of exposure to TACs have been established. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. Two types of risk are usually assessed, chronic non-cancer risk and acute non-cancer risk, though there are many different types of TACs, with varying degrees of toxicity.

Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations, such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

It is important to understand that TACs are not considered criteria air pollutants and thus are not specifically addressed through the setting of ambient air quality standards. Instead, the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (ARB) regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology (MACT and BACT) to limit emissions. These, in conjunction with additional local rules, establish the regulatory framework for TACs.

The State is both identifying and reducing risks associated with particulate matter emissions from diesel-fueled vehicles. In September 2000, ARB approved a comprehensive Diesel

Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan is to reduce diesel PM emissions and the associated health risk by 75 percent in 2010 and 85 percent by 2020. The plan consists of new regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles, new retrofit requirements for existing on-road, off-road, and stationary diesel-fueled engines and vehicles, and new diesel fuel regulations to reduce the sulfur content of diesel fuel as required by advanced diesel emission control systems.

Diesel exhaust is a TAC of growing concern in California. In 1998, ARB identified diesel engine particulate matter as a TAC. The exhaust from diesel engines contains hundreds of different gaseous and particulate components, many of which are toxic but are not considered to have acute non-cancer risks.

Mobile sources, such as trucks, buses, automobiles, and farm equipment, are generally the largest source of criteria pollutant emissions in the City of Taft. The Expansion Area, which includes the City's Sphere of Influence, generally does not include any existing major point sources of emissions, as most of these lands are devoid of any development.

Concentrations of diesel particulate matter, classified as a TAC by the State, are much higher near heavily traveled highways and intersections, such as SR 33 (Kern Street) and SR 119 (Taft Highway), especially in the presence of diesel-fueled vehicles. Land uses where individuals could be exposed to high levels of diesel exhaust include:

- Warehouses
- Schools with high volume of bus traffic
- High volume highways
- High volume arterials and local roadways with high level of diesel traffic.

Based on data from the Air Toxics Hot Spots Information and Assessment Act, there are numerous stationary sources in the City that have the potential to emit TACs (**Table 4.5-1**).

TABLE 4.5-1
MAJOR STATIONARY SOURCES OF TOXIC AIR CONTAMINANTS IN TAFT (TONS/YEAR)

Facility Name	ROG	CO	NOx	SOx	PM	PM_{10}
Boeing Satellite	0	0	0	0	0	0
Brown's Petroleum Products	0.3	0	0	0	0	0
Chevron Pipe Line Company	0.1	0.4	1.9	0.1	0.1	0.1
City of Taft Fire Department	0	0	0	0	0	0
ConocoPhillips Pipe Line Co	0.1	0	0	0	0	0
Crimson Resource Management	249.8	22.4	2.1	0.1	0.1	0.1
Geo Group Inc/Taft Correctional Inst	0.1	0.6	0.7	0	0.2	0.2
J G Boswell Company	0	0	0	0	0	0
Kern County Fire Station #21	0	0	0	0	0	0
MCI	0	0	0	0	0	0
Mercy Westside Hospital	0	0	0	0	0	0
New Albertson's Inc - Store #6382	0	0.2	0	0	0	0
New Cingular Wireless - Taft 14280	0	0	0	0	0	0
Pacific Pipeline System, LLC	3.6	0	0	0	0	0
Quality Mud Service	0	0.1	0.7	0	0	0
Scarbrough Management	0	0	0	0	0.1	0
Taft City Wastewater Plant	0	0.1	0.2	0	0	0
Taft Manufacturing Company	1.4	12.5	5.7	1.5	1.3	0.9
Taft Production Co	0.2	0.7	3.6	0	21.3	9.9
Taft Union High School	0	0	0.1	0	0	0
Titanium Specialties	0	0	0	0	0	0
Verizon California	0	0	0	0	0	0
Verizon Wireless – Taft	0	0	0.1	0	0	0
West Kern Water District	0	3.4	0	0	0.1	0.1
West Kern Water District	0.4	11.9	1.4	0	0.4	0.4

Source: ARB, 2008

TAC Health Effects

Health Risks - Acetaldehyde

Acetaldehyde is both directly emitted into the atmosphere and formed in the atmosphere from photochemical oxidation. Sources include combustion processes such as exhaust from mobile sources and fuel combustion from stationary internal combustion engines, boilers, and process heaters.

Acetaldehyde is classified as a federal hazardous air pollutant and as a California TAC. Acetaldehyde is a carcinogen that also causes chronic non-cancer toxicity in the respiratory system. Symptoms of chronic intoxication of acetaldehyde in humans resemble those of alcoholism.

The primary acute effect of inhalation exposure to acetaldehyde is irritation of the eyes, skin, and respiratory tract in humans. At higher exposure levels, erythema, coughing, pulmonary edema, and necrosis may also occur. Acute inhalation of acetaldehyde resulted in a depressed respiratory rate and elevated blood pressure in experimental animals. Tests involving acute exposure of rats, rabbits, and hamsters have demonstrated acetaldehyde to have low acute toxicity from inhalation and moderate acute toxicity from oral or dermal exposure (PMC, 2008)

Health Risks - Benzene

Approximately 84 percent of the benzene emitted in California comes from motor vehicles, including evaporative leakage and unburned fuel exhaust. Currently, the benzene content of gasoline is less than one percent.

Benzene is highly carcinogenic and occurs throughout California. Benzene also has non-cancer health effects. Brief inhalation exposure to high concentrations can cause central nervous system depression. Acute effects include central nervous system symptoms of nausea, tremors, drowsiness, dizziness, headache, intoxication, and unconsciousness (California Environmental Protection Agency and Air Resources Board, 2005).

Neurological symptoms of inhalation exposure to benzene include drowsiness, dizziness, headaches, and unconsciousness in humans. Ingestion of large amounts of benzene may result in vomiting, dizziness, and convulsions in humans. Exposure to liquid and vapor may irritate the skin, eyes, and upper respiratory tract in humans. Redness and blisters may result from dermal exposure to benzene.

Chronic inhalation of certain levels of benzene causes disorders in the blood in humans. Benzene specifically affects bone marrow (the tissues that produce blood cells). Aplastic anemia, excessive bleeding, and damage to the immune system (by changes in blood levels of antibodies and loss of white blood cells) may develop. Increased incidence of leukemia (cancer of the tissues that form white blood cells) has been observed in humans occupationally exposed to benzene (U.S. EPA, 2005b).

Health Risks - 1,3 –Butadiene

The majority of 1,3-butadiene emissions come from incomplete combustion of gasoline and diesel fuels. Mobile sources account for 83 percent of total statewide emissions. Area wide sources such as agricultural waste burning and open burning contribute approximately 13 percent of statewide emissions.

1,3-Butadiene has been identified as a carcinogen in California. Butadiene vapors cause neurological effects at very high levels such as blurred vision, fatigue, headache, and vertigo. Dermal exposure of humans to 1,3-butadiene causes a sensation of cold, followed by a burning sensation, which may lead to frostbite (California Environmental Protection Agency Air Resources Air Resources Board, 2005).

One epidemiological study reported that chronic (long-term) exposure to 1,3-butadiene via inhalation resulted in an increase in cardiovascular diseases, such as rheumatic and arteriosclerotic heart diseases, while other human studies have reported effects on the blood. A large epidemiological study of synthetic rubber industry workers demonstrated a consistent association between 1,3-butadiene exposure and occurrence of leukemia. Several epidemiological studies of workers in styrene-butadiene rubber factories have shown an increased incidence of respiratory, bladder, stomach, and lymphato-hematopoietic cancers. However, these studies are not sufficient to determine a causal association between 1,3-butadiene exposure and cancer due to possible exposure to other chemicals and other confounding factors (U.S. EPA, 2005c).

Health Risks - Carbon Tetrachloride

The primary sources of carbon tetrachloride in California include chemical and allied product manufacturers and petroleum refineries.

In California, carbon tetrachloride has been identified as a carcinogen. Carbon tetrachloride is also a central nervous system depressant and mile eye and respiratory tract irritant (California Environmental Protection Agency Air Resources Board, 2005). EPA has classified carbon tetrachloride as a Group B2, probable human carcinogen (U.S. EPA, 2005d).

Acute inhalation and oral exposures to high levels of carbon tetrachloride have been observed primarily to damage the liver (swollen, tender liver, changes in enzyme levels, and jaundice) and kidneys (nephritis, nephrosis, proteinurea) of humans. Depression of the central nervous system has also been reported. Symptoms of acute exposure in humans include headache, weakness, lethargy, nausea, and vomiting. Delayed pulmonary edema (fluid in lungs) has been observed in humans exposed to high levels of carbon tetrachloride by inhalation and ingestion, but this is believed to be due to injury to the kidney rather than direct action of carbon tetrachloride on the lung. Chronic inhalation or oral exposure to carbon tetrachloride produces liver and kidney damage in humans and animals (U.S. EPA, 2005d).

Health Risks - Chromium, Hexavalent

Chromium plating and other metal finishing processes are the primary sources of hexavalent chromium emissions in California. In California, hexavalent chromium has been identified as a carcinogen. There is epidemiological evidence that exposure to inhaled hexavalent chromium may result in lung cancer. The principal acute effects are renal toxicity, gastrointestinal hemorrhage, and intravascular hemolysis (California Environmental Protection Agency Air Resources Air Resources Board).

The respiratory tract is the major target organ for chromium (VI) following inhalation exposure in humans. Other effects noted from acute inhalation exposure to very high concentrations of chromium (VI) include gastrointestinal and neurological effects, while dermal exposure causes skin burns in humans. Chronic inhalation exposure to chromium (VI) in humans results in effects on the respiratory tract, with perforations and ulcerations of the septum, bronchitis, decreased pulmonary function, pneumonia, asthma, and nasal itching and soreness reported. Chronic human exposure to high levels of chromium (VI) by inhalation or oral exposure may produce effects on the liver, kidney, gastrointestinal and immune systems, and possibly the blood (U.S. EPA 2005e).

Health Risks - Para-Dichlorobenzene

The primary sources of para-dichlorobenzene include consumer products such as non-aerosol insect repellents and solid/gel air fresheners. These sources contribute 99% of statewide para-dichlorobenzene emissions.

In California, para-dichlorobenzene has been identified as a carcinogen. Acute exposure to 1,4-dichlorobenzene via inhalation in humans results in irritation to the eyes, skin, and throat. In addition, long-term inhalation exposure may affect the liver, skin, and central nervous system in humans (e.g., cerebellar ataxia, dysarthria, weakness in limbs, and hyporeflexia) (California Environmental Protection Agency Air Resources Air Resources Board, 2005; U.S. EPA, 2005f).

Health Risks - Formaldehyde

Formaldehyde is both directly emitted into the atmosphere and formed in the atmosphere as a result of photochemical oxidation. Formaldehyde is a product of incomplete combustion. One of the primary sources of formaldehyde is vehicular exhaust. Formaldehyde is also used in resins, can be found in many consumer products as an antimicrobial agent, and is used in fumigants and soil disinfectants.

The major toxic effects caused by acute formaldehyde exposure via inhalation are eye, nose, and throat irritation and effects on the nasal cavity. Other effects seen from exposure to high levels of formaldehyde in humans are coughing, wheezing, chest pains, and bronchitis. Chronic exposure to formaldehyde by inhalation in humans has been associated with respiratory symptoms and eye, nose, and throat irritation. Animal studies have reported effects on the nasal respiratory epithelium and lesions in the respiratory system from

chronic inhalation exposure to formaldehyde. Occupational studies have noted statistically significant associations between exposure to formaldehyde and increased incidence of lung and nasopharyngeal cancer. This evidence is considered to be "limited," rather than "sufficient," due to possible exposure to other agents that may have contributed to the excess cancers. EPA considers formaldehyde to be a probable human carcinogen (cancer-causing agent) and has ranked it in EPA's Group B1. In California, formaldehyde has been identified as a carcinogen (California Environmental Protection Agency Air Resources Air Resources Board, 2005; U.S. EPA, 2005g).

Health Risks - Methylene Chloride

Methylene chloride is used as a solvent, a blowing and cleaning agent in the manufacture of polyurethane foam and plastic manufacture, and as a solvent in paint stripping operations. Paint removers account for the largest use of methylene chloride in California.

Case studies of methylene chloride poisoning during paint stripping operations have demonstrated that inhalation exposure to extremely high levels can be fatal to humans. Acute inhalation exposure to high levels of methylene chloride in humans has resulted in effects on the central nervous system (CNS) including decreased visual, auditory, and psychomotor functions, but these effects are reversible once exposure ceases. Methylene chloride also irritates the nose and throat at high concentrations. The major effects from chronic inhalation exposure to methylene chloride in humans are effects on the central nervous system, such as headaches, dizziness, nausea, and memory loss. In addition, chronic exposure can lead to bone marrow, hepatic, and renal toxicity. EPA considers methylene chloride to be a probable human carcinogen and has ranked it in EPA's Group B2. California considers methylene chloride to be carcinogenic (U.S. EPA, 2005h).

Health Risks - Perchloroethylene

Perchloroethylene is used as a solvent, primarily in dry cleaning operations. Perchloroethylene is also used in degreasing operations, paints and coatings, adhesives, aerosols, specialty chemical production, printing inks, silicones, rug shampoos, and laboratory solvents.

In California, perchloroethylene has been identified as a carcinogen. Perchloroethylene vapors are irritating to the eyes and respiratory tract. Following chronic exposure, workers have shown signs of liver toxicity, as well as kidney dysfunction, and neurological disorders (California Environmental Protection Agency Air Resources Board, 2005)

Health Risks - Diesel Particulate Matter

Diesel particulate matter is emitted from both mobile and stationary sources. In California, on-road diesel fueled engines contribute approximately 24 percent of the statewide total, with an additional 71 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about 5 percent of total diesel particulate matter.

Diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any toxic air contaminant evaluated by the California Office of Environmental Health Hazard Assessment (OEHHA). ARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

In its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong evidence that long-term occupational exposure to diesel exhaust increases the risk of lung cancer. Using information from OEHHA's assessment, ARB estimates that diesel-particle levels measured in California's air in 2000 could cause 540 "excess" cancers (beyond what would occur if there were no diesel particles in the air) in a population of 1 million people over a 70-year lifetime. Other researchers and scientific organizations, including the National Institute for Occupational Safety and Health, have calculated cancer risks from diesel exhaust that are similar to those developed by OEHHA and ARB.

Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat and lungs, and it can cause coughs, headaches, lightheadedness and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Diesel engines are a major source of fine-particle pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution (see also health effects discussion in Section 4.3.4.5). Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children. In California, diesel exhaust particles have been identified as a carcinogen (California Office of Environmental Health Hazard Assessment and the American Lung Association. 2005; California Environmental Protection Agency Air Resources Board, 2005).

Asbestos

Fibrous (Asbestiform) Minerals

Asbestos is the generic term for the naturally-occurring fibrous (asbestiform) varieties of six silicate minerals. Chrysotile, which belongs to the serpentine mineral group, and amphibole asbestos (such as tremolite) occur naturally in certain geologic settings in California, most commonly in association with ultramafic rocks and along associated faults (DOC, 2000).

Asbestos is a known carcinogen and exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs) (ARB, 2009). In 1998 new concerns were raised about possible health hazards from activities that disturb rocks and soil containing asbestos and may generate asbestos-laden dust. When disturbed, asbestos fibers are released into the air where they can remain suspended for extended periods. If inhaled, these fibers pose a serious health threat as they can become permanently lodged in body tissues. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present (ARB, 2009). Although ultramafic rock is a concern for other portions of the air basin, it is not prevalent in the City of Taft.

Valley Fever

Coccidioidomycosis, more commonly known as "Valley Fever," is primarily a disease of the lungs caused by inhalation of spores of the *Coccidioides immitis* fungus. The spores are found in the soil, become airborne when the soil is disturbed, and are subsequently inhaled into the lungs. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley Fever symptoms generally occur within two to three weeks of exposure. Approximately 60 percent of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. Of those people who are exposed and seek medical treatment, the most common symptoms are fatigue, cough, chest pain, fever, rash, headache, and joint aches. In some cases painful, red bumps may develop. One important fact to mention is that these symptoms are not unique to Valley Fever and may be caused by other illnesses as well. Identifying and confirming this disease requires specific laboratory tests such as (1) microscopic identification of the fungal spherules in infected tissue, sputum, or body fluid sample, (2) growing a culture of *Coccidioides immitis* from a tissue specimen, sputum, or body fluid, (3) detection of antibodies (serological tests specifically for Valley Fever) against the fungus in blood serum or other body fluids, and (4) Valley Fever Skin Test (called coccidioidin or spherulin), which indicate prior exposure to the fungus.

Valley Fever is not "contagious" and therefore cannot be passed on from person to person. Most of those who are infected will recover without treatment within six months and will

have a life-long immunity to the fungal spores. In severe cases such as patients with rapid and extensive primary illness, those who are at risk for dissemination of disease, and those who have disseminated disease, antifungal drug therapy is used. Only one to two percent of those exposed who seek medical attention will develop disease that disseminates (spreads) to other parts of the body other than the lungs. **Table 4.5-2** presents the various infection classifications and normal diagnostic spread as noted in recent research conducted by the Valley Fever Center for Excellence (PMC, 2008).

TABLE 4.5-2
RANGE OF VALLEY FEVER CASES

Infection Classification	Percent of Total Diagnosed Cases
Inapparent Infections	60%
Mild to Moderate Infections	30%
Infections Resulting in Complications	5 to 10%
Fatal Infections	<1%

Source: PMC, 2008

Factors that affect the susceptibility to coccidioidal dissemination are race, sex, pregnancy, age, and immunosuppression. According to data gathered by the Kern County Health Department, Latinos are 3.4 times more likely than whites to develop coccidioidal dissemination; blacks are 13.7 times more likely; and Filipinos are 175.5 times more likely. Regarding deaths due to the disease, compared to whites, Latinos are five times greater, blacks are 23.3 times greater, and Filipinos are 191.4 times greater. In addition, residents new to the San Joaquin Valley are primarily at a higher risk of infection due to low immunity to this particular fungus. Many longtime residents exposed to Valley Fever have recovered and therefore developed a life-long immunity to the disease (PMC, 2008).

Spores become airborne when the soil is disturbed by winds, construction, farming, and other activities. The fungal spores are often found in the soil around rodent burrows, Indian ruins, and burial grounds. This type of fungus is common in the southwestern United States and even more endemic in Kern County. The ecologic factors that appear to be most conducive to the survival and replication of the fungal spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils (PMC, 2008).

The areas of Kern County that have the most incidents of Valley Fever exposure are northeast Bakersfield, Lamont-Arvin, Taft, and Edwards Air Force Base. The sediment in northeast Bakersfield endemic for Valley Fever is the Round Mountain silt. Round Mountain silt is member of the Miocene Temblor Formation equivalent and consists of decomposed, marine sediments. The sediments in the project area consist of Quaternary alluvial fan deposits derived from Mesozoic granitic rock of the Sierra Nevada Mountain Range. The relatively younger sediment deposited in the field area differs in composition and chemical content from the older Miocene marine sediment in northeast Bakersfield.

Odors

Odors are typically regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

The primary source of odors in the City is associated with the oil fields and natural gas reserves that tie into the Midway-Sunset and Buena Vista oil fields, and from facilities that are located in the adjacent unincorporated lands in the County. Oil wells, storage facilities, and other infrastructure that produce, store, and handle crude oil emit volatile organic compounds (e.g., methane, toluene benzene) that are considered TACs. Production from these two oil fields is expected to continue in the future (DOC, 2006).

Pesticides

Most pesticides are designed to harm or kill pests, and because some pests have systems similar to the human system, some pesticides also can harm or kill humans (USEPA, 2009). The hazards associated with pesticides depend on the toxicity of the pesticide and the exposure a human may receive in any situation.

The effects, or symptoms, of pesticide poisoning can be defined as either topical or systemic. Topical effects generally develop at the site of pesticide contact and are a result of either the pesticide's irritant properties or an allergic response by the victim. Dermatitis, or

inflammation of the skin, is the most commonly reported topical effect associated with pesticide exposure. Symptoms of dermatitis range from reddening of the skin to rashes and/or blisters. Other symptoms include coughing, wheezing and sneezing when exposed to pesticide sprays (Penn State, 2007).

Systemic effects often occur away from the original point of contact as a result of the pesticide being absorbed into and distributed throughout the body. Systemic effects often include nausea, vomiting, fatigue, headache, and intestinal disorders. In advanced poisoning cases, the individual may experience changes in heart rate, difficulty breathing, convulsions, and coma, which could lead to death (Penn State, 2007).

Common locations for pesticide use are agricultural land uses, where they are often used to prevent insect damage to crops. Because of this, the proximity of sensitive receptors to agricultural land uses could expose people to the hazards listed above.

Wood Smoke

Wood smoke has long been identified as a significant source of pollutants in urban and suburban areas. Wood smoke contributes to particulate matter and carbon monoxide concentrations, reduces visibility, and contains numerous toxic air contaminants. Present controls on this source include the adoption of emission standards for wood stoves and fireplace inserts. Interest in wood smoke is likely to increase with the recent adoption of a $PM_{2.5}$ (particulate matter less than 2.5 microns in diameter) national standard.

Sensitive Receptors

There are a number of facilities in the City that house or attract children, the elderly, and people with illnesses or others who are especially sensitive to the effects of air pollutants. These sensitive receptors are a focus of concern, as their proximity to existing or potential sources of localized air pollution can result in land use conflicts that expose people to unhealthful air quality. Hospitals, schools, convalescent facilities, and residential areas in the City include:

- Mercy Westside Hospital; 110 East North Street (currently closed)
- Taft College; 29 Emmons Park Drive
- Jefferson Elementary; 318 Taylor Street
- Lincoln Junior High; 810 North Sixth Street
- Roosevelt Elementary; 811 North Sixth Street
- Taft Union High; 701 Seventh Street
- Conley Elementary; 623 Rose Avenue
- Parkview Elementary; 520 A Street
- Taft Primary; 212 Lucard Street
- Buena Vista High; 901 San Emidio Street
- Westside Independent Study High School; 701 7th Street
- Taft Community Day; 337 Tenth Street

AMBIENT AIR QUALITY

While there are no monitoring stations in the City of Taft, ARB maintains several air quality monitoring sites in the cities of Bakersfield and Maricopa. While they are 40 and 8 miles away from the City, respectively, these nearby sites were deemed to be generally representative of ambient air quality in the City of Taft and the Planning Area because of their similar climate, meteorology, and topography. The three years of data provided in **Table 4.5-3** show the number of days standards were exceeded for each year, as well as the concentration of pollutants in the given area.

TABLE 4.5-3
AMBIENT AIR QUALITY IN THE TAFT SUBREGION ANNUAL SUMMARY

Pollutant/Standard	2006	2007	2008
O_3 (8-hour) [A]			
Maximum Concentration (ppm)	0.094	0.090	0.089
Days > CAAQS (0.070 ppm)	64	47	40
Days > NAAQS (0.075 ppm)	45	23	20
O3 (1-hour) A			
Maximum Concentration (ppm)	0.104	0.097	0.097
Days > CAAQS (0.070 ppm)	4	3	2
Days > NAAQS (0.075 ppm)	0	0	0
PM2.5 (24-hour) B			
Maximum Concentration (µg/m3)	78.6	90.7	100.3
Days > NAAQS (65 µg/m3)	Unavailable D	53.1	Unavailable D
PM10 (24-hour) D			
Maximum Concentration (µg/m3)	157.0	131.0	267.4
Days > CAAQS (50 µµg/m3)	27	28	29
Days > NAAQS (150 µg/m3)	1	0	1
CO (8-hour) D			
Maximum Concentration (ppm)	2.19	1.97	2.17
Days > CAAQS (9.0 ppm)	0	0	0
Days > NAAQS (9.0 ppm)	0	0	0
SO2 (24-hour) E			
Maximum Concentration (ppm)	N/A	N/A	N/A
Days > CAAQS (0.04 ppm)	N/A	N/A	N/A
Days > NAAQS (0.14 ppm)	N/A	N/A	N/A
NO2 (1-hour) D			
Maximum Concentration (ppm)	0.076	0.073	0.075
Days > CAAQS (0.25 ppm)	0	0	0

Source: ARB, 2009a
[A] *Data taken from the Maricopa – Stanislaus St. Air Monitoring Station.*
[B] *Data taken from the Bakersfield 410 E. Planz Road Air Monitoring Station.*
[C] *Estimated value of days above national standards.*
[D] *Data taken from the Bakersfield Golden State Highway Air Monitoring Station.*
[E] *There was insufficient data available throughout the year to determine the value.*

As shown in **Table 4.5-3**, the following criteria pollutants have exceeded state or federal standards between 2006 and 2008: PM_{10}, $PM_{2.5}$, 8-hour O_3, and 1-hour O_3. Based on these monitoring data, the San Joaquin Valley Air Basin is nonattainment for federal ozone and $PM_{2.5}$ standards and for state ozone, $PM_{2.5}$, and PM_{10} standards (**Table 4.5-4**).

TABLE 4.5-4
FEDERAL AND STATE ATTAINMENT STATUS FOR SAN JOAQUIN VALLEY AIR BASIN

Pollutants	Federal Classification	State Classification
Ozone	Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
PM_{10}	Attainment	Nonattainment
CO	Unclassified/Attainment	Attainment
NO_2	Unclassified/Attainment	Attainment
SO_2	Attainment	Attainment

Source: ARB, 2009b

4.5.2 REGULATORY FRAMEWORK

Air quality in the San Joaquin Valley Air Basin is regulated through the efforts of federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies primarily responsible for improving the air quality in Taft are discussed below, along with their individual responsibilities.

FEDERAL

Ambient Air Quality Standards

Both USPA and ARB have established ambient air quality standards for common pollutants. The national ambient air quality standards (NAAQS, or federal standards) and California ambient air quality standards (CAAQS, or state standards) for important pollutants are summarized in **Table 4.5-5**. These ambient air quality standards are levels of contaminants that represent levels that protect public health and welfare, and avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. USEPA and ARB have focused on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, and lead. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California standards are more stringent. This is particularly true for ozone and PM10.

TABLE 4.5-5
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards [a, c]	National Standards [b, c]	
			Primary [d]	Secondary [e]
Ozone (O_3)	1-hour	0.09 ppm (180 μg/m³)	- -	Same as Primary
	8-hour	0.070 ppm (137 μg/m³)	0.075 ppm[g]	
Particulate Matter (PM10)	AAM	20 μg/m³	(Revoked)[f]	
	24-hour	50 μg/m³	150 μg/m³	
Fine Particulate Matter (PM2.5)	AAM	12 μg/m³	15 μg/m³	
	24-hour	No Separate Standard	35 μg/m³ [f]	
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8-hour	9 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
	8-hour (Lake Tahoe)	6 ppm (7 mg/m³)	–	
Nitrogen Dioxide (NO_2)	AAM	–	0.053 ppm (100 μg/m³)	Same as Primary
	1-hour	0.25 ppm (470 μg/m³)	–	
Sulfur Dioxide (SO_2)	AAM	–	0.03 ppm (80 μg/m³)	–
	24-hour	0.04 ppm (105 μg/m³)	0.14 ppm (365 μg/m³)	–
	3-hour	–	–	0.5 ppm (1,300 μg/m³)
	1-hour	0.25 ppm (655 μg/m³)	–	–
Lead	Rolling 3-Month	–	0.15 μg/m³	Same as Primary
	30-day	1.5 μg/m³	–	–
	Quarter	–	1.5 μg/m³	Same as Primary
Sulfates	24-hour	25 μg/m³	No Federal Standards	
Hydrogen Sulfide	1-hour	0.03 ppm (42 μg/m³)		
Vinyl Chloride	24-hour	0.01 ppm (26 μg/m³)		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient of 0.23 per kilometer — visibility of 10 miles or more (0.07—30 miles or more for Lake Tahoe)		

Pollutant	Averaging Time	California Standards [a, c]	National Standards [b, c]	
			Primary [d]	Secondary [e]
		due to particles when the relative humidity is less than 70%.		

a California standards for O_3, CO (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, PM (PM_{10} and $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

b National standards (other than O3, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The O3 standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of daily concentrations, average over three years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25EC and a reference pressure of 760 torr.

d The levels of air quality necessary to protect the public health.

e The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f Based on revised particulate standards adopted by USEPA on September 21, 2006. Due to lack of evidence linking health problems to long-term exposure to coarse particulate pollution, USEPA has revoked the annual PM10 standard.

g The federal primary ozone standard, as averaged over an 8-hour period, was revised in 2008 to 0.075 ppm.

AAM = Annual Arithmetic Mean

Source: ARB 2008; USEPA 2008

A geographical area identified to have air quality as good as, or better than, the national or California ambient air quality standard is referred to as being in attainment of these standards. An area may be an attainment area for one pollutant and a nonattainment area for others.

The federal standard for ozone ground-level ozone is 0.075 parts per million (ppm), measured over an 8-hour averaging period. This standard replaces the previous 1-hour ozone standard that USEPA had enforced for decades. National standards for fine particulate matter (diameter 2.5 microns or less) have also been established for 24-hour and annual averaging periods. The current PM10 standards were retained, but the method and form for determining compliance with the standards were revised. Implementation of the new ozone and particulate matter standards was delayed by a lawsuit. On February 27, 2001, the U.S. Supreme Court unanimously ruled in favor of USEPA, clearing the way for implementation of the new standards.

ARB has developed recommended designations for California air basins, designating the San Joaquin Valley Air Basin as nonattainment for the new 8-hour ozone standard. On April 28, 2005, ARB approved the 8-hour average standard at 0.070 ppm.

U.S. Environmental Protection Agency

Federal Clean Air Act

USEPA is responsible for enforcing the Federal Clean Air Act (CAA) and the 1990 amendments to it and the national ambient air quality standards that USEPA establishes.

These standards identify levels of air quality for six criteria pollutants, which are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. USEPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf) and sources that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking.

CAA Visibility Regulations

The national visibility goal was established in section 169A of the 1977 Clean Air Act (CAA) as

"the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Federal Class I areas which impairment results from manmade air pollution." There are 156 mandatory Federal Class I areas identified for visibility protection under this provision. Section 169B of the 1990 CAA Amendments required EPA to issue a report to Congress estimating the visibility improvement expected in these 156 areas resulting from implementation of the 1990 Amendments. In October 1993, EPA issued its report entitled *Effects of the 1990 Clean Air Act Amendments on Visibility in Class I Areas: An EPA Report to Congress (EPA 452/R-93-014)*. Section 169B also requires EPA to provide Congress with regular assessments of the actual progress and improvements in visibility in the mandatory Federal Class I areas.

Federal Hazardous Air Pollutant Program

Title III of the CAA requires USEPA to promulgate national emissions standards for HAPs (NESHAP). The NESHAP may differ for major sources than for area sources of HAPs (major sources are defined as stationary sources with potential to emit more than 10 tons per year [TPY] of any HAP or more than 25 TPY of any combination of HAPs; all other sources are considered area sources). The emissions standards are to be promulgated in two phases. In the first phase (1992–2000), USEPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring MACT. For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), USEPA was required to promulgate health risk–based emissions standards where deemed necessary to address risks remaining after implementation of the technology-based NESHAP standards.

The CAA required USEPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions, at a minimum to benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1, 3-butadiene. In addition, Section 219 required the use of reformulated gasoline in selected U.S. cities (those with the most severe ozone nonattainment conditions) to further reduce mobile-source emissions.

STATE

California Air Resources Board

ARB, a department of the California Environmental Protection Agency (Cal-EPA), oversees air quality planning and control throughout California. It is primarily responsible for ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), responding to the federal CAA requirements, and regulating emissions from motor vehicles and consumer products within the state. ARB has established emission standards for vehicles sold in California and for various types of equipment available commercially. It also sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish ambient air quality standards for the state and a legal mandate to achieve these standards by the earliest practical date. These standards apply to the same six criteria pollutants as the federal CAA and also include sulfate, visibility, hydrogen sulfide, and vinyl chloride. They are more stringent than the federal standards and, in the case of PM_{10} and SO_2, far more stringent.

Tanner Air Toxics Act

California regulates TACs primarily through the Tanner Air Toxics Act, also known as Assembly Bill (AB) 1807. The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB can designate a substance as a TAC. To date, ARB has identified more than 21 TACs and has adopted USEPA's list of HAPs as TACs. Most recently, diesel PM was added to the ARB list of TACs.

Once a TAC is identified, ARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate BACT to minimize emissions.

California also regulates TACs through the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. ARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, ARB adopted a public-transit bus-fleet rule and emission standards for new urban buses. These rules and standards provide for (1) more stringent emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule. Current and upcoming milestones include the low-

sulfur diesel-fuel requirement, and tighter emission standards for heavy-duty diesel trucks and off-road diesel equipment (2011) nationwide.

Assembly Bill 170

AB 170 was passed in 2003 and requires local governments in the San Joaquin Valley to amend appropriate elements of general plans to include data, analysis, comprehensive goals, policies, and feasible implementation strategies to improve air quality no later than one year after the first revision of their housing elements that occurs after January 1, 2004. To ensure that better land use decisions can reduce emission from local jurisdictions, cities and counties are required to submit these air quality amendments to the San Joaquin Valley Air Pollution Control District at least 45 days prior to the adoption of those amendments, and SJVAPCD then has 30 days to return comments and advice.

Air Quality and Land Use Handbook

As part of its Community Health Program, ARB developed an Air Quality and Land Use Handbook, which serves as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. ARB is also developing related information and technical evaluation tools for addressing cumulative air pollution impacts in a community. Any recommendations or considerations contained in the handbook are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts.

The primary goal in developing this document was to provide information that will help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution. Recent air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high-traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California.

The handbook identifies ARB's recommendations regarding the siting of new sensitive land uses near freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities. This list consists of the air pollution sources that have been evaluated from the standpoint of the proximity issue. It is based on available information and reflects ARB's primary areas of jurisdiction – mobile sources and toxic air contaminants.

REGIONAL AND LOCAL

San Joaquin Valley Air Pollution Control District

Air Quality Plans

SJVAPCD has adopted several attainment plans to achieve state and federal air quality standards to comply with the CCAA and federal CAA. SJVAPCD must continuously monitor its progress in implementing attainment plans and must periodically report to ARB and USEPA. It must also periodically revise its attainment plans to reflect new conditions and requirements in accordance with schedules mandated by the CCAA and federal CAA. Following are descriptions and the current status of SJVAPCD's various air quality attainment plans.

Ozone Plans

Federal 1-Hour Ozone: 2004 Extreme Ozone Attainment Demonstration Plan

After passage of the federal CAA, the SJVAB was classified "serious" nonattainment for the federal 1-hour ozone standard. Accordingly, the district prepared and submitted the 1994 Ozone Attainment Demonstration Plan which projected attainment of the federal ozone standard by 1999. This goal was not achieved by the deadline and the SJVAB was reclassified from "serious" to "severe" nonattainment with a new attainment deadline of November 15, 2005. The district began preparing a Severe Ozone Attainment Demonstration Plan in 2001 and determined that attainment could not be achieved by the 2005 deadline. The district requested reclassification from "severe" to "extreme" nonattainment with a new attainment deadline of November 15, 2010. ARB approved and submitted to USEPA the district's 2004 Extreme Ozone Attainment Demonstration Plan for approval in November 2004.

USEPA has revoked in full the federal 1-hour ozone ambient air quality standard, including associated designations and classifications, in all areas except 14 early action compact areas that do not include the SJVAB. As such, transportation conformity and de minimis thresholds for 1-hour ozone no longer apply, contingency measures are not needed, and USEPA will not make a finding of a failure to attain. However, other requirements still apply, including anti-backsliding provisions, rate of progress reductions, reasonably available control technologies (RACT), and black box measures (provisions of an extreme area's implementation plan that anticipate development of new control techniques of improvement of existing control technologies) (SJVAPCD, 2008).

State 1-Hour Ozone

In accordance with the CAA, the district prepared the Air Quality Attainment Plan in 1991 which was subsequently approved by ARB in 1992. California Health and Safety Code requires that a report be prepared every three years that summarizes the progress made by the district in meeting the schedules for developing, adopting, and implementing the air

pollution control measures contained in the district's plan. The district's most recent progress report, the California Clean Air Act Triennial Progress Report and Plan Revision, 1997–1999, was prepared and submitted to ARB in March 2001 (SJVAPCD, 2008).

Federal 8-Hour Ozone: 2007 Ozone Plan

The SJVAB was classified as "serious" nonattainment for the federal 8-hour ozone standard on April 15, 2004, and was given an attainment deadline of June 15, 2013. The district approved the 2007 Ozone Plan on April 30, 2007, and submitted it, on schedule, to USEPA on June 15, 2007. The plan was adopted in December 2008 (SJVAPCD, 2008).

Carbon Monoxide Plan

The 1992 Federal Attainment Plan for Carbon Monoxide established the regulatory groundwork in order to bring the SJVAB into compliance with the NAAQS for carbon monoxide. The Final Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas (April 1996) demonstrated that the SJVAB was in compliance with the NAAQS for carbon monoxide and requested redesignation to attainment status. This plan was approved by USEPA on June 1, 1998. SJVAPCD revised this maintenance plan in 1998 and 2004 (SJVAPCD, 2008).

PM_{10} and $PM_{2.5}$ Plans

PM_{10}

After passage of the federal CAA, the SJVAB was classified nonattainment for PM_{10} and was required to adopt a PM_{10} plan by November 15, 1991. The district submitted a plan but was unable to demonstrate attainment by the deadline of December 31, 1994. This resulted in reclassification to "serious" nonattainment with a new attainment deadline of December 31, 2001. On May 15, 1997, the district submitted a PM_{10} Attainment Demonstration Plan; however, USEPA indicated that it intended to disapprove the plan and the district withdrew. USEPA approved the 2003 PM_{10} Plan on May 26, 2004, and approved the 2005 Amendments to the 2003 PM_{10} Plan on May 19, 2005. The district's most recent attainment plan is the 2006 PM_{10} Plan. This plan sets forth the approach SJVAPCD will use to attain the NAAQS for PM_{10} (SJVAPCD, 2008).

$PM_{2.5}$

USEPA adopted the first NAAQS for $PM_{2.5}$ in 1997 and classified the SJVAB as nonattainment. The district prepared and adopted the 2008 $PM_{2.5}$ Plan in April 2008 which plans for attainment of the 1997 federal standards and the 2006 federal standards by 2014, and the state standard as soon as possible (SJVAPCD, 2008). Because many $PM_{2.5}$ strategies are similar to ozone strategies, the 2008 $PM_{2.5}$ Plan builds off the 2007 Ozone Plan.

Prevention of Significant Deterioration Consideration

Under federal regulations, areas designated as Class I airsheds are considered pristine and require specific standards, such as Prevention of Significant Deterioration (PSD) requirements (SJVAPCD, 2002). Within SJVAPCD, the Kings Canyon and Sequoia National Parks and Ansel Adams, Kaiser, John Muir, and Domeland Wilderness Areas are Class I areas. None of these Class I airsheds is within the vicinity of the City of Taft, as the nearest Class I airshed is the Domeland Wilderness Area, approximately 70 miles away.

Rules and Regulations

There are several rules and regulations from SJVAPCD that would generally apply to the future projects that would be allowed under the General Plan Update.

Regulation VIII – Fugitive PM_{10} Prohibitions

SJVAPCD has adopted a set of PM_{10} Fugitive Dust Rules that are codified through Regulation VIII. Regulation VIII comprises District Rules 8011 through 8081 which are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc.

Rule 4102 – Nuisance

This rule applies to any source operation that emits or may emit air contaminants or other materials. In the event that the project or construction of the project creates a public nuisance, it could be in violation and subject to district enforcement actions.

Rule 4601 – Architectural Coatings

This rule limits volatile organic compounds from architectural coatings by specifying architectural coatings storage, cleanup, and labeling requirements and applies to any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating.

Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

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

Rule 8021 – Construction, Demolition, Excavation, and Other Earthmoving Activities

District Rule 8021 requires owners or operators of construction projects to submit a Dust Control Plan to the district if at any time the project involves nonresidential developments of five or more acres of disturbed surface area or moving, depositing, or relocating of more than 2,500 cubic yards per day of bulk materials on at least three days of the project. The

proposed project will meet these criteria and will be required to submit a Dust Control Plan to the district in order to comply with this rule.

Rule 9510 Indirect Source Review

District Rule 9510 (Indirect Source Review) was adopted on December 15, 2005, to fulfill the district's emission reduction commitments in the PM_{10} and Ozone Attainment Plans. Rule 9510 requires submittal of an Air Impact Assessment (AIA) application no later than the date on which application is made for final discretionary approval by the public agency. The AIA is used to determine the construction and operational impacts of a proposed development project. The proposed project qualifies as a development project under Rule 9510 because it contains more than 2,000 square feet of commercial space. Section 6.0 of the rule outlines general mitigation requirements for construction equipment emissions; the rule specifies that construction equipment greater than 50 horsepower needs to reduce NOx exhaust emissions by 20 percent and PM_{10} exhaust emissions by 45 percent. The alternative to achieving these onsite reductions is to pay a fee for the excess emissions of NOx and/or PM_{10}.

Air Quality Guidelines for General Plans

Assembly Bill 170 (Reyes) was passed in 2003 and requires each City and County within the jurisdiction of SJVAPCD to amend its general plan to include goals, policies, standards, and feasible implementation measures to improve air quality. The Air Quality Guidelines for General Plans is a guidance document published by SJVAPCD in June 2005. The guidelines are intended to serve as a resource to cities and counties located within the SJVAB and to assist local jurisdictions in meeting the requirements of AB 170. The guidelines include recommended goals, policies, and programs for adoption in general plans to reduce vehicle trips, reduce miles traveled, and improve air quality throughout the region and to promote healthier more livable communities throughout the SJVAB.

Local governments' responsibility for air quality increased significantly with the passage of the CCAA and the federal CAA amendments. Both of these pieces of legislation place new emphasis on reducing motor vehicle trips and vehicle miles traveled at the local level. Although SJVAPCD is required to address state air quality standards by way of transportation control measures (TCMs) and indirect source programs in its air quality attainment plans, cities and counties, through their Councils of Government, are responsible for most implementation. Local government responsibilities for air quality are found in four areas: (1) land use planning; (2) reviewing and mitigating the environmental impacts of development projects; (3) developing and maintaining the transportation infrastructure in the community, including transit systems; (4) implementing local air quality programs such as commute-based trip reduction and rideshare. The City's General Plan Update incorporates goals and policies to reduce emissions of regional criteria pollutants, in accordance with AB 170.

Guide for Assessing and Mitigating Air Quality Impacts

This document is an advisory document that provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality in environmental documents (SJVAPCD, 2002).

4.5.3 PROJECT IMPACT ANALYSIS

STANDARDS OF SIGNIFICANCE

The Air Quality Section of Appendix G of the State CEQA Guidelines contains a list of effects that may be deemed potentially significant. As such, the proposed Project is considered to have a significant impact on air quality if planned growth would directly or indirectly:

1) Conflict with or obstruct implementation of the applicable air quality plan;

2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project is non-attainment under applicable federal or state ambient air quality standards;

4) Expose sensitive receptors to substantial pollutant concentrations; or

5) Create objectionable odors affecting a substantial number of people.

This air quality analysis uses both the State CEQA Guidelines Appendix G significance criteria and recommended significance thresholds from SJVAPCD.

SJVAPCD STANDARDS OF SIGNIFICANCE

SJVAPCD has developed the following recommended thresholds of significance for construction and operations:

Construction

SJVAPCD recommends that projects should be evaluated in terms of air pollution control thresholds established by SJVAPCD and that any determination of significance with respect to construction emissions should be based on a consideration of the control measures to be implemented. As development projects that are allowed due to the proposed policies of the General Plan Update are constructed, compliance with Regulation VIII and implementation of the control measures required by SJVAPCD under Regulation VIII will constitute sufficient mitigation to reduce PM_{10} impacts to a level considered less than significant (SJVAPCD, 2002).

Carbon Monoxide Analysis

The proposed General Plan Update could have a significant impact on localized CO concentrations if:

A traffic study indicates that the level of service (LOS) on one or more streets or at one or more intersections will be reduced to LOS E or F; or

A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at more or more intersections.

If either of the above criteria can be associated with any intersection affected by the project, a CO Protocol Analysis would be needed to determine significance. SJVAPCD has established a preliminary screening protocol that can be used to determine with fair certainty whether the proposed General Plan buildout would potentially cause a future CO exceedance of federal standards.

METHODOLOGY

This air quality analysis for the General Plan EIR is based on land use designations identified in the General Plan Land Use Element and the projected traffic and residential uses. The project area for this analysis includes the entire Planning Area as a whole. Construction-related emissions for potential future development projects were characterized using ARB's URBEMIS 9.4.2 emissions model. Increases in long-term, regional criteria air pollutants from motor vehicles were calculated using ARB's EMFAC 2007 emissions modeling software utilizing data from the Traffic Impact Analysis (included as **Appendix 4.5**). In addition, emissions from stationary, area, and other mobile sources were calculated using technical air quality emission factors from ARB and other entities paired with activity data for the Planning Area from the Population and Housing section of this DEIR (e.g., household, population projections).

It should be noted that certain impact analyses are inherently local or cumulative in nature. For example, impacts related to an increase in greenhouse gases and subsequent climate change are nearly exclusively cumulative in nature. Conversely, some impacts, such as a CO hotspot analysis, are local in nature, and generally affect the immediate vicinity of the affected congestion.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the

impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

IMPACTS AND MITIGATION MEASURES

Conflict with or Obstruct Implementation of Applicable Air Quality Plans or Contribute Substantially to an Existing Air Quality Violation

Impact 4.5.1 Implementation of the General Plan Update would allow for population growth that would exceed projections assumed in SJVAPCD's 2007 Ozone Plan. This inconsistency could hinder SJVAPCD's ozone attainment strategy. However, proposed General Plan policies would address this inconsistency and ensure that the region's attainment plans incorporate the City's updated growth forecast for the Planning Area. This impact is considered to be **potentially significant**.

Implementation of the General Plan Update will result in long-term emissions from a variety of sources, including motor vehicles and stationary sources associated with future growth. As illustrated in **Table 4.5-6**, motor vehicle emissions from on-road driving within the City of Taft would total over 16.2 tons per day of criteria pollutants.

TABLE 4.5-6
CITY OF TAFT VEHICLE EMISSIONS IN 2035 (TONS/DAY)

Pollutant	2035
VMT	5,571,450
CO	9.61
NOx	4.32
SOx	0.04
ROG	1.53
PM_{10}	0.42
$PM_{2.5}$	0.29

Source: California Air Resources Board, EMFAC 2007 model outputs. 2035 VMT forecasts provided by Fehr and Peers, 2009.

The General Plan would also allow more growth that would produce emissions from stationary sources that would challenge the region's ability to meet ozone and PM standards. This would include point sources of pollution (e.g., regional wastewater treatment facilities, energy supplies) and area sources (e.g., natural gas use for heating in the winter, consumer products, architectural coatings). **Table 4.5-7** summarizes the projected emissions from growth in residentially-based area source emissions.

TABLE 4.5-7
AREA SOURCE EMISSIONS FROM RESIDENTIAL ENERGY USE FOR THE ENTIRE PLANNING AREA (TONS/DAY)

Pollutant	2008	2035	Change in Emissions from Existing to 2035	Percent Change in Emissions from Existing to 2035
ROG	103	431	+328	+318%
NOx	23	96	+73	+317%
CO	481	2,007	+1,526	+317%
SOx	1	6	+5	+500%
PM_{10}	74	307	+233	+315%
$PM_{2.5}$	71	296	+225	+317%

Source: California Air Resources Board, URBEMIS 2007 v. 9.2.4 Outputs

Ultimately, the General Plan's cumulative impact on regional air quality is determined by comparing proposed population growth accommodated by the General Plan Update with the growth that was assumed in attainment plans prepared by the SJVAPCD. These plans include the 2007 Ozone Plan, 2006 PM_{10} Plan, and 2008 $PM_{2.5}$ Plan.

The SJVAPCD's attainment plans for these three pollutants were based on population forecasts from the Kern Council of Governments (Kern COG) 2007 Regional Transportation Plan (RTP), which were incorporated into the SJVAPCD 2007 Ozone Plan. **Table 4.5-8** shows the estimated increase in housing resulting from implementation of the proposed General Plan. **Table 4.5-9** shows the SJVAPCD's 2007 Ozone Plans population estimates for the City of Taft. **Table 4.7-10** compares the data from **Tables 4.5-8** and **4.5-9**.

TABLE 4.5-8
SUMMARY OF EXISTING AND GENERAL PLAN BUILDOUT CONDITIONS

Land Uses	City Only		Planning Area	
	Existing	2035	Existing	Buildout
Residential Units	2,684	13,837	3,354	25,184
Population	9,228	37,374	8,842	68,018
Total Employment[1]	2,553	25,257	2,972	92,334

Note: Buildout projections under the Entire Planning Area include the City.

TABLE 4.5-9
SUMMARY OF 2007 OZONE PLAN POPULATION FORECASTS

Land Uses	City of Taft		
	2010	2020	2030
Households	2,400	2,800	3,300
Population	9,800	11,700	14,000

Source: SJVAPCD 2007 Ozone Plan and Kern COG 2007 RTP. Note: The totals from the Kern COG 2007 RTP were incorporated in the 2007 RTP and 2007 FTIP Air Quality Conformity Analysis.

TABLE 4.7-10
COMPARISON OF GENERAL PLAN 2030 POPULATION FORECASTS WITH 2007 OZONE PLAN FORECASTS FOR THE CITY OF TAFT

Land Uses	2007 Ozone Plan	General Plan	Difference
Households	3,300	11,772	+8,472
Population	14,000	32,162	+18,162

Note: This table compares the City of Taft population in the 2007 RTP to the projected increases in housing and population within the current City limits in the year 2030. This was interpolated using the data in tables 4.5-7 and 4.5-8.

As illustrated here, the General Plan Update would facilitate more growth than the region's 2007 Ozone Plan, 2006 PM_{10} Plan, and 2008 $PM_{2.5}$ Plan attainment plan planned for. Some of the impacts associated with growth can be mitigated by existing and proposed policies in the General Plan Update. For example, the following proposed policies and actions in the updated General Plan would help reduce long-term emissions from growth that does occur:

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policies and action items are intended to directly or indirectly reduce criteria pollutant emissions associated with growth.

Land Use Element

Policy LU-29: Encourage the location, size, scale, and design of neighborhood commercial uses to complement and meet the needs of the surrounding neighborhood.

Policy LU-30: Encourage the provision of pedestrian, bicycle, and other non-motorized access in all neighborhoods.

Policy LU-33: Encourage commercial developments and adjacent land uses to be pedestrian-oriented.

Policy LU-38: To minimize traffic impacts, locate industrial and business activities in areas close to major transportation facilities or include development of transit stop(s) within, or close to, proposed activities.

Policy LU-52: Create a safe and comfortable environment in the Downtown where pedestrians, bicyclists, vehicular traffic, and parking work in harmony.

Circulation Element

Policy CI-2: Require projects subject to discretionary review to minimize vehicle trips.

Open Space and Conservation Element

Policy C-26: Minimize air pollutant emissions from all City facilities and operations consistent with the City's need to provide a high level of public service.

Policy C-27: Incorporate design, construction, and/or operational features to reduce emissions in all development projects which have the potential to result in substantial air quality impacts.

Policy C-28 Support San Joaquin Valley Air Pollution Control District efforts to reduce regional and localized pollutants.

Policy C-29: Development shall comply with the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts.

Policy C-30: Encourage and facilitate the use of railways as an alternative to using trucks to transport materials by preserving existing rights-of-way and investigating the feasibility of increasing general freight traffic by developing additional facilities.

Policy C-31: Support incentives to residents, fleet operators, school districts, and employers to purchase and use alternative fuel or low-emission vehicles as funding sources become available.

Policy C-32: Promote land use policies that minimize public exposure to sources of toxic air contaminants, ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, and lead.

Policy C-33: Ensure that all land use decisions are equitable and protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the adverse health effects of air pollution.

Even with these proposed policies, the rate of growth within the City and the Planning Area exceeds that which is accommodated by the regional attainment plans.

Mitigation Measures

MM 4.5.1 The City of Taft shall ensure that both Kern COG and the SJVAPCD incorporate the updated growth forecasts from the proposed General Plan Update in their upcoming revisions to the region's transportation and ozone attainment plans, respectively.

The coordination with Kern COG and SJVAPCD is designed to ensure that the City's projected growth will not obstruct the regional ozone, PM_{10}, and $PM_{2.5}$ attainment and maintenance plans. However, until such attainment demonstrations can be made that accommodate this level of growth, the General Plan Update could conflict with future attainment plans for the region. This impact is considered **significant and unavoidable**.

Violate Any Air Quality Standard or Contribute Substantially to a Projected Air Quality Violation

Impact 4.5.2 The General Plan Update would allow continued growth in population, housing, and jobs in the City of Taft that would increase traffic volumes on local roadways over time. This would result in elevated CO emissions from motor vehicle congestion that could expose sensitive receptors to elevated CO concentrations. However, based on the projections of traffic congestion, this is not expected to result in exceedances of CO standards. As a result, this is considered to be a **less than significant** impact.

Local mobile-source carbon monoxide emissions near roadway intersections are a function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. Under specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels. These concentrations are also impacted by vehicle delay associated with roadways or intersections. As vehicles speeds slow to LOS E or F, or worsen from a LOS F, CO concentrations are increased, creating a scenario in which localized CO could possibly cause a hotspot (SJVAPCD, 1998).

The proposed General Plan Update could have a significant impact on localized CO concentrations if:

- A traffic study indicates that the level of service (LOS) on one or more streets or at one or more intersections will be reduced to LOS E or F; or
- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or intersections.

If either of the above criteria can be associated with any intersection affected by the project, a CO Protocol Analysis would be needed to determine significance. SJVAPCD has established a preliminary screening protocol that can be used to determine with fair

certainty whether the proposed General Plan buildout would potentially cause a future CO exceedance of federal standards.

However, the modeling conducted for this DEIR projected that the traffic congestion levels in the City of Taft would not result in significant delay or idling that could result in CO violations of ambient air quality standards. In the absence of the need for CO modeling, this impact is considered **less than significant.**

Mitigation Measures

None required.

Create Objectionable Odors

Impact 4.5.3 Implementation of the General Plan Update may result in future siting of land uses that create objectionable odors or expose future sensitive receptors to existing odor sources. This impact is **less than significant**.

Generically, there are several types of projects that could create objectionable odors, including: wastewater treatment plant, sanitary landfill, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing, fiberglass manufacturing, auto body shops, rendering plants, and coffee roasters. These types of land uses are not accommodated by the City's proposed General Plan Update. Nevertheless, impacts resulting from odors can occur when sensitive receptors are located near new odor sources or vice versa. For example, locating residential growth adjacent to existing oil production operations on unincorporated County lands could expose future City residents to odors.

SJVAPCD Rule 4102 governs nuisances for existing or future land uses that produce intermittent odors that adversely affect nearby persons. This is an existing regulation that helps to address existing odor issues. The General Plan Update would also include several key policies that would indirectly limit the potential for siting of incompatible land uses that would generate odors:

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policies and action items are intended to directly or indirectly reduce impacts associated with objectionable odors.

Land Use Element

Policy LU-5: All development projects shall be analyzed in accordance with the provisions of CEQA.

Policy LU-39: Encourage industrial and business activity areas to provide room for expansion and sufficient buffers to prevent incompatibility with surrounding uses.

Open Space and Conservation Element

Policy C-29: Development shall comply with the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts.

The proposed General Plan Update is designed to ensure that development considers environmental constraints and opportunities, existing land uses, the circulation system, and other factors. With implementation of proposed General Plan policies listed above and SJVAPCD Rule 4102, the General Plan Update's impact from the creation of objectionable odors is expected to be **less than significant**.

Mitigation Measures

None required.

Expose Sensitive Receptors to Toxic Air Contaminants

Impact 4.5.4 Implementation of the General Plan Update may result in the siting of future land uses that emit TACs or expose future sensitive receptors to existing TAC sources. This impact is **potentially significant**.

Implementation of the General Plan Update may locate sensitive receptors near potential existing and future sources of TACs, particularly in the Expansion Area that is currently governed by the County's General Plan Land Use Map. The majority of the Expansion Area is currently planned for agricultural, mineral, and petroleum production use, with the remaining areas designated for residential, commercial, industrial and public uses.

The proposed General Plan Land Use Map generally designates the Expansion Area for uses that is generally consistent with those of the County General Plan. Where SR 119 meets I-5, where SR 43 meets I-5, and where SR 43 meets SR 119, the proposed General Plan Update has expanded the commercially designated areas, as compared to the County General Plan. The County General Plan currently designates these areas for agriculture, resource management, and mineral/petroleum production uses. In addition, the proposed General Plan Update expands upon the industrial designations associated with the South Kern Industrial Center Specific Plan to the west, an area that is currently designated by the County General Plan for resource management and agricultural uses.

Some proposed designations that are in conflict with the County General Plan occur in the unincorporated communities of Taft Heights, South Taft, and Ford City, which are located immediately adjacent to the Taft City limits but are currently under Kern County jurisdiction. In the Taft Heights area, the proposed General Plan Update designates the area currently designated by the County for mineral/petroleum production as Medium Density Residential. In the South Taft area, the proposed General Plan Update again

eliminates the mineral/petroleum production uses currently designated by the County and designates the area as Low Density Residential as well as Open Space adjacent to the Public Facility designation, which it maintains. The proposed General Plan also designates the northeastern portion of South Taft as Mixed Use and General Commercial while the County General Plan designates it for service industrial uses. Finally, the proposed General Plan Update designates the Ford City area west of N. Lincoln Street as Mixed Use while the County General Plan designates the area for service commercial and mineral/petroleum production uses. Further, the proposed General Plan eliminates the County's parks/recreation designation in the Ford City area east of SR 119 and designates it as General Commercial.

These changes in land use designation could introduce land use conflicts that expose persons to TACs from industrial or commercial land uses. For example, industrial land uses can produce diesel truck traffic that can generate diesel-based particulate matter that has been designated a TAC by the State. Without mitigation, this impact is therefore potentially significant.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update contains policies that will minimize inappropriate siting of land uses that could expose sensitive receptors to TAC sources or vice versa. Consistent with the SJVAPCD's CEQA Guidelines, proposed policies would support buffer zones around existing and proposed land uses that would emit odors and toxic air contaminants to avoid adverse impacts.

Land Use Element

Policy LU-39: Encourage industrial and business activity areas to provide room for expansion and sufficient buffers to prevent incompatibility with surrounding uses.

Open Space and Conservation Element

Policy C-5: Working in consultation with the Kern County Agricultural Commission and the Kern County Farm Bureau, establish agricultural buffer zones between urban and agricultural land uses. Design buffer zones to address the physical effects of agricultural practices, such as chemical spraying, noise, and odors and to prohibit residential incursion into agricultural areas.

Policy C-7: Encourage cluster development as a means of obtaining open space to be used as a buffer.

Policy C-33: Ensure that all land use decisions are equitable and protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the adverse health effects of air pollution.

Policy C-34: Encourage the mitigation of significant off-site impacts when new residential development and other sensitive receptors are sited adjacent to existing and potential sources of toxic emissions.

Energy Resources Element

Policy E-8: Assure that oilfield development takes place in accordance with regulations administered by the federal Bureau of Land Management (BLM) or the state Division of Oil, Gas, and Geothermal Resources (DOGGR).

Policy E-9: Maintain appropriate zoning on lands that are the subject to active or potential oil extraction.

Policy E-10: Minimize conflicts between mineral and energy resource lands and urban growth.

Implementation of General Plan policies listed above would help ensure adequate buffers between land uses that could expose sensitive receptors to unhealthful levels of TACs or odors. When paired with implementation of AB 2588, impacts of land use designations proposed in the General Plan Update are considered to be less than significant. In addition, incorporation of the following mitigation measures ensures that implementation of the General Plan Update reduce exposure of sensitive receptors to TACs.

Mitigation Measures

MM 4.5.2 Add the following General Plan policy: Residential development projects and projects categorized as sensitive receptors shall be located an adequate distance from existing and potential sources of toxic emissions such as freeways, major arterials, industrial sites, and hazardous material locations. "Adequate distance" will be based on site-specific conditions, on the types and amounts of potential toxic emissions, and other factors.

MM 4.5.3 Add the following General Plan policy: The City shall require new air pollution point sources (such as, but not limited to, industrial, manufacturing, and processing facilities) to be located an adequate distance from residential areas and other sensitive receptors. "Adequate distance" will be based on site-specific conditions, the type and location of sensitive receptors, on the types and amounts of potential toxic emissions, and other factors.

Significance After Mitigation

Incorporation of mitigation measures **MM 4.5.2** and **MM 4.5.3** ensures that implementation of the General Plan Update reduces exposure of sensitive receptors to TACs. Therefore, this impact remains **less than significant**.

Increases in Short-term Construction Emissions

Impact 4.5.5 Implementation of the General Plan Update will lead to development that may expose sensitive receptors to short-term emissions of particulates and contribute to the region's non-attainment status for the PM_{10} standard. This impact is **less than significant**.

The proposed General Plan Update includes new development standards that would allow for future construction of residential, commercial, industrial, and other projects, particularly in the Expansion Area. This will result in construction-related emissions from future projects that would generally be short-term in duration, but may still cause adverse air quality impacts. Inhalable PM_{10} is the pollutant of greatest concern associated with construction activities. PM_{10} emissions can result from construction activities facilitated by the proposed General Plan Update, including excavation, grading, demolition, vehicle travel on paved and unpaved surfaces, and vehicle and equipment exhaust. Particulate emissions from construction activities can lead to adverse health effects as well as nuisance concerns such as reduced visibility and soiling of exposed surfaces.

Construction emissions of PM_{10} can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. **Table 4.5-11** illustrates a profile of construction-related emissions from a hypothetical one-acre development site with moderate grading and construction activities. This table demonstrates that even a 43,560 square foot site can produce substantial emissions of PM_{10} and other criteria pollutants, though there can be great variability in emissions depending upon the amount of earthmoving activities and other similar factors.

TABLE 4.5-11
CONSTRUCTION EMISSIONS FROM TYPICAL ONE-ACRE CONSTRUCTION SITE POUNDS/DAY)

	ROG	NOx	CO	SOx	PM10	PM2.5	CO2
Construction Emissions (2035)							
Fine Grading	2	11	10	0	6	2	2,358
Paving	3	18	17	0	6	2	3,549
Construction	1	4	4	0	0	0	975
Coating	10	0	0	0	0	0	13

Source: URBEMIS 2007 v. 9.2.4 Outputs

SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions) includes several rules that regulate emissions of fugitive particulates by calling for good housekeeping and/or work practices. This would apply to all construction activities associated with future growth.

Proposed General Plan Policies and Action Items that Provide Mitigation

There are two key proposed General Plan policies associated with directly reducing construction emissions. These policies, listed below, directly address air quality and are not intended to represent a comprehensive list of all General Plan policies which can be related to air quality.

Open Space and Conservation Element

Policy C-27: Incorporate design, construction, and/or operational features to reduce emissions in all development projects which have the potential to result in substantial air quality impacts.

Policy C-29: Development shall comply with the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts.

With implementation of the proposed General Plan policies listed above, the potential impact of future construction projects on PM_{10} concentrations is considered **less than significant**.

Mitigation Measures

None required.

Visibility Impacts

Impact 4.5.6 Implementation of the proposed General Plan Update may result in reduced visibility to nearby Class I areas. This impact is **less than significant**.

Implementation of the General Plan Update may result in new major stationary sources that would have the potential to emit NO_x, SO_2 or particulate matter in amounts that could have an adverse impact on visibility in any Class I area. SJVAPCD Rule 2201 (New and Modified Stationary Source Review Rule) requires new and modified stationary sources of emissions to mitigate emissions using best available control technology and to offset emissions when above thresholds.

Proposed General Plan Policies and Action Items that Provide Mitigation

There are three key proposed General Plan policies associated with directly reducing emissions from major stationary sources. These policies, listed below, directly address air quality and are not intended to represent a comprehensive list of all General Plan policies which can be related to air quality.

Open Space and Conservation Element

Policy C-27: Incorporate design, construction, and/or operational features to reduce emissions in all development projects which have the potential to result in substantial air quality impacts.

Policy C-28: Support San Joaquin Valley Air Pollution Control District efforts to reduce regional and localized pollutants.

Policy C-29: Development shall comply with the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts.

With implementation of the proposed General Plan policies listed above, the potential impact of future construction projects on PM_{10} concentrations is considered **less than significant**.

Mitigation Measures

None required.

Valley Fever Impacts

Impact 4.5.7 Implementation of the General Plan Update may result in occurrences of Valley Fever. This impact is **less than significant**.

As discussed above under "Existing Conditions," spores associated with occurrences of Valley Fever are known to exist in soils within the Taft area. Exposure to the spores is generally related to the disturbance of soils during construction or other groundbreaking activities. Although the majority of the proposed Expansion Area would remain under the same land use designations as currently exist under the Kern County General Plan Land Use Map, some land use changes are proposed that could alter the potential for release of the Valley Fever spore.

Where SR 119 meets I-5, where SR 43 meets I-5, and where SR 43 meets SR 119, the proposed General Plan Update would expand the commercially designated areas, as compared to the County General Plan. The County General Plan currently designates these areas for agriculture, resource management, and mineral/petroleum production uses. In addition, the proposed General Plan Update expands upon the industrial designations associated with the South Kern Industrial Center Specific Plan to the west, an area that is currently designated by the County General Plan for resource management and agricultural uses.

As noted above, release of the Valley Fever spore occurs during construction and other groundbreaking activities. In regard to the proposed General Plan Update land use changes, conversion to an expansion of commercial and industrial uses may result in the release of spores during future construction activities at the time of site development. However, given that these areas are currently designated for industrial and agricultural uses,

this land use conversion would likely decrease the potential for release of Valley Fever spores over the existing condition. Mineral/petroleum production uses, as well as agricultural uses, involve ongoing soil disturbance as a part of land use operations. The conversion of the areas discussed above to commercial and industrial land uses, where such soil disturbance would only occur on a temporary, construction-phase basis, would therefore be a **less than significant** impact.

Proposed General Plan Policies and Action Items that Provide Mitigation

In addition, the proposed General Plan Update includes the following policy ensuring compliance with all construction-phase air quality mitigation measures for future proposed projects within the GPU Planning Area:

Open Space and Conservation Element

Policy C-29: Development shall comply with the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts.

With implementation of the proposed General Plan policy listed above, the potential impact of future construction projects on occurrences of Valley Fever is considered **less than significant**.

Mitigation Measures

None required.

4.5.4 CUMULATIVE IMPACT ANALYSIS

AIR QUALITY CUMULATIVE SETTING

The land use policies in the proposed City of Taft General Plan Update would provide direction for growth within the City limits, while the Kern County General Plan policies provides direction for growth outside the City limits, but within the Planning Area boundaries (until land areas are annexed into the City). Thus, the setting for this cumulative analysis consists of the San Joaquin Air Basin (Basin) and associated growth and development anticipated in the Basin (regional anticipated development is described in Section 4.0). This includes consideration of attainment efforts for the Basin under full buildout of the City of Taft General Plan Planning Area as proposed in the General Plan Update (occurring after year 2035), as development in the region identified in Section 4.0 would change the intensity of land uses in the region.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Air Quality Impacts on Attainment Plans

Impact 4.5.8 Implementation of the proposed General Plan Update, in combination with cumulative development in the San Joaquin Valley Air Basin, would contribute to a cumulative air quality impacts and could conflict with ozone and particulate matter attainment efforts. This is considered a **cumulatively considerable** impact.

As described under Impact 4.5.1, subsequent development under the proposed General Plan Update would exceed growth projections used in regional air quality planning and attainment efforts under year 2035 conditions. Buildout of the Planning Area would generate additional emissions beyond 2035 and could further conflict with attainment efforts. This impact is therefore **cumulatively considerable**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following proposed key policies and actions are consistent with best management practices identified by the State's Attorney General and Air Resources Board and would indirectly help mitigate Citywide GHG emissions by reducing activities from several key sources of GHGs, including motor vehicles, water conveyance, waste collection, and energy consumption.

The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Open Space and Conservation Element

Policy C-28; Action C-28a; Action C-28b; Action C-28c

While implementation of the proposed General Plan policies listed above would help reduce particulate matter and ozone precursor emissions associated with future growth, buildout anticipated under the proposed General Plan Update would exceed growth protections used in attainment plan development as well as result in substantial increases in emissions. Thus, this impact is **cumulatively considerable** and **significant and unavoidable**.

Mitigation Measures

No additional feasible mitigation available.

GREENHOUSE GAS AND CLIMATE CHANGE

The California Environmental Quality Act (CEQA) requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval. Emissions of greenhouse gases (GHGs) have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. In turn, global climate change has the potential to cause sea level rise, which can inundate low-lying areas; to affect rain and snow fall, leading to changes in water supply; to affect habitat, leading to adverse affects on biological resources, etc.

As noted previously, cumulative impacts are the collective impacts of one or more past, present, and future projects, that, when combined, result in adverse changes to the environment. When the adverse change is substantial, the cumulative impact is considered significant. The cumulative project list for this issue (global climate) comprises anthropogenic (i.e., man-made) GHG emission sources across the entire globe. No project alone would cause any noticeable incremental change to the global climate. However, legislation and executive orders on the subject of climate change in California have established a statewide context for GHG emissions, and an enforceable statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires the evaluation of the cumulative impacts of GHGs. Even relatively small (on a global basis) additions need to be considered, and small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable (and therefore, significant). Thus, the City of Taft has concluded that GHG emissions require consideration under CEQA.

Existing Climate Setting

To fully understand global climate change it is important to recognize the naturally occurring "greenhouse effect" and to define the greenhouse gases (GHG) that contribute to this phenomenon. The temperature on Earth is regulated by this greenhouse effect, which is so named because the Earth's atmosphere acts like a greenhouse, warming the planet in much the same way that an ordinary greenhouse warms the air inside its glass walls. Like glass, the gases in the atmosphere let in light yet prevent heat from escaping.

GHG are naturally occurring gases such as water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) that absorb heat radiated from the Earth's surface. GHGs carbon dioxide, methane, nitrous oxide, and others – are transparent to certain wavelengths of the sun's radiant energy, allowing them to penetrate deep into the atmosphere or all the way to the Earth's surface. Clouds, ice caps, and particles in the air reflect about 30 percent of this radiation, but oceans and land masses absorb the rest (70 percent of the radiation received from the sun) before releasing it back toward space as infrared radiation. GHG and clouds effectively prevent some of the infrared radiation from escaping; they trap the heat near Earth's surface where it warms the lower atmosphere. If this natural barrier of atmospheric gases were not present, the heat would escape into space, and Earth's average global temperatures could be as much as 61 degrees Fahrenheit cooler (NASA, 2007).

Human activities are exerting a major and growing influence on climate by changing the composition of the atmosphere and by modifying the land surface. Particularly, the increased consumption of fossil fuels (natural gas, coal, gasoline, etc.) has substantially increased atmospheric levels of greenhouse gases because such fuels when burned release GHG. Measured atmospheric levels of certain GHG such as carbon dioxide, methane, and nitrous oxide have risen substantially in recent decades (Miller, 2000). This increase in atmospheric levels of GHG unnaturally enhances the greenhouse effect by trapping more infrared radiation as it rebounds from the Earth's surface, thus trapping more heat near the Earth's surface. Prominent GHGs contributing to the greenhouse effect and climate change include carbon dioxide (CO_2), methane (CH_4), ozone, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). Emissions of these gases are attributable to human activities associated with the industrial/manufacturing, utilities, transportation, residential, and agricultural sectors (California Energy Commission, 2006a).

According to the EPA, the Earth's average surface temperature has increased by about 1.2 to 1.4ºF since 1900. The warmest global average temperatures on record have all occurred within the past 15 years, the warmest two years being 1998 and 2005. Eleven of the last 13 years rank among the hottest years on record (since 1850, when reliable worldwide temperature measurements began) (IPCC, 2007). This warming trend of recent decades is likely the result of human activities. The warming has affected other aspects of the climate, such as rainfall patterns, snow and ice cover, and sea level.

Global Implications

Recognizing the problem of global climate change, the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) established the Intergovernmental Panel on Climate Change (IPCC) in 1988. It is open to all members of the United Nations and WMO. The role of the IPCC is to assess on a comprehensive, objective, open, and transparent basis the scientific, technical, and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation. According to climate models, the IPCC projects that the Earth's average surface temperature should raise 1.8–6.3 ºF before 2100. If the atmospheric concentration of CO_2 doubles from its late 1700s level of 280 parts per million (ppm) to 560 ppm, the most likely rise in temperature would be about 3.6 ºF. This may not seem like a significant increase, yet even at the lowest projected increase of 1.8 ºF, the Earth would be warmer than it has been for 10,000 years (Miller, 2000) and environmental changes are expected to occur as a result.

The IPCC Fourth Assessment Report's Working Group I Summary for Policymakers (Report) synthesizes current scientific understanding of global climate change and projects future climate change using the most comprehensive set of well-established global climate models. The Report incorporates findings of the current effects of global climate change. These findings include:

- The intensity of tropical cyclones (hurricanes) in the North Atlantic has increased over the past 30 years, which correlates with increases in tropical sea surface temperatures.

- Droughts have become longer and more intense and have affected larger areas since the 1970s, especially in the tropics and subtropics.

- Since 1900 the Northern Hemisphere has lost 7 percent of the maximum area covered by seasonally frozen ground.

- Mountain glaciers and snow cover have declined worldwide.

- Satellite data since 1978 show that the extent of Arctic sea ice during the summer has shrunk by more than 20 percent.

Since 1961, the world's oceans have been absorbing more than 80 percent of the heat added to the climate, causing ocean water to expand and contributing to rising sea levels. Between 1993 and 2003, ocean expansion was the largest contributor to sea level rise.

Melting glaciers and losses from the Greenland and Antarctic ice sheets have also contributed to recent sea level rise.

An enhanced greenhouse effect will generate new patterns of microclimate and will have significant impacts on the economy, environment, and transportation infrastructure and operations due to increased temperatures, intensity of storms, sea level rise, and changes in precipitation. Impacts may include flooding of tunnels, coastal highways, runways, and railways, buckling of highways and railroad tracks, submersion of dock facilities, and a shift in agriculture to areas that are more hospitable to crop production. Such prospects will have strategic security as well as transportation implications.

Climate change affects public health and the environment. Increased smog and emissions, respiratory disease, reduction in the state's water supply, extensive coastal damage, and changes in vegetation and crop patterns have been identified as effects of climate change. The impacts of climate change are broad-ranging and interact with other market failures and economic dynamics, giving rise to many complex policy problems. The findings are the latest in a string of reports warning that the rate of carbon dioxide accumulating in the atmosphere is increasing at an alarming pace.

California Implications

Climate change is a global problem, and GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Worldwide, California is the 12th to 16th largest emitter of CO_2 and is responsible for approximately two percent of the world's CO_2 emissions (CEC, 2006a, 2006b). In 2004, California produced 492 million gross metric tons of carbon dioxide-equivalent (CEC, 2006a).

Increased ocean temperature could result in increased moisture flux into the state; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's flood control system. Sea level has risen approximately 7 inches during the last century and, according to the CEC report, it is predicted to rise an additional 22–35 inches by 2100, depending on the future GHG emissions levels (CEC, 2006c). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion, and disruption of wetlands (CEC, 2006c). As the existing climate throughout California changes over time, mass migration of species, or worse, failure of species to migrate in time to adapt to the perturbations in climate, could also result.

According to the California Environmental Protection Agency, the climate changes for global warming could affect agriculture, the fishing industry, California's coastline, forests, and ecosystems, increase air pollution, and energy production (CalEPA, 2002).

Agriculture

Potential impacts, such as reduced water supply, more severe droughts, more winter floods, and drier growing seasons will affect California's agriculture. Many farms, especially in the fruit and nut business, require long-term investments, making fast adaptation difficult, and could thus experience serious losses if decisions continue to be made with no regard to expected climate changes.

Fishing

Studies found that as a result of changes in ocean conditions, the distribution and abundance of major fish stocks will change substantially. Impacts to fisheries related to El Niño/Southern Oscillation illustrate how climate directly impacts marine fisheries on short-term scales. Higher sea surface temperatures in 1997–1998 during the El Niño had a great impact on market squid, California's largest fishery by volume. The California Regional Assessment reports that landings fell to less than 1,000 metric tons in that season, down from 110,000 tons in the 1996–1997 season. Other unusual events also occurred such as poor salmon returns, a series of plankton blooms, and seabird die-offs.

Coastline

With climate changes, recreational facilities and developed coastlines will also be more vulnerable to hurricanes, storm surges, and flooding. Increasing population growth in coastal areas is a reason for further concern, since these areas could be more vulnerable to climate change impacts. Impacts of expected sea level rise and increased storm surges are numerous. Beachfront homes and harbors as well as wetlands may flood. Sewage systems may be overwhelmed by storm runoff and high tides. Jetties and seawalls may have to be raised and strengthened to protect harbors which are used for shipping, recreation, and tourism.

Forests

The California Regional Assessment notes an increase in the number and extent of areas burned by wildfires in recent years, and modeling results under changing climate conditions suggest that fires may be hotter, move faster, and be more difficult to contain under future climate conditions. The factors which contribute to the risk of catastrophic fires (fuel loads, high temperatures, dry conditions, and wind) are typically present already in summer and fall seasons in California, but can exist at other times of the year, especially in drought conditions. Public safety is an issue as more home and tourism developments on coastal hills and mountains, and the foothills and higher elevations in the Sierra Nevada are highly susceptible to catastrophic wildfires.

Ecosystems

The current distribution, abundance, and vitality of species and habitats are strongly dependent on climatic (and microclimatic) conditions. Climate change is expected to result in warmer temperatures year-round, accompanied by substantially wetter winters. Rising sea level will significantly affect coastal wetlands because they are mostly within a few feet of sea level. As the sea rises, these wetlands will move inland. The overall acreage of wetlands will be reduced due to constraints by existing urban development and steeper slopes immediately inland of existing wetlands. Tidal rivers, estuaries, and relatively flat shoreline habitats will be more subject to damage by flooding and erosion. More severe storm surges from the ocean, due to higher sea levels, combined with higher river runoff could significantly increase flood levels by more than the rise in sea level alone. Erosion of beaches would decrease habitat for beach-dependent species, such as seals, shorebirds, and endangered species (for example, snowy plover and least tern).

The timing and amounts of water released from reservoirs and diverted from streams are constrained by their effects on various native fish, especially those that are listed under the federal and state endangered species acts as threatened or endangered. Several potential hydrological changes associated with global climate change could influence the ecology of aquatic life in California and have several negative effects on cold-water fish (Department of Water Resources [hereafter "DWR"] 2006). For example, if climate change raises air temperature by just a few degrees Celsius, this change could be enough to raise the water temperatures above the tolerance of salmon and trout in many streams, favoring instead non-native fishes such as sunfish and carp (DWR 2006). Unsuitable summer temperatures would be particularly problematic for many of the threatened and endangered fish that spend summers in cold-water streams, either as adults, juveniles, or both (DWR 2006). In short, climate change could significantly affect threatened and endangered fish in California. It could also cause non-threatened and non-endangered fish to reach the point where they become designated as such (DWR 2006).

Changes in temperature and precipitation patterns would also shift California's current climate zones, and thus habitats associated with these zones, northward by approximately 100–400 miles, as well as upwards in elevation by 500–1,500 feet. Global climate change would alter the composition, structure, and arrangement of the vegetation cover of the state

(forest and wildland). Species distribution would move geographically as the climate changes, with forest stands, woodlands, and grassland species predicted to move northward and higher in elevation. The entire vegetative community may be affected if non-native invasive species occupy sites and replace native plants. Outbreaks of insects and diseases could compromise forest health and the capability of the forest stands to reproduce and to store carbon on a landscape basis. Forest fires are likely to become more frequent and severe if soils become drier. Changes in pest populations could further increase the stress on forests.

Air Quality

Projected climate changes will impact the quality of California's air, public health, and environment. Higher temperatures increase the formation and retention of ground-level ozone and particulate matter, making it more difficult to meet the health-base air quality standards for these pollutants. Ground-level ozone has been shown to aggravate existing respiratory illnesses such as asthma, reduce lung function, and induce respiratory inflammation. Ambient ozone also reduces agricultural crop yields and impairs ecosystem health.

The particulate matter of most concern – PM_{10} – has a diameter smaller than 10 micrometers and can easily pass into the lungs, contributing to lung tissue damage. PM_{10} has been implicated in exacerbation of cardiovascular disease, asthma, and other respiratory diseases and associated with increased mortality. Air pollution is also made worse by increases in natural hydrocarbon emissions and evaporative emissions of fuels and solvents which lead to higher levels of ozone and PM_{10} during hot weather. Warmer temperatures that cause increased use of air conditioners, which release pollutants, can cause increased air pollutants from power plants meeting cooling energy needs, and from vehicle operation. In addition, warming, drying, and increased winds could mean hotter, harder-to-control wildfires. These wildfires could result in increased levels of fine particulate matter that could also exceed state and federal standards and harm public health.

Electricity Generation

California's electricity generation is currently relatively efficient when it comes to emissions of greenhouse gases. The national average for the electricity generation share of total greenhouse gas emissions is approximately 40 percent, while California electricity accounts for only 16 percent of statewide emissions. This is in part due to California's significant amount of imported electricity, mild climate, and lack of energy-intensive industry. Over the past two decades, California has developed one of the largest and most diverse renewable electricity generation industries in the world. However, changes in climate of the magnitude predicted by the Intergovernmental Panel of Climate Change would substantially affect electricity generation throughout California and the entire western states grid, particularly for hydroelectric facilities.

A decrease in snowpack due to warmer temperatures and less rainfall would result in lower stream levels in the summer and fall seasons due to reduced runoff in those seasons,

reducing hydro-electric capabilities. Additional hydropower may be available during the winter and the spring, but is more useful and valuable within the grid mix of generation sources when it is available throughout the peak summer and fall seasons. Flooding could also impact pipelines, wells, and related petroleum extraction equipment. Warmer weather would result in an increased demand for electricity for cooling appliances in homes and businesses.

Water Supply

While most climate model simulations project relatively moderate changes in precipitation over this century, rising global temperatures are expected to result in reductions in snowpack for the Sierra Nevada Mountains (i.e., precipitation changing in the form of rain from snow). By the 2035 to 2064 period, the Sierra Nevada snowpack could decrease from 12 percent to 40 percent as compared to historic levels (depending on the climate scenario) (Cal/EPA, 2006). The Sierra Nevada Mountains snowpack acts as a natural water storage facility (equal to approximately half of the storage capacity of California's major human-made reservoirs) by holding the winter precipitation and releasing it during the spring and early summer months as the snow melts. The reduction of this natural water storage during the winter could mean water shortages in the future and would require the alteration of the management of existing reservoirs (while not losing flood control capacity or hydropower generation capacity) and/or the construction of additional human-made reservoirs to compensate for this storage loss.

Potential impacts of climate change on water supply and availability could directly and indirectly affect a wide range of institutional, economic, and societal factors (PMC, 2009). Much uncertainty remains, however, with respect to the overall impact of global climate change on future water supplies. For example, models that predict drier conditions (i.e.., parallel climate model [PCM]) suggest decreased reservoir inflows and storage and decreased river flows, relative to current conditions. By comparison, models that predict wetter conditions (i.e., HadCM2) project increased reservoir inflows and storage, and increased river flows (PMC, 2009). Both projections are equally probable based on which model is chosen for the analyses. Much uncertainty also exists with respect to how climate change will affect future demand of water supply (DWR 2006). Still, changes in water supply are expected to occur and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows (PMC, 2009).

Minimal research has been conducted on the effects of climate change on specific groundwater basins, groundwater quality, or groundwater recharge characteristics. Changes in rainfall and changes in the timing of the groundwater recharge season would result in changes in recharge. Warmer temperatures could lead to higher evaporation as well as prolonged drought periods that would reduce the amount of water entering the ground that could further limit deficient water supply conditions. However, warmer and wetter winters could increase the amount of runoff available for groundwater recharge. Additional winter runoff, however, could be occurring at a time when groundwater basins are being recharged

at their maximum capacity. However, the extent to which climate will change and the impact of that change on groundwater are both unknown at this time.

Increased Flooding

Currently, there is no accurate information to accurately assess the impact of climate change for flood frequency or severity, because of the absence of detailed regional precipitation information from climate models and because water-management choices can substantially influence overall flood risk. However, increased amounts of winter runoff could be accompanied by increases in flood event severity and warrant additional dedication of wet season storage space for flood control as opposed to water supply storage. This need to manage water storage facilities to handle increased runoff could in turn lead to water shortages during high water demand. It is recognized that these impacts would result in increased challenges for reservoir management and balancing the competing concerns of flood protection and water supply.

Sudden Climate Change

Most global climate models project that anthropogenic climate change will be a continuous and fairly gradual process through the end of this century (DWR 2006). California is expected to be able to adapt to the water supply challenges posed by climate change, even at some of the warmer and dryer projections for change. Sudden and unexpected changes in climate, however, could leave water managers unprepared and could, in extreme situations, have significant implications for California and its water supplies. For example, there is speculation that some of the recent droughts that occurred in California and the western United States could have been due, at least in part, to oscillating oceanic conditions resulting from climatic changes. The exact causes of these events are, however, unknown, and evidence suggests such events have occurred during at least the past 2000 years (DWR 2006).

REGULATORY FRAMEWORK

State

US EPA - Greenhouse Gases

USEPA is the federal agency responsible for implementing the CAA. Prior to 2007, USEPA did not have regulations addressing GHGs. The U.S. Supreme Court ruled on April 2, 2007, that CO_2 is an air pollutant as defined under the CAA and that USEPA has the authority to regulate emissions of GHGs. However, there are no federal regulations or policies regarding GHG emissions applicable at the time of this writing.

State

Assembly Bill 1493

Assembly Bill (AB) 1493 required that the ARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty truck and other vehicles determined by the ARB to be vehicles whose primary use is noncommercial personal transportation in the state."

Assembly Bill 32, the California Global Warming Solutions Act of 2006

Assembly Bill (AB) 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in, starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Climate Change Proposed Scoping Plan

In October of 2008, ARB published its *Climate Change Proposed Scoping Plan* (*Proposed Scoping Plan*), which is the State's plan to achieve GHG reductions in California required by AB 32 (ARB 2009f). The *Proposed Scoping Plan* contains the main strategies California will implement to achieve reduction of 169 million metric tons (MMT) of carbon dioxide equivalents (CO_2e), or approximately 30% from the state's projected 2020 emission level of 596 MMT of CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10%, from 2002-2004 average emissions). The *Proposed Scoping Plan* also includes ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations are from improving emission standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e), implementation of the Low-Carbon Fuel Standard (15.0 MMT CO_2e), energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e), and a renewable portfolio standard for electricity

production (21.3 MMT CO_2e). ARB has not yet determined what amount of GHG reductions it recommends from local government operations; however, the *Proposed Scoping Plan* does state that land use planning and urban growth decisions will play an important role in the State's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions (ARB is also developing an additional protocol for community emissions). ARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The *Proposed Scoping Plan* states that the ultimate GHG reduction assignment to local government operations is to be determined (ARB 2009f). With regard to land use planning, the *Proposed Scoping Plan* expects approximately 5.0 MMT CO_2e will be achieved associated with implementation of SB 375, which is discussed further below. The *Proposed Scoping Plan* was approved by ARB on December 11, 2008.

Senate Bill 1368

SB 1368 is the companion bill of AB 32. SB 1368 required the California Public Utilities Commission (CPUC) to establish a greenhouse gas emission performance standard for baseload generation from investor owned utilities by February 1, 2007. The California Energy Commission (CEC) established a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the greenhouse gas emission rate from a baseload combined-cycle natural gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and CEC.

California Climate Action Registry

The California Climate Action Registry (CCAR) was established in 2000 by Senate Bill 1771 and modified in 2001 by Senate Bill 527 as a nonprofit voluntary registry for GHG emissions (See Stats. 2000, ch. 1018 (enacting Health & Safety Code, Sections 42800–42870 and Pub. Resources Code, § 25730) and Stats. 2001, ch. 769 (amending Health and Safety Code, Sections 42810, 42821–42824, 42840–42843, 42860, and 42870). The purpose of CCAR is to help companies and organizations with operations in the state to establish GHG emissions baselines against which any future GHG emissions reduction requirements may be applied. CCAR has developed a general protocol and additional industry-specific protocols that provide guidance on how to inventory GHG emissions for participation in the registry.

Senate Bill 97

Senate Bill (SB) 97, signed August 2007, acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA (Stats. 2007, ch. 185 (enacting Pub. Resources Code, Sections 21083.05 and 21097)). This bill directs the State Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions,

as required by CEQA by July 1, 2009. OPR met this requirement when it transmitted proposed guidelines to the Resources Agency in April 2009. The Resources Agency is now required to certify and adopt those guidelines by January 1, 2010. This bill also removes, both retroactively and prospectively, as legitimate litigation causes of action any claim of inadequate CEQA analysis of effects of GHG emissions associated with environmental review for projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1B or 1E). This provision will be repealed by operation of law on January 1, 2010, at which time such projects, if any remain unapproved, will no longer enjoy the protection against litigation claims based on failure to adequately address climate change issues.

Senate Bill 1078

SB 1078 addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum 20 percent of their supply from renewable sources by 2017. SB 1078 changed the target date of this bill's implementation to 2010. This Senate bill would affect statewide GHG emissions associated with electricity generation.

Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

This bill also extends the minimum time period for the Regional Housing Needs Allocation (RHNA) cycle from 5 years to 8 years for local governments located within an MPO that meets certain requirements. City or County land use policies (including General Plans) are not required to be consistent with the RTP (and associated SCS or APS). However, new provisions of CEQA would incentivize qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

Executive Order S-3-05

Executive Order S-3-05 proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further

exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary will also submit biannual reports to the governor and state legislature describing (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created a Climate Act Team (CAT) made up of members from various state agencies and commission. CAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Executive Order S-13-08: The Climate Adaptation and Sea Level Rise Planning Directive1

On November 14, 2008, Governor Arnold Schwarzenegger issued Executive Order (EO) S-13-08 in order to reduce and assess California vulnerability to climate change and sea level rise. The EO initiated four major actions:

1. Initiate California's first statewide climate change adaptation strategy that will assess the state's expected climate change impacts, identify where California is most vulnerable and recommend climate adaptation policies by early 2009;

2. Request the National Academy of Science establish an expert panel to report on sea level rise impacts in California to inform state planning and development efforts;

3. Issue interim guidance to state agencies for how to plan for sea level rise in designated coastal and floodplain areas for new projects; and

4. Initiate a report on critical existing and planned infrastructure projects vulnerable to sea level rise.

5. The EO will provide consistency and clarify to state agencies on how to address sea level rise in current planning efforts.

Thresholds of Significance for GHG Emissions Contributing to Climate Change

On April 13, 2009, the Office of Planning and Research (OPR) submitted to the Secretary for Natural Resources its proposed amendments to the State CEQA Guidelines for

1 California Climate Change Portal, "California Climate Adaptation Strategy", http://www.climatechange.ca.gov/adaptation/index.html

greenhouse gas emissions, as required by Senate Bill 97 (as discussed above). These proposed State CEQA Guideline amendments would provide guidance to public agencies such as the City of Taft regarding the 1) significance analysis and 2) mitigation of the effects of greenhouse gas emissions in draft CEQA documents, such as Environmental Impact Reports. The Natural Resources Agency will conduct formal rulemaking in 2009, prior to certifying and adopting the amendments, as required by Senate Bill 97. Although these amendments have not yet been formally adopted, such adoption is anticipated within the year. Therefore the City of Taft intends to take all feasible and appropriate steps to comply with the proposed GHG amendments to the CEQA Guidelines. Presently, the OPR proposes that lead agencies consider the following when determining the significance of impacts from greenhouse gas emissions (OPR, 2009)[2]:

1. The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

GREENHOUSE GAS AND CLIMATE CHANGE IMPACTS AND MITIGATION MEASURES

Thresholds of Significance

Under CEQA, an environmental impact report must identify and focus on the significant environmental effects of a project. Significant effect on the environment means a substantial, or potentially substantial, adverse change in the environment (Pub. Resources Code, § 21068). CEQA further states that the CEQA Guidelines shall specify certain criteria to be used in determining whether projects would have a significant effect on the environment. However, as of the writing of this EIR, the agencies with jurisdiction over air quality regulation and GHG emissions such as the ARB and the San Joaquin Valley Air Pollution Control District (SJVAPCD) have not established regulations, guidance, methodologies, significance thresholds, standards or analysis protocols for the assessment

2 Proposed CEQA Guidelines, section 15064.4(b)

of GHG emissions and climate change. A standardized, statewide methodology to establish an appropriate baseline, such as a project-level (regional GHG emissions) inventory, to evaluate the significance of GHG emission changes has not yet been established. This places the burden for establishing a methodology, and determining significance standards, on local lead agencies, such as the City of Taft.

Given the challenges associated with determining project-specific significance criteria for this global-scale issue, and the fact that regulatory agencies best suited for developing the methodology have not yet established any criteria, a quantified significance threshold was not used in this EIR.

This EIR provides full disclosure by quantifying GHG emissions that are expected to result from the proposed General Plan Update using the methodologies and strategies employed in the AB 32 Climate Change Proposed Scoping Plan (discussed above). Increases in long-term GHG emissions from motor vehicles were calculated using the ARB's EMFAC 2007 emissions modeling software and emission factors from the ARB's Local Government Protocol (ARB et al, 2008) utilizing data from the Traffic Impact Analysis (Fehr & Peers, 2009). In addition, emissions from area sources were calculated using technical air quality emission factors from ARB paired with activity data (e.g., household, population projections) from the proposed General Plan Update.

The proposed General Plan Update contribution to global climate change would be considered significant if it would:

- Be inconsistent with AB 32's and other related state activities for reducing greenhouse gas emissions from sources associated with projected growth (i.e., motor vehicles, direct energy use, waste-related activities); or

- Expose future development to significant environmental effects associated with the effects of global climate change.

This methodology is appropriate because it discloses as much information about the proposed General Plan Update's impact on climate change and the impact of climate change on the proposed General Plan update as is practicable given reasonably available technical information. This approach quantifies GHG emissions from motor vehicles, a major source category for GHG emissions utilizing ARB-certified emission factors for CO_2. It also relies on ARB's CO_2 emission factors for natural gas energy needs associated with future growth. These estimates are augmented by the State's emission factors for the other five primary greenhouse gases.

Like any methodology for evaluating air quality impacts of a complex project, the methodology for analyzing climate change impacts is limited by three key policy, technical, and practical issues. First, in the absence of any consensus on how to assess impacts of a global phenomenon, the determination of significance is somewhat subjective. Second, any forecast of future GHG emissions is based on today's assumptions about future GHG emission rates from motor vehicles and energy use; as new regulatory and/or technological

changes occur, these estimates could become outdated. Finally, actual GHG emissions for the planning area over time will be a function of actual development and vehicle activity.

PROJECT IMPACTS AND MITIGATION MEASURES ADDRESSING GREENHOUSE GAS EMISSIONS SIGNIFICANCE THRESHOLDS

Conflict or Obstruct with Implementation of Greenhouse Gas Reduction Measures

Impact 4.5.9 Implementation of the proposed project would substantially increase emissions of CO_2e in 2035 over existing (2008) conditions. This increase in GHG emissions would be inconsistent with state efforts to reduce greenhouse gas emissions. This impact is considered to be **cumulatively considerable.**

CO2e emissions associated with growth in the City of Taft's planning area are projected to increase from 2008 to 2035. **Table 4.5-12** illustrates that most of these increases are likely to come from increases in housing associated with the City's population growth. **Table 4.5-13** illustrates the total CO2e vehicle emissions for the planning area. In addition to the CO2e increases shown in these tables, there would also be increases in electricity use, water use, and waste associated with the growth accommodated by the General Plan Update, which would further increase CO_2e emissions. These increases would increase the carbon footprint of Taft in 2035. Even with the proposed policies that would help reduce GHG emissions from motor vehicles and energy use associated with growth, the net increase in emissions will further contribute to climate change and this impact would be **cumulatively considerable**.

TABLE 4.5-12
GREENHOUSE GAS CO_2E EMISSIONS (2008 AND 2035)
(METRIC TONS/YEAR)

	2008 Existing Conditions	2035 General Plan Conditions	Change 2008 to 2035	
			Tons	Percentage
Natural Gas CO_2e Residential Emissions	30,217	126,033	+95,816	+317%

CO_2e emissions rates are based on CARB Local Government Operations Protocol Table C.10, 2008.
Energy emissions based on Urbemis 9.2.4 outputs.

TABLE 4.5-13
MOTOR VEHICLE GREENHOUSE GAS CO_2E EMISSIONS (2035)
(TONS/YEAR)

2035 Conditions	CO_2	CH_4	N_2O	Total CO_2e
Vehicle CO_2e Emissions	1,616,950	608	5,457	1,623,016

CO_2e emissions rates are based on Emfac 2007 outputs. VMT based on the 2009 model outputs by Fehr and Peers. Energy emissions based on Urbemis 9.2.4 outputs.

Implementation of the proposed General Plan Update would implement a number of policies that would complement and be consistent with the State's early action items for implementing AB 32. These measures would be generally consistent with the State's recommended best practices for reducing carbon-based GHG emissions, including the State's AB 32 Early Action Plan, adopted on April 20, 2007, the State released its early action items for implementing AB 32 (CARB, 2007). It was dominated by technology-forcing standards to clean up combustion engines, including on- and off-road engines. As such, the proposed General Plan Update does not conflict with these early action items, as it proposes the following:

The Climate Action Team (CAT) developed a report that "proposes a path to achieve the Governor's targets that will build on voluntary actions of California businesses, local government and community actions, and State incentive and regulatory programs" (CAT 2006). The report indicates that the strategies will reduce California's emissions to the levels proposed in Executive Order S-3-05.

The strategies that apply to the proposed project are contained in **Table 4.5-14**. These strategies are broad in their scope and address a wide range of industries and GHG emission sources. Therefore, most of the strategies are not applicable to the proposed project. Also, for those strategies that are applicable, specific regulations or detailed guidance regarding their implementation is typically not available. Thus, the project's compliance with these measures was evaluated by the City qualitatively with the understanding that exact compliance can only be determined once specifically applicable regulations are adopted. The analysis included in this table focuses on the ability of the General Plan Update to substantially comply with the applicable strategies.

TABLE 4.5-14
PROPOSED GENERAL PLAN UPDATE COMPLIANCE WITH CAT GREENHOUSE GAS EMISSION REDUCTION STRATEGIES

Strategy and Description	Proposed General Plan Update Compliance
California Air Resources Board	
Vehicle Climate Change Standards	Compliant.
AB 1493 (Pavley) required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004.	This measure applies to passenger vehicles and light duty trucks. The City does not manufacture, sale or purchase these vehicles. Vehicles used onsite would be required to comply with applicable State and federal regulations, once implemented. However, following a phase-in period, the majority of the vehicles that access the site would be expected to be in compliance with any vehicle standards that CARB adopts.
Other Light Duty Vehicle Technology	Compliant.
New standards would be adopted to phase in beginning in the 2017 model year	The City does not manufacture, sale or purchase light duty vehicles. Light duty trucks that access the site would be required to be in compliance with applicable State and federal regulations. However, following a phase-in period, the majority of the vehicles that access the site would be expected to be in compliance with any vehicle standards that CARB adopts.
Diesel Anti-Idling	Compliant.
In July 2004, the ARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	Businesses operators in the City would be subject to this requirement. All vehicles, including diesel trucks accessing the site, would be subject to the CARB measures and would be required to adhere to the 5-minute limit for vehicle idling. Additionally, General Plan Update air quality conservation policies and action include consideration of local measures to discourage heavy-duty vehicle idling.
Hydrofluorocarbon Reduction	Compliant.
(1) Ban retail sale of HFC in small cans. (2) Require that only low GWP refrigerants be used in new vehicular systems. (3) Adopt specifications for new commercial refrigeration. (4) Add refrigerant leak-tightness to the pass criteria for vehicular inspection and maintenance programs. (5) Enforce federal ban on releasing HFCs.	Retail uses, businesses and City operations would be subject to this requirement. This strategy is dependent upon CARB adopting regulation measures and enforcing them.
Transportation Refrigeration Units (TRUs), Off-Road Electrification, Port Electrification	Compliant.
Strategies to reduce emissions from TRUs, increase off-road electrification, and increase use of shore-side/port electrification.	Implementation of the General Plan Update does not involve transportation refrigeration units. However, vehicles that access the site that are required to comply with the standards will comply with the strategy.

Strategy and Description	Proposed General Plan Update Compliance
Manure Management	Compliant.
Strategies to reduce volatile organic compounds from confined animal facilities.	Applicable businesses operators in the City would be subject to this requirement. The General Plan Update includes policies that would encourage sustainable agricultural practices that may include such strategies.
Alternative Fuels: Biodiesel Blends	Compliant.
ARB would develop regulations to require the use of 1 to 4% biodiesel displacement of California diesel fuel.	General Plan Update policies and actions call for replacement or conversion of City fleet to low-emission or alternative fuel vehicles, encourages the use of clean fuels and development of Citywide fueling station that distribute clean fuels, and support incentives to residents, fleet operators, school districts, and employers to purchase and use alternative fuel or low-emission vehicles.
Alternative Fuels: Ethanol	Compliant.
Increased use of ethanol fuel.	General Plan Update policies and actions call for replacement or conversion of City fleet to low-emission or alternative fuel vehicles, encourages the use of clean fuels and development of Citywide fueling station that distribute clean fuels, and support incentives to residents, fleet operators, school districts, and employers to purchase and use alternative fuel or low-emission vehicles.
Heavy-Duty Vehicle Emission Reduction Measures	Compliant.
Increased efficiency in the design of heavy-duty vehicles and an education program for the heavy-duty vehicle sector.	Applicable businesses operators in the City would be subject to this requirement. General Plan Update policies and actions for call replacement or conversion of City fleet to low-emission or alternative fuel vehicles, encourages the use of clean fuels and development of Citywide fueling station that distribute clean fuels, and support incentives to fleet operators, school districts, and employers to purchase and use alternative fuel or low-emission vehicles. Additionally, General Plan Update air quality conservation policies and action include consideration of local measures to discourage heavy-duty vehicle idling.
Reduced Venting and Leaks in Oil and Gas Systems	Not Applicable.
Rule considered for adoption by the Air Pollution Control Districts for improved management practices.	
Hydrogen Highway	Compliant.
The California Hydrogen Highway Network (CA H2 Net) is a State initiative to promote the use of hydrogen as a means of diversifying the sources of transportation energy.	General Plan Update policies and actions call for replacement or conversion of City fleet to low-emission or alternative fuel vehicles, encourages the use of clean fuels and development of Citywide fueling station that distribute clean fuels, and support incentives to residents, fleet operators, school districts, and employers to purchase and use alternative fuel or low-emission vehicles.

Strategy and Description	Proposed General Plan Update Compliance
Achieve 50 Percent Statewide Recycling Goal Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy-intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48 percent has been achieved on a statewide basis. Therefore, a 2 percent additional reduction is needed.	Compliant. General Plan Update conservation policies would require facilities in new developments to accommodate and encourage recycling. In addition, General Plan Update conservation policies encourage zero waste for all development.
Landfill Methane Capture Install direct gas use or electricity projects at landfills to capture and use emitted methane.	Compliant. General Plan Update energy resource policies would encourage the use of landfill gas recovery and methane recovery projects.
Department of Forestry	
Urban Forestry A new statewide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs.	Compliant. General Plan Update land use policies call for the development and implementation of an Urban Tree Canopy Master Plan, attaining the status as a Tree City USA, and planting of street trees. The City is also involved in Arbor Day programs and has implemented an on-going tree planting program.
Reforestation Projects Reforestation projects focus on restoring native tree cover on lands that were previously forested and are now covered with other vegetative types.	Compliant. General Plan Update land use policies call for the development and implementation of an Urban Tree Canopy Master Plan, attaining the status as a Tree City USA, and planting of street trees.
Department of Water Resources	
Water Use Efficiency Approximately 19% of all electricity, 30% of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions.	Compliant. The proposed General Plan Update includes conservation policies that call for better water management, conservation, and use of reclaimed water.
Energy Commission (CEC)	
Building Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing	Compliant. Construction and operation of all of the proposed buildings in the City would be required to comply with the energy efficiency standards included in Title 24 of the California Code of Regulations. Title 24 identifies specific energy efficiency requirements for building construction and systems operations

Strategy and Description	Proposed General Plan Update Compliance
buildings).	that are intended to ensure efficient energy usage over the long-term life of the building. General Plan Update energy conservation policies would require public and private development to exceed Title 24 standards by 15 percent.
Appliance Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	Compliant. Construction and operation of all of the proposed buildings in the City would be required to comply with the energy efficiency standards included in Title 24 of the California Code of Regulations. Title 24 identifies specific energy efficiency requirements for building construction and systems operations that are intended to ensure efficient energy usage over the long-term life of the building. General Plan Update energy conservation policies would require public and private development to exceed Title 24 standards by 15 percent.
Cement Manufacturing Cost-effective reductions to reduce energy consumption and to lower carbon dioxide emissions in the cement industry.	Compliant. General Plan Update air quality conservation policies call for incorporating design, construction, and/or operational features to result in the reduction of emissions in all development projects. as well as the existing cement plant in the City.
Municipal Utility Strategies Includes energy efficiency programs, renewable portfolio standard, combined heat and power, and transitioning away from carbon-intensive generation.	Not Applicable.
Alternative Fuels: Non-Petroleum Fuels Increasing the use of non-petroleum fuels in California's transportation sector, as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.	Compliant. General Plan Update policies and actions call for replacement or conversion of City fleet to low-emission or alternative fuel vehicles, encourages the use of clean fuels and development of Citywide fueling station that distribute clean fuels, and support incentives to residents, fleet operators, school districts, and employers to purchase and use alternative fuel or low-emission vehicles.
Business Transportation and Housing	
Smart Land Use and Intelligent Transportation Systems (ITS) Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of	Compliant. The subsequent development would be required to comply with applicable General Plan Update policies that encourage smart land use development. These policies are list further below in the impact discussion. Circulation Policy CI-9 calls for improving transportation operational efficiency.

Strategy and Description	Proposed General Plan Update Compliance
people, goods, and services. Governor Schwarzenegger is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through State investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity, and a quality environment. Smart land use, demand management, ITS, and value pricing are critical elements in this plan for improving mobility and transportation efficiency. Specific strategies include promoting jobs/housing proximity and transit-oriented development; encouraging high-density residential/commercial development along transit/rail corridor; valuing and congestion pricing; implementing intelligent transportation systems, traveler information/traffic control, and incident management; accelerating the development of broadband infrastructure; and comprehensive, integrated, multimodal/intermodal transportation planning.	
Measures to Improve Transportation Energy Efficiency	Compliant.
Builds on current efforts to provide a framework for expanded and new initiatives, including incentives, tools, and information that advance cleaner transportation and reduce climate change emissions.	General Plan Update policies and actions call for replacement or conversion of City fleet to low-emission or alternative fuel vehicles, encourages the use of clean fuels and development of Citywide fueling station that distribute clean fuels, and support incentives to residents, fleet operators, school districts, and employers to purchase and use alternative fuel or low-emission vehicles. Additionally, General Plan Update includes climate change and greenhouse gas conservation policies that encourage a compact urban form and mixed-used develop to become less auto-dependent and reduce potential air pollutants and greenhouse gas emissions.
Department of Food and Agriculture	
Enteric Fermentation	Compliant.
Cattle emit methane from digestion processes. Changes in diet could result in a reduction in emissions.	The General Plan Update includes policies that would encourage sustainable agricultural practices that may include such strategies.
State and Consumer Services Agency	
Green Buildings Initiative	Compliant.
Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels. The Executive Order and related action plan spell out specific actions State agencies are	As discussed above, the General Plan Update would be required through Title 24 requirements. General Plan Update energy conservation policies would require public and private development to exceed Title 24 standards by 15 percent. In addition, General Plan Update green building conservation

Strategy and Description	Proposed General Plan Update Compliance
to take with State-owned and -leased buildings. The order and plan also discuss various strategies and incentives to encourage private building owners and operators to achieve the 20 percent target.	policies call for incorporation of green building practices in the planning, design, construction, management, renovation, operation, and demolition of City facilities and would develop a implementation strategy for a mandatory green building program.
Public Utilities Commission (PUC)	
Accelerated Renewable Portfolio Standard The Governor has set a goal of achieving 33 percent renewables in the State's resource mix by 2020. The joint PUC/Energy Commission September 2005 Energy Action Plan II (EAP II) adopts the 33 percent goal.	Not Applicable.
Investor-Owned Utility This strategy includes energy efficiency programs, combined heat and power initiative, and electricity sector carbon policy for investor owned utility.	Not Applicable.

In June of 2008, the California Governor's Office of Planning and Research (OPR) published a technical advisory entitled "CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review." As a part of this document, OPR included examples of recommended measures that lead agencies may wish to consider to reduce GHG emissions. The recommendations from OPR are contained in **Table 4.5-15**. As with the CAT strategies identified above, the OPR recommendations are broad in their scope and address a wide range of industries and GHG emission sources. Therefore, most of the recommendations are not applicable to the development and operation of any single residential project, but rather as general development policies. Also, for those recommendations that are applicable, specific regulations or detailed guidance regarding their implementation is typically not available. Thus, the proposed project's compliance with these measures was evaluated by the City qualitatively with the understanding that exact compliance can only be determined once specifically applicable regulations are adopted.

TABLE 4.5-15
PROPOSED GENERAL PLAN UPDATE COMPLIANCE WITH
OPR GREENHOUSE GAS EMISSION REDUCTION RECOMMENDATIONS

Recommendation and Description	General Plan Update Compliance
Land Use and Transportation	
Implement land use strategies to encourage jobs/housing proximity, promote transit-oriented development, and encourage high density development along transportation corridors. Encourage compact, mixed-use projects, forming urban villages designed to maximize affordable housing and encourage walking, bicycling and the use of public transit systems,	Compliant. The subsequent development would be required to comply with applicable General Plan Update policies that encourage smart land use development.
Encourage infill, redevelopment, and higher density development, whether in incorporated or unincorporated settings.	Compliant. The subsequent development would be required to comply with applicable General Plan Update policies that encourage smart land use development as well as infill development.
Encourage new developments to integrate housing, civic and retail amenities (jobs, schools, parks, shopping opportunities) to help reduce VMT resulting from discretionary automobile trips.	Compliant. The subsequent development would be required to comply with applicable General Plan Update policies that encourage mixed use development in the City.
Apply advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services.	Compliant. The proposed General Plan Update includes transportation policies to improve and diversify the City's transportation system.
Incorporate features into project design that would accommodate the supply of frequent, reliable and convenient public transit.	Compliant. The subsequent development would be required to comply with applicable General Plan Update policies that encourage smart land use development, infill development, public transportation, pedestrian and bicycle use.
Implement street improvements that are designed to relieve pressure on a region's most congested roadways and intersections.	Compliant. The proposed General Plan Update includes transportation policies to improve and diversify the City's transportation system.
Limit idling time for commercial vehicles, including delivery and construction vehicles.	Compliant. Applicable businesses operators in the City would be subject to this provision. The General Plan Update air quality conservation policies and action include consideration of local measures to discourage heavy-duty vehicle idling.

Recommendation and Description	General Plan Update Compliance
Urban Forestry	
Plant trees and vegetation near structures to shade buildings and reduce energy requirements for heating/cooling.	Compliant. General Plan Update land use policies call for the development and implementation of an Urban Tree Canopy Master Plan, attaining the status as a Tree City USA, and planting of street trees. The City is also involved in Arbor Day programs and has implemented an on-going tree planting program.
Preserve or replace onsite trees (that are removed due to development) as a means of providing carbon storage.	Not Applicable.
Green Buildings	
Encourage public and private construction of LEED (Leadership in Energy and Environmental Design) certified (or equivalent) buildings.	Compliant. General Plan Update green building conservation policies would encourage energy-efficient green buildings at a minimum LEED certification level of Silver. General Plan actions also call for developing an implementation strategy for a mandatory green building program.
Energy Conservation Policies and Actions	
Recognize and promote energy savings measures beyond Title 24 requirements for residential and commercial projects.	Compliant. General Plan Update energy conservation policies would require public and private development to exceed Title 24 standards by 15 percent.
Where feasible, include in new buildings facilities to support the use of low/zero carbon fueled vehicles, such as the charging of electric vehicles from green electricity sources.	Compliant. General Plan Update air quality conservation policies call for incorporating design, construction, and/or operational features to result in the reduction of emissions in all development projects. In addition, General Plan Update policies support the use of alternative-fueled vehicles and the supporting infrastructure.
Educate the public, schools, other jurisdictions, professional associations, business and industry about reducing GHG emissions.	Compliant. The General Plan Update climate change and greenhouse gas conservation policies include measures to increase public awareness about climate change and to encourage residents and business to make lifestyle changes that will reduce greenhouse gas emissions.
Replace traffic lights, street lights, and other electrical uses to energy efficient bulbs and appliances.	Compliant. General Plan Update energy conservation policies would promote energy conservation and efficiency measures including operating City-owned buildings and facilities in an

Recommendation and Description	General Plan Update Compliance
	energy-efficient manner and retrofit City buildings with energy-saving features.
Purchase Energy Star equipment and appliances for public agency use.	Compliant. General Plan Update energy conservation policies would promote energy conservation and efficiency measures including operating City-owned buildings and facilities in an energy-efficient manner and retrofit City buildings with energy-saving features.
Incorporate on-site renewable energy production, including installation of photovoltaic cells or other solar options.	Compliant. General Plan Update policies would minimize obstacles to use of sustainable energy sources and technologies.
Execute an Energy Savings Performance Contract with a private entity to retrofit public buildings. This type of contract allows the private entity to fund all energy improvements in exchange for a share of the energy savings over time.	Compliant. General Plan Update energy conservation policies would promote energy conservation and efficiency measures including operating City-owned buildings and facilities in an energy-efficient manner and retrofit City buildings with energy-saving features.
Design, build, and operate schools that meet the Collaborative for High Performance Schools (CHPS) best practices.	Not Applicable.
Retrofit municipal water and wastewater management systems with energy efficient motors, pumps, and other equipment, and recover wastewater treatment methane for energy production.	Compliant. General Plan Update energy conservation policies would promote energy conservation and efficiency measures including operating City-owned buildings and facilities in an energy-efficient manner and retrofit City buildings with energy-saving features.
Convert landfill gas into energy sources for use in fueling vehicles, operating equipment, and heating buildings.	Compliant. General Plan Update energy resource policies would encourage the use of landfill gas recovery and methane recovery projects.
Purchase government vehicles and buses that use alternative fuels or technology, such as electric hybrids, biodiesel and ethanol. Where feasible, require fleet vehicles to be low emission vehicles. Promote the use of these vehicles in the general community.	Compliant. General Plan Update policies and actions call for replacement or conversion of City fleet to low-emission or alternative fuel vehicles, encourages the use of clean fuels and development of Citywide fueling station that distribute clean fuels, and support incentives to residents, fleet operators, school districts, and employers to purchase and use alternative fuel or low-emission vehicles.
Offer government incentives to private businesses developing buildings with energy and water efficient	Compliant. General Plan Update green building conservation policies

Recommendation and Description	General Plan Update Compliance
features and recycled materials. The incentives can include expedited plan checks and reduced permit fees.	would encourage green buildings and call for developing an implementation strategy for a mandatory green building program that includes performance standards, guidelines, review criteria, and incentives.
Offer rebates and low-interest loans to residents that make energy-savings improvements on their homes.	Not Applicable. The City does not provide loan programs.
Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.	Compliant. The proposed General Plan Update includes policies for the provision of bicycle and pedestrian facilities.
Programs To Reduce Vehicle Miles Traveled	
Offer government employees financial incentives to carpool, use public transportation, or use other modes of travel for daily commutes.	Compliant. The proposed General Plan Update includes transportation and air quality conservation policies to improve and diversify the City's transportation system and minimize air pollutant emissions.
Encourage large businesses to develop commute trip reduction plans that encourage employees who commute alone to consider alternative transportation modes.	Compliant. The proposed General Plan Update includes transportation and air quality conservation policies that encourage the use of alternative models of transportation, efforts to reduce peak travel demand from business, schools and government, and minimize air pollutant emissions..
Develop shuttle systems around business district parking garages to reduce congestion and create shorter commutes.	Not Applicable.
Create an online ridesharing program that matches potential carpoolers immediately through email.	Compliant. The proposed General Plan Update includes transportation policies to reduce peak travel demand from business, schools and government.
Develop a Safe Routes to School program that allows and promotes bicycling and walking to school.	Compliant. The proposed General Plan Update includes transportation policies that encourage the walking and bicycle use and the provision of safe non-motorized travel.
Programs to Reduce Solid Waste	
Create incentives to increase recycling and reduce generation of solid waste by residential users.	Compliant. General Plan Update conservation policies would require facilities in new developments to accommodate and encourage recycling, and encourage zero waste for all development.

Recommendation and Description	General Plan Update Compliance
Implement a Construction and Demolition Waste Recycling Ordinance to reduce the solid waste created by new development.	Compliant. General Plan Update conservation policies would require facilities in new developments to accommodate and encourage recycling, and encourage zero waste for all development.
Add residential/commercial food waste collection to existing greenwaste collection programs.	Not Applicable

Proposed General Plan Policies and Action Items that Provide Mitigation

The following proposed policies and actions that would directly help mitigate Citywide GHG emissions from five key sources, including motor vehicles, energy use, water use, waste, and construction. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Conservation & Open Space Element

Policy C-34 Encourage the use of alternative modes of transportation to reduce the amount of greenhouse gas emissions.

Action C-34a Coordinate with the Kern Council of Governments and local jurisdictions to develop a multi-modal transportation system which allows convenient and efficient use of transportation alternatives and provides multi-modal transfer sites that incorporate auto, bike parking, transit, pedestrian and bicycle paths, as well as park and ride pickup points.

Policy C-35: Encourage the use of alternative modes of transportation to reduce the amount of greenhouse gas emissions.

Policy C-35 Encourage a compact urban form and mixed-use development to become less auto-dependent and reduce potential air pollutants and greenhouse gas emissions.

Action C-35a Amend the Zoning Ordinance to establish development standards for compact and mixed-use development.

Policy C-36 Implement and enforce state and regional regulations pertaining to greenhouse gas emissions and climate change.

Action C-36a Develop a Climate Action Plan by 2011 that lays out a strategy for reducing greenhouse gas emissions over time

that are consistent with AB 32, SB 375, and other requirements.

Action C-36b Monitor effectiveness of implemented programs and adaptively manage emission reduction measures to achieve the goals of the Climate Action Plan.

Action C-36c Collaborate and coordinate with the San Joaquin Valley Air Pollution Control District, Kern Council of Governments, and other stakeholders to promote regional solutions to reducing greenhouse gas emissions that comply with SB 375, AB 32, and other requirements.

Policy C-37 Work to reduce greenhouse gas emissions from its operations, specifically in the sectors of energy, transportation, waste.

Action C-37a Develop a Greenhouse Gas Emissions Baseline Report by 2010 and update the inventory for every five year period beginning with the baseline year.

Policy C-38 Encourage the proper design and mitigation of potential greenhouse gas emissions from proposed development projects.

Policy C-39 Increase public awareness about climate change and encourage residents and businesses to make lifestyle changes that will reduce greenhouse gas emissions.

Policy C-54 Continue participation in the Climate Smart program.

Policy C-40: Increase public awareness about climate change and encourage residents and businesses to make lifestyle changes that will reduce greenhouse gas emissions.

Policy C-41: Support development practices that conserve energy.

Policy C-42: Promote energy conservation and efficiency measures.

Policy C-43: Require public and private development including homes, commercial, and industrial uses to exceed Title 24 of the California Building Code standards by 15 percent.

Policy C-44: Retrofit existing City buildings with energy-saving features, such as insulation, glazing, and fluorescent lighting fixtures, and participate in programs to encourage private property owners to do the same.

Policy C-45: Encourage rehabilitation and reuse of buildings whenever appropriate and feasible to reduce waste, conserve resources and energy, and decrease construction costs.

Policy C-46: Incorporate green building practices into the planning, design, construction, management, renovation, operations, and demolition of all facilities that are constructed, owned, managed, or financed by the City.

Policy C-47: Encourage the conservation and reuse of building materials and resources and promote the use of sustainable recycled and locally sourced materials in development projects.

Policy C-48: Encourage energy-efficient "green buildings" as certified by the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Program at a minimum certification level of Silver or equivalent.

Policy C-49: Continue participation in the Climate Smart program.

Policy C-50: Consider participation in the Bakersfield and Kern County Energy Watch program and any other future programs that encourage energy and/or water conservation.

Policy C-51: Minimize obstacles to energy conservation and encourage use of sustainable energy sources and technologies such as solar and wind while promoting the economic benefits of conservation in its regulation of private activities.

Policy C-52: Employ the best available practices in materials procurement, use, reuse, and recycling, where feasible, and encourage individuals, organizations, and other agencies to do likewise. "Best available practices" means behavior and technologies that, considering available equipment, life-cycle costs, social and environmental side effects, and the regulations of other agencies, use the least amount of newly refined materials for a desired outcome, direct the largest feasible fraction of used materials to future uses, and avoid undesirable effects due to further use of materials.

Policy C-53: Require facilities in new developments to accommodate and encourage recycling.

Policy C-54: Encourage zero waste for all development.

Energy Resources Element

Policy E-19: Encourage the development of sustainable energy sources and alternative energy projects.

Policy E-20: Encourage domestic and commercial solar energy uses.

Policy E-21: Encourage wind energy development where visual and environmental impacts can be mitigated and adequate site analysis is completed.

Policy E-22: Promote a continuing dialogue with wind energy industry representatives to monitor trends in wind energy development and technology.

Policy E-23: Encourage the use of clean technologies in oil and natural gas production.

Implementation of the proposed project would be generally consistent with current state measures to reduce greenhouse gas emissions. However, due to the expected substantial increase in GHG emissions resulting from the growth associated with the proposed General Plan Update, this impact remains **cumulatively considerable** and is considered **significant and unavoidable.**

Mitigation Measures

No further feasible mitigation is available.

Climate Change Environmental Effects on the City

Impact 4.5.10 Implementation of the proposed project could substantially increase emissions of greenhouse gas emissions over existing conditions that could result in environmental effects to the City. This impact is considered to be **less than cumulatively considerable**.

As identified above under the "Climate Setting" discussion, there have several technical studies regarding the environmental effects of climate change on across the Earth as well as California. Several adverse environmental effects have been identified that are projected to impact California over the next century. However, the extents of these environmental effects are still being defined as climate modeling tools become more refined. Potential environmental effects of climate change that could impact the City could include the following (which were previously noted above):

- Adverse impacts on water supply availability;
- Increased severity of flooding events;
- Increased wildland fire hazards;
- Alteration of natural habitats for special-status plant and animal species; and,
- Air quality impacts.

Since considerable uncertainty remains with respect to the overall impact of global climate change California and the City, it is unknown whether these impacts would be significant. This also includes the uncertainty to what degree global climate change may adversely impact future Kern County water supply and availability. However, based on consideration of the recent climate change studies, and based that Kern County Water Agency's surface source is anticipated to largely remain intact (though the form of precipitation in the Sierra Nevada Mountains is expected to come from rain rather than snow), it is reasonably

expected that the impacts of global climate change on the City would be **less than cumulatively considerable**.

Mitigation Measures

None required.

Conflict or Obstruct with Implementation of AB 32

Impact 4.5.11 Implementation of the proposed General Plan Update would increase emissions of CO_2e in 2030 over existing (2008) conditions. This increase in GHG emissions is inconsistent with AB 32's goal of reducing 2020 greenhouse gas emissions to 1990 levels. This impact is considered **cumulatively considerable** and **significant and unavoidable**.

CO_2e emissions associated with growth in the City of Taft's planning area are projected to increase from 2008 to 2030. **Table 4.5.16** illustrates that most of these increases are likely to come from increases in housing associated with the City's population growth. **Table 4.5.17** illustrates the total CO_2e vehicle emissions for the planning area. In addition to the CO_2e increases shown in these tables, there would also be increases in electricity use, water use, and waste associated with the growth accommodated by the General Plan Update, which would further increase CO_2e emissions. These increases would increase the carbon footprint of Taft in 2030. Even with the proposed policies that would help reduce GHG emissions from motor vehicles and energy use associated with growth, the net increase in emissions will further contribute to climate change.

TABLE 4.5-16
GREENHOUSE GAS CO_2E EMISSIONS (2008 AND 2030)
(TONS/YEAR)

	2008 Existing Conditions	2030 General Plan Conditions	Change 2008 to 2030	
			Tons	Percentage
Natural Gas CO2e Residential Emissions	30,217	126,033	+95,816	+317%

CO2e emissions rates are based on CARB Local Government Operations Protocol Table C.10, 2008. Energy emissions based on Urbemis 9.2.4 outputs.

TABLE 4.5-17
MOTOR VEHICLE GREENHOUSE GAS CO_2E EMISSIONS (2035)
(TONS/YEAR)

2035 Conditions	CO2	CH_4	N_2O	Total CO_2e
Vehicle CO_2e Emissions	1,616,950	608	5,457	1,623,016

CO2e emissions rates are based on Emfac 2007 outputs. VMT based on the 2009 model outputs by Fehr and Peers. Energy emissions based on Urbemis 9.2.4 outputs.

Implementation of the proposed General Plan Update would implement a number of policies that would complement and be consistent with the State's early action items for implementing AB 32. These measures would be generally consistent with the State's recommended best practices for reducing carbon-based GHG emissions, including the State's AB 32 Early Action Plan, adopted on April 20, 2007 (CARB, 2007). This Plan was dominated by technology-forcing standards to clean up combustion engines, including on- and off-road engines. This impact is considered **cumulatively considerable** and **significant and unavoidable**.

Proposed General Plan Policies, Objectives and Actions that Provide Mitigation

Policy LU-1 Encourage infill development in the existing urban areas of the Planning Area.

Policy LU-22 Encourage residential developments and adjacent land uses to be pedestrian-oriented.

Action LU-21 During review and approval of development plans, the City should require all residential developments to allow for pedestrian and bicycle connections.

Policy LU-24 New commercial areas are encouraged to cluster in identified areas to prevent and discourage strip commercial development.

Policy LU-27 Encourage commercial infill development in areas that are blighted.

Action LU-26 Initiate incentives such as flexible zoning for commercial infill projects.

Policy LU-31 Encourage commercial developments and adjacent land uses to be pedestrian-oriented.

Action LU-30 During review and approval of development plans, the City should require all commercial developments to provide for pedestrian and bicycle connections.

Policy LU-33 Encourage industrial infill development in areas.

Action LU-32 Initiate incentives such as flexible zoning for industrial infill projects.

Policy LU-40 Promote housing development in upper floors of mixed use developments to bring residents to the downtown area, creating a lifestyle center area.

Policy LU-45 Redevelop under-utilized commercial areas in the Downtown to higher density residential usages and office/commercial uses.

Policy LU-46 Redevelop the railroad property to the south of the Downtown and other properties in and near Downtown as opportunities for redevelopment arise.

Policy LU-62 The City should actively pursue removal or rehabilitation of substandard homes.

Policy LU-65 Encourage residential infill development in neighborhoods.

Action LU-64 Initiate incentives such as flexible zoning for residential infill projects.

Circulation Element

Policy CI-19 The City should encourage the use of transportation alternatives that reduce the use of personal motor vehicles including public transit, bicycles and walking.

Policy CI-20 Transit services should be provided to the entire planning area and should serve the needs of all persons, in particular those without access to private vehicles, the disabled, the elderly, and children.

Policy CI-21 The City should encourage the use of public transit.

Policy CI-22 The City should seek to provide transit service that is effective in attracting and retaining transit riders in areas with identifiable transit needs.

Policy CI-24 The City should require new development to provide safe and convenient access to alternative transportation within the project area and safe access to public transportation.

Policy CI-25 The City should demonstrate leadership in the implementation of programs encouraging the use of alternative modes of transportation by their employees, as well as the use of alternative fuels. Example programs may include:

- Preferential carpool parking and other ridesharing incentives;

- Flexible work hours or telecommuting where consistent with job duties and customer service needs;
- A purchasing program that favors hybrid, electric or alternative fuel vehicles;
- Assisting in the development of demonstration projects for alternative fuel technologies such as ethanol, hydrogen, and electricity;
- Secure bicycle parking; and,
- Transit incentives.

Policy CI-27 Provide for safe and effective bicycle transportation in Taft.

Policy CI-28 Provide a well-integrated trail system in the planning area that addresses bicycle and pedestrian uses consistent with the Bicycle and Pedestrian Trail System Plan.

Policy CI-30 Require provision for safe bicycle circulation in all new developments, including bicycle parking facilities and internal bicycle and pedestrian routes.

Policy CI-31 Provide adequate and secure bicycle storage in governmental, commercial, residential and open space recreational facilities.

Policy CI-35 All new development should be required to provide bike lanes consistent with the Bikeway Master Plan.

Policy CI-37 Widen sidewalks above the minimum Established Improvement Standards where intensive commercial, recreational or institutional activity is present and where residential densities are high.

Policy CI-39 All new developments should provide sidewalks to facilitate pedestrian traffic.

Policy CI-43 Improve the accessibility of and circulation within the Downtown.

Open Space and Conservation Element

Policy C-34 Encourage the use of alternative modes of transportation to reduce the amount of greenhouse gas emissions.

Action C-34a Coordinate with the Kern Council of Governments and local jurisdictions to develop a multi-modal transportation system which allows convenient and efficient use of

transportation alternatives and provides multi-modal transfer sites that incorporate auto, bike parking, transit, pedestrian and bicycle paths, as well as park and ride pickup points.

Policy C-35 Encourage a compact urban form and mixed-use development to become less auto-dependent and reduce potential air pollutants and greenhouse gas emissions.

Action C-35a Amend the Zoning Ordinance to establish development standards for compact and mixed-use development.

Policy C-36 Implement and enforce state and regional regulations pertaining to greenhouse gas emissions and climate change.

Action C-36a Develop a Climate Action Plan by 2011 that lays out a strategy for reducing greenhouse gas emissions over time that are consistent with AB 32, SB 375, and other requirements.

Action C-36b Monitor effectiveness of implemented programs and adaptively manage emission reduction measures to achieve the goals of the Climate Action Plan.

Action C-36c Collaborate and coordinate with the San Joaquin Valley Air Pollution Control District, Kern Council of Governments, and other stakeholders to promote regional solutions to reducing greenhouse gas emissions that comply with SB 375, AB 32, and other requirements.

Policy C-37 Work to reduce greenhouse gas emissions from its operations, specifically in the sectors of energy, transportation, waste.

Action C-37a Develop a Greenhouse Gas Emissions Baseline Report by 2010 and update the inventory for every five year period beginning with the baseline year.

Policy C-38 Encourage the proper design and mitigation of potential greenhouse gas emissions from proposed development projects.

Policy C-39 Increase public awareness about climate change and encourage residents and businesses to make lifestyle changes that will reduce greenhouse gas emissions.

Policy C-54 Continue participation in the Climate Smart program.

Policy C-34 Encourage the use of alternative modes of transportation to reduce the amount of greenhouse gas emissions.

Action C-34a Coordinate with the Kern Council of Governments and local jurisdictions to develop a multi-modal transportation system which allows convenient and efficient use of transportation alternatives and provides multi-modal transfer sites that incorporate auto, bike parking, transit, pedestrian and bicycle paths, as well as park and ride pickup points.

Policy C-35 Encourage a compact urban form and mixed-use development to become less auto-dependent and reduce potential air pollutants and greenhouse gas emissions.

Action C-35a Amend the Zoning Ordinance to establish development standards for compact and mixed-use development.

Policy C-36 Implement and enforce state and regional regulations pertaining to greenhouse gas emissions and climate change.

Action C-36a Develop a Climate Action Plan by 2011 that lays out a strategy for reducing greenhouse gas emissions over time that are consistent with AB 32, SB 375, and other requirements.

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Policy C-38 Encourage the proper design and mitigation of potential greenhouse gas emissions from proposed development projects.

Policy C-39 Increase public awareness about climate change and encourage residents and businesses to make lifestyle changes that will reduce greenhouse gas emissions.

Policy C-54 Continue participation in the Climate Smart program.

Mitigation Measures

Even with the implementation of the proposed General Plan policies, the City's potential carbon footprint is expected to significantly grow through buildout of the General Plan based on the extent of growth within the City and the Expansion Area. These policies address the range of best practices policies recommended by the State's Attorney General. As such, no other feasible mitigation measures exist that could offset the carbon-based emissions anticipated from future growth in the City and the Expansion Area. As a result, the proposed General Plan Update is inconsistent with AB 32's goal of reducing GHG emissions by 2020 to 1990 levels. This impact is considered **cumulatively considerable** and **significant and unavoidable**.

Exposure of Persons to Risks Associated with Climate Change

Impact 4.5.12 Projected growth in the City of Taft and the Expansion Area could contribute to global increases in temperature that could increase exposure to risk related to significant storm events, extreme heat, and flooding resulting from global climate change. The projects and programs in the General Plan Update could expose people and the infrastructure to risk. However, the potential extent and severity of any such risk is speculative, given the unknown nature of potential impacts of climate change on Taft. This impact is considered to be **less than significant**.

Within Taft, increased frequency and intensity of storms due to climate change could lead to subsidence and/or erosion damage to roads, bridges, and other facilities. Low-lying areas would also be at risk from both storm-related flooding. Flooding could also close or damage roadways within the City. Increased exposure to extreme heat episodes is also possible.

These potential impacts are real, given the general concurrence in the scientific community about the potential impacts of climate change on the environment. However, the severity of such impacts is still speculative at this time. Nevertheless, two proposed General Plan policies are intended to help the City and the region reduce potential exposure of people and projects to future impacts of climate change.

Proposed General Plan Policies, Objectives and Actions that Provide Mitigation

The impact of climate change on the General Plan Update and future development in the Planning Area is considered **less than significant**.

Circulation Element

Policy C-34; Action C-34a; Policy C-35; Action C-35a; Policy C-36; Action C-36a; Action C-36b; Action C-36c; Policy C-37; Action C-37a; Policy C-38; Policy C-39; Policy C-54

Mitigation Measures

None required.

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4.6
NOISE

This section of the Draft Environmental Impact Report ("Draft EIR": "DEIR") describes terminology commonly used to describe noise and provides a discussion of the existing noise environment and common noise sources within the City of Taft General Plan Planning Area (Planning Area). Short-term construction and long-term operational noise impacts associated with implementation of the General Plan Update are also analyzed. The information provided in this section is based on a technical assessment by Ambient Air Quality and Noise Consulting, Inc. in 2009, presented in **Appendix 4.6**.

4.6.1 EXISTING SETTING

BACKGROUND AND TERMINOLOGY

Acoustic Fundamentals

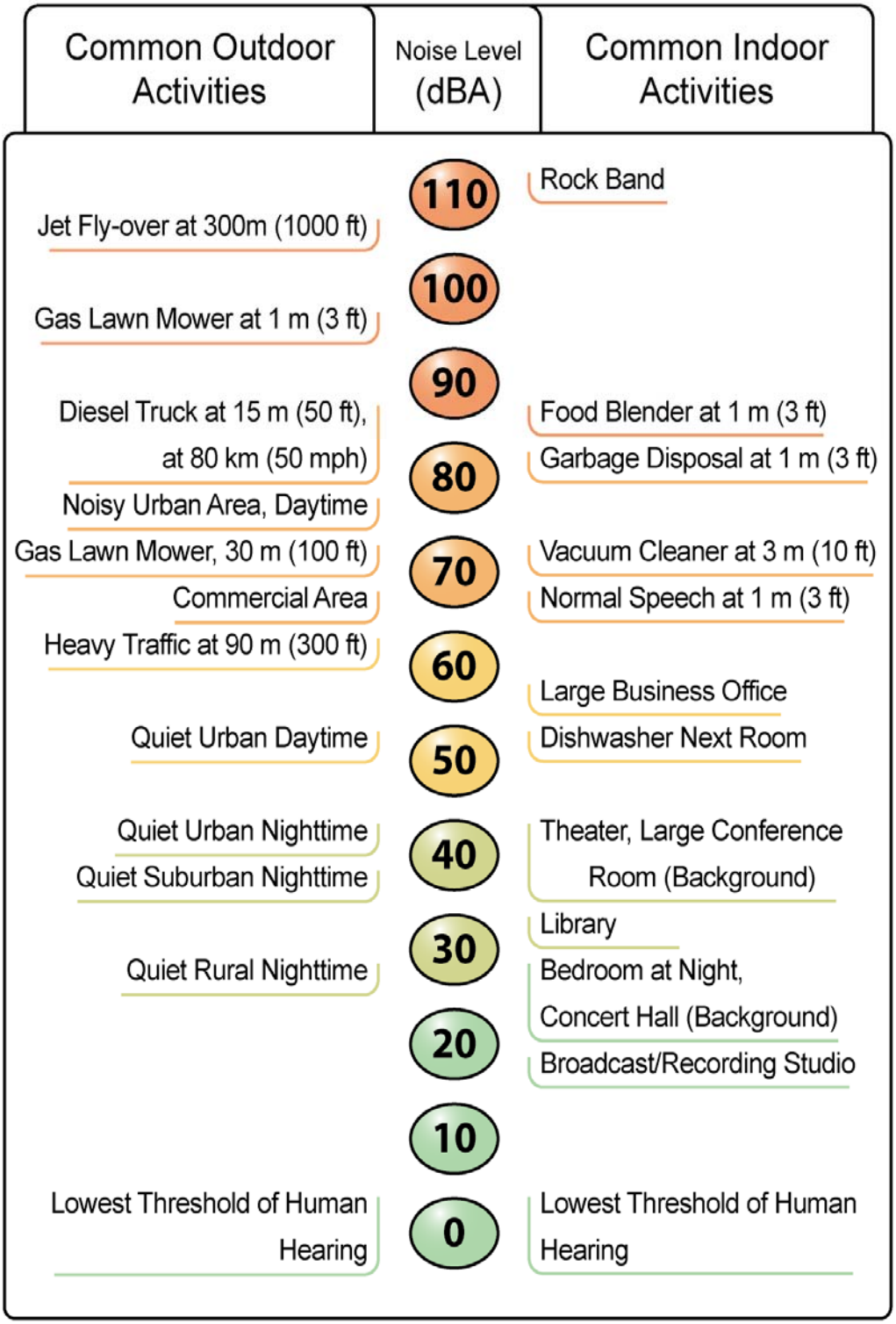
Sound is mechanical energy transmitted in the form of a wave because of a disturbance or vibration. Sound levels are described in terms of both amplitude and frequency.

Amplitude is defined as the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by three dB). Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a three dB change in amplitude as the minimum audible difference perceptible to the average person (Ambient, 2009).

The frequency of a sound is defined as the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. For instance, the human ear is more sensitive to sound in the higher portion of this range than in the lower, and sound waves below 16 Hz or above 20,000 Hz cannot be heard at all. To approximate the sensitivity of the human ear to changes in frequency, environmental sound is usually measured in what is referred to as "A-weighted decibels" (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA (Ambient, 2009).

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. Common community noise sources and associated noise levels, in dBA, are depicted in **Figure 4.6-1**. Noise generated by mobile sources typically attenuates at a rate between 3.0 to 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Mobile transportation sources, such as highways, hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance from the source. Noise generated by stationary sources typically attenuates at a rate of approximately 6.0 to 7.5 dBA per doubling of distance from the source (Ambient, 2009).

FIGURE 4.6-1
TYPICAL COMMUNITY NOISE LEVELS



NOISE DESCRIPTORS

The intensity of environmental noise fluctuates over time, and several descriptors of time-averaged noise levels are used. The three most commonly used descriptors are Leq, Ldn, and CNEL. The energy-equivalent noise level, Leq, is a measure of the average energy content (intensity) of noise over any given period. The Leq metric is commonly applied to measure of the impact of a series of events during a given time period. Many communities use 24-hour descriptors of noise levels to regulate noise. The day-night average noise level, Ldn, is the 24-hour average of the noise intensity, with a 10-dBA "penalty" added for nighttime noise (10:00 p.m. to 7:00 a.m.) to account for the greater sensitivity to noise during this period. CNEL, the Community Noise Equivalent Level, is similar to Ldn but adds an additional five-dBA penalty for evening noise (7:00 p.m. to 10:00 p.m.) Another descriptor that is commonly used is the sound exposure level (SEL). The SEL is a composite metric that represents both the intensity of a sound and its duration. Individual time-varying noise events (e.g., aircraft overflights) have two main characteristics: a sound level that changes throughout the event and a period of time during which the event is heard. SEL provides a measure of the net impact of the entire acoustic event, but it does not directly represent the sound level heard at any given time. Noise analyses may also depend on measurements of Lmax, the maximum instantaneous noise level during a specific period of time, and Lmin, the minimum instantaneous noise level during a specific period. Common noise level descriptors are summarized in **Table 4.6-1.**

TABLE 4.6-1
COMMON ACOUSTICAL DESCRIPTORS

Descriptor	Definition
Energy Equivalent Noise Level (L_{eq})	The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value (in dBA) is calculated.
Minimum Noise Level (L_{min})	The lowest sound level measured during a single event (e.g., an aircraft overflight) in which the sound level changes value with time.
Maximum Noise Level (L_{max})	The highest sound level measured during a single event in which the sound level changes value with time.
Day-Night Average Noise Level (DNL or L_{dn})	The 24-hour L_{eq} with a 10 dBA "penalty" for noise events that occur during the noise-sensitive hours between 10:00 p.m. and 7:00 a.m. In other words, 10 dBA is "added" to noise events that occur in the nighttime hours to account for increases sensitivity to noise during these hours.
Community Noise Equivalent Level (CNEL)	The CNEL is similar to the L_{dn} described above, but with an additional 5 dBA "penalty" added to noise events that occur between the hours of 7:00 p.m. to 10:00 p.m. The calculated CNEL is typically approximately 0.5 dBA higher than the calculated L_{dn}.
Sound Exposure Level (SEL)	SEL is a logarithmic measure of the total acoustic energy transmitted to the listener during the event. Mathematically, it represents the sound level of a constant sound that would, in one second, generate the same acoustic energy as the actual time-varying noise event.

Source: USEPA 1971; Caltrans 2002a

HUMAN RESPONSE TO NOISE

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the bases for land use planning policies preventing exposure to excessive community noise levels.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted, referred to as the "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged. With regard to human response, the following relationships are often relied upon when evaluating noise levels and potential impacts:

- Except in carefully controlled laboratory experiments, a change of one dB cannot be perceived by humans;
- Outside of the laboratory, a three dB change is considered a just-perceivable difference;
- A change in level of at least five dB is required before any noticeable change in community response would be expected. An increase of five dB is typically considered substantial;
- A 10 dB change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response. (Ambient, 2009)

NOISE-SENSITIVE LAND USES

Noise-sensitive land uses are generally considered to include those uses that would result in noise exposure that could cause health-related risks to individuals. Places where quiet is essential are also considered noise-sensitive uses. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. School classrooms, places of assembly (including churches, arenas and stadiums), hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. Other land uses such as parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels. (Ambient, 2009)

NOISE REDUCTION

Various methods can be employed to reduce noise levels, including enclosures, barriers, and sound-damping materials. The methods employed are dependent on various factors, including source and receptor characteristics, as well as environmental conditions. With regard to typical community noise sources, noise-reduction techniques typically focus on the isolation or shielding of the noise source from nearby noise-sensitive receptors. The more common methods include the use of buffers, enclosures, and barriers. In general, these techniques contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise but are less effective than solid barriers. Changes in design specifications and use of equipment noise control devices (e.g., mufflers and silencers) are also commonly employed to reduce stationary-source (i.e., non-transportation) noise levels. Additional noise control techniques commonly used for transportation noise sources include traffic control, such as prohibiting heavy-duty trucks and reducing speed limits along primarily affected corridors. However, an approximate 20 mile-per-hour reduction in speed would typically be required to achieve a noticeable decrease in noise levels. In some instances, the use of noise-reducing p*avements, such as rubberized asphalt,* have also been used to reduce traffic noise (Ambient, 2009).

EXISTING NOISE CONDITIONS IN THE PLANNING AREA

AMBIENT NOISE ENVIRONMENT

Several sources of noise that could affect local residents were identified within the Planning Area in general, but within the City of Taft, specifically. These sources include noise generated from non-transportation sources (e.g., commercial and industrial uses) and vehicle traffic on area roadways and highways. Ambient noise measurements were conducted for the purpose of documenting and measuring the existing noise environment in various areas of the City. These measurements were primarily focused in and around the immediate City limits due to the higher concentrations of residential uses in this area versus the remainder of the Planning Area. Noise measurement surveys were conducted on November 4, 2008. All noise measurements were conducted using a Larson Davis Laboratories, Model 820, Type I sound-level meter placed at a height of approximately 4.5 feet above the ground surface. (Ambient, 2009) Ambient noise measurement locations and corresponding measured values are summarized in **Table 4.6-2**. The noise measurement locations are depicted in **Figure 4.6-2**.

TABLE 4.6-2
AMBIENT NOISE MEASUREMENT SURVEYS

	Location	Monitoring Period	Noise Level (dBA)	
		Time[2]	L_{eq}	L_{max}
1	Cedar St. and Harrison St.	10:15-10:25	60.5	70.4
2	Ford City Park, Cedar St. and Polk St.	10:45-10:55	52.5	66.1
3	Lincoln St. and Birch St.	11:10-11:20	66.8	75.9
4	Kern St. and Cascade Place	11:45-11:55	65.0	74.1
5	South 10th St. and Philippine St.	12:15-12:30	62.1	71.0
6	Taft College, Woodrow St. and 7th St.	12:55-13:05	49.6	60.2
7	Roosevelt School, 6th St. and Warren St.	13:30-13:40	57.8	67.8
8	Veteran's Memorial Park, Williams Way and Kern St.	14:05-14:15	57.6	68.4
9	Franklin Field, East Ash St. and Taft Highway	14:30-14:40	48.1	64.8
10	A Street Park, Hillard St. and "A" St.	15:20-15:30	47.6	64.8
11	Buena Vista St. and General Petroleum Ave.	16:10-16:20	51.4	67.2

(Ambient, 2009)

Noise measurements were conducted using a Larson Davis Laboratories, Model 820 sound-level meter positioned approximately 25 feet from the near-travel-lane centerline of adjacent roadways. Measurement locations correspond to those depicted in ***Figure 4.6-2****.*

dBA = A-weighted Decibel Scale (Frequency weighting that best approximates the response of the human ear.)

L_{eq} = Equivalent (Energy-Average) Noise Level

L_{max} = Maximum Noise Level

T:_CS\Work\Taft, City of\Figures, May 2009

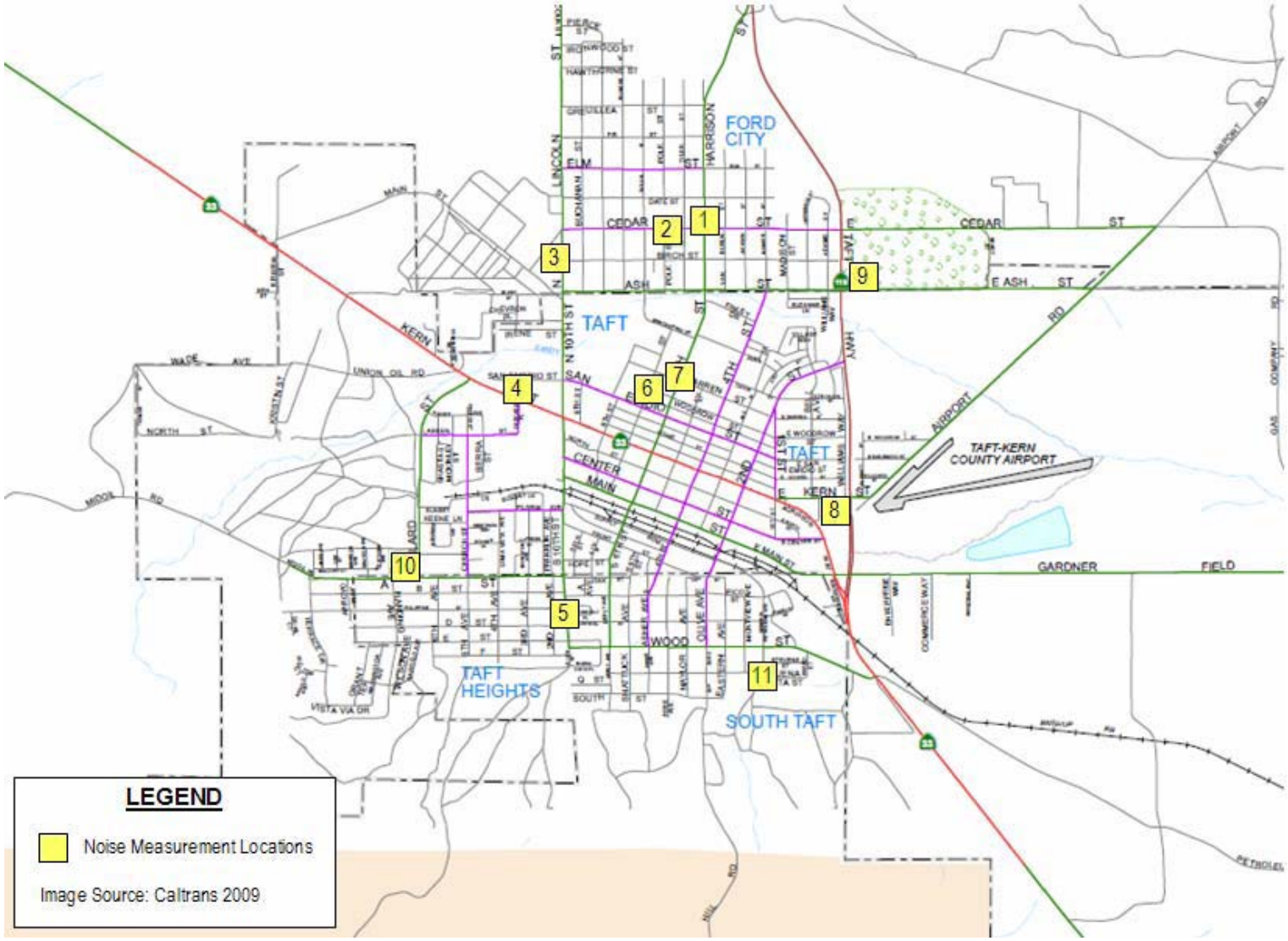


Figure 4.6-2

Ambient Noise Monitoring Locations

PMC®

NOISE SOURCES

Major noise sources located within the City consist of both non-transportation (i.e., stationary) and transportation sources. Noise levels associated with major noise sources are discussed in more detail below.

Non-Transportation Sources

Within the City of Taft, major non-transportation noise sources consist predominantly of industrial and commercial land uses, as well as recreational uses. Many industrial processes produce noise, even when the best available noise control technology is applied. Noise exposures within industrial facilities are controlled by federal and state employee health and safety regulations (i.e., regulations of the Occupational Safety and Health Administration of the U.S. Department of Labor [OSHA] and the California Division of Occupational Safety and Health [Cal-OSHA]). Exterior noise levels that affect neighboring parcels are typically subject to local standards. Commercial, recreational, and public facility activities can also produce noise that may affect adjacent noise-sensitive land uses. These noise sources can be continuous or intermittent and may contain tonal components that are annoying to individuals who live nearby. For instance, emergency-use sirens and backup alarms are often considered nuisance noise sources but may not occur frequently enough to be considered incompatible with noise-sensitive land uses. In addition, noise generation from fixed noise sources may vary based upon climate conditions, time of day, and existing ambient noise levels.

From a land use planning perspective, stationary-source noise control issues focus on two goals: (1) preventing the introduction of new noise-producing uses in noise-sensitive areas; and (2) preventing encroachment of noise-sensitive uses upon existing noise-producing facilities. The first goal can be achieved by applying noise performance standards to proposed new noise-producing uses. The second goal can be met by requiring that new noise-sensitive uses near noise-producing facilities include mitigation measures to ensure compliance with noise performance standards. Each of these goals stresses the importance of avoiding the location of new uses that may be incompatible with adjoining uses. In addition to avoidance, mitigation may also be required.

Noise levels associated with non-transportation noise sources can vary depending on various factors, including site conditions, equipment operated, and the specific activities being conducted. As a result, actual noise levels at nearby noise-sensitive receptors will likely vary depending on the above-mentioned conditions and other influences, such as location, distance from source, shielding provided by intervening terrain and structures, and ground attenuation rates. For these reasons, noise generated by such uses and impacts to nearby noise-sensitive land uses should be evaluated on a project-by-project and site-specific basis.

Non-transportation noise sources within the community consist predominantly of commercial and industrial uses. To a somewhat lesser extent, other non-transportation noise sources include automotive/equipment repair and maintenance facilities, and construction activities. Noise levels associated with some of the more common non-transportation noise sources are discussed in more detail, as follows:

Commercial and Industrial Uses

Industrial land uses within Taft consist predominantly of equipment and supply yards located primarily along major roadway corridors within the southeastern and northwestern portions of the City. Noise sources commonly associated with such uses include truck traffic, loading and unloading activities, and heavy-equipment operation, as well as equipment maintenance and repair activities.

Noise levels are often loudest during periods when use of heavy-duty trucks and off-road equipment are being operated within exterior areas. During periods when heavy-duty equipment and vehicles are being operated, noise levels can reach approximately 80 dBA L_{eq} at 50 feet. Based on this noise level, the predicted 60 dBA L_{eq} noise contour for industrial uses involving the use of heavy-equipment would extend to approximately 525 feet.

Typical automotive and equipment maintenance and repair activities often include the use of pneumatic tools, air compressors, and power generators. Other equipment operations, such as the use of power hand tools (e.g., sanders, drills, grinders, pneumatic wrenches, etc.) typically generate a lesser degree of noise. The use of air compressors, power generators, and pneumatic tools can generate noise levels of up to approximately 85 dBA at 50 feet. Noise levels generated by the use of hand-held tools, such as sanders, drills, and grinders, typically average between 63 and 87 dBA at three feet. Simultaneous use of multiple hand tools, such as grinders being used on metal, can generate levels of 87 to 97 dBA L_{eq} at three feet (Ambient, 2009). Noise levels associated with these facilities would be dependent on the specific activities performed and source/facility characteristics. Assuming an exterior operational noise level of 97 dBA L_{eq} at 3 feet, the 60 dBA L_{eq} noise contour would extend to a distance of approximately 225 feet. (Ambient, 2009)

Other Non-Transportation Noise Sources

Various other non-transportation noise sources can contribute to noticeable increases in ambient noise levels. Such sources would include, but are not limited to, recreational uses or events, particularly those that utilize amplified sound systems (e.g., sporting events, public auctions, animal/vehicle exhibitions), building mechanical systems, and construction activities. Noise generated by such sources is often directional and can vary depending on site and operational characteristics. (Ambient, 2009)

Recreational Events

Recreational events involving large spectator crowds, particularly those involving the use of amplified sound systems, can result in substantial increases in ambient noise levels. Outdoor events that include the use of an amplified sound system and involve relatively small spectator crowds (such as small amphitheaters, auctions, and vehicle/animal exhibitions) can generate noise levels of approximately 70 to 80 dBA L_{eq} at 50 feet from the stage area/speaker locations. Based on these noise levels, the predicted 60 dBA L_{eq} noise contour for such uses would extend to a distance of approximately 525 feet. Noise levels generated by such sources are primarily a

function of the type of performance being provided and can vary substantially depending on the use.

For stadiums that draw large spectator crowds and are equipped with multi-speaker amplified sound systems, predicted exterior noise levels can range from approximately 57 to 72 dBA L_{eq} at approximately 500 feet during recreational events. Outdoor musical and band performances, such as marching band performances during half-time and pregame shows, have measured approximately 57 to 76 dBA L_{eq} at 500 feet. Predicted noise levels at stadiums are dependent on various factors including stadium design and orientation, the activities conducted, spectator crowd size, and type of public address (PA) amplification system installed, as well as speaker placement. Depending on such factors, the predicted 60 dBA L_{eq} noise contour for larger stadiums would extend to distances ranging from approximately 370 to 2,500 feet. (Ambient, 2009)

Building Mechanical Systems

The majority of electrical and mechanical equipment in buildings is used for air circulation systems. In addition, pumping and piping systems are used for water and fluid circulation, elevators and escalators are used for movement of personnel, and various conveyance systems are used for moving material. Much of this equipment is located in mechanical equipment rooms or in areas that provide shielding from direct public/personnel exposure (i.e., above ceilings, in walls, or behind enclosures.) Equipment located within exterior areas can result in increases in ambient noise levels, particularly when located in unshielded areas and within line of sight of nearby receptors. Such equipment would include air-conditioning units, cooling towers, compressors, fans/turbines, electrical transformers, chillers, and pumps. Noise levels associated with these sources can vary depending on the specific equipment being operated, facility/equipment design, and operational characteristics. Typical noise levels associated with building mechanical equipment can range from less than 50 to 110 dBA at three feet, with the highest noise levels reaching approximately 85 dBA L_{eq} at 50 feet from the source (Ambient, 2009.) Assuming an exterior operational noise level of 85 dBA L_{eq} at 50 feet, the 60 dBA L_{eq} noise contour would extend to a distance of approximately 930 feet.

Construction Activities

Construction noise typically occurs intermittently and varies depending upon the nature or phase (e.g., demolition/land clearing, grading and excavation, erection) of construction. Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. The U.S. Environmental Protection Agency (USEPA) has found that the noisiest equipment types operating at construction sites typically range from 88 dBA to 91 dBA L_{eq} at 50 feet. Typical operating cycles may involve two minutes of full power, followed by three or four minutes at lower settings. Although noise ranges were found to be similar for all construction phases, the building construction phase tended to be less noisy (i.e., 79 dBA to 88 dBA L_{eq} at 50 feet), when compared to the initial site preparation and grading phases (Ambient, 2009).

Transportation Sources

Taft-Kern County Airport

The Taft-Kern County Airport is a general aviation airport owned and operated by the County of Kern. The airport covers approximately 71 acres located along the eastern boundary of the City. A majority of aircraft utilizing this airport are operated between the daytime hours of 7:00 a.m. to 7:00 p.m. Surrounding land uses consist predominantly of open land and oil fields to the east and north, mixed urban uses to the west, and commercial and industrial uses to the south of the airport (Kern County, 2004). Additionally, there are parks and ball fields to the north and industrial uses to the northeast.

Noise concerns typically associated with airports include increased levels of annoyance and interference with personal activities such as sleeping, conversing, relaxing, or watching television. While individual responses to noise can vary, various methods and noise descriptors have been developed in an attempt to correlate aircraft noise levels with land use compatibility and community reaction. The CNEL descriptor is most commonly used to evaluate aircraft noise levels with respect to land use compatibility.

Noise that emanates away from airports and airplane flight paths is typically represented by concentric noise contours around the airport. The contours help to define zones where land use is restricted to protect persons on the ground from the detrimental effects of exposure to excessive aircraft noise. The contours are constructed using noise samples from around the airport, combined with specific computer noise models which indicate the location of each contour line. These noise contours take into account the flight path, the number, time of day, and frequency of aircraft operations, as well as variations in monthly and seasonal flight schedules. The result is a 24-hour day-night average noise contour, depicted in CNEL. Because the CNEL noise metric is time weighted to take into account noise events that occur during the more noise-sensitive periods of the day, this metric is typically used for the analysis of land use compatibility with aircraft operations.

The predicted existing 60 dBA CNEL noise exposure contour for Taft Airport is depicted in **Figure 4.6-3**. Actual noise levels will vary from day to day, dependent on a number of factors, including traffic volumes, shielding from existing structures, variations in attenuation rates due to changes in surface parameters, and meteorological conditions. It is also important to note that the noise contour does not take into account shielding or reflection of noise from existing structures. As depicted in **Figure 4.6-3**, the predicted 60 dBA CNEL noise contour for the airport does not extend beyond the airport boundary. In general, noise is a significant concern only a short distance west of the runway (Kern County, 2004).

Depending on factors such as the distribution or types of aircraft operated, use of the CNEL noise descriptor may be insufficient for the full assessment of noise impacts. For this reason, although CNEL contours are considered adequate for general land use planning purposes, they may not be adequate for review of individual land use projects. For the analysis of noise impacts of limited duration, such as aircraft overflights, the SEL descriptor is typically used. To date, criteria regarding acceptable SEL are typically based on physiological effects, such as speech or

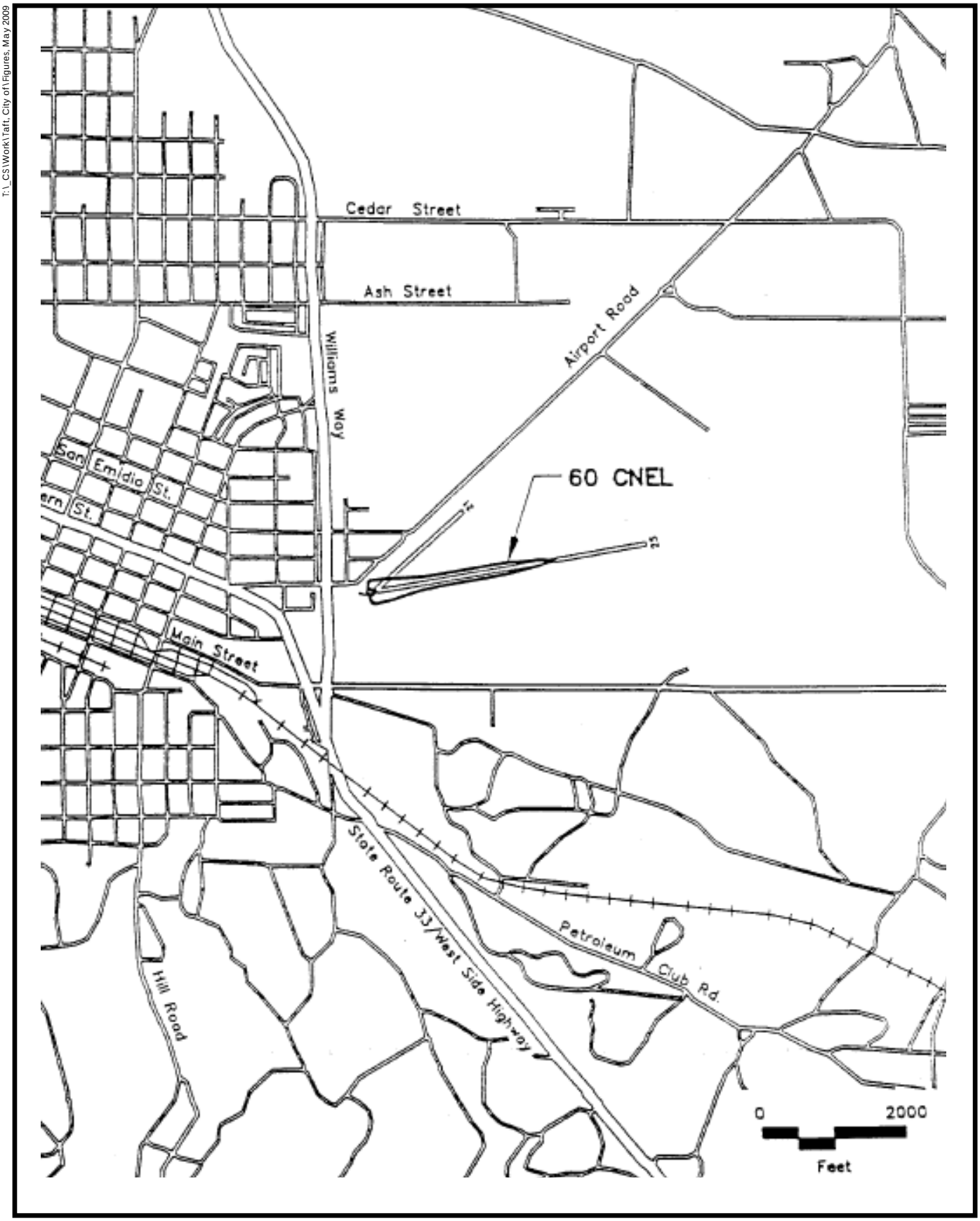
sleep interference, rather than land use compatibility. The Federal Aviation Administration (FAA) has suggested that the threshold for speech interference is 60 dBA. However, the FAA has not provided guidance indicating what number or duration of events exceeding this threshold should be considered significant. Similarly, studies prepared on behalf of the Federal Interagency Committee on Aviation Noise have provided estimates of the percentage of people expected to be awakened when exposed to specific single-event noise levels inside a home. However, no determination as to what frequency of disturbance would be considered acceptable has been made. The noise threshold at which sleep disruption occurs is considered higher than for speech interference, with only 10 percent of people awakened at 80 dBA SEL (Ambient, 2009).

Roadway Traffic

Ambient noise levels in many portions of the City are defined primarily by traffic on major roadways, including State Routes (SR) 33 and SR 119. The FHWA Highway Traffic Noise Prediction model (FHWA-RD-77-108) was used to predict traffic noise levels along major area roadways. The FHWA modeling was based upon the Calveno noise emission factors for automobiles and medium and heavy-duty trucks. Input data used in the model included average-daily traffic volumes, day/night percentages of automobiles and medium and heavy trucks, vehicle speeds, ground attenuation factors, and roadway widths. Traffic volumes were derived from the traffic analysis prepared for this project. Vehicle distribution percentages were based on traffic data obtained during the site reconnaissance conducted for this project, as well as heavy-duty truck distribution percentages for major highways obtained from the California Department of Transportation (Ambient, 2009).

Predicted traffic noise levels for roadway segments within the City, including distances to the predicted 60, 65, and 70-dBA L_{dn}/CNEL noise contours, are summarized in **Table 4.6-3**. Predicted noise contours do not include shielding or reflection of noise due to intervening terrain or structures. As a result, predicted noise contours should be considered to represent bands of similar noise exposure along roadway segments, rather than absolute lines of demarcation. Although these predicted noise contours are not considered site-specific, they are useful for determining potential land-use conflicts.

T:_CS\Work\Taft, City of\Figures, May 2009



N

Figure 4.6-3

Existing Noise Exposure Contour – Taft-Kern County Airport

PMC®

TABLE 4.6-3
EXISTING TRAFFIC NOISE LEVELS

Roadway Segment	ADT	CNEL at 50 Feet from Near Travel-lane Centerline	Distance (feet) From Roadway Centerline to CNEL Contour		
			70	65	60
State Route 33, SR 166 to Petroleum Club Road	6,700	70.64	62	132	285
State Route 33, Petroleum Club Road to Cadet Road	6,700	70.64	62	132	285
State Route 33, Cadet Road to SR 119	6,700	69.84	55	117	252
State Route 33, SR 119 to First Street	5,800	62.67	--	--	84
State Route 33, First Street to Sixth Street	9,400	63.69	--	57	117
State Route 33, Sixth Street to Tenth Street	13,000	65.10	--	69	145
State Route 33, Tenth Street to Midway Road	13,800	67.84	--	103	219
State Route 119, SR 33 to East Kern Street/SR 33	5,400	69.14	--	105	226
State Route 119, East Kern Street/SR 33 to Second Street	5,900	68.45	55	113	240
State Route 119, Second Street to Harrison Street	7,300	71.23	68	145	312
State Route 119, Harrison Street to Midway Road	13,200	73.80	100	215	463
State Route 119, Midway Road to Elk Hills Road	13,200	73.80	100	215	463
State Route 119, Elk Hills Road to Airport Road	13,200	73.80	100	215	463
State Route 119, Airport Road to Valley West Road	13,200	73.80	100	215	463
State Route 119, Valley West Road to Tupman Road	13,200	73.80	100	215	463
State Route 119, Tupman Road to SR 43	13,000	73.73	99	213	458
State Route 119, SR 43 to Interstate 5	8,600	71.94	75	162	348
State Route 166, Interstate 5 to Old River Road	3,400	70.65	62	133	286
Old River Road, SR 166 to Copus Road	5,723	66.66	--	72	155
Midway Road, SR 119 to Lincoln Street	5,214	66.26	--	68	146
Lincoln Street, Midway Road to Ash Street	6,830	64.15	--	60	125
Lincoln Street, Ash Street to SR 33	9,700	62.99	--	--	105
Interstate 5, SR 166 to Old River Road	35,500	81.04	357	769	1,656
Interstate 5, Old River Road to SR 223/Bear Mountain Boulevard	36,500	81.16	364	784	1,687
Interstate 5, SR 223/Bear Mountain Boulevard to SR 119	43,000	81.87	406	874	1,882
Interstate 5, State Route 119 to SR 43	43,000	81.87	406	874	1,882

Noise levels/contours were calculated using the FHWA roadway noise model based on Calveno vehicle reference noise levels and traffic data obtained from the traffic analysis prepared for this project. Refer to ***Appendix 4.6*** *for modeling output files.*

-- Contours are within roadway right-of-way

4.6.2 REGULATORY FRAMEWORK

Federal, state, and local governments have established noise standards and guidelines to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise. Those regulations most applicable to the community are summarized below.

FEDERAL

Federal Aviation Administration

As a means of implementing the Aviation Safety and Noise Abatement Act of 1979, the Federal Aviation Administration adopted regulations that established a voluntary program which airports can utilize to conduct airport noise compatibility planning. These compatibility planning studies are often referred to as "Part 150" studies. Part 150 includes a system for measuring airport noise impacts and presents guidelines for identifying incompatible land uses. Airports which choose to undertake a Part 150 study are eligible for federal funding both for the study itself and for implementation of approved components of the local program.

The noise exposure maps included in Part 150 studies are depicted in terms of average-daily noise contours (i.e., L_{dn} or CNEL) around the airport. For the purposes of federal regulations, all land uses are considered compatible within areas with noise levels of less than 65 dBA L_{dn}. At higher noise exposures, selected land uses are also deemed acceptable, depending upon the nature of the use and the degree of structural noise attenuation provided. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses (Ambient, 2009).

U.S. Environmental Protection Agency

In 1974, the USEPA Office of Noise Abatement and Control published a report entitled Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Although this document does not constitute USEPA regulations or standards, it is useful in identifying noise levels at which increased levels of annoyance would be anticipated. Based on an annual-average day-night noise level (expressed as L_{dn} or DNL), the document states that "undue interference with activity and annoyance" will not occur if outdoor noise levels in residential areas are below 55 dBA L_{dn} and indoor levels are below 45 dBA L_{dn} (USEPA, 1974).

Department of Housing and Urban Development

The Federal Department of Housing and Urban Development (HUD) guidelines for the acceptability of residential land uses are set forth in the Code of Federal Regulations, Title 24, Part 51, "Environmental Criteria and Standards." These guidelines identify a noise exposure of 65 dBA L_{dn}, or less, as acceptable. Noise levels of 65 to 75 dBA L_{dn} are considered normally acceptable, provided appropriate sound attenuation is provided to reduce interior noise levels to

within acceptable levels. Noise levels above 75 dBA L_{dn} are considered unacceptable. The goal of the interior noise levels is 45 dBA L_{dn}. These guidelines apply only to new construction supported by HUD grants and are not binding upon local communities (Ambient, 2009).

STATE

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land use compatibility criteria.

California Building Code

Title 24 of the California Code of Regulations contains standards for allowable interior noise levels associated with exterior noise sources (California Building Code, 1998 edition, Volume 1, Appendix Chapter 12, Section 1208A). The standards apply to new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family residences. The standards state that the interior noise level attributable to exterior sources shall not exceed 45 dBA in any habitable room. Proposed residential structures to be located where the CNEL/L_{dn} exceeds 60 dBA shall require an acoustical analysis showing that the proposed building design would achieve the prescribed allowable interior noise standard. Worst-case noise levels, either existing or future, shall be used as the basis for determining compliance with these standards (Ambient, 2009

State of California General Plan Guidelines

The State of California General Plan Guidelines (State of California 1998), published by the Governor's Office of Planning and Research (OPR), also provides guidance for the acceptability of projects within specific noise environments. Based on these guidelines, residential uses, churches, libraries, and hospitals are normally unacceptable in areas exceeding 70 dBA CNEL and conditionally acceptable between 60 and 70 dBA CNEL. Professional and commercial office buildings are normally unacceptable in areas exceeding 75 dBA CNEL and conditionally acceptable between 67 and 77 dBA CNEL. However, the state stresses that these guidelines can be modified to reflect communities' sensitivities to noise. Adjustment factors may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

California Airport Noise Regulations

The airport noise standards promulgated in accordance with the State Aeronautics Act are set forth in Section 5000 et seq. of the California Code of Regulations (Title 21, Division 2.5, Chapter 6). The current version of the regulations became effective in March 1990. In Section 5006, the regulations state that "The level of noise acceptable to a reasonable person residing in the vicinity of an airport is established as a community noise equivalent level (CNEL) value of 65 dBA for purposes of these regulations. Noise-sensitive land uses (i.e., residential dwellings, schools, hospitals and convalescent homes, and places of worship) that are located within the 65

dBA CNEL noise contour would be considered incompatible, unless mitigation has been incorporated. This criterion level has been chosen for reasonable persons residing in urban residential areas where houses are of typical California construction and may have windows partially open. It has been selected with reference to speech, sleep and community reaction" (Ambient, 2009).

LOCAL

Kern County Airport Land Use Compatibility Plan

The Kern County Airport Land Use Compatibility Plan (ALUCP) was initially adopted in September 1996 and most recently updated in November 2008. The ALUCP was established to ensure that there are no direct conflicts with land uses, noise, or other issues that would impact the functionality and safety of airports located within the County, including the Taft-Kern County Airport. The ALUCP requires that City and County general plans and zoning ordinances are consistent with Airport Environs Land Use Plans, which contain noise contours, restrictions for types of construction and building heights in navigable air space, as well as requirements impacting the establishment or construction of sensitive uses within close proximity to airports.

Kern County General Plan

The existing Kern County General Plan was adopted in March of 2007. Key General Plan policies regarding cultural resources that are applicable to the Planning Area outside of the City limits include:

Noise Element

Policy 1: Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.

Policy 2: Require noise level criteria applied to all categories of land uses to be consistent with the recommendations of the California Division of Occupational Safety and Health (DOSH).

Policy 3: Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise.

Policy 4: Utilize good land use planning principles to reduce conflicts related to noise emissions.

Policy 5: Prohibit new noise-sensitive land uses in noise-impacted areas unless effective mitigation measures are incorporated into the project design. Such mitigation shall be designed to reduce noise to the following levels:

a) 65 dB L_{dn} or less in outdoor activity areas;

b) 45 dB L_{dn} or less within interior living spaces or other noise sensitive interior spaces.

Policy 6: Ensure that new development in the vicinity of airports will be compatible with existing and projected airport noise levels as set forth in the ALUCP.

Policy 7: Employ the best available methods of noise control.

Policy 8: Enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code concerning the construction of new multiple-occupancy dwellings such as hotels, apartments, and condominiums.

Implementation Measure A: Utilize zoning regulations to assist in achieving noise-compatible land use patterns.

Implementation Measure B: Require proper acoustical treatment of transportation facilities, including highways, airports, and railroads.

Implementation Measure C: Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policies outlined in this element.

Implementation Measure D: Review discretionary development plans for proposed residential or other noise sensitive land uses in noise-impacts areas to ensure their conformance with the noise standards of 65 dB L_{dn} or less in outdoor activity areas and 45 dB L_{dn} or less within interior living spaces.

Implementation Measure E: Review discretionary development plans to ensure compatibility with adopted Airport Land Use Compatibility Plans.

Implementation Measure F: Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise sensitive land uses to exterior noise levels in excess of 65 dB L_{dn} and interior noise levels in excess of 45 dB L_{dn}.

Implementation Measure G: At the time of any discretionary approval, such as a request for a General Plan Amendment, zone change or subdivision, the developer may be required to submit an acoustical report indicating the means by which the developer proposes to comply with the noise standards. The acoustical report shall:

a) Be the responsibility of the applicant.

b) Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.

c) Be subject to the review and approval of the Kern County Planning Department and the Environmental Health Services Department. All recommendations therein shall be complied with prior to final approval of the project.

Implementation Measure H: Encourage cooperation between the County and the incorporated cities within the County to control noise.

Implementation Measure I: Noise analyses shall include recommended mitigation, if required, and shall:

a) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.

b) Include estimated noise levels, in terms of CNEL, for existing and projected future (10-20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.

c) Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.

d) Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.

Implementation Measure J: Develop implementation procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are conducted as part of the project permitting process.

City of Taft Municipal Code

The City of Taft Municipal Code regulates loud, unnecessary, and disturbing noise from various sources within the City. The City's Municipal Code does not, however, include specific noise standards for noise sources, nor does the Municipal Code identify specific hourly limitations for construction-related activities (City of Taft, 2009). However, the City has adopted the Uniform Building Code, which is largely identical to the California Building Code.

4.6.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A noise impact is considered significant if implementation of the General Plan Update would:

- Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies.
- Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- Expose people residing or working in the project area to excessive noise levels for a project located within an airport land use plan area or, where such a plan has not been adopted, or within two miles of a public airport or a public use airport.
- Expose people residing or working in the project area to excessive noise levels for a project within the vicinity of a private airstrip.

METHODOLOGY

A combination of use of existing literature and general application of accepted noise thresholds were used to determine the impact of ambient noise levels resulting from and on development within the project area. Short-term and long-term impacts associated with transportation and non-transportation noise sources were qualitatively assessed based on potential increases in ambient noise levels anticipated to occur at noise-sensitive land uses. Traffic noise levels along major area roadways were estimated using the FHWA Highway Traffic Noise Prediction model (FHWA-RD-77-108.) The FHWA modeling was based upon the Calveno noise-emission factors for automobiles and medium and heavy-duty trucks. Input data used in the model included average-daily traffic volumes, day/night percentages of automobiles and medium and heavy trucks, vehicle speeds, ground attenuation factors, roadway widths, and ground elevation data. Traffic volumes were derived from the traffic analysis prepared for this project. Roadway data and vehicle distribution percentages were based on traffic data obtained during the site reconnaissance conducted for this project, as well as heavy-duty truck distribution percentages for major highways obtained from the California Department of Transportation (Caltrans). For

purposes of this analysis, significant increases in ambient noise levels would be defined as an increase of 3 dBA, or greater.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

PROJECT IMPACTS AND MITIGATION MEASURES

Exposure to Construction Noise

Impact 4.6.1 Activities associated with construction of land uses allowed under the proposed General Plan Update could result in elevated noise levels at noise-sensitive land uses. Increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption. This impact would be considered **potentially significant**.

According to data compiled by the US EPA, construction noise typically occurs intermittently and varies depending upon the nature or phase (e.g., demolition/land clearing, grading and excavation, erection) of construction. Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Although noise ranges were found to be similar for all construction phases, the grading phase tends to involve the most equipment and resulted in slightly higher average-hourly noise levels. Typical noise levels for individual pieces of construction equipment are summarized in **Table 4.6-4**. As depicted, individual equipment noise levels typically range from approximately 74 to 89 dBA at 50 feet (USEPA, 1971).

Assuming a maximum construction noise level of 89 dBA L_{eq} and an average attenuation rate of six dBA per doubling of distance from the source, construction activities located within approximately 1,500 feet of noise-sensitive receptors could reach levels of approximately 60 dBA L_{eq}. Activities occurring during the more noise-sensitive evening and nighttime hours may result in increased levels of annoyance and potential sleep disruption to occupants of nearby noise-sensitive land uses (e.g., residential dwellings, schools, hospitals). Depending on distances from nearby noise-sensitive land uses, construction activities associated with buildout of the General Plan Planning Area may result in temporary and periodic increases in ambient noise levels at nearby receptors. Increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption to occupants of nearby dwellings. As a result, this impact is considered **potentially significant**.

TABLE 4.6-4
CONSTRUCTION EQUIPMENT NOISE

Equipment	Typical Noise Level (dBA) 50 feet from Source
Roller	74
Concrete Vibrator, Pump, Saw	76
Backhoe	80
Generator, Air Compressor	81
Compactor, Concrete Pump	82
Crane, Mobile	83
Dozer, Grader, Loader, Concrete Mixer, Impact Wrench, Pneumatic Tool	85
Truck, Jack Hammer	88
Paver	89

Source: FTA, 2006

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policy and action that address construction noise hazards are identified in the General Plan Noise Element:

Policy N-4 Minimize the impacts of construction noise on adjacent uses.

Action N-4a Amend the Taft Municipal Code to establish standards for construction noise including the following:

- Restrict noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to between the hours of 6 a.m. and 7 p.m. Monday through Friday, and between 6 a.m. and 5 p.m. on weekends.

- Require the use of temporary construction noise control measures including the use of temporary noise barriers, if necessary, as mitigation for noise generated during construction of public and/or private projects.

While the proposed General Plan policy and action item mentioned above would assist in reducing construction-related noise impacts to adjacent sensitive noise receptors, it is not likely that excessive construction noise levels can be fully mitigated in all circumstances. This impact is considered **potentially significant and significant and unavoidable**.

Mitigation Measure

No further feasible mitigation available.

Exposure to Roadway Traffic Noise

Impact 4.6.2 Buildout of land uses proposed by the General Plan Update would result in increased traffic noise levels that could adversely affect existing and future noise-sensitive land uses. In addition, future noise-sensitive land uses could be exposed to roadway noise levels in excess of the City's noise standards. This impact would be considered **significant**.

Projected noise contours for major roadways within the City are summarized in **Table 4.6-4** and depicted in **Figure 4.6-3**. It is important to note that the predicted noise levels and distance to noise contours do not take into account shielding of noise by intervening structures or terrain. As a result, these noise contours should not be considered as "absolute lines of demarcation." Because distances to noise contours will vary depending on site-specific conditions, these contours should be used as a guide for establishing a pattern of land uses that minimizes the exposure of community residents to excessive noise.

Predicted increases in traffic noise levels associated with future development, in comparison to existing traffic noise levels, are summarized in **Table 4.6-5**. As depicted in **Table 4.6-5**, portions of SR 119, SR 33, Midway Road, and Lincoln Street would experience substantial increases (i.e., 3 dBA or greater) in traffic noise levels. Portions of SR 119 are predicted to experience the greatest increases in traffic noise levels, particularly between Tupman Road and Interstate 5 (I-5). Based on the modeling conducted, projected increases in vehicle traffic volumes attributable to the proposed project would result in significant increases in roadway traffic noise levels.

The proposed General Plan Update includes noise-sensitive land use designations along roadways anticipated to experience substantial increases in traffic noise. Development of noise-sensitive land uses could also occur within the projected 60 dBA CNEL noise contours of area roadways. Implementation of the General Plan Update would result in increased exposure of existing and future noise-sensitive land uses to traffic noise levels that could exceed the City's land use compatibility noise standards. As a result, exposure to vehicular traffic noise on area roadways would be considered **significant**.

TABLE 4.6-5
PREDICTED TRAFFIC NOISE LEVELS PROPOSED GENERAL PLAN 2035 CONDITIONS

Roadway Segment	ADT	CNEL at 50 Feet from Near-Travel-lane Centerline	Distance (feet) from Roadway Centerline to CNEL Contour		
			70	65	60
State Route 33, SR 166 to Petroleum Club Road	10,300	72.51	82	176	380
State Route 33, Petroleum Club Road to Cadet Road	15,800	74.37	109	235	505
State Route 33, Cadet Road to SR 119	26,900	74.80	138	296	636
State Route 33, SR 119 to First Street	9,100	64.62	--	53	113
State Route 33, First Street to Sixth Street	19,000	66.75	--	88	186
State Route 33, Sixth Street to Tenth Street	23,400	67.65	--	100	213
State Route 33, Tenth Street to Midway Road	22,600	69.98	68	142	304
State Route 119, SR 33 to East Kern Street/SR 33	21,200	74.00	123	262	563
State Route 119, East Kern Street/SR 33 to Second Street	17,400	73.14	108	230	493
State Route 119, Second Street to Harrison Street	19,100	74.33	129	275	592
State Route 119, Harrison Street to Midway Road	19,500	74.42	130	279	600
State Route 119, Midway Road to Elk Hills Road	36,000	77.08	195	419	902
State Route 119, Elk Hills Road to Airport Road	33,900	76.82	188	403	867
State Route 119, Airport Road to Valley West Road	41,700	77.72	215	462	995
State Route 119, Valley West Road to Tupman Road	49,900	77.69	243	521	1,121
State Route 119, Tupman Road to SR 43	66,600	78.94	294	631	1,358
State Route 119, SR 43 to Interstate 5	69,400	79.12	302	649	1,396
State Route 166, Interstate 5 to Old River Road	5,700	72.90	87	187	403
Old River Road, SR 166 to Copus Road	9,000	68.63	--	97	209
Midway Road, SR 119 to Lincoln Street	17,500	71.52	71	151	326
Lincoln Street, Midway Road to Ash Street	18,200	68.41	54	112	239
Lincoln Street, Ash Street to SR 33	28,500	67.67	--	100	213
Interstate 5, SR 166 to Old River Road	62,500	83.50	521	1,121	2,415
Interstate 5, Old River Road to SR 223/Bear Mountain Blvd.	56,900	83.09	489	1,053	2,269
Interstate 5, SR 223/Bear Mountain Boulevard to SR 119	66,000	83.73	540	1,163	2,504
Interstate 5, State Route 119 to SR 43	64,700	83.65	533	1,147	2,471

Noise levels/contours were calculated using the FHWA roadway noise model based on Calveno vehicle reference noise levels and traffic data obtained from the traffic analysis prepared for this project. Refer to ***Appendix 4.6*** *for modeling output files.*

Contours are within roadway right-of-way

Source: AMBIENT, 2009

TABLE 4.6-6
PREDICTED CHANGES IN TRAFFIC NOISE LEVELS

Roadway Segment	CNEL at 50 Feet from Near Travel-lane Centerline		Predicted Increase in Noise Level (CNEL)
	Existing Conditions	Proposed GP Year 2035 Conditions	
State Route 33, SR 166 to Petroleum Club Road	70.64	72.51	**1.87**
State Route 33, Petroleum Club Road to Cadet Road	70.64	74.37	**3.73**
State Route 33, Cadet Road to SR 119	69.84	74.80	**4.96**
State Route 33, SR 119 to First Street	62.67	64.62	**1.95**
State Route 33, First Street to Sixth Street	63.69	66.75	**3.06**
State Route 33, Sixth Street to Tenth Street	65.10	67.65	**2.55**
State Route 33, Tenth Street to Midway Road	67.84	69.98	**2.14**
State Route 119, SR 33 to East Kern Street/SR 33	69.14	74.00	**4.86**
State Route 119, East Kern Street/SR 33 to Second Street	68.45	73.14	**4.69**
State Route 119, Second Street to Harrison Street	71.23	74.33	**3.10**
State Route 119, Harrison Street to Midway Road	73.80	74.42	**0.62**
State Route 119, Midway Road to Elk Hills Road	73.80	77.08	**3.28**
State Route 119, Elk Hills Road to Airport Road	73.80	76.82	**3.02**
State Route 119, Airport Road to Valley West Road	73.80	77.72	**3.92**
State Route 119, Valley West Road to Tupman Road	73.80	77.69	**3.89**
State Route 119, Tupman Road to SR 43	73.73	78.94	**5.21**
State Route 119, SR 43 to Interstate 5	71.94	79.12	**7.18**
State Route 166, Interstate 5 to Old River Road	70.65	72.90	**2.25**
Old River Road, SR 166 to Copus	66.66	68.63	**1.97**

Roadway Segment	CNEL at 50 Feet from Near Travel-lane Centerline		Predicted Increase in Noise Level (CNEL)
	Existing Conditions	Proposed GP Year 2035 Conditions	
Road			
Midway Road, SR 119 to Lincoln Street	66.26	71.52	**5.26**
Lincoln Street, Midway Road to Ash Street	64.15	68.41	**4.26**
Lincoln Street, Ash Street to SR 33	62.99	67.67	**4.68**
Interstate 5, SR 166 to Old River Road	81.04	83.50	**2.46**
Interstate 5, Old River Road to SR 223/Bear Mountain Blvd.	81.16	83.09	**1.93**
Interstate 5, SR 223/Bear Mountain Boulevard to SR 119	81.87	83.73	**1.86**
Interstate 5, State Route 119 to SR 43	81.87	83.65	**1.78**

Traffic noise levels were estimated using the FHWA Highway Traffic Noise Prediction model (FHWA-RD-77-108) Traffic volumes were derived from the traffic analysis prepared for this project. Roadway data and vehicle distribution percentages were based on traffic data obtained during the site reconnaissance conducted for this project, as well as heavy-duty truck distribution percentages obtained from the California Department of Transportation (Caltrans).

Source: AMBIENT, 2009

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policies and actions that address roadway traffic noise impacts are identified in the General Plan Noise Element:

Policy N-1 Require new development to conform with to noise levels contained in [General Plan Update] Table 8.0-1 (Land Use Compatibility for New Development Near Transportation and Non-Transportation Noise Sources). Locate, construct, and/or screen all indoor and outdoor areas from noise sources to achieve compliance with the City's noise standards.

Action N-1a Amend the Taft Municipal Code to reflect the noise thresholds identified in Table 8.0-1 (Land Use Compatibility for new Development Near Transportation and Non-Transportation Noise Sources).

Action N-1b Require an acoustical analysis as part of the environmental review process when proposed development is likely to produce noise levels that exceed the City's noise standards.

Action N-1c Identify potential noise impacts during the acoustical analysis to be mitigated in the project design to the maximum extent.

Policy N-2 Use site planning, project design, and all other practical design-related noise mitigation measures as the primary means of noise mitigation.

Policy N-3 Use noise barriers as a secondary means of noise mitigation. Require noise barriers, if required, to be visually attractive, complement the surroundings, and include a provision for continuing maintenance.

Policy N-6 Route truck traffic around noise-sensitive areas, such as residential neighborhoods.

Policy N-1 requires new development to conform to proposed land use compatibility noise criteria. The preparation of acoustical analyses would also be required for noise-sensitive land uses proposed in areas where ambient noise levels would be anticipated to exceed corresponding City noise standards. The purpose of the noise analyses would be to identify areas of significant noise impacts and mitigation to be implemented to achieve applicable City noise standards. Policies N-2 and N-3 require incorporation of noise-reduction measures for newly proposed land uses, where necessary, sufficient to comply with the noise standards established for transportation noise sources. Policy N-6 would require that truck traffic be routed away from noise-sensitive land uses. However, it may not be possible to fully mitigate in all areas, particularly in existing development that may be constrained due to age, placement, or other factors which limit the feasibility of mitigation. As a result, implementation of these recommended policies would reduce roadway traffic noise impacts, but not necessarily to a less than significant level. For this reason, noise impacts associated with future development would be considered **significant**.

Implementation of recommended General Plan noise policies would reduce potential noise impacts. Future development projects would be required to analyze project-related noise impacts and incorporate necessary noise-reduction measures sufficient to achieve applicable noise standards. Implementation of these policies and actions will help to reduce impacts associated with proposed development. Noise-reduction measures typically implemented to reduce traffic noise include increased insulation, setbacks, and construction of sound barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. Policy N-3 discourages the construction of sound barriers that would be considered aesthetically intrusive. The feasibility of these measures would be determined on a project-by-project basis. However, it may not be possible to fully mitigate in all areas, particularly in existing development that may be constrained due to age, placement, or other factors which limit the feasibility of mitigation. As a result, increases in traffic noise associated with implementation of the proposed General Plan Update would be considered to have a **potentially significant** and **significant and unavoidable** impact**.**

Mitigation Measures

No further feasible mitigation available.

Exposure to Aircraft Noise

Impact 4.6.3 Sensitive land uses constructed near Taft-Kern County Airport could be exposed to aircraft noise in excess of applicable noise standards for land use compatibility. This is considered a **potentially significant** impact.

The Kern County Airport Land Use Compatibility Plan was established to ensure that there are no direct conflicts with land uses, noise, or other issues that would impact the functionality and safety of airports located within the County, including the Taft-Kern County Airport. The ALUCP requires that City and County general plans and zoning ordinances are consistent with Airport Environs Land Use Plans, which contain noise contours, restrictions for types of construction and building heights in navigable air space, as well as requirements impacting the establishment or construction of sensitive uses within close proximity to airports.

Projected existing noise contours for the Taft-Kern County Airport are depicted in **Figure 4.6-3**. Projected future (year 2035) noise contours were not available for the airport at the time that this report was prepared. However, projected noise contours would be anticipated to expand in future years as development and demand for airport services increase.

The proposed land uses in the General Plan Update are consistent with the noise policies and recommended land uses identified within the Kern County Airport Land Use Compatibility Plan. However, it is conceivable that future development within the City, as well as future expansion of airport activities and associated noise contours, could occur in future years, which may result in increased exposure to aircraft noise levels at some nearby noise-sensitive land uses. As a result, this impact is considered **potentially significant**.

<u>Proposed General Plan Policies and Action Items that Provide Mitigation</u>

The following General Plan policies and actions that address airport traffic noise impacts are identified in the General Plan Noise Element:

Policy N-1 Require new development to conform with to noise levels contained in [General Plan Update] Table 8.0-1 (Land Use Compatibility for New Development Near Transportation and Non-Transportation Noise Sources). Locate, construct, and/or screen all indoor and outdoor areas from noise sources to achieve compliance with the City's noise standards.

<u>Action N-1a</u> Amend the Taft Municipal Code to reflect the noise thresholds identified in Table 8.0-1 (Land Use Compatibility for new Development Near Transportation and Non-Transportation Noise Sources).

<u>Action N-1b</u> Require an acoustical analysis as part of the environmental review process when proposed development is likely to produce noise levels that exceed the City's noise standards.

Action N-1c Identify potential noise impacts during the acoustical analysis to be mitigated in the project design to the maximum extent.

Policy N-2 Use site planning, project design, and all other practical design-related noise mitigation measures as the primary means of noise mitigation.

Policy N-3 Use noise barriers as a secondary means of noise mitigation. Require noise barriers, if required, to be visually attractive, complement the surroundings, and include a provision for continuing maintenance.

Policy N-5 Encourage new development in the vicinity of the airport to be compatible with existing and projected airport noise levels as set forth in the Airport Land Use Compatibility Plan.

Action N-5a Discourage residential and other noise-sensitive uses from being located near the airport.

Policies N-1 through N-3 address compatibility of sensitive land uses that would be exposed to transportation noise sources and require that they would be reviewed and appropriate mitigation measures would be incorporated to achieve acceptable noise levels. Policy N-5 would also require new development in the vicinity of the airport to be compatible with existing and projected airport noise levels.

Implementation of the applicable policies and standards contained in the City's proposed General Plan Update would ensure that future development near Taft-Kern County Airport would meet applicable noise criteria for land use compatibility and/or include noise attenuation features to meet applicable noise standards. Accordingly, proposed future development projects located within air traffic patterns, corridors, and airport influence zones would be reviewed to ensure continued consistency with the Kern County Airport Land Use Compatibility Plan. With incorporation of the proposed General Plan policies, this impact would be considered **less than significant**.

Mitigation Measures

None required.

Exposure to Stationary Non-Transportation Noise

Impact 4.6.4 As additional development occurs throughout the City, the potential exists for new noise-sensitive land uses to encroach upon existing or proposed stationary noise sources. As a result, this impact is considered **significant**.

Implementation of the proposed General Plan Update could result in the future development of land uses that generate noise levels in excess of applicable City noise standards. Such land uses may include commercial, industrial, and recreational uses and could expose noise-sensitive land uses to excessive noise levels. In addition, new noise-sensitive land uses could be located in areas of existing stationary noise sources. Increased exposure to non-transportation source noise

levels could result in increased levels of annoyance, activity interference, and potential sleep disruption for occupants of nearby land uses. For these reasons, this impact would be considered potentially significant.

The City's Municipal Code includes provisions that prohibit the generation of noise from various sources that would result in a nuisance to noise-sensitive land uses. However, the City's Municipal Code does not identify noise level performance standards for non-transportation noise sources (City of Taft, 2009).

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policies and actions that address non-transportation noise impacts are identified in the General Plan Noise Element:

Policy N-1 Require new development to conform with to noise levels contained in [General Plan Update] Table 8.0-1 (Land Use Compatibility for New Development Near Transportation and Non-Transportation Noise Sources). Locate, construct, and/or screen all indoor and outdoor areas from noise sources to achieve compliance with the City's noise standards.

Action N-1a Amend the Taft Municipal Code to reflect the noise thresholds identified in Table 8.0-1 (Land Use Compatibility for new Development Near Transportation and Non-Transportation Noise Sources).

Action N-1b Require an acoustical analysis as part of the environmental review process when proposed development is likely to produce noise levels that exceed the City's noise standards.

Action N-1c Identify potential noise impacts during the acoustical analysis to be mitigated in the project design to the maximum extent.

Policy N-2 Use site planning, project design, and all other practical design-related noise mitigation measures as the primary means of noise mitigation.

Policy N-3 Use noise barriers as a secondary means of noise mitigation. Require noise barriers, if required, to be visually attractive, complement the surroundings, and include a provision for continuing maintenance.

Policy N-7 Prohibit new non-residential land uses, including energy project proposals, from creating operational noise disturbances in existing noise-sensitive areas.

Policy N-8 Mitigate noise created by proposed non-transportation noise sources.

Action N-8a Require the operation of loading docks, trash compactors, and other noise-producing uses that are adjacent to residential and other sensitive uses to be consistent with Table 8.0-1.

Policy N-9 Discourage future noise-sensitive uses from locating in areas designated for commercial and/or industrial land uses to protect existing and proposed conforming noise-producing uses.

Action N-9a Require new noise-sensitive uses proposed in or adjacent to areas designated for commercial and/or industrial land uses to be provided a disclosure statement notifying them of existing and potential noise-producing uses.

Policy N-10 Maintain acceptable noise levels and adequate privacy in higher density and mixed-use development.

Action N-10a Require design and construction standards that minimize noise conflicts between residents with shared walls or floors/ceilings.

Policy N-1 requires new development to conform to proposed land use compatibility noise criteria. The preparation of acoustical analyses would also be required for noise-sensitive land uses proposed in areas where ambient noise levels would be anticipated to exceed corresponding City noise standards. The purpose of the noise analyses would be to identify areas of significant noise impacts and mitigation to be implemented to achieve applicable City noise standards. Policies N-2 and N-3 require incorporation of noise-reduction measures for newly proposed land uses, where necessary, sufficient to comply with the noise standards established for transportation noise sources. Policies N-7 and N-8 would prohibit new nonresidential land uses from creating operational noise disturbances that would adversely affect existing noise-sensitive land uses and would require non-transportation noise sources to incorporate noise-reduction measures, when necessary. Policies N-9 and N-10 are intended to reduce land use conflicts associated with the construction of new noise-sensitive land uses, particularly in areas where proposed noise-sensitive land uses would encroach upon existing non-transportation noise sources.

Implementation of recommended General Plan noise policies and standards would reduce potential noise impacts by requiring the incorporation of necessary noise-reduction measures in the design and operation of proposed development projects sufficient to achieve applicable noise standards. Implementation of these policies will help to reduce impacts associated with proposed development. Noise-reduction measures typically implemented to reduce noise levels include increased insulation, setbacks, and construction of sound barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. Policy N-2 would discourage the construction of aesthetically intrusive sound barriers. The feasibility of these measures would be determined on a project-by-project basis. However, it may not be possible to fully mitigate in all areas, particularly in existing development that may be constrained due to age, placement, or other factors which limit the feasibility of mitigation. As a result, implementation of these recommended policies would reduce noise-related impacts, but not necessarily to a less than significant level at all receptor locations. For this reason, noise impacts associated with future development would be considered **significant**.

No additional feasible mitigation has been identified that would further reduce this impact. As a result, non-transportation source noise impacts would be considered **potentially significant** and **significant and unavoidable**.

Mitigation Measures

No further feasible mitigation available.

Exposure to Groundborne Vibration

Impact 4.6.6 As additional development occurs throughout the City, the potential exists for noise-sensitive land uses to be exposed to construction-generated sources of groundborne vibration. As a result, this impact is considered **potentially significant**.

The effects of ground vibration can vary from no perceptible effects at the lowest levels, to low rumbling sounds and detectable vibrations at moderate levels, to slight damage to nearby structures at the highest levels. At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage.

There are no federal, state, or local regulatory standards for vibration. However, various criteria have been established to assist in the evaluation of vibration impacts. For instance, the California Department of Transportation has developed vibration criteria based on human perception and structural damage risks. For most structures, Caltrans considers a peak-particle velocity (ppv) threshold of 0.2 inches per second (in/sec) to be the level at which architectural damage (i.e., minor cracking of plaster walls and ceilings) to normal structures may occur. Below 0.10 in/sec, there is virtually no risk of "architectural" damage to normal buildings. Historic or historic or ancient buildings could occur at levels of 0.08 in/sec ppv. In terms of human annoyance, continuous vibrations in excess of 0.1 in/sec ppv are identified by Caltrans as the minimum level perceptible level for ground vibration. Short periods of ground vibration in excess of 0.2 in/sec ppv can be expected to result in increased levels of annoyance to people within buildings (Ambient, 2009).

Groundborne vibration sources located within the City that could potentially affect future development would be primarily associated with short-term construction activities. With the exception of pavement breaking and pile driving, construction activities and related equipment typically generate groundborne vibration levels of less than 0.2 in/sec, which is the architectural damage risk threshold recommended by Caltrans. Based on Caltrans measurement data, use of off-road tractors, dozers, earthmovers, and haul trucks generate groundborne vibration levels of less than 0.10 in/sec, or one half of the architectural damage risk level, at 10 feet. The highest vibration level associated with a pavement breaker was 2.88 in/sec at 10 feet. During pile driving, vibration levels near the source depend mainly on the soil's penetration resistance, as well as the type of pile driver used. Impact pile drivers tend to generate higher vibration levels than vibratory or drilled piles. Groundborne vibration levels of pile drivers can range from approximately 0.17 to 1.5 in/sec ppv. Caltrans indicates that the distance to the 0.2 in/sec ppv

criterion for pile driving activities would occur at a distance of approximately 50 feet. However, as with construction-generated noise levels, pile driving can result in a high potential for human annoyance and pile-driving activities are typically considered as potentially significant if these activities are performed within 200 feet of permanent structures (Ambient, 2009). No applicable City code sections or General Plan policies have been identified that would reduce this impact. As a result, this impact would be considered potentially significant.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policy and action that address construction noise hazards are identified in the General Plan Noise Element:

Policy N-4 Minimize the impacts of construction noise on adjacent uses.

Action N-4a Amend the Taft Municipal Code to establish standards for construction noise including the following:

- Restrict noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to between the hours of 6 a.m. and 7 p.m. Monday through Friday, and between 6 a.m. and 5 p.m. on weekends.

- Require the use of temporary construction noise control measures including the use of temporary noise barriers, if necessary, as mitigation for noise generated during construction of public and/or private projects.

Implementation of the applicable policies and standards contained in the City's proposed General Plan Update would restrict noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to the daytime hours of operation. Also, the applicable policies and action items would reduce construction-generated groundborne vibration associated with future development projects to an insignificant level. In addition, individual development projects will be subject to site-specific environmental review, which will necessitate identification of site-specific mitigation in the event that significant impacts are identified. Therefore, this impact is **less than significant**.

Mitigation Measures

None required.

4.6.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The land use policies in the proposed City of Taft General Plan Update would provide direction for growth within the City limits, while the Kern County General Plan policies provides direction for growth outside the City limits, but within the Planning Area boundaries (until land areas are annexed into the City). Thus, the setting for this cumulative analysis includes existing, proposed, approved, and planned projects in the General Plan Planning Area and surrounding portions of unincorporated Kern County as well as full buildout of the City of Taft General Plan Planning Area as proposed under the proposed project (occurring after year 2035). Development in the region identified in Section 4.0 would change the intensity of land uses in the region. Implementation of the proposed General Plan Update would result in changes in land uses within the Planning Area, which in turn would invariably affect the future cumulative ambient noise environment within the Planning Area. Those changes would invariably affect the future cumulative ambient noise environment within the Planning Area. The cumulative noise setting includes development anticipated within Kern County in addition to buildout of the proposed General Plan Update. The future (cumulative) ambient noise environment will be affected by buildout of the proposed General Plan and planned development in surrounding communities. Cumulative development would alter the intensity of land uses in the region and increase housing, employment, shopping, and recreational opportunities. Such development would result in new noise generators and noise-sensitive land uses and potentially increase land use conflicts and hazards associated with noise.

While it is difficult to project exactly how the ambient noise conditions within the Planning Area will change following buildout under the proposed General Plan Update, it is known that traffic noise levels will increase due to the additional traffic generated by buildout of various land use designations which have yet to be developed. Predicted future (year 2035) traffic noise levels and distances to noise contours for major roadway corridors, with implementation of the proposed General Plan Update, are summarized in **Table 4.6-5**. Predicted future (year 2035) noise contours for major roadways within the community are depicted in **Figure 4.6-4**. Transportation noise projections include regional traffic conditions in the Planning Area from anticipated future regional growth.

The primary factor for cumulative noise impact analysis is the consideration of future traffic volumes. To a lesser extent, non-transportation noise sources, including construction activities, would also contribute to cumulative noise levels, but on a more localized basis. In addition, changes in noise associated with non-transportation noise sources are difficult to predict. Although new non-transportation noise sources would result in localized increases in ambient noise conditions, noise levels associated with non-transportation noise sources would be regulated by noise standards proposed as part of the General Plan Update.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Noise Impacts Associated with Increased Traffic Resulting from Buildout of the Proposed General Plan

Impact 4.6.7 Implementation of the proposed General Plan along with potential development of the Planning Area could result in increased noise conflicts. This is considered a **cumulatively considerable** impact.

Projected future noise contours for major roadways within the City and predicted increases in traffic noise levels associated with future development are summarized in **Table 4.6-5** and **Table 4.6-6**, respectively (refer to Impact 4.6.2 of this report). Predicted future noise contours for major roadways within the community are depicted in **Figure 4.6-4**.

As discussed in Impact 4.6.1 and in comparison to existing conditions, implementation of the proposed General Plan Update would result in significant increases in traffic noise levels along several major area roadways. Portions of SR 119, SR 33, Midway Road, and Lincoln Street would experience the greatest projected increases in traffic noise levels. Substantial increases along other local roadways that were not included in this modeling may also occur and would be evaluated on a project-by-project basis, as development is proposed. Implementation of the General Plan Update would result in projected increases in traffic noise levels that could adversely affect noise-sensitive land uses.

The proposed General Plan Update includes noise-sensitive land use designations along roadways anticipated to experience significant increases in traffic noise, as well as within the projected 60 dBA CNEL noise contours of major roadways. Exposure to non-transportation noise sources in excess of applicable noise standards may also occur. Implementation of the General Plan Update would result in increased exposure of existing and future noise-sensitive land uses to noise levels that could exceed the City's land use compatibility noise standards. As a result, this impact would be considered cumulatively considerable.

Proposed General Plan Policies and Action Items that Provide Mitigation

Relevant noise-related policies identified in the proposed General Plan Update include policies N-1 through N-3 and N-6. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

T:_CS\Work\Taft, City of\Figures, May 2009

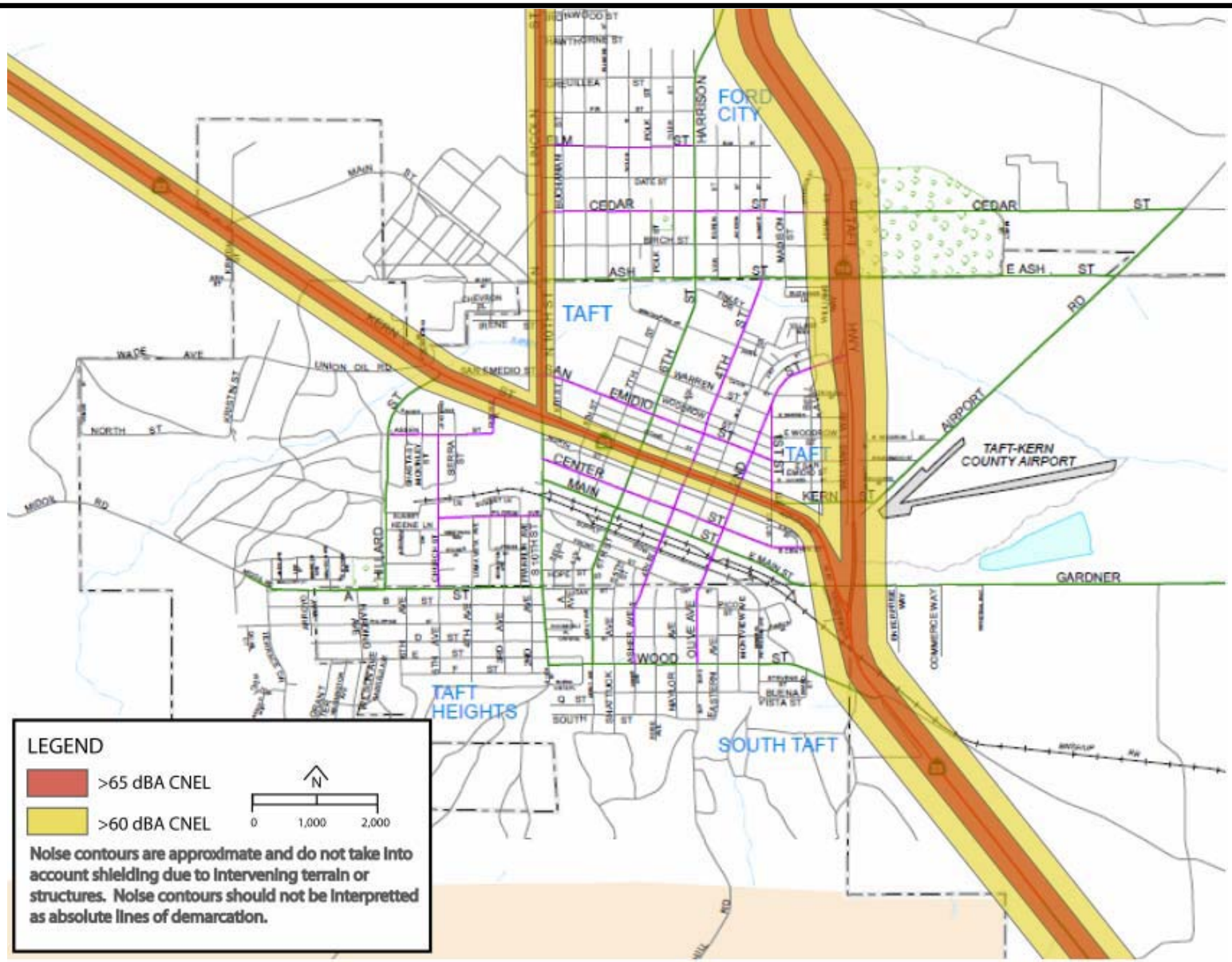


Figure 4.6-4

Predicted Traffic Noise Contours for Major Roadways – 2035 Conditions

PMC®

Noise Element

Policy N-1; Action N-1a; Action N-1b; Action N-1c; Policy N-2; Policy N-3; Policy N-4; Action N-4a; Policy N-6

Policy N-1 requires new development to conform to proposed land use compatibility noise criteria. The preparation of acoustical analyses would also be required for noise-sensitive land uses proposed in areas where ambient noise levels would be anticipated to exceed corresponding City noise standards. The purpose of the noise analyses would be to identify areas of significant noise impacts and mitigation to be implemented to achieve applicable City noise standards. Policies N-2 and N-3 require incorporation of noise-reduction measures for newly proposed land uses, where necessary, sufficient to comply with the noise standards established for transportation noise sources. Policy N-6 would require that truck traffic be routed away from noise-sensitive land uses.

Implementation of recommended General Plan noise policies would reduce potential noise impacts. Future development projects would be required to analyze project-related noise impacts and incorporate necessary noise-reduction measures sufficient to achieve applicable noise standards. Implementation of these policies and actions will help to reduce impacts associated with proposed development. Noise-reduction measures typically implemented to reduce traffic noise include increased insulation, setbacks, and construction of sound barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. Policy N-3 discourages the construction of sound barriers that would be considered aesthetically intrusive. The feasibility of these measures would be determined on a project-by-project basis. However, it may not be possible to fully mitigate in all areas, particularly in existing development that may be constrained due to age, placement or other factors which limit the feasibility of mitigation. As a result, the proposed project would have a **cumulatively considerable** contribution to this **significant and unavoidable** impact**.**

Mitigation Measures

No further feasible mitigation available.

REFERENCES

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4.7
HAZARDS AND HUMAN HEALTH

This section of the Draft Environmental Impact Report ("Draft DEIR"; "DEIR") describes the existing environmental conditions of the City of Taft General Plan Planning Area (Planning Area) and identifies the methods used in analyzing the proposed project's potential to create hazards to the public health. This section also analyzes the environmental effects related to hazardous materials, substances, or waste and other potential hazards that may impact public safety. Potential problems related to hazardous materials include water and soil contamination, health hazards from existing or historic land uses that utilize or generate these materials, and improper disposal of these materials by business, industry, and individual households. Appropriate mitigation measures are identified to reduce, lessen, or eliminate the General Plan Update's impacts. For impacts related to flood hazards, the reader is referred to Section 4.10, Hydrology and Water Quality. For impacts related to fire hazards, the reader is referred to Section 4.13, Public Services and Utilities.

4.7.1 EXISTING SETTING

HAZARDOUS MATERIALS DEFINED

Under Title 22 of the California Code of Regulations (CCR), the term hazardous substance refers to both hazardous materials and hazardous wastes and both are classified according to four properties: toxicity, ignitability, corrosiveness, and reactivity (CCR Title 22, Chapter 11, Article 3). A hazardous material is defined as a substance or combination of substances that may cause or significantly contribute to an increase in serious, irreversible, or incapacitating illness, or may pose a substantial presence or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. Hazardous wastes are hazardous substances that no longer have practical use, such as hazardous materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be disposed of properly (CCR Title 22, Chapter 11, Article 2, Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific CCR Title 22 criteria. While hazardous substances are regulated by multiple agencies, as described below in Section 4.7.2, Regulatory Framework, cleanup requirements of hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over the project.

Public health is potentially at risk whenever hazardous materials are, or will be, used. It is necessary to differentiate between the "hazard" of these materials and the acceptability of the "risk" they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure, in addition to the inherent toxicity of a material (DTSC, 2009).

Factors that can influence the health effects when human beings are exposed to hazardous materials include the dose the person is exposed to, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body), and the individual's unique biological susceptibility.

Transportation of Hazardous Materials

The transportation of hazardous materials within the General Plan Planning Area is subject to various federal, state, and local regulations, as described in Section 4.7.2, Regulatory Framework. It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery, or the loading of such materials (California Vehicle Code, Sections 31602(b) and 32104(a)).

The California Highway Patrol also designates through routes to be used for the transportation of inhalation hazards and may designate separate through routes for the transportation of inhalation hazards composed of any chemical rocket propellant (California Vehicle Code, Sections 32100 and 32102(b)).

According to Title 13 Chapter 6 of the CCR, within the Planning Area, the CHP designates SR 33 and Interstate 5 (I-5) for vehicles carrying explosives, SR 166 for vehicles carrying inhalation hazards, and I-5 for vehicles carrying nuclear material. (CCR, Title 13, Div. 2).

Asbestos-Containing Building Materials

Structures constructed or remodeled between 1930 and 1981 have the potential to contain asbestos-containing building materials (ACBM). These materials may include, but are not limited to, floor coverings, drywall joint compounds, acoustic ceiling tiles, piping insulation, electrical insulation, and fireproofing materials. Asbestos is a general name for a group of naturally occurring minerals composed of small fibers. It is common in many building materials. Various diseases have been associated with exposure to asbestos fibers, and the extensive use of asbestos in building materials has raised some concern about exposure in non-industrial settings. Health hazards associated with ACBMs include increased risks of cancer and respiratory-related illnesses and diseases. The presence of asbestos in a building does not necessarily endanger the health of building occupants. As long as ACBMs remain in good condition and are not disturbed or damaged, exposure is unlikely. However, damaged, deteriorated, or disturbed asbestos-containing materials can lead to fiber release (exposure), and unauthorized removal or disturbance of asbestos materials could result in adverse health effects. Existing residences or other buildings may be demolished for construction related to programs and projects analyzed in this document. Such structures may contain lead or asbestos and as such may release toxics into the environment if disturbed or improperly handled.

Lead-Based Materials

Exposure to lead-based paint is possible when the paint is in poor condition or during paint removal. In construction settings, workers can be exposed to airborne lead during renovation, maintenance, or removal work. Lead-based paints were phased out of production in the early 1970s. Lead is a highly toxic metal that was used for many years in products found in and around homes. Lead may cause a range of health effects, from behavioral problems and learning disabilities to seizures and death. Any existing buildings which will be demolished to accommodate project implementation may have been constructed prior to the ban on lead-based paints. Therefore, it is likely that these materials are present in the structure. Proper handling

and disposal of lead-based materials significantly reduces potential environmental-related impacts.

Radon

Radon isotope-22 is a colorless, odorless, tasteless radioactive gas that is a natural decay product of uranium. Uranium and radon are present in varying amounts in rocks and soil, and radon is present in background concentrations in the atmosphere. Current evidence indicates that increased lung cancer risk is directly related to radon-decay products. Radon potential of rocks and soils and indoor radon exposure levels in the United States are currently areas of intense research by governmental regulators as well as the geoscience and medical communities. At this time, the United States Environmental Protection Agency (USEPA) has recommended an "action" level for indoor radon concentrations at or exceeding 4 pico-curies per liter of air (pCi/l). The USEPA has extrapolated a 1 percent to 3 percent lung cancer mortality rate due to a lifetime exposure at 4 pCi/l; that is, one to three persons per 100 exposed to this concentration for life will die of lung cancer induced by radon.

The California Statewide Radon Survey Interim Results, based on the EPA/State Department of Health Services State Radon Survey, indicate that 212 of the 541 test sites (39 percent) in Kern County and 29 of the 92 test sites (31.5 percent) in Taft exceeded the USEPA's recommended level of 4 pCi/l (DHS, 2008). Of the 33 states participating in the study, California ranks as the third lowest for percentage of homes exceeding 4 pCi/l. Specific indoor radon information is not available, as the presence of radon can only be obtained through a sampling and testing program for existing or future buildings.

Electrical Facilities and Electromagnetic Fields

Electromagnetic fields (EMF) are invisible lines of force surrounding any electrical wire or device. They have two components — the electric field resulting from voltage and the magnetic field resulting from current flow. Ordinary use of electricity produces magnetic and electric fields. These 60-Hertz fields (fields that go back and forth 60 times a second) are associated with electrical appliances, power lines, and wiring in buildings. EMF health and safety issues from power lines are preempted by the Public Utilities Commission (PUC) and therefore are typically not addressed in general plans.

Although a point of concern, the evidence that EMF from high voltage power lines can be hazardous to human health is not quantifiable and remains unresolved. Federal agencies working on establishing limits and health standards related to EMF include the National Institute for Occupational Safety and Health (NIOSH), U.S. Environmental Protection Agency (USEPA), Federal Communications Commission (FCC), Occupational Safety and Health Administration (OSHA), National Telecommunications and Information Administration (NTIA), and the National Institute of Health (NIH). (Lake County, 2009)

PCB Transformers

In 1976, Congress enacted the Toxic Substances Control Act (TSCA), which gave USEPA the ability to track all industrial chemicals imported into and used in the United States. USEPA screens these chemicals and can ban the manufacture and import of those chemicals that pose an unreasonable risk. The TSCA directed USEPA to ban the manufacture of polychlorinated biphenyls (PCBs) and regulated their use and disposal. USEPA accomplished this by the issuance of regulations in 1978.

Primary sources of PCBs include fluorescent light ballast and electrical transformers. USEPA maintains the PCB Activity Database (PADS) that identifies generators, transporters, commercial storers, and brokers and disposers of PCBs. Electrical facilities developed after 1979 are unlikely to be associated with PCB-containing transformers. The actual levels of PCBs in specific equipment can only be confirmed by sampling and analysis of the mineral oil coolant within the actual pieces of equipment under consideration.

Pacific Gas and Energy Company (PG&E) provides electrical service to the Planning Area. PG&E is responsible for all transformers within its service area boundaries and is subject to USEPA regulations regarding PCB transformers. In addition, electricity providers are required to notify USEPA of any activities or incidents involving PCBs. (PG&E, 2008)

Residual Agricultural Chemicals

Diazinon, chlorpyrifos, and other "Group A" pesticides are insecticides used to control pests on crops as well as in individual home use. Diazinon is a nonsystemic organophosphate insecticide classified by USEPA as a Restricted Use Pesticide (RUP) and is for professional pest control operator use only. In 1988, USEPA canceled registration of diazinon for use on golf courses and sod farms because of die-offs of birds that often congregated in these areas. Diazinon is used to control cockroaches, silverfish, ants, and fleas in residential, non-food buildings. Diazinon bait is used to control scavenger yellow jackets in the western United States. It is used on home gardens and farms to control a wide variety of sucking and leaf-eating insects. It is also used on rice, fruit trees, sugarcane, corn, tobacco, potatoes, and on horticultural plants and used as an ingredient in pest strips. Diazinon may be found in formulations with a variety of other pesticides, including pyrethrins, lindane, and disulfoton. Birds are significantly more susceptible to diazinon poisoning than other wildlife, and it is highly toxic to fish and to bees. Diazinon has a low persistence in soil. Diazinon seldom migrates below the top half inch in soil, but in some instances it may contaminate groundwater. Diazinon is absorbed by plant roots when applied to the soil and translocated to other parts of the plant.

Chlorpyrifos is a broad-spectrum organophosphate insecticide classified by USEPA as a General Use Pesticide. While originally used primarily to kill mosquitoes, it is no longer registered for this use. Chlorpyrifos is effective in controlling cutworms, corn rootworms, cockroaches, grubs, flea beetles, flies, termites, fire ants, and lice. It is used as an insecticide on grain, cotton, field, fruit, nut, and vegetable crops, as well as on lawns and ornamental plants. It is also registered for direct use on sheep and turkeys, for horse site treatment, dog kennels, domestic dwellings, farm buildings, storage bins, and commercial establishments. Chlorpyrifos acts on pests primarily as a

contact poison, with some action as a stomach poison. Chlorpyrifos is moderately to very highly toxic to birds and highly toxic to freshwater fish, aquatic invertebrates, and estuarine and marine organisms. Due to its high acute toxicity and its persistence in sediments, chlorpyrifos may represent a hazard to smaller organisms. Aquatic and general agricultural uses of chlorpyrifos pose a serious hazard to wildlife and honeybees.

Various agricultural operations that were once (and are currently) located within the Planning Area may have used these above-mentioned residual agricultural-related chemicals, potentially affecting the on-site soils. Additional persistent chemicals that may be found within the Planning Area include toxaphene and lead arsenate. Toxaphene is an insecticide containing over 670 chemicals, also known as camphechlor, chlorocamphene, polychlorocamphene, or chlorinated camphene. It is usually found as a solid or gas and in its original form is a yellow to amber waxy solid that smells like turpentine. Toxaphene was one of the most heavily used insecticides in the United States until 1982, when it was canceled for most uses; all uses were banned in 1990. Toxaphene was used primarily to control insect pests on cotton and other crops. It was also used to control insect pests on livestock and to kill unwanted fish in lakes.

Lead arsenate is a form of inorganic arsenic (22 percent arsenic) that normally exists as white crystals with no discernible odor. Associated with row crops and orchards, lead arsenate is currently used as a growth regulator on 17 percent of the U.S. grapefruit crop, and 10,000 pounds of lead arsenate are used annually in the U.S. to control cockroaches, silverfish, and crickets, according to the Environmental Protection Agency (USEPA, 1986). Frequent applications of lead arsenate at increasing rates over time eventually causes lead and arsenic to accumulate in the topsoil.

Persistent residual chemicals may be present at differing levels within the Planning Area, including over-the-counter insecticides and herbicides as well as chemicals that were banned years ago. However, none of the Planning Area rivers, creeks, or streams are on the most recent (2006) California Clean Water Act Section 303(d) list, and according to the Tulare Basin Water Quality Control Plan surface water quality in the basin is generally good (RWQCB, 2004).

Mosquito Hazards

Mosquito-Borne Diseases

Mosquitoes are known to be the carriers of many serious diseases. The mosquito genus *Anopheles* carries the parasite that causes malaria, which is the leading cause of premature mortality worldwide. Encephalitis type diseases are also transmitted through mosquitoes, including Eastern equine encephalitis (EEE) and Western equine encephalitis (WEE) which occur in the United States where they cause disease in humans, horses, and some bird species. Both EEE and WEE are regarded as two of the most serious mosquito-borne diseases in the United States due to the high mortality rate. It is not know how long West Nile Virus has been in the U.S., but CDC scientists believe the virus has probably been in the eastern U.S. since the early summer of 1999, possibly longer (CDC, 2008).

All species of mosquitoes require standing water to complete their growth cycle. Therefore, any standing body of water represents a potential mosquito breeding habitat. Although mosquitoes will typically stay close to suitable breeding habitat and blood-meal hosts, they are known to travel up to 10 miles under breezy conditions. The breeding period for mosquitoes depends on temperature but generally occurs in March through October.

In 2007, Kern County had the highest number of human cases of West Nile Virus in the State of California, with 140 cases. The next highest was Los Angeles County with 36 human cases (CDPH, 2008). However, in 2008, Kern County had two reported human cases, while Los Angeles County had 156. (CDHP, 2008)

Mosquito Species of Concern

In Kern County, two species of mosquito are primary targets for suppression. These two species, *Culex pipiens quinquefasciatus* and *Culex tarsalis*, are potential vectors of encephalitis and West Nile Virus. Other species of mosquitoes exist in Kern County that can cause a substantial nuisance in surrounding communities, but the Culex mosquito is the primary vector species of concern.

Although the West Nile Virus can be transmitted by a number of mosquito species, Culex is the most common carrier. This disease is thought to be a seasonal epidemic that flares up in the summer and fall. West Nile Virus is spread when mosquitoes that feed on infected birds bite humans and other animals (CDC, 2007).

The encephalitis mosquito (*Culex tarsalis*) breeds in almost any freshwater pond. Birds appear to be the primary blood-meal hosts of this species, but the insect will also feed on domestic animals and humans. This species is the primary carrier in California of western equine encephalitis, St. Louis encephalitis, and California encephalitis, and it is considered a significant disease vector of concern in the state. (Kern County, 2009a)

The house mosquito (*Culex pipiens quinquefasciatus*) usually breeds in waters with a high organic material content. This species is often identified by its characteristic buzzing. Although its primary blood-meal host is birds, the house mosquito can also seek out humans. The house mosquito can be a vector of St. Louis encephalitis. (Kern County, 2009a)

Mosquito Concerns in the Planning Area

Potential mosquito breeding sites in the Planning Area include agricultural ditches, tail water ponds and canals, as well as irrigated cropland. Mosquitoes begin reproducing in March, and their reproduction usually peaks in September. Reproduction rates diminish in the cooler winter months, but adults may overwinter in the area.

Features such as quarry pits, settling ponds, and drainage channels could provide potential breeding sites for mosquitoes. West Side Mosquito and Vector Control District currently serves the City of Taft. (westnile.ca.gov, 2004)

Valley Fever

Coccidioidomycosis, commonly known as valley fever, is primarily a disease of the lungs that is common in the southwestern United States and northwestern Mexico. The disease is of critical concern to Kern County. Valley fever is caused by the fungus *Coccidioides immitis*, which grows in soils in areas of low rainfall, high summer temperatures, and moderate winter temperatures. These fungal spores become airborne when the soil is disturbed by winds, construction, farming, and other activities. In susceptible people and animals, infection occurs when a spore is inhaled. valley fever symptoms generally occur within three weeks of exposure. Valley fever is not a contagious disease. Secondary infections are rare.

It is estimated that more than 4 million people live in areas where valley fever fungus is prevalent in the soils. Residents of Bakersfield and Phoenix, Arizona, have shown positive skin-test reaction rates of 30–40 percent, meaning that about one-third of residents tested have had valley fever sometime in the past. Among those who have never had valley fever, the chance of infection is about three percent per year, but the longer one resides in an endemic area, the greater the risk. In the southwestern U.S., there are approximately 100,000 new infections each year.

People working in certain occupations such as construction, agriculture, and archaeology have an increased risk of exposure and disease because these jobs result in the disturbance of soils where fungal spores are found. Valley fever infection is highest in California from June to November. In addition, many domestic and native animals are susceptible to the disease, including dogs, horses, cattle, coyotes, rodents, bats, and snakes. Most valley fever cases are very mild. It is estimated that 60 percent or more of infected people either have no symptoms or experience flu-like symptoms and never seek medical attention. (Kern County, 2009a)

Hazardous Material and Waste Sites

The State of California Hazardous Waste and Substances Site List (also known as the "Cortese List") is a planning document used by state, local agencies, and developers to comply with the California Environmental Quality Act (CEQA) requirements in providing information about the location of hazardous materials sites. California Government Code Section 65962.5 requires the California Environmental Protection Agency (Cal-EPA) to annually update the Cortese List. The Cal-EPA Department of Toxic Substances Control (DTSC) is responsible for preparing a portion of the information that comprises the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information that is part of the complete list. DTSC's Site Mitigation and Brownfields Reuse Program EnviroStor database provides DTSC's component of Cortese List data by identifying State Response and/or Federal Superfund and backlog sites listed under Health and Safety Code Section 25356. In addition, DTSC's Cortese List includes Certified with Operation and Maintenance sites. There are 7 military evaluation sites in the planning area, 1 of which is active. There is also one active voluntary cleanup site in the planning area. **Table 4.7-1** below shows the DTSC Site Mitigation and Brownfields Reuse Program information for the Taft General Plan planning area, also included in DTSC's component of the Cortese List and available in EnviroStor.

In addition to EnviroStor, the CAL-SITES Abandoned Sites Information System (ASPIS) database, compiled by Cal-EPA, can also be used to identify and track potential hazardous waste sites. This database is regularly uploaded to the State's Geographic Environmental Information Management System (GEIMS) so that agencies and the general public can access information regarding a specific site. GEIMS, a data warehouse which tracks regulatory data regarding leaking underground fuel tanks (LUFTs), other contaminant release sites, water quality information, water use information, and infrastructure data, can be used to identify properties that are known or have had contaminant spills. GeoTracker, the interface to GEIMS, uses commercially available software to allow users to access data from GEIMS over the Internet.

According to the GEIMS database, as of February 2009, in the planning area, there are 43 hazardous materials sites in the Planning Area. These consist of 28 leaking underground fuel tanks, three of which are open cases, one open case land disposal site, and six cleanup program sites, two of which are open. Additionally, there are six inactive Military Evaluation Sites, one active Military Evaluation Site, and one Voluntary Cleanup Site in the Planning Area (see **Figure 4.7-1**). The three sites with the status "Open – Site Assessment" include the Mitchell Property at 701 Harrison Street, the Outpost Food Store at 509 6th Street, and the Lucky 7 Food Mart #20 at 501 S 10th Street. The Outpost Food Store location is within 0.25 miles of both Elk Hills Elementary School and Taft High School. **Table 4.7.1** shows the name, type, status, and address of each GEIMS and Cortese site.

TABLE 4.7-1
HAZARDOUS MATERIALS SITES IN THE PLANNING AREA[1]

Cortese List Sites			
Site Name	**Type of Site**	**Status**	**Location**
US Auxiliary Landing Field	Inactive – Needs Evaluation as of 7/1/2005	Military Evaluation Site	21 Miles SE of Taft
US Auxiliary Landing Field (J0CA710000)	Inactive – Needs Evaluation as of 7/1/2005	Military Evaluation Site	15 Miles SE of Taft
Gardner Field	Active as of 12/1/2008	Military Evaluation Site	Gardner field Rd. and Basic School Rd.
County Airport	Inactive – Needs Evaluation as of 7/1/2005	Military Evaluation Site	7 Miles SE of Taft
U.S. Dept. of Energy, Ford City	Active as of 2/17/2004	Voluntary Cleanup Site	Ford City
County Airport- Taft Airport	Inactive – Needs Evaluation as of 7/1/2005	Military Evaluation Site	Taft
Ladlaw Environmental Services	Inactive as of 1/1/2008	Military Evaluation Site	7004 Gas Company Rd.
Kern Field Auxiliary Field #2	Inactive – Needs	Military Evaluation	Taft

Cortese List Sites			
Site Name	Type of Site	Status	Location
	Evaluation as of 7/1/2005	Site	
GEIMS Sites			
Four Corners Pipeline Company	Completed- Case Closed		Cleanup Program Site
South Kern Industrial Center Composting Facility	Open	12 mi. East of Taft on S. Lake Road	Land Disposal Site
Sunset Vista Ranch	Open- Site Assessment	16500 Millux Rd	Cleanup Program Site
So. Coles levee #10	Completed- Case Closed	T31S, R25E Section 10	LUST Site
Kern Water Bank	Open- Site Assessment	Sect 15, T30S/R25E	Cleanup Program Site
Bobs Handi Mart	Completed- Case Closed	400 Kern St	LUST Site
Cal Trans Taft Station	Completed- Case Closed	27450 Highway 33	LUST Site
Cavins Oil Well Tool	Completed- Case Closed	815 Main St	LUST Site
Chevron #90-127	Completed- Case Closed	325 10th St N	LUST Site
Chevron Division Field Service	Completed- Case Closed	Lincoln St	LUST Site
City Corporation Yard	Completed- Case Closed	209 Kern St E	LUST Site
Cougar Country	Completed- Case Closed	301 Kern St	LUST Site
Enterprise Contractors	Completed- Case Closed	701 Gardner Field Rd	LUST Site
Gene Watson Construction	Completed- Case Closed	811 Supply Row	LUST Site
Kimbriel's BP	Completed- Case Closed	301 Harrison St	LUST Site
Kimbriels mobil station	Completed- Case Closed	301 Harrison	LUST Site
Lucky 7 Food Mart #20	Open- Site Assessment	501 10th St S	LUST Site
Mcneal & Schuck Petroleum	Completed- Case Closed	1011 Kern St	LUST Site

Cortese List Sites			
Site Name	Type of Site	Status	Location
Midway Pump Station	Completed- Case Closed	Midway Pump Station	LUST Site
Mitchell Property	Open- Site Assessment	701 Harrison St	LUST Site
Outpost Food Store	Open- Site Assessment	509 6th St	LUST Site
Pride Petroleum Service	Completed- Case Closed	1050 Wood St	LUST Site
S.C.L.U. Gas plant	Completed- Case Closed	Highway 119	LUST Site
Sierra Production Service	Completed- Case Closed	Highway 33	LUST Site
Simmons Oilfield Construction	Completed- Case Closed	Highway 33 (1 mi N of Taft)	LUST Site
Taft City School District	Completed- Case Closed	905 4th St	LUST Site
Taft Fire Station	Completed- Case Closed	125 10th St N	LUST Site
Taft Lens & Camera	Completed- Case Closed	422 1/2 North St	LUST Site
Taft Union High School	Completed- Case Closed	701 7th St	LUST Site
Texaco Buena Vista Hills	Completed- Case Closed	15500 Airport Dr	LUST Site
Tretolite Services	Completed- Case Closed	101 East Main St	LUST Site
Trico Industries - Taft	Completed- Case Closed	1277 Kern Street	Cleanup Program Site
Unocal - Taft (former: Unocal Station 2989)	Completed- Case Closed	411 Kern St.	Cleanup Program Site
Westside Oilfield Construction	Completed- Case Closed	330 Supply Row	LUST Site
Weatherford Enterra, Inc. - Taft	Completed- Case Closed	1555 Kern St	Cleanup Program Site

1: Cortese and GEIMS databases accessed June 2009

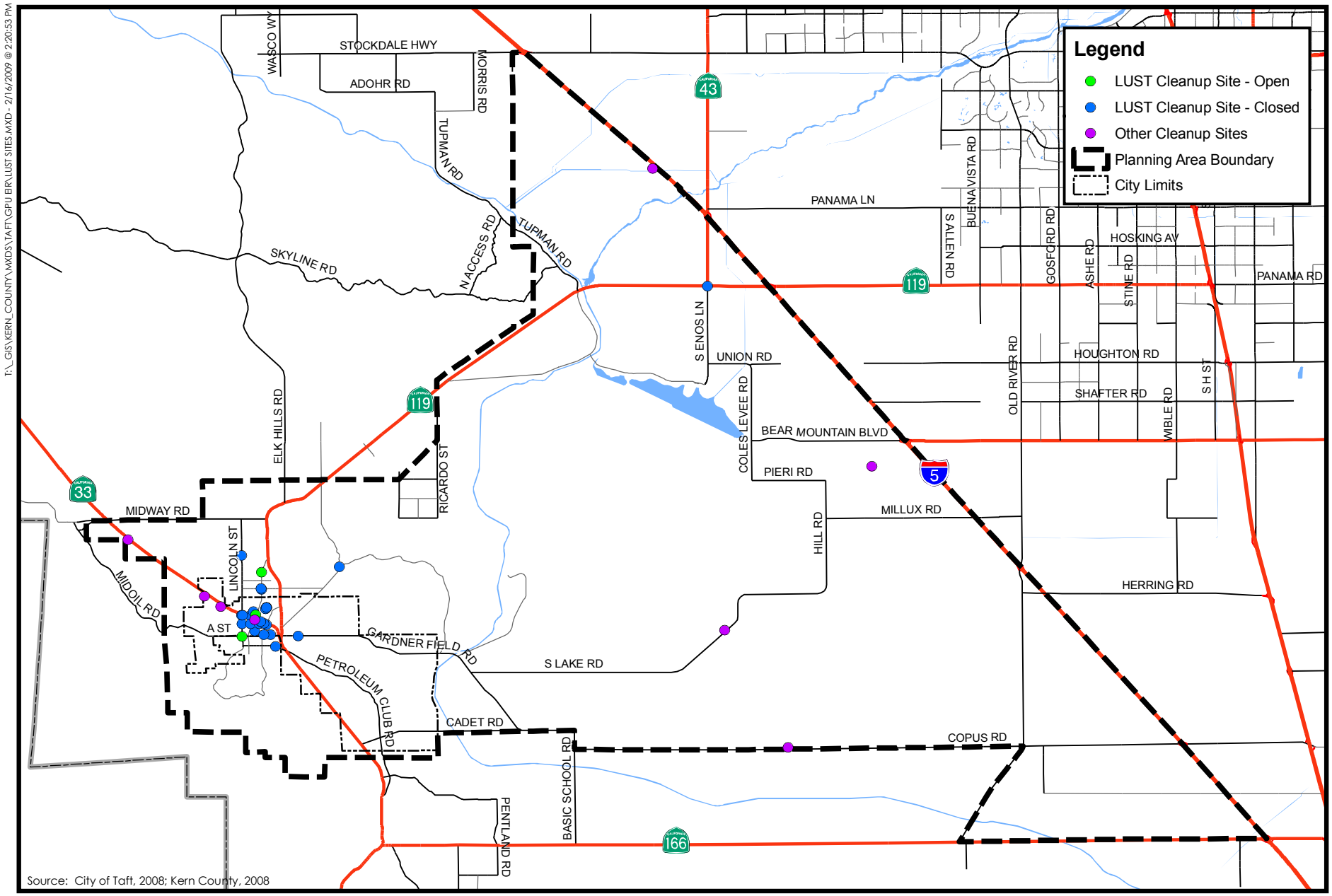

Figure 4.7-1

Leaking Underground Storage Tanks and Other Cleanup Sites within the Planning Area

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As of March 2009, there are no National Priorities List (NPL) sites in the Planning Area. The Resource Conservation and Recovery Act (RCRA) online database shows that, as of March 2009, 122 facilities in the Planning Area are hazardous waste handlers, generators, transporters, treaters, storers, or disposers. (US EPA, 2009) See the USEPA Hazardous Materials Handling discussion in the Regulatory Setting below for more details on these sites and facilities.

Airport Hazards

Projects 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, could result in a safety hazard for people residing or working in the project area.

The State Division of Aeronautics has compiled extensive data regarding aircraft accidents around airports in California. This data is much more detailed and specific than data currently available from the Federal Aviation Administration (FAA) and the National Transportation Safety Board (NTSB). According to the California Airport Land Use Planning Handbook (2002), prepared by the State Division of Aeronautics, 18.2 percent of general aviation accidents occur during takeoff and initial climb and 44.2 percent of general aviation accidents occur during approach and landing (California Division of Aeronautics, 2002). The State Division of Aeronautics has plotted accidents during these phases at airports across the country and has determined certain theoretical areas of high accident probability.

Approach and Landing Accidents

As nearly half of all general aviation accidents occur in the approach and landing phase of flight, considerable work has been done to determine the approximate probability of such accidents. Nearly 77 percent of accidents during this phase of flight occur during touchdown onto the runway or during the roll-out (California Division of Aeronautics, 2002). These accidents typically consist of hard or long landings, ground loops (where the aircraft spins out on the ground), departures from the runway surface, etc. These types of accidents are rarely fatal and often do not involve other aircraft or structures. Commonly, these accidents occur due to loss of control on the part of the pilot and, to some extent, weather conditions.

The remaining 23 percent of accidents during the approach and landing phase of flight occur as the aircraft is maneuvered toward the runway for landing, in a portion of the airspace around the airport commonly called the traffic pattern (California Division of Aeronautics, 2002). Common causes of approach accidents include the pilot's misjudging the rate of descent, poor visibility, unexpected downdrafts, or tall objects beneath the final approach course. Improper use of rudder on an aircraft during the last turn toward the runway can sometimes result in a stall (a cross-control stall) and resultant spin, causing the aircraft to strike the ground directly below the aircraft. The types of events that lead to approach accidents tend to place the accident site fairly close to the extended runway centerline. The probability of accidents increases as the flight path nears the approach end of the runway (ibid.).

According to the State Division of Aeronautics which provides aircraft accident plotting, most accidents that occur during the approach and landing phase of flight occur on the airport surface

itself. The remainder of accidents that occur during this phase of flight are generally clustered along the extended centerline of the runway, where the aircraft is flying closest to the ground and with the lowest airspeed.

Takeoff and Departure Accidents

According to data collected by the State Division of Aeronautics, nearly 65 percent of all accidents during the takeoff and departure phase of flight occur during the initial climb phase, immediately after takeoff. This data is correlated by two physical constraints of general aviation aircraft:

The takeoff and initial climb phase are times when the aircraft engine(s) is under maximum stress and is thus more susceptible to mechanical problems than at other phases of flight; and

Average general aviation runways are not typically long enough to allow an aircraft that experiences a loss of power shortly after takeoff to land again and stop before the end of the runway (ibid.).

While the majority of approach and landing accidents occur on or near to the centerline of the runway, accidents that occur during initial climb are more dispersed in their location as pilots are not attempting to get to any one specific point (such as a runway). Additionally, aircraft vary widely in payload, engine power, glide ratio, and several other factors that affect glide distance, handling characteristics after engine loss, and general response to engine failure. This further disperses the accident pattern. However, while the pattern is more dispersed than that seen for approach and landing accidents, the departure pattern is still generally localized in the direction of departure and within proximity of the centerline. This is partially due to the fact that pilots are trained to fly straight ahead and avoid turns when experiencing a loss of power or engine failure. Turning flight causes the aircraft to sink faster and flying straight allows for more time to attempt to fix the problem.

Aviation hazard events typically involve two types of aircraft events, both of which are subject to separate rules under the Federal Aviation Administration (FAA) and the National Transportation Safety Board (NTSB). "Accidents," as defined by the NTSB and the FAA are events involving damage to one or more aircraft that result in fatalities or serious injury to pilots, passengers, or persons on the ground or in substantial damage to the aircraft. Damage is "substantial" if it negatively affects structural strength, performance, or flying characteristics of the aircraft involved, excluding damage to landing gear, wheels, tires, or flaps or damage resulting in bent fairings, small dents or punctures of the aircraft skin, ground damage to propeller blades, or damage to only one engine (on multi-engine aircraft). "Incidents" are any event involving one or more aircraft that affects safety of flight but does not result in substantial injury or damage. Accidents are investigated and reported by the NTSB. Incidents, when reported, are the purview of the FAA.

According to the NTSB Database, there have been 34 aviation accidents or incidents in the Taft, CA area (including the Expansion Area portion of the Planning Area) since 1964. Of those, 19 occurred on the Taft – Kern County Airport or in close proximity to it, and only one of these

was fatal. The FAA Accident/Incident Database System (AIDS) lists three incidents on the airport, though some of these may duplicate the NTSB database. In regards to the most recent reported incidents and accidents, no incidents or accidents have occurred since October, 2000. That incident involved a gear-up landing with no injuries and no damage to property (other than the plane). The next most recent event occurred in 1999 and involved a student pilot impacting trees and power lines less than a ¼ mile from the airport. No fatalities were reported. The next most recent event occurred earlier that year and involved a control malfunction crash immediately adjacent to the runway at takeoff. No fatalities were reported. (NTSB, 2009)

4.7.2 REGULATORY FRAMEWORK

Although numerous federal, state, and local laws and regulations pertaining to hazardous waste management are applicable to remedial activities, conformance with these laws and regulations is addressed through separate environmental review and regulatory oversight specifically associated with the remedial projects. These activities are separate actions that are not part of the proposed City of Taft General Plan Update. Federal, state, and local laws and regulations that would apply to construction and operational activities that would occur within the Planning Area under the proposed General Plan Update are included in **Table 4.7-2** and discussed further below.

TABLE 4.7.2
REGULATORY AGENCIES FOR HAZARDOUS MATERIALS

Federal Agencies	
Regulatory Agency	**Authority**
Department of Transportation (DOT)	Hazardous Materials transportation Act – Code of Federal Regulations (CFR) 49
Environmental Protection Agency (USEPA)	Federal Water Pollution Control Act Clean Air Act Resource Conservation and Recovery Act (RCRA) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Superfund Amendments and Reauthorization Act (SARA) Federal Insecticide, Fungicide, and Rodenticide Act Toxic Substances Control Act (TSCA)
National Institute of Health	Guidelines for Carcinogens and Biohazards
Occupational Safety and Health Administration (OSHA)	Occupational Safety and Health Act and CFR 29
State Agencies	
Regulatory Agency	**Authority**
Department of Toxic Substances Control (DTSC)	California Code of Regulations
Department of Industrial Relations (CAL-OSHA)	California Occupational Safety and Health Ace, CCR Title 8
State Water Resources Control Board and Regional Water Quality Control Board	Porter-Cologne Water Quality Act Underground Storage Tank Law
Health and Welfare Agency	Safe Drinking Water and Toxic Enforcement Act
Air Resources Board	Air Resources Act
Office of Emergency Services	Hazardous Materials Release Response Plan/Inventory Law
Department of Fish and Game	Fish and Game Code
Department of Food and Agriculture	Food and Agriculture Code
State Fire Marshal	Uniform Fire Code, CCR Title 19
Regional/County Agencies	
Regulatory Agency	**Authority**
Air Pollution Control District	Air Resources Act

Source: PMC, 2009

FEDERAL

USEPA Hazardous Materials Handling

At the federal level, the principal agency regulating the generation, transport, and disposal of hazardous substances is USEPA, under the authority of the Resource Conservation and Recovery Act (RCRA). The RCRA established an all-encompassing federal regulatory program for hazardous substances that is administered by USEPA. Under the RCRA, USEPA regulates the generation, transportation, treatment, storage, and disposal of hazardous substances. The RCRA was amended in 1984 by the Hazardous and Solid Waste Amendments of 1984 (HSWA), which specifically prohibits the use of certain techniques for the disposal of various hazardous substances. The Federal Emergency Planning and Community Right to Know Act of 1986 imposes hazardous materials planning requirements to help protect local communities in the event of accidental release. USEPA has delegated much of the RCRA requirements to DTSC. CERCLA Hazardous Materials Releases

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980 (U.S. Code, Title 42). This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, $1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The law authorizes two kinds of response actions: (1) short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and (2) long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening. These actions can be conducted only at sites listed on EPA's National Priorities List (NPL). CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

CERCLA created the Superfund Program in order to clean up uncontrolled or abandoned hazardous-waste sites and to respond to accidents, spills, and other emergency releases of pollutants and contaminants. Section 101 of CERCLA defines a list of hazardous chemicals for which USEPA must establish regulations. Releases of CERCLA hazardous substances in amounts greater than their "reportable quantity" must be reported to the National Response Center and to state and local government officials. Hazardous substances identified in CERCLA include all chemicals on the following regulatory lists: Clean Air Act list of hazardous air pollutants (HAPs); Clean Water Act list of hazardous substances and priority pollutants; Solid Waste Disposal Act list of hazardous wastes; and Toxic Substances Control Act list of imminent hazards.

The National Priorities List is maintained by the EPA and lists the most severe hazardous waste sites as identified by Superfund. Sites are put on the NPL after they have been scored using the Hazard Ranking System, as well as having been subjected to public comment. Any site on the NPL is eligible for cleanup using Superfund Trust money. The NPL is primarily an informational resource that identifies sites that may warrant cleanup.

OSHA Worker Safety Requirements

The U.S. Department of Labor Occupational Safety & Health Administration (OSHA) is responsible at the federal level for ensuring worker safety. OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for the handling of hazardous substances (as well as other hazards). OSHA also establishes criteria by which each state can implement its own health and safety program.

CFR Federal Aviation Administration

The Federal Aviation Administration is responsible for the safety of civil aviation in the United States. The Federal Aviation Act of 1958 created the agency under the original name of the Federal Aviation Agency. The FAA's major responsibilities include:

- Regulation of civil aviation to promote safety;
- Encouragement of the development of civil aeronautics, including new technology;
- Development and operation of a system of air traffic control and navigation for use by both civil and military aircraft;
- Research and development of the National Airspace System and civil aeronautics; and
- Regulation of U.S. commercial space transportation.

FAA regulations, known as Federal Aviation Regulations (FARs), provide regulatory guidance for the operation, development, and construction of airports and aircraft as well as the training of and conduct of pilots of all civil types and ratings. Included in the FARs are specific regulations guiding the operation of airports and requirements on development adjacent to these airports.

Chapter 1 of the Code of Federal Regulations, Title 14, Volume 2 revised as of January 1, 2004 (14CFR77.1) specifically includes the Federal Aviation Administration regulations and Part 77 (Federal Aviation Regulation or FAR Part 77) pertains to objects affecting navigable airspace. FAR Part 77 establishes standards for determining obstructions in navigable airspace, sets forth the requirements for notice to the administrator of certain proposed construction or alteration; provides for aeronautical studies of obstructions to air navigation in order to determine their effect on the safe and efficient use of airspace, provides for public hearings on the hazardous effects of proposed construction or alteration on air navigation, and provides for the establishment of antenna farm areas.

STATE

California Hazardous Materials Handling

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires preparation of Hazardous Materials Business Plans and disclosure of hazardous materials inventories. A Business Plan includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the State of California. Local agencies, including the City of Taft, administer these laws and regulations.

Cal-OSHA Worker Safety Requirements

The California Occupational Safety and Health Administration (Cal-OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within California. Cal-OSHA regulations pertaining to the use of hazardous materials in the workplace, as detailed in CCR Title 8, include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal-OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites. The hazard communication program requires that Material Safety Data Sheets (MSDS) be available to employees and that employee information and training programs be documented.

Emergency Response to Hazardous Materials Incidents

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government and private agencies. Response to hazardous materials incidents is one part of this plan. The plan is managed by the State Office of Emergency Services (OES), which coordinates the responses of other agencies including Cal-EPA, California Highway Patrol (CHP), California Department of Fish and Game, and the City of Taft Police and Fire Departments.

California Department of Transportation, Hazardous Materials Transport

The U.S. Department of Transportation regulates hazardous materials transportation between states. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation (Caltrans). Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads.

It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery, or the loading, of such materials (Cal. Vehicle Code Sections 31602(b) and 32104(a)). When transporting explosives through or into a city for which a route has not been designated by CHP, drivers must follow routes as may be prescribed or established by local authorities (California Vehicle Code, Section 31614(a)). The transportation of explosives in quantities of 1,000 pounds or less, or other than on a public highway, is subject to the California Health and Safety Code (California Vehicle Code, Section 31601(a)).

California Department of Transportation, Division of Aeronautics

The Division of Aeronautics (DoA), a division of Caltrans, is responsible with developing a safe, efficient, dependable, and environmentally compatible air transportation system. Its mission is similar to the FAA, only on a state level. The DoA was founded in 1947 as the California Aeronautics Commission. The DoA operates in accordance with the State Aeronautics Act, Public Utilities Code Section 21001 et seq., which provides policy direction for the DoA and its sphere of influence. The DoA issues permits for and annually inspects hospital heliports and public-use airports, makes recommendations regarding proposed school sites within two miles of an airport runway, and authorizes helicopter landing sites at or near schools. The DoA also provides for the integration of aviation into transportation system planning on a regional, statewide, and national basis; administers noise regulation and land use planning laws that foster compatible land use around airports; encourages environmental mitigation measures to lessen noise, air pollution, and other impacts caused by aviation; and provides grants and loans for safety, maintenance, and capital improvement projects at airports.

Developed by the Division of Aeronautics, the California Airport Land Use Planning Handbook guides land use planning within the vicinity of public-use airports in the state. When an environmental impact report is prepared for a project within two miles of a public-use airport, Public Resources Code Section 21096(a) requires that the California Airport Land Use Planning Handbook be utilized to guide the analysis.

LOCAL

Airport Land Use Commission

In accordance with the California Public Utilities Code, Section 21670(b), each county in which there is an airport served by an airline or operated for the benefit of the general public was required to form an Airport Land Use Commission (ALUC) in order to address issues typically experienced by airport and land uses adjacent to those land uses. However, the State Aeronautics Act was revised in 1993 to make the creation of an Airport Land Use Commission optional, rather than mandatory, for local jurisdictions. In response, the Kern County Board of Supervisors chose in early 1994 to eliminate the Kern ALUC.

Kern County Airport Land Use Compatibility Plan

The Planning Area is located within Kern County, which has developed an ALUCP that addresses land use compatibility for 16 public use airports, two military installations (China Lake Naval Weapons Station and Edwards Air Force Base), and the Joint Service R-2508 Airspace complex. The ALUCP identifies an airport influence area for each airport and policies that apply to military aviation and the military installations. Proposed development projects within these areas must be reviewed to determine their potential to affect the airport. If a project is proposed by the airport, the project should be reviewed for its potential to affect adjacent non-airport land within the airport influence area. (Kern County, 2008)

The Taft-Kern County Airport is a public airport located at the intersection of SR 119 and SR 33, within the incorporated boundaries of the City. The airport is currently operated by Kern County and, as such, the current General Plan and associated zoning and other requirements have been established by the City in order to be consistent with the requirements of the Kern County Airport Land Use Compatibility Plan (ALUCP). The ALUCP establishes certain land use restrictions and height requirements within the vicinity of the airport in order to minimize the effect of the airport on people and structures on the ground in the areas of noise, safety, and land use. (Kern County, 2008)

The Taft City Council and Kern County Board or Supervisors recently adopted an amendment to the Airport Land Use Compatibility Plan for the Taft-Kern County Airport. See Section 4.1, Land Use and Planning**,** of this document for further discussion of these updates.

Mosquito Abatement and Vector Control

The West Side Mosquito and Vector Control District (WSMVCD) has jurisdiction over the Planning Area. The WSMVCD consists of five members, three appointed by the Board of Supervisors, one by City of Maricopa, and one by City of Taft. Responsibilities of the WSMVCD include extermination of mosquitoes, flies or other insects, abatement of stagnant pools of water and other breeding places, and any and all things necessary to carry out these objectives under the powers set forth under Section 2270 of the Health & Safety Code. (Kern County, 2009b)

Environmental Control

The West Side Mosquito and Vector Control District's preferred method of treatment is elimination or reduction of the source, including physical elimination of environmental conditions necessary for mosquito production. This method typically involves eliminating sources of standing water.

Biological Control

Mosquitofish are the primary biological control used by the WSMVCD. Mosquitofish are raised in captivity and used to stock open waters and flooded habitats where mosquito larvae may most likely be found. The effectiveness of mosquitofish can be limited by dense stands of emergent

wetland vegetation, and management of these stands is often a required element of an integrated mosquito abatement program.

Pesticides

Pesticides are used by the WSMVCD to control larval and adult mosquitoes. Larvicides, such as light-grade oils and *Bacillus thuringiensis israelensis*, a bacterial larvicide, are applied directly to water to control mosquito larvae. For adult mosquito suppression, and as a last resort, Mosquito Abatement Districts will use synthetic pyrethroids, a group of synthetic insecticides with relatively low mammalian toxicity that are modeled after the botanical pyrethrum insecticides (Kern County, 2009a).

Kern County Multi-Hazard Mitigation Plan

The purpose of the Kern County Multi-Hazard Mitigation Plan is to reduce or eliminate long-term risk to people and property from natural hazards and their effects in Kern County, California. This plan has been prepared to meet the Disaster Mitigation Act of 2000 requirements in order to maintain Kern's eligibility for FEMA Pre-Disaster Mitigation (PDM) and Hazard Mitigation Grant Programs (HMGP). (Kern County, 2005)

The process followed a methodology prescribed by FEMA. It began with the formation of a Hazard Mitigation Planning Committee (HMPC) comprising of key County, City, special district, and stakeholder representatives. The planning process examined the recorded history of losses resulting from natural hazards and analyzed the future risks posed to the County by these hazards. Kern County is vulnerable to several natural hazards that are identified, profiled, and analyzed in the plan. Earthquakes, wildfires, floods, and drought are some of the hazards that can have a significant impact on the County.

The plan puts forth several mitigation goals and objectives that are based on the results of the risk assessment. The plan includes specific recommendations for actions that can mitigate future disaster losses. The plan also includes a review of the County's current capabilities to reduce hazard impacts. The multi-jurisdictional plan includes the County and the incorporated municipalities of Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. This plan also covers 45 special districts that include school, recreation and park, water, community service, and other districts. This plan has been formally adopted by each participating entity and is required to be updated a minimum of every five years.

Kern County Environmental Health Services Department

The Kern County Environmental Health Services Department sets forth standards and regulations regarding the underground storage of hazardous substances which must be met by the City of Taft (and the proposed General Plan Update planning area). Chapter 8.48 of the Kern County Code sets forth required permits, fees, reporting, monitoring, equipment, design, inspection, abandonment, and penalty standards regarding underground storage tanks. Both new underground storage tanks and existing tanks must comply with these standards. Furthermore,

all underground storage tank removal and remediation efforts must comply with the Kern County Environmental Health Services Department standards. If discovered, the tanks would require removal prior to any development activities. If subsurface contamination occurred as a result of tank leakage or overfilling, the contamination would require assessment and remediation in compliance with Kern County Environmental Health Services Department regulations.

Kern County General Plan

The Kern County General Plan was originally adopted by the Board of Supervisors in June 2004. Minor amendments to the plan were subsequently adopted in 2006 and 2007. The plan contains policies related to development of lands under County jurisdiction, which include the Expansion Area. **Figure 4.1-2** depicts the County General Plan land use designations within the Expansion Area. Most of the County land within the Expansion Area is designated Agriculture (A) and Natural Resources (NR).

Kern County General Plan goals, policies, and implementation measures related to hazards and the proposed project are provided below.

Safety Element

Policies

4.2-1. That the County's program of identification, mapping, and evaluating the geologic, fire, flood safety hazard areas, and significant concentrations of hydrogen sulfide in oilfield areas, presently under way by various County departments, be continued.

4.2-2. Those hazardous areas, identified as unsuitable for human occupancy, are guided toward open space use, such as agriculture, wildlife habitat, and limited recreation.

4.2-3. That the County government encourage public support of local, State, and federal research programs on geologic, fire, flood hazards, valley fever, plague, and other studies so that acceptable risk may be continually reevaluated and kept current with contemporary values.

4.2-4. The County shall encourage extra precautions be taken for the design of significant lifeline installations, such as highways, utilities, and petrochemical pipelines.

4.7-1. Continue to maintain and update the Kern County Emergency Plan and continuously educate program participants of their responsibilities.

4.7-2. Monitor, enforce, and update, as appropriate, all emergency plans as needs and as conditions change.

4.9-1. The proposed siting or expansion of hazardous waste facilities will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan.

Implementation Measures

4.2-A. All hazards (geologic, fire, and flood) should be considered whenever a Planning Commission or Board of Supervisors action could involve the establishment of a land use activity susceptible to such hazards.

4.2-B. The Safety Element should be reviewed and comprehensively revised every five years, or whenever substantially new scientific evidence becomes available.

4.2-C. Require detailed site studies for groundshaking characteristics, liquefaction potential, dam failure inundation, flooding potential, and fault rupture potential as background to the design process for critical facilities under County discretionary approval.

4.2-D Require seismic review prior to major addition, renovation, or increase in occupancy of buildings.

4.2-E. Maintain adequate setbacks between oil/gas wells and development through the use of the zone districts DI (Drilling Island) and PE (Petroleum Extraction) and implementation of the Uniform Fire Code 7904.32.3.

4.7-A. Incorporate specific plans and procedures for the sequential and orderly evacuation of the potential dam inundation area into Kern County emergency plans.

4.7-B. The County to maintain effective Joint Powers Agreement (JPA) for fire, police, medical response, emergency morgue, mass care, heavy rescue, or other functions as appropriate.

4.7-C. Require emergency plans to include procedures for traffic control and security of damaged areas.

4.7-D. Require public education and preparedness to be a major continuing component of the emergency program. It should include, at a minimum:

a) The existence and approximate locations of local faults, liquefaction susceptibility areas, and the dam evacuation areas and the procedures that have been developed to deal with them.

b) The potential for strong groundshaking in the area and means of strengthening buildings and protecting furnishings, equipment, and other building contents from damage.

c) The need for businesses and residents to be self-sufficient for several days following an earthquake, including food, water, sanitation, medical assistance, and limited fire fighting.

d) The provision for the orderly evacuation of elderly, handicapped, and other special-care persons.

e) What people and businesses should do to help themselves before, during, and after earthquakes.

4.4.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on criteria derived from Appendix G in the CEQA Guidelines, the proposed General Plan would result in a significant impact to the environment or to human health and safety if the project would:

Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Be located on a site that is included on a list of hazardous materials sites compiled by Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.

For a project in the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.

Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

METHODOLOGY

Evaluation of potential hazards and hazardous materials impacts of the proposed City of Taft General Plan Update was based primarily on database research, field reconnaissance of the surroundings, review of the Kern County General Plan and existing Taft General Plan, consultation with relevant agencies, and review of public comment letters. Databases accessed for information included the Cortese List and the CAL-SITES ASPIS database. A detailed list of resources used in the completion of the analysis in this section can be found under "References" located at the end of the section.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan polices are designed to mitigate or avoid impacts on the environment resulting from

implementation of the proposed project. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan polices were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies. Only those policies and action items that contain specific enforceable requirements or restrictions and corresponding performance standards that address an impact have been included under each impact discussion below.

PROJECT IMPACTS AND MITIGATION MEASURES

Transportation of Hazardous Materials

Impact 4.7.1 Implementation of the proposed project would include the routine transportation of hazardous materials on Planning Area roadways. Implementation of proposed General Plan policies and action items would result in a **less than significant** impact.

There are certain approved transportation routes in the Planning Area for the transportation of explosives, inhalation hazards, and nuclear material. It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery, or the loading of such materials (California Vehicle Code Sections 31602(b) and 32104(a)). The California Highway Patrol also designates through routes to be used for the transportation of inhalation hazards and may designate separate through routes for the transportation of inhalation hazards composed of any chemical rocket propellant (California Vehicle Code, Section 32100 and Section 32102(b)). According to Title 13 Chapter 6 of the CCR, within the Planning Area, the CHP designates SR 33 and Interstate 5 (I-5) for vehicles carrying explosives, SR 166 for vehicles carrying inhalation hazards, and I-5 for vehicles carrying nuclear material.

Growth allowed under the City's updated General Plan would increase the potential for the use, transportation, and disposal of hazardous materials accidents and spills. I-5 is currently utilized to transport hazardous waste through the San Joaquin Valley, and an increase in development close to this route would additionally increase the potential exposure of residents to hazardous material releases due to accidents. In general, the transportation of hazardous materials could result in accidental spills, leaks, toxic releases, fire, or explosion. The precise increase in the amount of regulated hazardous materials transported to or from the Planning Area as a result of implementation of the proposed General Plan Update cannot be definitively predicted at this time. It is possible that licensed vendors could bring some hazardous materials to and from the Planning Area; however, appropriate documentation and proper identification of all vehicles transporting hazardous waste would be provided for compliance with the existing hazardous materials regulations. As required by Title 49 of the CFR, placards must be placed on vehicles during loading and transportation of hazardous materials. These placards must be put on each side and each end of the transporting vehicle. Additionally, every driver who transports

hazardous materials would be required to obtain a hazardous materials transportation license. Compliance with all applicable federal and state laws related to the transportation of hazardous materials would reduce the likelihood and severity of accidents during transit.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following proposed General Plan policies and action items address the use and handling of hazardous materials and associated land uses involving hazardous materials through the coordination with appropriate agencies regarding route planning and incident response:

Policy LU-5 Analyze all development projects in accordance with the provisions of CEQA.

Policy S-12 Continue to coordinate with the California Office of Emergency Services, the California Department of Toxic Substances Control, the California Highway Patrol, the Kern County Department of Environmental Health Services, the Kern County Fire Department, the Kern County Sheriff's Department, and other appropriate agencies in hazardous materials route planning and incident response.

Action S-12a Coordinate with the oil companies to prepare emergency and contingency plans for controlling and mitigating pipeline leakage within the Planning Area.

Action S-12b Support Kern County in their efforts to manage the use, movement, storage, and disposal of hazardous materials in the County and the City when they update the Hazardous Waste Management Plan and the Integrated Waste Management Plan.

Action S-12c Cooperate with the Kern County Fire Department to develop, review, and revise, as necessary, the Emergency Response Plan to provide consistent and proper procedures to address pipeline ruptures.

Action S-12d Coordinate with state and federal agencies having responsibilities for regulating the transportation of hazardous materials review regulations and procedures to mitigate the public safety hazard.

Action S-12e As part of review and approval of development plans, consider the impact of proposed industrial development projects with respect to transport of hazardous materials. To the extent feasible, locate uses requiring substantial transport of hazardous materials so as to direct such traffic away from residential and commercial areas.

Implementation of the policies and action items described above, as well as adherence to all federal, state, and local regulations regarding the transportation of hazardous materials, would

reduce the environmental impacts associated with the routine transportation of hazardous materials on Planning Area roadways to **less than significant**.

Mitigation Measures

None required.

Release and Exposure to Hazardous Materials

Impact 4.7.2 The Planning Area consists of land uses having the potential to result in an increased risk of release of hazardous materials. This is considered a **less than significant** impact.

Implementation of the proposed General Plan with the proposed residential and non-residential uses would involve the storage, use, and transport of hazardous materials (e.g., gasoline fuels, demolition materials, asphalt, lubricants, toxic solvents, pesticides, and herbicides) during construction, demolition, and landscaping activities. In addition, certain commercial uses, including water treatment plants, swimming pool facilities, gas stations, and dry cleaners that store, use, and routinely transport hazardous material to and from their facilities, could pose a potential hazard to the environment. Hazardous materials used during construction and operational activities throughout the Planning Area may expose nearby residents and local schools to toxic emissions. Electrical transformers and industrial products containing polychlorinated biphenyls and heavy metals, as well as persistent residual chemicals including pesticides, herbicides, and fertilizers have the potential to pose a health and safety risk via accidental release, misuse, or historic use in the Planning Area.

As discussed under Impact 4.7.1, the transportation of hazardous materials on area roadways is regulated by the CHP, U.S. Department of Transportation (Hazardous Materials Transportation Act) and Caltrans, and use of these materials is regulated by the DTSC (22 Cal. Code Regs. Section 66001, et seq.). The use, storage, and transport of hazardous materials by developers, contractors, business owners, and others are required to be in compliance with local, state, and federal regulations during project construction and operation. Facilities that use hazardous materials are required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. All existing and future projects in the Planning Area would be required to comply with federal, state, and local regulations regarding the handling, transportation, disposal, and cleanup of hazardous materials. For further discussion on impacts to air quality due to toxic emissions, the reader is referred to Section 4.5, Air Quality, of this Draft EIR.

As discussed above in the Existing Setting section, the Cortese List, prepared pursuant to Government Code Section 65962.5 by the California Department of Toxic Substances Control, does not list any sites in the proposed Planning Area. However, the Regional Water Quality Control Board has listed several leaking underground storage tank sites in and around Taft. As of December 2008, there are 29 leaking underground fuel tanks (LUFTs) and 8 closed/completed SLIC (Spills, Leaks, Investigations, and Clean-Up) sites within the Planning Area, all but one of which is within 2008 City limits. Underground storage tanks (USTs) are

associated with a wide variety of farmland and ranching activities. Due to unknown underlying conditions, there is the potential for discovering USTs within the Planning Area. If UST(s) are discovered during any phase of a project, removal is required prior to additional site preparation or development activities (California State Water Resources Control Board Underground Storage Tank Program (SWRCB, 2009b) and California Health and Safety Code Section 25281, et seq). All UST removal and remediation efforts must comply with the Kern County Environmental Health Services Department standards. If discovered, the tanks would require removal prior to any development activities. If subsurface contamination occurred as a result of tank leakage or overfilling, the contamination would require assessment and remediation in compliance with Kern County Environmental Health Services Department regulations.

Both Elk Hills Elementary School and Taft High School are within 0.25 miles of an existing open-case LUST site. Furthermore, the proposed General Plan Update Land Use Map (see **Figure 3.0-6**) sites portions of land designated Industrial adjacent to portions designated public facilities. The proximity of industrial land uses to public facilities creates the potential for hazardous materials issues within the Planning Area. To site and construct a state-funded school, a public school district must complete an extensive and independent statutory review process in accordance with the siting requirements of the California Department of Education. In addition to CEQA review, and in order to ensure that each new school site is safe from toxic hazards, new school sites may be subject to review from the Department of Toxic Substances Control; the State Allocation Board, which administers and allocates funding requests; and the Division of the State Architect, which reviews the design, plans, and construction of public-funded schools. These review processes are most typically done on a site-specific basis. The selection of new public school sites must comply with the California Education Code (including Section 17521, requiring the governing board of the school district to adopt a resolution in connection with consideration of proposal for occupancy of a building to be constructed on its property, and to conduct a public meeting), and the California Code of Regulations (CCR), Title 5, Sections 14001 through 14012, which outlines the powers and duties and establishes standards with which the California Department of Education, and all public school districts, must comply in the selection of new school sites. Since any future siting of schools within the Planning Area will have to comply with state statutory and regulatory requirements addressing public and environmental health as well as safety from hazards, including hazardous substances, impacts from siting schools in the vicinity of such hazards are not evaluated further in this document. However, impacts due to the siting of schools and hazards within the Planning Area are not anticipated to be significant. At this time, any further analysis of this impact would be speculative. Implementation of proposed General Plan policies would therefore ensure that this impact is **less than significant**.

<u>Proposed General Plan Policies and Action Items that Provide Mitigation</u>

The following proposed General Plan policies address issues associated with hazardous materials and contamination through the regulation of hazardous waste storage, compliance with up-to-date safety standards and the provision of buffer zones:

Policy LU-5 Analyze all development projects in accordance with the provisions of CEQA.

Policy S-8 Work to identify and eliminate hazardous waste releases from both private companies and public agencies.

Action S-8a Continue to coordinate with the Kern County Health Department.

Action S-8b Work with appropriate agencies to map and document known contaminated and remediated sites.

Policy S-9 Strictly regulate the storage of hazardous materials and waste, consistent with state and federal law.

Action S-9a Regularly review the Taft Municipal Code to ensure that City regulations reflect the most up-to-date standards for the storage, handling, and use of hazardous and toxic materials.

Action S-9b Require secondary containment and periodic examination for all storage of hazardous and toxic materials, consistent with the requirements of state or federal law.

Action S-9c As part of the review and approval of development plans and building permits, assure that secondary containment is provided for hazardous and toxic materials.

Policy S-10 Require industrial facilities to be constructed in accordance with up-to-date safety and environmental protection standards.

Action S-10a Support continued enforcement of permitting requirements for radioactive materials and enforce public safety standards for the use of these materials, including the placarding of transport vehicles.

Policy S-11 Require industries which store and process hazardous or toxic materials to provide a buffer between the source and the property boundaries sufficient to protect public safety, subject to approval by the City and any other regulatory agency.

Action S-11a As part of review and approval of development plans, require adequate buffering of sensitive uses from hazardous or potential hazardous areas.

Implementation of the above proposed General Plan Update policies and associated action items, and adherence to all federal, state, and local regulations regarding the storage and handling of hazardous wastes, and the use and removal of underground storage tanks, as well as the cleanup and remediation of leaking contaminants and hazardous wastes and hazardous substances, would reduce potential impacts to the environment and to public health and safety

associated with the accidental release of and exposure to hazardous substances to **less than significant**.

Mitigation Measures

None required.

Airport Safety Hazards

Impact 4.7.3 Implementation of the proposed General Plan Update would locate development within an airport land use plan, potentially resulting in a safety hazard for people residing or working in the area. This impact is considered **less than significant**.

As described in the Airport Hazards section above, airport operation hazards are generally associated with aircraft accidents, particularly during takeoffs and landings due to incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures that penetrate the imaginary surfaces surrounding an airport.

The Kern County ALUCP addresses land use compatibility for 16 public use airports, two military installations (China Lake Naval Weapons Station and Edwards Air Force Base), and the Joint Service R-2508 Airspace complex. The ALUCP identifies an airport influence area for each airport, and provides policies that apply to military aviation and installations. Proposed development projects within these areas must be reviewed to determine their potential to affect the airport. If a project is proposed in the vicinity of an airport, the project would have to be reviewed for its potential to affect adjacent non-airport land within the airport influence area. Buildings within the Taft-Kern County Airport safety zone would be required to adhere to both Federal Aviation Administration regulations and the local County ALUCP. The reader is referred to Section 4.1, Land Use and Planning, for additional discussion regarding the Taft-Kern County Airport and the ALUCP. According to the proposed General Plan Update land uses (see **Figure 3.0-6**), no residential land uses are within Zone A of the Kern County/Taft Airport's Land Use Compatibility Plan. Land designated Rural Residential and Mixed Use does, however, lie within Zone B1.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following proposed General Plan policies addresses potential operational and safety conflicts with Taft-Kern County Airport operations through the dedication of an aviation easement:

Policy LU-6 Require all development to be compatible with the Airport Land Use Compatibility Plan (ALUCP).

Policy CI-39 Where required by the Federal Aviation Administration, require the dedication of aviation easements for discretionary projects to provide for orderly development and as a means of preventing new noise and safety impacts.

Adherence to federal regulations, the Comprehensive Land Use Plan, Kern County ALUC requirements, and implementation of the General Plan land use and circulation policies described above would reduce airport safety hazards to **less than significant.**

Mitigation Measures

None required.

Interfere with Emergency Response Plans or Emergency Evacuation Plans

Impact 4.7.4 Implementation of the proposed project could impair implementation of or physically interfere with the Kern County Multi-Jurisdictional Hazard Mitigation Plan. This is considered a **less than significant** impact.

An efficient roadway and circulation system is vital for the evacuation of residents and the mobility of fire suppression, emergency response, and law enforcement vehicles. Implementation of the General Plan Update will add additional traffic and residences requiring evacuation in case of an emergency. The proposed project would result in increased intensities in land uses within the Planning Area. The resulting changes in land use patterns could increase the potential for conflicts with existing emergency response or emergency evacuation plans by making implementation of emergency response activities more difficult. This increased difficulty would place more people at risk of serious injury or death and property at greater risk of serious damage. See Section 4.4, Traffic and Circulation for a discussion of roadway connectivity under the GPU.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following proposed General Plan Update policy and action items address potential interference with emergency response plans by keeping emergency plans updated and emergency staff properly trained:

Policy S-2 Support Kern County's efforts regarding staff levels and training for preparation and reaction to the full range of natural and man-made hazards.

Action S-2a Regularly update emergency operations plans, identifying leadership, representatives, coordination and action for responding to emergencies in a timely and efficient manner.

Action S-2b Coordinate emergency operations plans with the Kern County Emergency Operations Plan.

Action S-2c Train City staff to handle emergency situations.

Action S-2e Participate in the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS) and comply with the State of California Emergency Services Act.

Adherence to the Kern County Multi-Jurisdictional Hazard Mitigation Plan and implementation of the General Plan policies and action items described above would reduce safety hazards due to the interference of emergency response plans to **less than significant.**

Mitigation Measures

None required

4.7.4 CUMULATIVE IMPACT ANALYSIS

CUMULATIVE SETTING

The land use policies in the proposed City of Taft General Plan Update would provide direction for growth within the City limits, while the Kern County General Plan policies provides direction for growth outside the City limits, but within the Planning Area boundaries (until land areas are annexed into the City). Thus, the setting for this cumulative analysis includes existing, proposed, approved, and planned projects in the General Plan Planning Area and surrounding portions of unincorporated the County as well as full buildout of the City of Taft General Plan Planning Area as proposed under the project (occurring after year 2035). Development in the region identified in Section 4.0 would change the intensity of land uses in the region. In particular, this cumulative development scenario would provide additional housing, employment, shopping, and recreational opportunities. These potential changes would though the hazardous material, human health, and safety impacts as described in CEQA Appendix G are generally site-specific and not cumulative by nature, the transportation of hazardous materials occurs over a wider area. Growth in the region could lead to increased transport of hazardous materials on the state highways and interstates that also serve the Planning Area. In addition, development elsewhere in the region could have a greater effect on the transport and accidental release of hazardous materials. Therefore, the cumulative setting for the discussion of hazardous materials and risk of upset impacts includes not only the Planning Area but the remainder of Kern County as well.

The potential cumulative impacts due to the increased use of hazardous materials resulting from proposed development under the General Plan include, but are not limited to, air quality, noise, water quality, flooding, and fire, as well as exposure to multiple contaminants. The cumulative impacts associated with affected resources, such as air and water, are analyzed in the applicable technical sections of this Draft EIR.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Hazards and Health Risks

Impact 4.7.5 Implementation of the proposed General Plan Update could contribute to the cumulative exposure of persons to contaminated soil or groundwater during development of previously contaminated sites or sites undergoing remediation. This impact is considered **less than cumulatively considerable**.

The cumulative effects from land uses proposed in association with the updated General Plan could create a risk to public health from exposure to hazards and hazardous materials from existing contamination conditions as well as future land use operations (transportation, handling, and storage). As discussed under Impact 4.7.2, implementation of the proposed General Plan would involve the development of land on previously contaminated sites. Contamination from hazardous waste sites and leaking underground storage tanks has the potential to contaminate soils and/or groundwater and present public health hazards. This is a **less than cumulatively considerable** impact.

Transportation of hazardous materials on area roadways is regulated by the CHP, U.S. Department of Transportation (Hazardous Materials Transportation Act) and Caltrans, and use of these materials is regulated by the DTSC (22 Cal. Code Regs. Section 66001, et seq.). The use, storage, and transport of hazardous materials by developers, contractors, business owners, and others are required to be in compliance with local, state, and federal regulations during project construction and operation. New school sites may also be subject to review from the Department of Toxic Substances Control; the State Allocation Board, which administers and allocates funding requests; and the Division of the State Architect, which reviews the design, plans, and construction of public-funded schools. These review processes are most typically done on a site-specific basis. The selection of new public school sites must comply with the California Education Code (including Section 17521, requiring the governing board of the school district to adopt a resolution in connection with consideration of proposal for occupancy of a building to be constructed on its property, and to conduct a public meeting), and the California Code of Regulations (CCR), Title 5, Sections 14001 through 14012, which outlines the powers and duties and establishes standards with which the California Department of Education, and all public school districts, must comply in the selection of new school sites.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing this hazards and human health risks impact. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Land Use Element

Policy LU-5

Circulation Element

Policy CI-38

Safety Element

Policy S-2; Action S-2a; Action S-2b; Action S-2c; Policy S-8; Action S-8a; Action S-8b; Policy S-9; Action S-9a; Action S-9b; Action S-9c; Policy S-10; Action S-10a; Policy S-11; Action S-11a; Policy S-12; Action S-12a; Action S-12b; Action S-12c; Action S-12d; Action S-12e

Implementation of the above proposed General Plan policies and associated action items, and compliance with federal, state, and local regulations regarding the handling, transportation, disposal, and cleanup of hazardous materials would fully mitigate specific hazardous material exposure issues associated with the proposed General Plan Update. As such, the General Plan Update's contribution to cumulative hazardous material impacts and other hazards to public safety are considered **less than cumulatively considerable.**

Mitigation Measures

None required.

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4.8
GEOLOGY AND SOILS

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") discusses the geologic, soil, and mineral resources conditions of the City of Taft General Plan Planning Area (Planning Area) and identifies the related potential environmental impacts and development constraints if the proposed General Plan were implemented. This analysis is based on the Geotechnical Hazards Investigation study done by Krazan & Associates, Inc. in September 2008 as supporting documentation for this analysis, for this report, available in **Appendix 4.8** of this DEIR. All sources from this report are incorporated by reference.

4.8.1 EXISTING SETTING

REGIONAL GEOLOGIC SETTING

The proposed Planning Area is located in Kern County, along the west margin of the southern San Joaquin Valley portion of the Great Valley Geomorphic Province of California and flanks the Temblor Range portion of the Coast Ranges Geomorphic Province. The San Joaquin Valley is bordered to the north by the Sacramento Valley portion of the Great Valley, to the east by the Sierra Nevada, to the west by the Coast Ranges, and to the south by the Transverse Ranges. The San Joaquin sedimentary basin is separated from the Sacramento basin to the north by the buried Stockton arch and associated Stockton Fault. The buried Bakersfield arch near the south end of the valley separates the relatively small Maricopa-Tejon subbasin at the south end of the San Joaquin basin from the remainder of the basin. The 450-mile long Great Valley is an asymmetric structural trough that has been filled with a prism of Mesozoic and Cenozoic sediments up to six miles thick. (Krazan, 2008)

Soils on the dissected upland areas are generally coarse and moderately to highly permeable; they contain a high proportion of sand, gravel, and coarse deposits. Except near the valley trough, the soils are moderately permeable and have a low water-holding capacity. (Krazan, 2008)

The Kern River has a well-defined flood plain that is as much as one mile wide in some areas, and that lies 300 feet below the general level of the upland surface. The Kern River waterway flows into the northerly part of the Planning Area, although much of its flow ultimately reaches the valley floor in the vicinity of the Buena Vista Lake and Kern Lake beds through irrigation works and by seepage from irrigated areas. Prior to the introduction of flood control, oil production and irrigation projects which altered the river's natural drainage, the river's path from the hills east of Bakersfield historically changed its course many times. New channels were formed during floods, because old channels and distributaries had become choked with alluvial debris during low stages. (Krazan, 2008)

Regional Lithology

The thick accumulation of deposits within the San Joaquin Valley range in age from Jurassic to Holocene and include both marine and continental rocks and deposits. However, in the Buena Vista-Kern Lake area within the eastern portion of the Planning Area, the thickness of sediments underlying the valley likely exceeds 35,000 feet. These beds, ranging in age from Cretaceous to Holocene, rest without continuity in deposition upon a crystalline basement complex. The sediments are less then 35,000 feet thick in the remainder of

the planning area. The surface and near surface deposits throughout the Planning Area consist of predominantly silty sand, sandy silt, sandy clay, clayey sand, sand, and gravel. (Krazan, 2008)

Structure and Faults

Although the mountain ranges that enclose the San Joaquin Valley have been established throughout a long interval of geologic time, they owe their present form largely to tectonic movements, which resulted in deformation of deposits along the valley borders and in the valley itself.

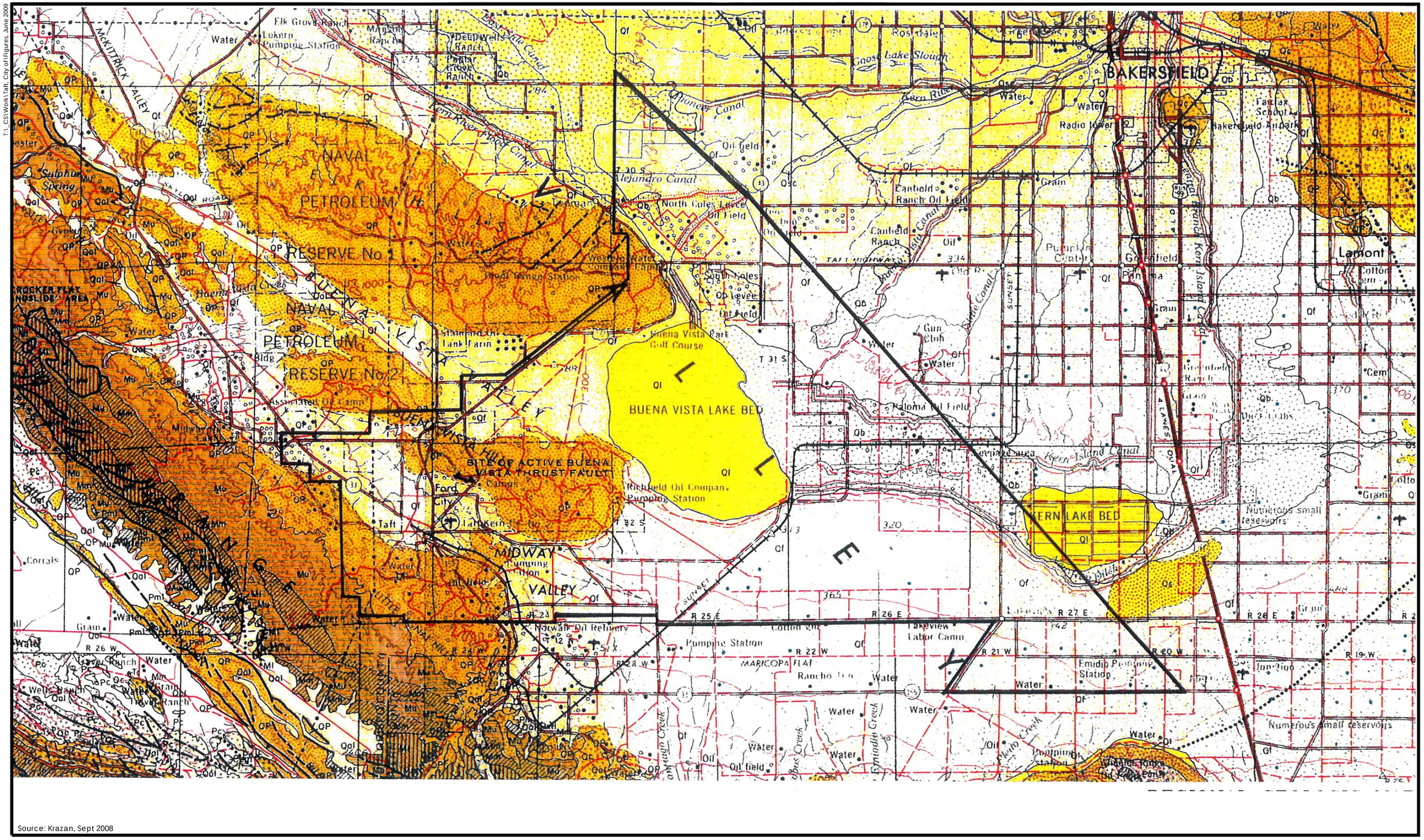
The south end of the San Joaquin Valley is bordered on the west, south, and east by three major fault systems: the San Andreas, Garlock, and Breckenridge-Kern Canyon faults, respectively. These faults are along the edges and within the Sierra Nevada and Coast Ranges (refer to **Figure 4.8.1a**- **Regional Geologic Map**). The San Andreas Fault is in the Coast Ranges, the Garlock Fault is in the Southern Sierra Nevada, and the Breckenridge/Kern Canyon is in the Sierra Nevada.

The Sierra Nevada and Coast Ranges are geologically young mountain ranges and possess active and potentially active fault zones. Major active faults and fault zones occur at some distance to the east, west, and south of the Planning Area. The Sierra Nevada and Owens Valley Fault Zones bound the eastern edge of the Sierra Nevada block approximately 61 and 83 miles east from the City of Taft, respectively. Numerous active faults are present within the San Joaquin Valley, San Emigdio Mountains, and Tehachapi Mountains south of the site including the San Andreas, Pleito Thrust, White Wolf, and Garlock faults. These faults are located approximately 9, 16, 20, and 37 miles from the City of Taft, respectively.

The White Wolf Fault (responsible for a 1952 earthquake that caused extensive damage in the Bakersfield area) is located in the tectonically active Tehachapi Mountains at the southerly terminus of the valley, approximately 2 miles southeast of the Planning Area. The Great Valley Fault Zone, another significant seismotectonic source located northwesterly of the site is the Great Valley Fault Zone (Coast Ranges-Central Valley boundary zone) located approximately 66 miles northwest from the City of Taft in the Coast Ranges/ Central Valley boundary zone.

The Kern Front, Premier, Buena Vista, and New Hope are faults in oil-producing areas. In addition, numerous unnamed faults are mapped within the oil fields in the vicinity of the Planning Area. The Pond Fault is a relatively minor fault which is considered to be due to differential subsidence caused by groundwater withdrawal. Numerous faults are mapped east of Bakersfield, including the Kern Gorge, Edison, and Breckenridge faults, and several unnamed faults. (Krazan, 2009)

T:_CS\Work\Taft, City of\Figures, June 2009



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SCALE IN MILES

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Figure 4.8-1a

Regional Geologic Map

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Seismic Hazard Zones

In 1975 the Kern County Planning Department prepared Seismic Hazard Atlases for a majority of the USGS 7.5 minute topographic quadrangles in the central valley portion of Kern County. The Taft quadrangle shows the Buena Vista Hill Thrust and an unnamed related fault in the vicinity. The Maricopa, Fellows, and Taft quadrangles show the Midway Fault, an inferred surface fault, extending northwest to southeast through the oil fields in the southwest corner of the Planning Area. Several unnamed minor subsurface faults are shown on the Seismic Hazard Atlas maps to be located throughout the oil fields in the Planning Area. Most of these faults are not considered to be a concern. (Krazan, 2008)

Soil Liquefaction

Liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other rapid loading. Liquefaction and related phenomena have been responsible for tremendous amounts of damage in historical earthquakes around the world. Liquefaction occurs in saturated soils, in which the space between individual particles is completely filled with water. This water exerts a pressure on the soil particles that influences how tightly the particles themselves are pressed together. Prior to an earthquake, the water pressure is relatively low. However, earthquake shaking can cause the water pressure to increase to the point where the soil particles can readily move with respect to each other.

LOCAL GEOLOGIC SETTING

General Surface Features

Alluvial fans formed by the Kern River have resulted in a rather flat topography in the eastern portion of the Planning Area. The majority of the Planning Area comprises alluvial deposits which consist of sands, silts, clays, and gravels. (Krazan, 2008)

The Planning Area is known for significant oil and gas production. Eleven medium to large-sized oil fields are located within the Planning Area and vicinity: the Buena Vista, the Buena Vista Lake Gas, the Canal, the Coles Levee North, the Coles Levee South, the Elk Hills, the Midway Sunset, the Rio Vista, the San Emidio Nose, the Ten Section, and the Yowlumne. These oil fields were discovered in the 1920s, but it was not until the middle 1930s that production began to increase significantly. (Krazan, 2008)

A site reconnaissance of the Planning Area was performed by Krazan and Associates in August 2008. Elevations within the Planning Area range from 280 feet to 2,000 feet above median sea level (amsl) throughout the site. Areas of slope stability concern are predominately located in the hilly and mountainous regions in the northern and western portions of the Planning Area. Evidence of faulting was noted in the central west portion of the site within the Buena Vista Hills (see **Figure 4.8-1a- Regional Geological Map** and **Figure 4.8-1b- Regional Geological Map Key**). The Buena Vista Fault is considered to be caused by differential subsidence due to fluid (oil) withdrawal.

A portion of the Kern Lake Bed extends into the southeast portion of the Planning Area. The Buena Vista Lake Bed is located in the central portion of the Planning Area. These historic lake beds have been graded and cultivated and are currently utilized as agricultural land. Portions of the California Aqueduct, Kern River, Pioneer Canal, East Side Canal, Main Canal, Buena Vista Canal, Stine Canal, New Rim Ditch, several seasonal creeks, and unnamed ditches trend throughout the Planning Area. Existing and abandoned oil wells and water wells are located throughout the Planning Area.

The Buena Vista Valley, Buena Vista Hills, and Midway Valley extend into the northwest portion of the Planning Area. The Temblor Range and Little Single Hills trend through the southwest portion of the Planning Area.

Elevations within the Planning Area range from 280 feet to 2,000 feet above mean sea level (amsl) throughout the site. Areas of slope stability concern are predominantly located in the hilly and mountainous regions in the north and western portions of the Planning Area. Evidence of faulting was noted in the central west portion of the site within the Buena Vista Hills. (Krazan, 2008)

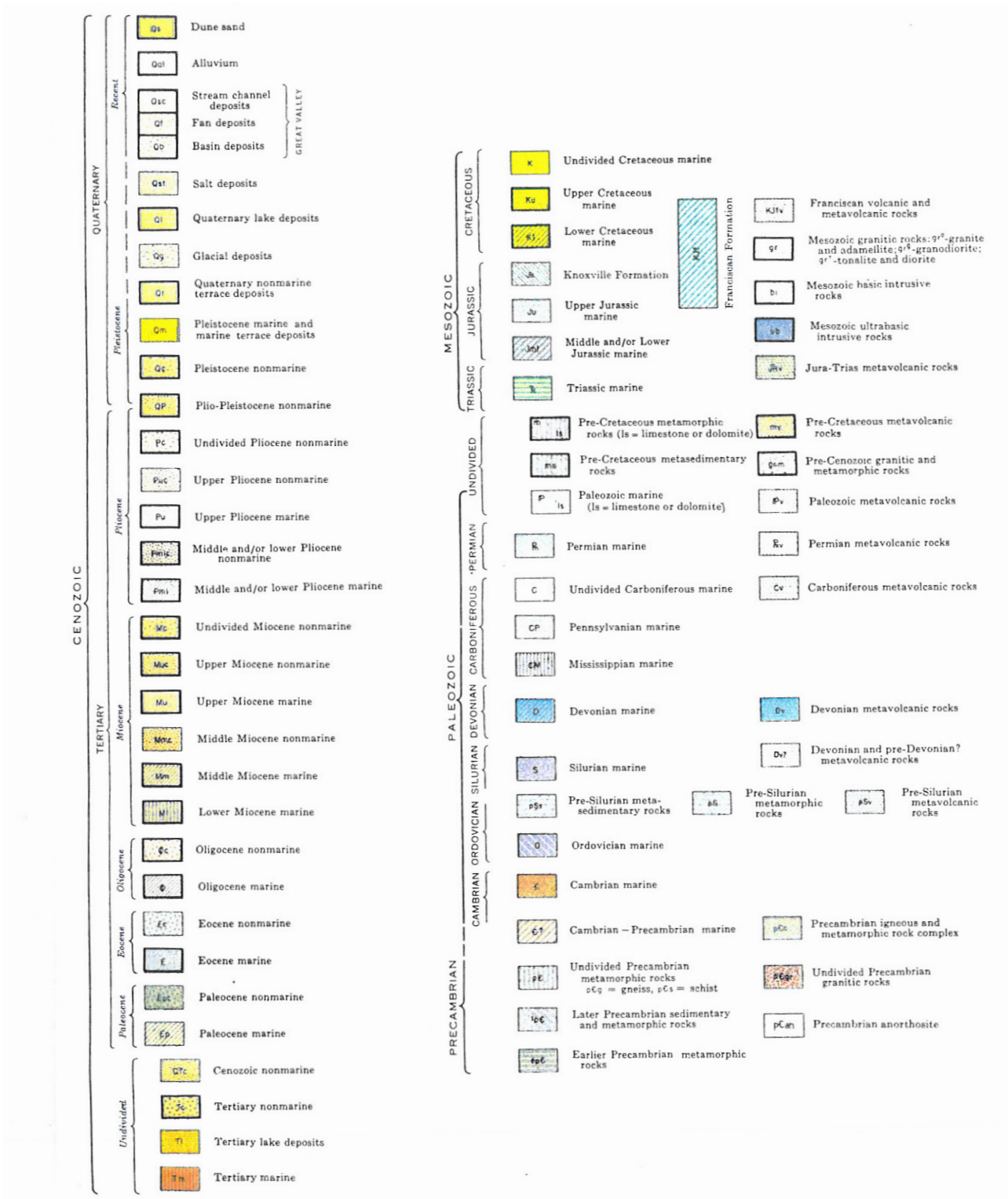
Subsurface Conditions

Subsurface investigations consisting of exploratory drilling has been performed by Krazan & Associates within the Planning Area for over 25 years. Based on the findings of the geologic study for the General Plan Update, the subsurface conditions encountered appear typical of those found in the geologic region of the site. In general, the upper soils consist of approximately 6 to 12 inches of very loose silty sand, silty sand with trace clay, sandy silt, clayey sand, or clayey gravel. These soils are disturbed, have low strength characteristics, and are highly compressible when saturated.

Below the loose surface soils, approximately 2 to 4 feet of loose/soft to dense/hard clays, silts, sands, and gravels are typically encountered. Field and laboratory tests suggest that these soils are typically moderately strong and slightly to moderately compressible. The clayey soils had a low to high expansion potential. Below 3 to 5 feet, predominantly clays, silts, sands, and gravels are usually encountered. Field and laboratory tests suggest that these soils are typically moderately strong and slightly compressible. A list of soils within the City and expansion area is located in **Appendix 4.8**.

Depth to groundwater is variable throughout the Planning Area. Groundwater may be as shallow as several feet adjacent to unlined canals and within the agricultural areas during the irrigation season. Shallow groundwater is typical in the vicinity of the Buena Vista Lake Bed and Kern Lake Bed. Review of the Kern County Water Agency Map entitled "*Depth to Groundwater, Spring 2001*" indicates that groundwater depth in the western portion of the Planning Area is typically greater than 150 feet. It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, and climatic conditions as well as other factors. Available groundwater depth mapping, as well as the project geologist's experience with the area, indicates that historically groundwater in the vicinity of the Planning Area is encountered at depths as shallow as 0 feet to greater than 100 feet below site grade. (Krazan, 2008)

T:_CS\Work\Taft, City of\Figures, June 2009



Source: Krazen, Sept 2009

Figure 4.8-1b

Regional Geologic Map Key

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Mineral Resources

Within Kern County, borax and cement production, as well as construction aggregates, are considered major economic mineral resources (Kern County, 2007). Construction aggregate consists of sand, gravel, and crushed stone. Existing mineral extraction activities that occur within and in the vicinity of the Planning Area primarily consist of fine sand and course gravel construction aggregates and clay. Construction aggregates come from two different sources: hardbed rock sources and river channel (alluvial) sources. Generally, sand, gravel, and clay are used as fill and for the construction of highways and roads, streets, urban and suburban development, canals, aqueducts, and pond linings, among other uses.

There is no land within the proposed General Plan Update Land Use Map designated for mining. The Expansion Area consists of predominantly agricultural and open space land. However, there are hundreds of sites designated Mineral Resource Zone (MRZ)-2 within the Planning Area. MRZs are discussed in more detail under Regulatory Framework below.

SEISMIC HAZARDS

Fault Rupture Hazard Zones

Of the twelve USGS topographic quadrangle maps that cover the Planning Area, there are four Fault Rupture Hazard Zone maps that show the location of faults in the vicinity of the Planning Area. **Figure 4.8.1a- Regional Geologic Map** shows the faults of concern within the Planning Area. The Official Fault Rupture Hazard Zone Maps are available at the City of Taft Planning Department for review for all new developments in the Planning Area. The Conner SW and Coal Oil Canyon quadrangles indicate the presence of faulting approximately 2 to 3 miles south of the Planning Area associated with the 1952 Kern County earthquake. The Maricopa quadrangle indicates the presence of faulting approximately 4 miles south to southwest of the Planning Area associated with movement along the San Andreas Fault. The Taft quadrangle indicates the presence of faulting approximately 0.5 to 1.5 miles north and east of Ford City associated with movement along the Buena Vista Thrust Fault. (Krazan, 2008) Fault rupture hazard studies are required before the application is finalized in accordance with the Department of Conservation, California Geological Survey for any structures designed for human occupancy to be constructed within this designated Fault Rupture Hazard Zone.

Seismic Hazard Zones

There are Seismic Hazard Zone Maps for each of the 12 quadrangle maps (24"x36") that make up the Planning Area on file at the Kern County Planning Department. These maps are an additional preliminary reference for developers to identify areas of potential geologic/seismic concerns within the Planning Area that may need to be addressed prior to development. These maps are preliminary and do not show restricted use areas. These maps are available for review at the City of Taft Planning Department.

Historic Seismicity/Earthquake Epicenter Distribution

The Planning Area has historically experienced a moderate degree of seismicity. The geotechnical report presented in **Appendix 4.8** shows that there have been 239 earthquakes of magnitude 4.0 or greater within approximately 50 miles of the City of Taft between 1800 and 2008. A plot of epicenters associated with historic earthquakes in the region with magnitudes greater than 5 is shown in **Figure 4.8-2- Epicenter Map**. The earthquakes closest to the City of Taft occurred in the 1920's, were about 5.0 miles away, and had magnitudes of 4.0 and 4.6. The largest magnitude found in the search radius was 7.9 occurring on January 9, 1857. This event occurred approximately 22.6 miles from the City of Taft.

The most recent earthquake significant to the Planning Area was the seismic event which occurred on July 21, 1952, the Arvin-Tehachapi earthquake. A significant number of the listed historic earthquakes occurred in 1952 and are considered related to the Arvin-Tehachapi earthquake. This magnitude 7.7 event affected all of Kern County as well as parts of Los Angeles and Santa Barbara counties. The quake caused numerous landslides and damaged highways, bridges, and railroads. (Krazan, 2008)

Geologic Subgrade

The general soil profile within the Planning Area consists predominantly of silty sands, sandy silts, sandy clays, and clayey sands with varying amounts of gravel. With the exception of a limited occurrence of near-surface loose soils, penetration resistance and laboratory testing indicate that these materials are typically medium dense. Accordingly, Krazan conservatively characterizes the upper 100 feet of geologic subgrade of the site as "stiff soil" and considers a Joyner Boore Class C subgrade to be appropriate for the site, which corresponds with a National Earthquake Hazard Reduction Program (NEHRP) Site Class D. The site class definition from the 2007 California Building Code that is most consistent with the site conditions is Site Class D. However, in the vicinity of the Kern Lake Bed and Buena Vista Lake Bed areas, Site Class E conditions may be encountered (Krazan, 2008). According to Table 1613.5.2 of the 2007 California Building Code, soil profiles include the following:

Class A- hard rock,
Class B- rock,
Class C- very dense soil and soft rock,
Class D- stiff soil profile,
Class E- stiff soil profile.

Soil Liquefaction

As noted above, the predominant soils within the Planning Area consist of varying combinations of very loose/very soft to very dense/hard silts, clays, sands, gravels, and cobbles. Moderate cohesion strength is associated with the clayey soils. Groundwater has been encountered near the surface during exploratory drilling. Available groundwater depth mapping, as well as the project geologist's experience with the area, indicates that historically groundwater in the vicinity of the Planning Area is encountered at depths as shallow as 0 feet to greater than 100 feet below site grade.

According to Krazan's findings, the potential for soil liquefaction within the Planning Area ranges from very low to moderate due to the variable density of the subsurface soils and the presence of shallow groundwater.

Seismic Settlement and Lateral Spread

One of the most common phenomena during seismic shaking accompanying any earthquake is the induced settlement of loose unconsolidated soils. Based on the nature of the subsurface materials (moderately strong and slightly to moderately compressible sandy silts, silty sands, sandy clays, clayey sands, and sands with varying amounts of gravel), and the relatively low to moderate seismicity of the region, the Krazan Geotechnical Report (2009) states that seismic settlement or lateral spread is not expected to represent a significant geologic hazard to the majority of the Planning Area.

Land Subsidence

Portions of the San Joaquin Valley have been subject to land subsidence due to fluid withdrawal (groundwater and petroleum). The Planning Area has been subject to significant subsidence hazards in the past. The Arvin-Maricopa area, which includes the entire Planning Area, is the southernmost of three principal areas of widespread subsidence in the San Joaquin Valley. As of 1970, 700 square miles of irrigable land, roughly 60 percent of the areas of Joaquin Valley, had subsided due to the intensive pumping of groundwater. All alluvial areas within the San Joaquin Valley are susceptible to subsidence due to fluid withdrawal. See **Figure 4.8-3- Land Subsidence Due to Groundwater Withdrawal Within the Planning Area** to see where subsidence has occurred in and around the Planning Area.

As in other subsidence areas of the San Joaquin Valley, subsidence will continue in the Arvin-Maricopa area as long as declining water levels continue to cause increased effective stresses and will stop as soon as excess pore pressures in the aquitards (impermeable layers along aquifers) are dissipated.

Since the early 1970s, land subsidence has continued in some locations, but has generally slowed due to reductions in groundwater pumpage and the accompanying recovery of groundwater levels made possible by supplemental use of surface water for irrigation. The surface water is diverted principally from the Sacramento-San Joaquin Delta and the San Joaquin, Kings, Kern, and Feather rivers. Several droughts since 1975 have caused surface water deliveries in the valley to be sharply curtailed and demonstrated the valley's vulnerability to continued land subsidence when groundwater pumpage is increased.

In the 1970s when the last comprehensive surveys of land subsidence were made, subsidence in excess of 1 foot had affected more than 5,200 square miles of irrigable land — one-half the entire San Joaquin Valley. The maximum subsidence, near Mendota, was more than 28 feet. In recent years, land subsidence has slowed due to the use of surface water for irrigation. As in other areas of the San Joaquin Valley, subsidence will continue as long as declining water levels continue, and will stop when water levels are maintained at current or higher historic levels and as soon as excess pore pressures in the aquitards are dissipated.

The history of land subsidence in the San Joaquin Valley is integrally linked to the development of agriculture and the availability of water irrigation. Further agricultural development without accompanying subsidence is dependent on the continued availability of surface water, which is subject to uncertainties due to climatic variability and pending regulatory decisions.

Land subsidence caused by collapsible soils is common within the Planning Area. This type of subsidence is common in regions where rainfall, irrigation water, or other moisture has not penetrated the upper soils for an extended period of time. Areas where hydrocompaction concerns exist are typically defined during the geotechnical engineering investigation phase of the development.

Although subsidence is not anticipated to be a significant hazard in the Planning Area, damage to wells, foundations, and underground utilities may occur. The central and eastern portions of the Planning Area are not known to be subject to significant subsidence hazards.

Land subsidence caused by the extraction of oil field fluids is monitored by the State of California, Division of Oil, Gas, and Geothermal Resources. The State regulates oil and gas withdrawal and re-pressurizing of the fields. However, the Krazan report determined that this type of subsidence is not significant enough to be of serious concern in the Planning Area.

Expansive Soils

The surface and near-surface soils observed by Krazan throughout the Planning Area consist of varying combinations of clays, silts, sands, gravels, and cobbles. The clayey soils are considered to be slightly to highly expansive. (Krazan, 2009)

Inundation Hazards

A review of Federal Emergency Management Agency (FEMA) Flood Insurance Mapping for the Planning Area indicates that 15 new maps became effective September 26, 2008. These new maps cover Kern County unincorporated and incorporated areas. The reader is referred to the geotechnical report presented in **Appendix 4.8** for a list of Community Panel Numbers that affect the Planning Area. Review of the Community Panels indicates that there is a potential for flooding in the Kern Lake Bed and Buena Vista Lake Bed areas as well as in the proximity of the Kern River and of several seasonal streams.

The most severe flooding problems on the Kern River near Bakersfield have resulted from high-intensity winter rainstorms over a large portion of the basin, which generally occur from November to April. Snow melt floods, which usually occur in the late spring and early summer, generally have a longer period of runoff and also a lower peak than rain floods; as a result, these spring storms have rarely caused significant damage.

Flooding within the Planning Area originates from the Kern River watershed which lies in Kern and Tulare counties at the southern end of the Sierras, and from the Sandy Creek and several unnamed stream channels which drain the east slopes of the Coast Ranges. Some smaller areas are subject to flooding from localized watersheds.

A review of the Office of Emergency Services (OES) and Army Corps of Engineers Dam Inundation Mapping for the area of the Planning Area indicates that the eastern third of the Planning Area which includes the Kern Lake Bed, Buena Vista Lake Bed, and the Tupman area of the Planning Area is within the "inundation area" and would be affected should a failure occur at the Isabella Lake Dam located 49 miles northeast of the City of Taft. (Krazan, 2008) The City of Taft has original copies of the OES and Corps of Engineers Dam Inundation Maps for public review.

Tsunamis and Seiches

A tsunami is a series of ocean waves generated in the ocean by an impulsive disturbance. Due to the inland location of the Planning Area, tsunamis are not considered a threat to the site. Seiches are standing waves in a body of water such as a lake or reservoir. Several lakes are located in the northeast portion of the Buena Vista Lake Bed, which lies in the northern-most portion of the Planning Area near Tupman. Developments located in the vicinity of these water bodies have the potential to be affected by a seiche should a large seismic event occur in the proximity of the Planning Area. (Krazan, 2008)

Slope Stability and Potential for Slope Failure

Landslides are perhaps the most common form of ground failure that is not necessarily caused by earthquakes. In areas where a severe slope stability problem exists, landslide damage can best be avoided by simply not building on the unstable ground. In some landslide-prone areas, landslides can be totally removed or stabilized. Through good planning and careful controlled design, landslide losses can be all but eliminated.

The majority of the Planning Area is relatively level with no major changes in grade. However, the western portion of the Planning Area is located in an area of hilly and mountainous terrain with elevations up to about 2,000 feet amsl. The slopes within this area range from relatively level to near vertical and are up to several hundred feet high. Due to the climate, the native slopes are covered with a sparse to moderate weed and brush growth. Modifications to the native slopes are common in the oil fields and areas of previous development. No significant slope failures are shown in the Planning Area on the Kern County Seismic Hazard Maps dated 1974. Both significant slope failures and potential areas for slope failure were shown when the maps were produced. However, the maps are now over 35 years old and do not show subsequent failures or areas of newer development. No significant slope failures were noted during Krazan's site visits. However, minor slope instabilities, predominantly related to erosion, were observed at various locations throughout the western portion of the Planning Area.

According to the Krazan geotechnical report, previous landslides have been shown on the Kern County Seismic Hazard Atlas maps. (Krazan, 2009) Additional landslide areas may subsequently be identified and included on the maps when updated. Slope stability is the primary consideration in the ability of land to be developed or designated for urban uses.

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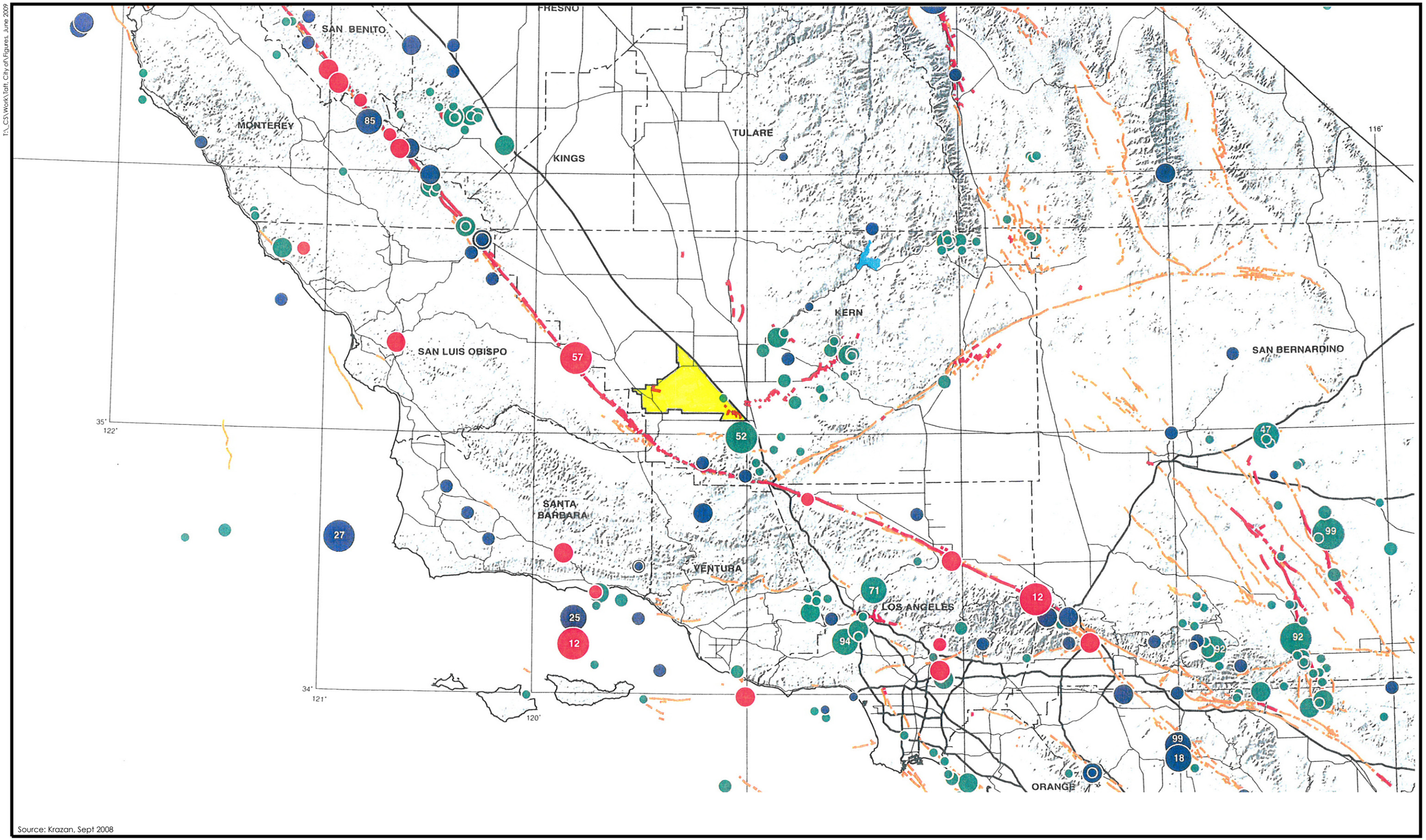

Source: Krazan, Sept 2008

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Figure 4.8-2
Epicenter Map

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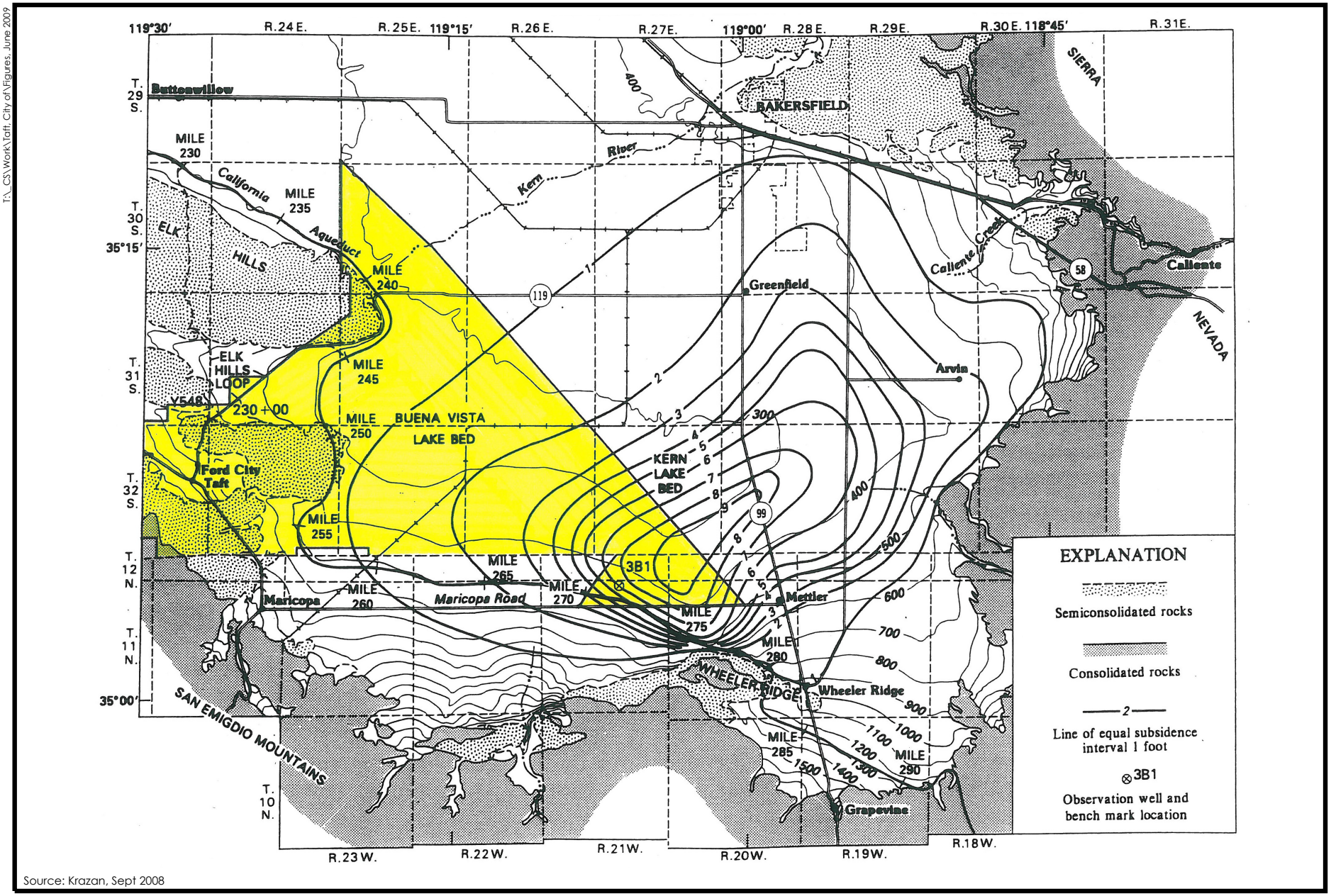

Source: Krazan, Sept 2008

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Figure 4.8-3

Land Subsidence Due to Groundwater Withdrawal Within the Planning Area

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T:_CS\Work\Taft, City of\Figures, June 2009

Volcanic Hazards

The Planning Area is not within an area known to be affected by volcanic hazards (Krazan, 2008).

4.8.2 REGULATORY FRAMEWORK

STATE

National Pollutant Discharge Elimination System Permit Program

As authorized by the Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. It is the responsibility of Regional Water Boards to preserve and enhance the quality of the state's waters through the development of water quality control plans and the issuance of waste discharge requirements (WDRs). WDRs for discharges to surface waters also serve as NPDES permits (SWRCB, 2008). Under Phase II NPDES permit requirements, dischargers in any location whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres are required to obtain coverage under the statewide General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list best management practices (BMPs) the discharger will use to protect stormwater runoff and the placement of those BMPs. The SWPPP must also include a proposed schedule for the implementation and maintenance of erosion control measures and a description of the erosion control practices, including appropriate design details and a time schedule. Consideration must be given to the full range of erosion control BMPs and the discharger is required to consider any additional site-specific and seasonal conditions when selecting and implementing appropriate BMPs. The SWPPP is also required to include a description of BMPs to reduce wind erosion at all times for the areas of active construction, with particular attention paid to stockpiled materials (SWRCB, 2008).

California Air Resources Board

The California Air Resources Board (ARB) has adopted two Airborne Toxic Control Measures (ATCMs) for naturally-occurring asbestos. The first is the Asbestos ATCM for Surfacing Applications and the second is the Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. Also, while the U.S. Environmental Protection Agency (USEPA) is responsible for enforcing regulations relating to asbestos renovations and demolitions, authority

can be delegated to state and local agencies. ARB and local air districts have received delegated authority to enforce the federal National Emission Standards for Hazardous Air Pollutants (NESHAPS) regulations for asbestos.

Asbestos ATCM for Surfacing Applications

In 1990, ARB adopted the Asbestos Airborne Toxic Control Measure for Asbestos-Containing Serpentine (1990 Asbestos ATCM). ARB staff developed amendments to the 1990 Asbestos ATCM that were adopted by the Board on July 20, 2000, as the Asbestos Airborne Toxic Control Measure for Surfacing Applications, section 93106, title 17, California Code of Regulations (amended Asbestos ATCM or amended ATCM). The amended ATCM became effective on November 13, 2001. The amended Asbestos ATCM was developed to reduce the public's exposure to airborne asbestos emissions from surfacing applications, such as unpaved roads surfaced with aggregate containing naturally-occurring asbestos. The amended Asbestos ATCM prohibits the sale or use of restricted material (includes aggregate material extracted from an ultramafic (or ultrabasic) rock unit as shown on the geologic maps referenced in the amended ATCM, ultramafic rock including serpentine, aggregate material shown to have an asbestos content of 0.25 percent or more, or any mixture containing 10 percent of these materials) for unpaved surfacing unless it has been tested and found to have an asbestos content that is less than 0.25 percent. The test method required to determine the asbestos content is either ARB Test Method 435 or a method approved by the Executive Officer of ARB (ARB, 2002a).

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was signed into law in 1972 as the Alquist-Priolo Geologic Hazard Zones Act. The name was subsequently changed to the Alquist-Priolo Special Studies Zones Act in 1975 and finally to the Alquist-Priolo Earthquake Fault Zoning Act in 1994. The act required the State Geologist to delineate zones of active faulting in the state and to require studies to be performed for projects located within the delineated Earthquake Fault Zones. The purpose of the act was to prohibit the location of most structures for human occupancy across active fault traces and to thereby mitigate the hazard of surface fault rupture. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones delineated on maps officially issued by the State Geologist. Working definitions include:

Fault – A fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side.

Fault Zone – A zone of related faults, which commonly are braided and subparallel, but may be branching and divergent. A fault zone has a significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles.

Sufficiently Active Fault – A fault that has evidence of Holocene surface displacement along one or more of its segments or branches (last 11,000 years).

Well-Defined Fault – A fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

"Sufficiently Active" and "Well Defined" are the two criteria used by the state to determine if a fault should be zoned under the Alquist-Priolo Act. No portion of the Planning Area is located within a designated Alquist-Priolo Earthquake Fault Zone. Therefore, the Planning Area is not affected by the Alquist-Priolo Act.

Seismic Hazards and Mapping Act

In 1990, the California State Legislature passed the Seismic Hazard Mapping Act to protect public safety from the effects of strong shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes. The act is codified in the Public Resources Code as Division 2, Chapter 7.8, Sections 2690–2699.6 and became operative on April 1, 1991. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (described above). The act requires that the State Geologist delineate various seismic hazards zones on Seismic Hazards Zone Maps. Specifically, the maps identify areas where soil liquefaction and earthquake-induced landslides are most likely to occur. The act directs cities, counties, and state agencies to use the maps in their land use planning and permitting processes. A site-specific geotechnical evaluation is required prior to permitting most urban developments within the mapped zones. The act also requires sellers of real property within the zones to disclose this fact to potential buyers.

Due to the recent enaction of the act, a limited number of Seismic Hazard Zone Maps have been prepared as of this writing. Areas covered by the preliminary maps released to date include portions of the immediate San Francisco Bay area and several areas in Los Angeles, Orange, and Ventura counties. The area of the Planning Area is not included on any of the State of California designated maps released to date.

California Building Code

The purpose of the Uniform Building Code (UBC) is to provide minimum standards to preserve the public peace, health, and safety by regulating the design, construction, quality of materials, certain equipment, location, grading, use, occupancy, and maintenance of all buildings and structures. UBC standards address foundation design, shear wall strength, and other structurally related conditions.

In addition to the requirements of the Uniform Building Code, California Code of Regulations, Title 24, also known as the California Building Standard Code or the California Building Code (CBC), establishes further guidance for foundation design, shear wall strength, and other structurally related concerns. The CBC, which the City of Taft adopted, modified national UBC regulations for specific conditions found in California and included a large number of more detailed and/or more restrictive regulations. For example, the CBC includes common engineering practices requiring special design and construction methods that reduce or eliminate

potential expansive soil related impacts. The CBC requires structures to be built to withstand ground shaking in areas of high earthquake hazards and the placement of strong motion instruments in larger buildings to monitor and record the response of the structure and the site of seismic activity. Compliance with CBC regulations ensures the adequate design and construction of building foundations to resist soil movement. In addition, the CBC also contains drainage requirements in order to control surface drainage and to reduce seasonal fluctuations in soil moisture content.

Surface Mining and Reclamation Act of 1975

The California Department of Conservation Reclamation Surface Mining and Reclamation Act of 1975 (Section 2710), also known as SMARA, provides a comprehensive surface mining and reclamation policy that permits the continued mining of minerals, as well as the protection and subsequent beneficial use of the mined and reclaimed land. The purpose of SMARA is to ensure that adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition and readily adaptable for alternative land uses. The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, wildlife, range and forage, as well as aesthetic enjoyment. Residual hazards to the public health and safety are eliminated. These goals are achieved through land use planning by allowing a jurisdiction to balance the economic benefits of resource reclamation with the need to provide other land uses.

Additionally, SMARA directs the State Geologist to identify and map the non-fuel mineral resources of the State in order to show where economically significant mineral deposits occur and where they are likely to occur based upon the best available scientific data. As such, the California Geological Survey and the State Mining and Geology Board are the state agencies responsible for the classification and designation of areas containing, or potentially containing, significant mineral resources. Areas known as Mineral Resource Zones (MRZs) are classified on the basis of geologic factors, without regard to existing land use and land ownership. The primary objective of the process is to provide local agencies with information on the location, need, and importance of minerals within their respective jurisdictions. The areas are categorized into four general classifications (MRZ-1 through MRZ-4) and are defined as follows:

MRZ-1 Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2 Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.

MRZ-3 Areas containing mineral deposits, the significance of which cannot be evaluated from available data.

MRZ-4 Areas where available data is inadequate for assignment to any other MRZ.

Of the four, the MRZ-2 classification is recognized in land use planning because the likelihood for occurrence of significant mineral deposits is high, and the classification may be a factor in the

discovery and development of mineral deposits that would tend to be economically beneficial to society. There are hundreds of MRZ-2 sites in the Planning Area. (Krazan, 2009)

If a use is proposed that might threaten the potential recovery of minerals from an area that has been classified (MRZ-2), of which there are hundreds in the Planning Area, SMARA would require the City to prepare a statement specifying its reasons for permitting the proposed use, provide public notice of these reasons, and forward a copy of the statement to the State Geologist and the State Mining and Geology Board (Cal. Pub. Res. Code Section 2762). The primary source of information considered in determining whether a site is within a MRZ-2 area is the "Mineral Lands Classification" maps published by the State pursuant to SMARA as previously described. The reports containing these maps are listed in publications available from the California Geological Survey, formerly known as the Division of Mines and Geology. The specific publication of the SMARA Mineral Land Classification Project dealing with mineral resources within the planning area is SR 147, which is available for review at the City of Taft and Kern County Planning departments.

LOCAL

Kern County Multi-Hazard Mitigation Plan

The purpose of the Kern County Multi-Hazard Mitigation Plan is to reduce or eliminate long-term risk to people and property from natural hazards and their effects in Kern County by identifying specific recommendations for actions that can mitigate future disaster losses. The Plan is multi-jurisdictional and includes the County and the incorporated municipalities of Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco, as well as 45 special districts that include school, recreation and park, water, community service, and other districts. The Plan documents the Kern County Hazard Mitigation Planning Process, identifies natural hazards and risks within the County, and identifies the County's hazard mitigation strategy to make Kern County less vulnerable and more disaster resistant and sustainable. Information in the Plan is intended to be used to help guide and coordinate mitigation activities and local policy decisions for future land use decisions. The Plan includes mitigation for earthquakes, landslides, and soil hazards such as land subsidence, expansive soils, erosion, liquefaction, and radon (Kern County Fire Department OES, 2005).

Kern County Environmental Health Services Department, Land Development

The Kern County Environmental Health Services Department Land Development program regulates individual sewage disposal systems (septic tanks) within Kern County. The program enforces standards for septic tanks, including requirements for submission of a soils report regarding the feasibility of using individual sewage disposal systems and that the report contain the results of soil percolation tests. The requirements also include minimum allowable lot sizes for on-site sewer systems and protections for groundwater quality. Project engineers are required to submit a statement to the Environmental Health Services Department that all lots have been designed in compliance with the sewage disposal standards/requirements (Kern County, 2008).

Kern County General Plan

The Kern County General Plan was originally adopted by the County Board of Supervisors in June 2004. Minor amendments to the plan were subsequently adopted in 2006 and 2007. The plan contains policies related to development of lands under County jurisdiction, which include the City of Taft Expansion Area. Kern County's Land Use, Conservation, and Open Space Element provides for a variety of land uses for future economic growth while also assuring the conservation of Kern County's agricultural, natural, and resource attributes.

Kern County General Plan policies related to geology and soils are provided below.

Land Use, Open Space, and Conservation Element

Physical and Environmental Constraints

Policy 1: Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained ((Map Code 2.1 (Seismic Hazard), Map Code 2.2 (Landslide), Map Code 2.3 (Shallow Groundwater), Map Code 2.5 (Flood Hazard), Map Codes from 2.6 – 2.9, Map Code 2.10 (Nearby Waste Facility), and Map Code 2.11 (Burn Dump Hazard)) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.

Policy 2: In order to minimize risk to Kern County residents and their property, new development will not be permitted in hazard areas in the absence of implementing ordinances and programs. These ordinances will establish conditions, criteria, and standards for the approval of development in hazard areas.

Policy 3: Zoning and other land use controls will be used to regulate and, in some instances, to prohibit development in hazardous areas.

Policy 4: Special requirements will be applied to new housing within recently active fault zones.

Policy 5: New residential uses in fault zones should be limited to single-family housing units.

Policy 6: Regardless of percentage of slope, development on hillsides will be sited in the least obtrusive fashion, thereby, minimizing the extent of topographic alteration required and reducing soil erosion while maintaining soil stability.

Policy 7: Ensure effective slope stability, wastewater drainage, and sewage treatments in areas with steep slopes are adequate for development.

Safety Element

General Policies Which Apply to More Than One Safety Constraint

Policy 1: That the County's program of identification, mapping, and evaluating the geologic, fire, flood safety hazard areas, and significant concentrations of hydrogen sulfide in oilfield areas, presently under way by various County departments, be continued.

Policy 3: That the County government encourage public support of local, State, and federal research programs on geologic, fire, flood hazards, valley fever, plague, and other studies so that acceptable risk may be continually reevaluated and kept current with contemporary values.

Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure

Policy 1: The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.

Landslides, Subsidence, Seiche, and Liquefaction

Policy 1: Determine the liquefaction potential at sites in areas of shallow groundwater (Map Code 2.3) prior to discretionary development and determine specific mitigation to be incorporated into the foundation design, as necessary, to prevent or reduce damage from liquefaction in an earthquake.

Policy 2: Route major lifeline installations around potential areas of liquefaction or otherwise protect them against significant damage from liquefaction in an earthquake.

Policy 3: Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.

4.8.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, a geology, soils, or mineral resources impact is considered significant if project implementation would result in any of the following:

Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death, involving:

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on

other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.

- Strong seismic ground shaking.
- Seismic-related ground failure, including liquefaction.
- Landslides.
- Result in substantial soil erosion or the loss of topsoil.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- 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.
- 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.
- 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.

METHODOLOGY

Evaluation of potential geologic and soil impacts of the proposed project was based on the geotechnical report prepared for the proposed project by Krazan Associates (2008). Krazan performed a field review of the project site and surrounding areas. The geotechnical report is included as an appendix to this document as **Appendix 4.8**. The proposed General Plan land uses were compared to existing geologic conditions in order to identify impacts to the Planning Area resulting from implementation of the proposed General Plan Update.

Documentation and mapping included in the Planning Guide to the Seismic Safety Elements of Kern County, California, dated 1975 and Amended Safety Element, dated March 2007, were reviewed in the Krazan geotechnical report. The seismic information contained within the older documents is somewhat dated and/or generalized and is superseded by more detailed or recent information and analyses described herein. The Kern County General Plan 2007 Amended Seismic Safety Element generally indicates that the site area is subject to relatively moderate seismicity and related hazards. (Krazan, 2008)

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan polices are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant GPU policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan polices were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

PROJECT IMPACTS AND MITIGATION MEASURES

Seismic Hazards

Impact 4.8.1 Implementation of the proposed General Plan Update may expose new development to seismic hazards, including but not limited to strong ground shaking and seismically related ground failure. This impact is considered to be **less than significant.**

Ground shaking can result in significant structural damage or structural failure in the absence of appropriate seismic design. As previously discussed, USGS maps indicate the presence of faulting in and around the Planning Area. Furthermore, the Kern County Seismic Hazard Atlases show the Buena Vista Hill Thrust, Midway Fault, and several unnamed minor subsurface faults within the Planning Area. Most of the minor faults are not considered by the geotechnical report to be of concern.

Settlement of the ground surface (settlement) can be accelerated and accentuated by earthquakes due to the rearrangement of soil particles during prolonged ground shaking. Settlement can also cause damage to structures and infrastructure. However, settlement or lateral spread is not expected to represent a significant geologic hazard to the majority of the Planning Area.

Similarly, due to the inland location of the Planning Area, tsunamis are not considered a threat to the site. Several lakes are located in the northeast portion of the Buena Vista Lake Bed. Developments located in the vicinity of these water bodies have the potential to be affected by a seiche should a large seismic event occur in the proximity of the Planning Area.

Earthquakes can produce a range of ground shaking intensities in the general area, depending primarily on the magnitude of the earthquake and the distance to the Planning Area from the epicenter of the quake. The amplitude and frequency of earthquake ground motions (waves) may be amplified due to the material through which the motions are moving. The Planning Area site is underlain entirely by alluvium which may affect the amplitude of earthquake ground motions because deep, loose soils tend to amplify and prolong the shaking. Ground shaking within the Planning Area could result in damage to structures and slope instability near riverbanks and construction cut slopes.

In addition, seismically related ground failure, which includes liquefaction and seismic-induced settlement, could occur within certain soils that exist within the Planning Area when subject to strong seismic ground shaking. Liquefaction occurs when loose sand and silt that is saturated with water is shaken by an earthquake and consequently behaves like a liquid. According to Krazan's findings, the potential for soil liquefaction within the Planning Area ranges from very low to moderate due to the variable density of the subsurface soils and the presence of shallow groundwater. Water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, and climatic conditions as well as other factors. Therefore, liquefaction impacts could occur during periods of seismic shaking. Liquefaction can damage foundations, disrupt utility service, and cause damage to roadways.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policies and action items that address seismic hazards through updates to emergency plans, training of emergency staff, and enforcing seismic standards for buildings, are identified in the General Plan Safety Element:

Policy S-2 Support Kern County's efforts regarding staff levels and training for preparation and reaction to the full range of natural and manmade hazards.

- Action S-2a Regularly update emergency operations plans, identifying leadership, representatives, coordination and action for responding to emergencies in a timely and efficient manner.
- Action S-2b Coordinate emergency operations plans with the Kern County Emergency Operations Plan.
- Action S-2c Train City staff to handle emergency situations.
- Action S-2d Budget for adequate staff and equipment.

Policy S-13 Support efforts by federal, state, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards'

Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible.

- Action S-14a Implement the Uniform Building Code and California Building Code to ensure that structures meet all applicable seismic standards.
- Action S-14b Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas.

As discussed above, the City adopted the CBC. The CBC requires structures to be built to withstand ground shaking in areas of high earthquake hazards and the placement of strong motion instruments in larger buildings to monitor and record the response of the structure and the site of seismic activity. Compliance with CBC regulations ensures the adequate design and construction of building foundations to resist soil movement. In addition, the CBC also contains drainage-related requirements in order to control surface drainage and reduce seasonal fluctuations in soil moisture content. All development projects associated with the proposed General Plan Update are subject to CBC standards, which require a seismic evaluation and particular seismic design criteria to reduce ground shaking effects.

Furthermore, as stated above, fault rupture hazard studies are required in accordance with the Department of Conservation, California Geological Survey requirements for any structures designed for human occupancy to be constructed within this designated Fault Rupture Hazard Zone.

Implementation of the above General Plan policies and associated action items and adherence to the Uniform Building Code and the California Building Code would reduce to a minimum the exposure of people and structures to potential substantial adverse effects, including the risk of loss, injury, or death, resulting from earthquakes, ground shaking, liquefaction, and other secondary hazards within the Planning Area. Therefore, seismic-related impacts are considered to be **less than significant**.

Mitigation Measures

None required.

Soil Erosion or Loss of Topsoil

Impact 4.8.2 Implementation of the proposed project would allow development that could result in increased soil erosion, wind and water erosion, and siltation of local drainage during and after construction. This would be a **less than significant** impact.

Implementation of the proposed General Plan Update would provide for the expansion of urbanization, including residential and commercial development activities in areas that have been previously undeveloped or are changing to more intense land uses. Although no specific development is proposed as part of the project, the proposed changes in land use would provide for new roadways, improvements to existing roadways, substantial infrastructure, and varying densities of commercial, residential, and industrial development.

The grading and site preparation for future development would remove topsoil, disturbing and potentially exposing the underlying soils to erosion from a variety of sources, including wind and water. In addition, construction activities generally involve the use of water, which could further erode the topsoil as the water moves across the ground. Proposed development would also involve paving and other site improvements, substantially increasing the amount of impervious surfaces. These impervious surfaces generate higher levels of urban runoff (i.e., erosion from

site preparation, sediment deposition from stormwater runoff, and automobile fluids). The predominantly silty and sandy soils within the Planning Area could be highly susceptible to erosion by both wind and water.

Construction activities involving clearing, grading, or excavation that causes soil disturbance on one or more acres (or any project involving less than one acre that is part of a larger development plan and includes clearing, grading, or excavation) would be subject to coverage under the state's National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit. Project applicants are required to prepare and comply with a Storm Water Pollution Prevention Plan (SWPPP) that specifies best management practices (BMPs) to avoid soil erosion and associated pollution of waterways and are also required to report any water pollution and remediate the pollution occurrence. Implementation of proposed General Plan would have **less than significant** impacts associated with loss of topsoil and erosion**.**

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policy, that addresses soil erosion through supporting the investigation of seismic and geologic hazards, is identified in the General Plan Open Space and Conservation and Safety Elements:

Policy S-7 Require all new urban development projects to incorporate runoff control measures, such as Low Impact Development (LID) techniques, to minimize peak flows of runoff.

- Action S-7b As part of the review of development projects, assure that runoff control measures and potential access constraints are planned and provided for. Where appropriate, require a site-specific geotechnical study to evaluate the site's soils and potential for shallow and/or deep subsidence.
- Action S-7c Coordinate with the Regional Water Quality Control Board and other appropriate agencies on best management practices available for incorporation into development projects.
- Action S-7d Develop and adopt a Grading and Erosion Control Ordinance with minimum standards of review and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects.

Policy S-13 Support efforts by federal, state, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards.

Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible.

Action S-14b Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas.

Implementation of the above General Plan Update policy and action sufficiently reduces the impact of erosion that could occur during development within the Planning Area, establishing administrative procedures, minimum standards of review, and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects. Following the implementation of the General Plan Update, accelerated erosion is reduced to a **less than significant** impact.

Mitigation Measures

None required.

Landslide/Slope Instability

Impact 4.8.3 Implementation of the proposed project may result in development within areas subject to landslide. This impact is considered to be **less than significant.**

Slope instability is often manifested as landslides, and steep slopes heighten the susceptibility to landsliding. However, steep slopes alone do not determine susceptibility. For a slope to fail, the driving forces that cause failure must exceed the resisting forces that maintain stability. Human activities such as mining, construction, grading, landscape irrigation, broken utility lines, and changes to surface drainage areas can increase landslide potential in an area. Structures and infrastructure located on or in the path of a landslide can be seriously damaged or destroyed.

The Krazan geotechnical report states that previous landslides have been shown on the Kern County Seismic Hazard Atlas maps (Krazan, 2008). The Seismic Hazards Atlas is available through the Kern County Engineering and Survey Services Department. The updated General Plan Land Use Map would allow for the development of urban uses in these areas. Development of urban uses in these areas could result in slope instability near the edges of steep slopes and if temporary or permanent cut and/or fill slopes were made during construction. Therefore, implementation of the proposed General Plan Land Use Map could expose new development within the City limits to hazards associated with slope instability and landslides.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policy, which addresses landslides and soil and geologic stability through supporting the investigation of seismic and geologic hazards, is identified in the General Plan Safety Element:

Policy C-59 Designate hillsides to be preserved.

Action C-59a Develop standards for hillside development to ensure safety and prevent slope instability.

Policy S-1 Seek to reduce to acceptable levels the risk of injury, death, and property damage resulting from all reasonably foreseeable safety hazards.

Action S-1c Ensure that all new development complies with Occupational Safety and Health Administration (OSHA) rules and regulations.

Policy S-13 Support efforts by federal, state, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards.

Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible.

Action S-14b Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas.

As discussed previously, the City of Taft adopted the California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code or California Building Code (CBC). The CBC includes common engineering practices requiring special design and construction methods that reduce or eliminate potential expansive soil related impacts. Compliance with CBC regulations ensures the adequate design and construction of building foundations to resist soil movement. In addition, the CBC also contains drainage-related requirements in order to control surface drainage and reduce seasonal fluctuations in soil moisture content.

Implementation of General Plan policies and compliance with the adopted Uniform Building Code and California Building Code requirements would reduce the impacts of landslides and soil instability to **less than significant**.

Mitigation Measures

None required.

Location on Unstable or Expansive Soil

Impact 4.8.4 Implementation of the proposed project may result in development on unstable or expansive soils. This impact is considered **less than significant.**

Implementation of the proposed General Plan Update could result in construction activities overlying expansive or unstable soils. Newly constructed buildings, pavements, and utilities could be damaged by differential settlement due to soil expansion and contraction. When structures are located on expansive soils, foundations have the tendency to rise during the wet season and shrink during the dry season. Movements can vary under the structures, which in turn create new stresses on various sections of the foundation and connected utilities. These variations in ground settlement can lead to structural failure and damage to infrastructure.

Geotechnical reports are tools used by public agencies and developers to identify specific site conditions and to develop design and construction recommendations for infrastructure improvements and commercial and residential development projects. Geotechnical reports generally contain a summary of all subsurface exploration data, including a subsurface soil profile, exploration logs, laboratory or in situ test results, and groundwater information. The reports also interpret and analyze the subsurface data, recommend specific engineering design elements, provide a discussion of conditions for the solution of anticipated problems, and recommend special geotechnical provisions.

According to the Krazan geotechnical report, the surface and near-surface soils observed throughout the Planning Area consist of varying combinations of clays, silts, sands, gravels, and cobbles. The clayey soils are considered to be slightly to highly expansive. Therefore, development allowed by the project may expose structures to potential damage from expansive soils (Krazan, 2008). However, site-specific geotechnical investigations would identify and mitigate any impacts associated with future development being placed on unstable or expansive soils on a site-by-site basis. As such, impacts resulting from expansive and/or unstable soils would be considered **less than significant**.

<u>Proposed General Plan Policies and Action Items that Provide Mitigation</u>

The following General Plan policy, which addresses unstable and expansive soils through supporting the investigation of seismic and geologic hazards, is identified in the General Plan Safety Element:

Policy S-13 Support efforts by federal, state, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards.

Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible.

<u>Action S-14b</u> Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the

soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas.

General Plan Action S-14b requires that a geotechnical investigation be conducted on new development sites. Therefore, impacts resulting from expansive and/or unstable soils would be reduced to a **less than significant** level.

Mitigation Measures

None required.

Septic System Operation

Impact 4.8.5 Implementation of the proposed project could impact areas where soils may be incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. This would be a **less than significant** impact.

Under the proposed project, there is the possibility that development may occur in areas where public sewer services are not available, particularly in the Expansion Area. Rural development often lacks the economy of scale and compact development patterns that are needed to make community sewer systems practical and cost effective. However, soil characteristics in areas where development proposes to use septic tank systems are not always conducive to adequately supporting the use of septic tanks and leach fields or alternative wastewater disposal systems. Although not a major issue in the Planning Area, failing septic tank systems are potentially hazardous when the situation results in the contamination of domestic water wells.

A septic system site evaluation report and/or a geotechnical report are tools used by public agencies and developers to identify specific site conditions and to develop design and construction recommendations for infrastructure improvements and commercial and residential development projects. Geotechnical reports generally contain a summary of all subsurface exploration data, including a subsurface soil profile, exploration logs, laboratory or in situ test results, and groundwater information. The reports also interpret and analyze the subsurface data, recommend specific engineering design elements, provide a discussion of conditions for the solution of anticipated problems, and recommend special geotechnical provisions. As discussed under Regulatory Framework above, the Kern County Environmental Health Services Department Land Development program regulates individual sewage disposal systems (septic tanks) and enforces standards for septic tanks, including requirements for submission of a soils report regarding the feasibility of using individual sewage disposal systems. Furthermore, the proposed General Plan requires a geotechnical evaluation for all new construction projects. As such, impacts resulting from soils incapable of adequately supporting the use of septic tanks would be considered **less than significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policy and action item, which address septic and wastewater systems through requirements of plan reviews and infrastructure availability, are identified in the General Plan Public Facilities and Services Element:

Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible.

Action S-14b Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas.

Compliance with the above General Plan policy would ensure that impacts due to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems within the Planning Area are mitigated to **less than significant**.

Mitigation Measures

None required.

Loss of Mineral Resources

Impact 4.8.6 Implementation of the proposed project could result in the loss of availability of a potentially valuable mineral resource. This impact is considered **significant.**

Hundreds of MRZ-2-classified sites exist within the Planning Area. The MRZ-2 zone represents areas where either mineral resources are known to exist and are currently in mining operations or where geologic data indicates significant resources may be present. Urban development that includes intensive paving, structures, and the creation of impervious surfaces could permanently preclude the future exploration for, and extraction of, mineral resources in areas where mineral resources are available but not currently mined.

The proposed GPU would allow urban development (e.g., residential, office, and commercial areas and associated infrastructure) at various locations throughout the Planning Area. If located on MRZ-2 classified lands, this future development could potentially preclude the exploration for and extraction of mineral resources, particularly in areas with mineral resources. This is a **significant** impact.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following proposed General Plan Update policy is identified in the General Plan Update, and addresses impacts to mineral resources:

Policy E-10 Minimize conflicts between mineral and energy resource lands and urban growth.

Implementation of the above General Plan policy would support the reduction of conflicts between potential mineral resource lands and urban uses. However, the loss of availability of known mineral resource areas would still occur even after implementation of the proposed GPU policies. No mitigation is available that would prevent the permanent loss of these mineral resources. Therefore, the proposed GPU would result in the **significant and unavoidable** loss of mineral resources.

Mitigation Measures

None available.

4.8.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The land use policies in the proposed General Plan Update would provide direction for growth within the City limits, while the Kern County General Plan policies provides direction for growth outside the City limits, but within the Planning Area boundaries (until land areas are annexed into the City). Thus, the setting for this cumulative analysis includes existing, proposed, approved, and planned projects in the City of Taft General Plan Planning Area and surrounding portions of unincorporated Kern County as well as full buildout of the General Plan Planning Area as proposed in the General Plan Update (occurring after year 2035). Development in the region identified in Section 4.0 would change the intensity of land uses in the region. In particular, this cumulative development scenario would provide additional housing, employment, shopping, and recreational opportunities.

Impacts associated with geology, soils, and seismicity are generally site-specific rather than cumulative in nature as geologic properties can vary by site. Individual development projects would be subject to, at a minimum, uniform site development and construction standards relative to seismic and other geologic conditions that are prevalent in the region. However, surficial deposits, namely erosion and sediment deposition, can be cumulative in nature, depending on the type and the amount of development proposed in a given geographical area.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Geologic and Soils Impacts

Impact 4.8.7 Implementation of the proposed General Plan Update, in combination with existing, planned, proposed, and reasonably foreseeable development, would not contribute to cumulative geologic and soil impacts, as the impacts would be site-specific and not additive in character. Thus, the General Plan's contribution would be **less than cumulatively considerable**.

Geology and soil related impacts are generally site-specific and are determined by a particular site's soil characteristics, topography, and proposed land uses. Impacts associated with geology and soils are generally site-specific in nature, based on conditions relating to the subsurface materials that underlie a project site. These inherent conditions are an end result of natural historical events that have played out through vast periods of geologic time. Development projects are analyzed on an individual basis and must comply with established requirements of the City and the CBC/UBC as they pertain to protection against known geologic hazards and potential geologic and soil related impacts. Given the low incidence of historical geologic activity in the vicinity, the General Plan's contribution to cumulative geology related impacts is considered **less than cumulatively considerable**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policies and action items are identified regarding soil and geologic stability:

Policy C-59 Designate hillsides to be preserved.

Action C-59a Develop standards for hillside development to ensure safety and prevent slope instability.

Policy S-7 Require all new urban development projects to incorporate runoff control measures, such as Low Impact Development (LID) techniques, to minimize peak flows of runoff.

Action S-7b As part of the review of development projects, assure that runoff control measures and potential access constraints are planned and provided for. Where appropriate, require a site-specific geotechnical study to evaluate the site's soils and potential for shallow and/or deep subsidence.

Action S-7c Coordinate with the Regional Water Quality Control Board and other appropriate agencies on best management practices available for incorporation into development projects.

Action S-7d Develop and adopt a Grading and Erosion Control Ordinance with minimum standards of review and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects.

Policy S-13 Support efforts by federal, state, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards.

Policy S-14 Protect new structures from damage caused by geologic and/or soil conditions to the greatest extent feasible.

Action S-14b Require all new construction projects complete a geotechnical report, soils report, or other appropriate analysis to determine the soils characteristics and the effects of seismic ground shaking based on the soil properties at each project site and impose appropriate measures for geologically sensitive areas.

Adherence to all federal, state, and local requirements, in addition to implementation of the above General Plan policies and their associated action items would further minimize soil-related impacts and protect water quality. The reader is referred to Section 4.10, Hydrology and Water Quality, for additional information regarding soil erosion and water quality. The General Plan's contribution to cumulative geologic and soil impacts is **less than cumulatively considerable**.

Mitigation Measures

None required.

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4.9
CULTURAL AND PALEONTOLOGICAL RESOURCES

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") considers and evaluates the potential impacts of the proposed City of Taft General Plan Update on historical, cultural and paleontological resources. Cultural resources are defined as prehistoric and historic sites, structures, and districts, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason. Paleontological resources include fossil remains, as well as fossil localities and formations which have produced fossil material.

For analysis purposes, cultural resources may be categorized into four groups: archaeological resources (prehistoric and historical); historic properties, buildings and districts; areas of importance to Native Americans; and paleontological resources (fossilized remains of plants and animals). Cultural resource impacts include those affecting existing historic resources (i.e., historic districts, landmarks, etc.) and to archaeological and paleontological resources.

CONCEPTS AND TERMINOLOGY FOR EVALUATION OF CULTURAL RESOURCES

The following definitions are common terms used to discuss the regulatory requirements and treatment of cultural resources:

- *Cultural resource* is a term used to describe several different types of properties: prehistoric and historical archaeological sites; architectural properties such as buildings, bridges, and infrastructure; and resources of importance to Native Americans.

- *Historic properties* is a term defined by the National Historic Preservation Act (NHPA) as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places (NRHP), including artifacts, records, and material remains related to such a property.

- *Historical resource* is a CEQA term that includes buildings, sites, structures, objects, or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance, and is eligible for listing or is listed in the California Register of Historical Resources (CRHR). The CRHR includes resources listed in or formally determined eligible for listing in the NRHP, as well as some California State Landmarks and Points of Historical Interest.

- *Paleontological resource* is defined as including fossilized remains of vertebrate and invertebrate organisms, fossil tracks and trackways, and plant fossils. A unique paleontological site would include a known area of fossil bearing rock strata.

4.9.1 EXISTING SETTING

PREHISTORY

There is a long history of regional archaeological research encompassing the General Plan Planning Area (Planning Area). The earliest archaeological surveys in the San Joaquin Valley

date to the 1920s and were accomplished by Gifford and Schenck in 1926 and Schenck and Dawson in 1929. This work was followed in 1941 by Hewes' survey of a 160-mile long stretch of the central San Joaquin Valley and the adjacent foothills of the Sierra Nevada range. Subsequent research broadened both the scope and database of earlier work and also became more systematic and intensive. Some of this more recent research includes work at Little Panoche Reservoir and Buchanan Reservoir (City of Livingston, 2008).

The prehistory of the San Joaquin Valley is generally divided into three periods. The first period is characterized by big game hunting and is dated approximately 8,000 years ago. The second period is dated from approximately 5,000 B.P. (Before Present) to A.D. 1200 and is characterized by a shift in subsistence strategy from hunting to the collection of plant resources. This shift in economic pursuits is evidenced in typical artifact assemblages from this period that include seed-grinding implements. The third period dates from approximately A.D. 1200-1700 and represents habitation of the area by Yokuts (City of Livingston, 2008).

ETHNOGRAPHY

Prior to the arrival of Euroamericans in the region, California was inhabited by groups of Native Americans speaking more than 100 different languages and occupying a variety of ecological settings. Kroeber (1925) subdivided California into four subculture areas, Northwestern, Northeastern, Southern, and Central. The Central area encompasses the City of Taft General Plan Planning Area (Planning Area), which includes the territory of Southern Valley Yokuts. The Yokuts are a language family with as many as 50 separate hunter/gatherer tribes, and a large number of dialects. They occupied the entire San Joaquin Valley from the mouth of the San Joaquin River to the foot of the Tehachapis, and the adjacent lower slopes or foothills of the Sierra Nevada mountain range, from the Fresno River south (Four Directions Institute, 2009).

Yokut tribes living in the southern end of the San Joaquin Valley formed the center of a culture that was different in significant respects from that of the northern and foothill tribes. Many of these differences are thought to be due to environmental factors, for they integrated their lives around their unique lake-slough-marsh environment. The Southern Yakuts home area comprised Tulare, Buena Vista, and Kern lakes, their sloughs, and the lower portions of the Kings, Kaweah, Tule, and Kern Rivers. They traveled on foot and by water (Wallace, 1978).

Signs of human existence in this area of California go back in time at least 8,000 years. A Yokut Tulamni tribe village was located on the western shore of Buena Vista Lake, approximately seven miles from Taft. An archaeological field survey was completed in the area of the village by the Smithsonian Institution in 1933-1934 (City of Taft, 2007; David A. Fredrickson, 2009). The site is listed as State of California Landmark No. 374 and is described by the California Natural Resources Agency (2009) as "The old Yokuts village of Tulamniu was named Buena Vista by Spanish Commander Fages in 1772. Fr. Zalvidea again recorded the site in 1806. This village was occupied for several centuries."

The economy of the Southern Valley Yokuts emphasized fishing, hunting waterfowl, and collecting shellfish, roots, and seeds. The southern tribes were able to occupy permanent residences for most of the year. They built two types of structures - small single-family dwellings

and larger communal structures. Knives, arrowpoints, and scraping tools were made from various imported materials, including obsidian. Southern Valley Yokuts also engaged in trading relationships with surrounding groups for commodities such as marine shells and basketry. The family was composed of a husband, wife, and their offspring, with a patrilineal lineage. It has been estimated that Yokuts political units averaged 350 persons each (Wallace, 1978).

HISTORIC PERIOD

Euroamerican contact with Native American groups living in the Central Valley of California began during the last half of the eighteenth century. The Southern Valley Yakuts were encountered by the Spaniards in 1772, soon after they settled in California. The Franciscan missionaries did not seem to have influenced a very considerable portion of the lake tribes and early casual contacts do not seem to have altered native life. More important was the new presence of runaway mission neophytes, who introduced new practices from their cultures and those of the Spanish missionaries. The Yokuts began making raids against missions and rancho herds in the early 19th century. Missions dominated the social, political, and economic lives of both Spanish and Native Americans across much of California during the Spanish Period (ca. 1769-1821) (Wallace, 1978).

The Mexican Period (ca. 1821-1848) in California is an outgrowth of the Mexican Revolution, and its accompanying social and political views affected the mission system. In 1833 the missions were secularized and their lands divided among the *Californios* as *ranchos* in the form of land grants. During this time period, expeditions into the valley continued, but they were said to be punitive in nature and were not for the purpose of settlement. No ranchos were established in the Planning Area, and the Mexican influence on the tribes appears to have been little, except for an 1833 epidemic, which devastated the native population (Wallace, 1978).

The American Period (ca. 1848-present) in California history begins with the end of the Mexican-American War and the signing of the Treaty of Guadalupe Hidalgo in 1848. This is when the cultural breakdown and near-total disappearance of Native Americans from the Planning Area occurred. The gold rush immigrants did not travel to the area, due to the lack of gold, but settlers arrived in the area later, and the Native peoples became dispossessed of their lands. Regardless of a change of economic focus, the plight of Native American populations remained, at best, relatively unchanged (e.g., the U.S. Senate rejected treaties between the government and Native Americans in 1851, and reservations were established) (Wallace, 1978).

Kern County (County) was formed from a portion of Mariposa County in 1866. Gold was discovered in eastern Kern County in 1854 in the Greenhorn Mountains, one of the highest points in the lower Sierra Nevada range. In 1857, gold seekers heard news of gold found in the Kern River and began arriving in great numbers in that area and mines were established. Agriculture and live-stock graving followed, along with the establishment of mills. The County is now the third largest in size in the state with an economic base of agriculture, oil, and industries uses such as aerospace (California Genealogy and History Archives, 1982; County of Kern, 2009).

The City of Taft's history is linked to that of the railroads and oil discoveries. Oil was discovered in the area in the late 1890's with oil gushers as early as 1901. Many of today's oil companies have been involved with projects in or near Taft. The Southern Pacific and Santa Fe railroads came together in a unique joint partnership in 1908 to share the Sunset Western Line. The railroad line travels through what was the center of town, with many of the same buildings existing since the 1920s and 1930s. In 1909 a fire destroyed most of the early settlement, which was to become the City of Taft. Afterward, Southern Pacific surveyed a town site on the north side of the tracks, where lots sold quickly. Buildings were constructed at a fast pace, including the Blaisdell Opera House. In 1910, the City built a small electric plant, and gas lines were installed. A water system was constructed with two tanks at the head of 6th Street, filled with water brought by tank cars and piped to the houses and structures. In 1909, the Conley School District was formed, a one room modest structure located in South Taft. In 1910, a two-room school building was started but was too small by the time it was completed and immediately a third room was added. In 1910, religious services began in Catholic, Methodist and Presbyterian churches (City of Taft, 2007).

The City of Taft (City) was incorporated in 1910 and has a current population of 9,228. The Southern Pacific line laid out the town originally naming it "Moron" but changed it to Taft in 1909, after President Taft who requested that Congress pass the Oil Land Withdrawal Act. This legislation required people who owned claims to develop them, which created much development and produced some of the largest oil gushers in the world. The oil industry is now the major contributor to Taft's economy. The economic prosperity of the years of 1910-1912 proved to be a building boon to the City resulting in many of today's historic buildings, with other up and down economic cycles to follow. Fires and storms have resulted in damage and the loss of historic buildings in Taft. Most of the buildings in the downtown area were destroyed in the 1940s and 1950s. As stated in the Historic Preservation Plan, "Due to lack of knowledge, many outstanding examples of different styles of architecture were torn down and replaced in the 60's – 70's." Most of the architecture in Taft area consists of the Spanish Colonial style, as found in hospitals and churches, and 1920's and 1930s Art Deco architecture found on Center Street and the Taft Union High School campus (City of Taft, 1999; City of Taft, 2007).

KNOWN CULTURAL RESOURCES IN THE PLANNING AREA

A records search was completed on January 28, 2009, at the Southern San Joaquin Valley Information Center, located at California State University, Bakersfield, for the Planning Area. The search included site record files encompassing known and recorded archaeological and historic sites, inventory and excavation reports filed with their office, and properties listed on the National Register of Historic Places, the Historic Property Data File (10/31/08), the California Historical Landmarks, the California Register, the California Inventory of Historic Resources and the California Points of Historical Interest.

The search identified 168 cultural resource surveys conducted within the Planning Area and 401 previously recorded prehistoric and historic sites within the Planning Area. State Historic Landmark 291, Fages-Zalvidea Crossing, is located on State Route (SR) 166, 5.5 miles west of Mettler. State Historic Landmark 374, Tulamniu Indian Site, is located eight miles east of Taft. Site P-15-000040, located on the Mouth of Kern 7.5' Map has a National Register Status Code of

2S2, which indicates that this property has been determined eligible for listing on the National Register of Historic Places (NRHP). This property is also listed on the California Register. The search did not identify any other resources within the Planning Area that are listed in the NRHP, California State Historic Landmarks, California Inventory of Historic Resources, California Register, or the California Points of Historical Interest.

KNOWN PALEONTOLOGICAL RESOURCES IN THE PLANNING AREA

Paleontology is defined as a science dealing with the life of past geological periods as known from fossil remains. Paleontological resources include fossil remains, as well as fossil localities and formations that have produced fossil material. Such locations and specimens are important nonrenewable resources. The California Environmental Quality Act (CEQA) offers protection for these sensitive resources and requires that they be addressed during the EIR analysis process.

A search of the University of California Museum of Paleontology (UCMP) collections database identified a location in Kern County where paleontological resources have been identified. These resources consist primarily of fossilized plants. The database search did not identify any paleontological resources within the Planning Area (University of California, Berkeley, 2009) Regardless, the entire Planning Area has not been subjected to formal paleontological investigation, and it is possible that paleontological resources could be identified during ground-disturbing activity within the Planning Area.

NATIVE AMERICAN COORDINATION

As of March 1, 2005, Senate Bill 18 (Gov. Code, Sections 65352.3, 65352.4) requires that, prior to the adoption or amendment of a general plan proposed on or after March 1, 2005, a city or county must consult with Native American tribes with respect to the possible preservation of, or the mitigation of impacts to, specified Native American places, features, and objects located within that jurisdiction. The City of Taft initiated the consultation process as required under these provisions of the Government Code on January 15, 2009.

PMC requested a sacred lands search and a list of Native American contacts from the NAHC. The results of the sacred lands search were received December 23, 2007, and did not identify any Native American sacred lands within the Planning Area. PMC contacted all tribal representation groups on the list provided by the NAHC, through written correspondence. PMC, to date, has not received any comments regarding the updated General Plan or EIR.

4.9.2 REGULATORY FRAMEWORK

FEDERAL

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service and includes listings

of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the NRHP as significant historic resources. However, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP. The criteria for listing in the NRHP include resources that:

- are associated with events that have made a significant contribution to the broad patterns of history;
- are associated with the lives of persons significant in our past;
- embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- have yielded or may likely yield information important in prehistory or history.

STATE

California Register of Historical Resources

Under the California Environmental Quality Act (CEQA), public agencies must consider the effects of their actions on both "historical resources" and "unique archaeological resources." Historical resources generally include buildings, sites, structures, objects, or districts, each of which may have historical, architectural, archaeological, cultural, or scientific significance. Pursuant to Public Resources Code (PRC) Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether proposed projects would have effects on "unique archaeological resources."

"Historical resource" is a term with a defined statutory meaning (PRC, Section 21084.1 and determining significant impacts to historical and archaeological resources is described in the State CEQA Guidelines, Section 15064.5 [a], [b]).

Under CEQA Guidelines Section 15064.5(a), "historical resources" include the following:

1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Public Resources Code, Section 5024.1).

2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, will

be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register of Historical Resources (Public Resources Code, Section 5024.1), including the following:

   a. is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

   b. is associated with the lives of persons important in our past;

   c. embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

   d. has yielded, or may be likely to yield, information important in prehistory or history.

The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Section 5020.1(j) or 5024.1.

Historic resources are usually 45 years old or older and must meet at least one of the criteria for listing in the California Register, described above (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of physical integrity.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be historical resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC, Section 5024.1 and California Code of Regulations, Title 14, Section 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

For historic structures, State CEQA Guidelines Section 15064.5, subdivision (b)(3), indicates that a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995) shall mitigate impacts to a level of less than significant.

As noted above, CEQA also requires lead agencies to consider whether projects will impact unique archaeological resources. PRC Section 21083.2, subdivision (g), states that "'unique archaeological resource' means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

3) Is directly associated with a scientifically recognized important prehistoric or historic event or person."

Treatment options under Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a "unique archaeological resource").

Archaeological resources that are not historical resources according to the above definitions may be unique archaeological resources as defined in Public Resources Code Section 21083.2, which also generally provides that non–unique archaeological resources do not receive any protection under CEQA. If an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources will not be considered a significant effect on the environment. It is sufficient that the resource and the effects on it be noted in this report, but the resource need not be considered further in the CEQA process.

California Health and Safety Code

Section 7050.5(b) of the California Health and Safety code specifies protocol when human remains are discovered. The code states:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the County in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related

provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

State CEQA Guidelines Section 15064.5, subdivision (e) requires that excavation activities be stopped whenever human remains are uncovered and that the County coroner be called in to assess the remains. If the County coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours of the determination. At that time, the lead agency must consult with the descendant(s) of the deceased Native American(s), if any, as identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the State CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to Section 15064.5, subdivision (f), these provisions should include "an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."

Paleontological resources are classified as non-renewable scientific resources and are protected by state statute (PRC Chapter 1.7, Section 5097.5, Archeological, Paleontological, and Historical Sites and Appendix G). No state or local agencies have specific jurisdiction over paleontological resources. No state or local agency requires a paleontological collecting permit to allow for the recovery of fossil remains discovered as a result of construction-related earth moving on state or private land in a project site.

LOCAL

Kern County General Plan

The existing Kern County General Plan was adopted in March of 2007. Key General Plan policies regarding cultural resources that are applicable to the Planning Area outside of the City limits include:

<u>Land Use, Open Space and Conservation Element</u>

Policy 25: The County will promote the preservation of cultural and historic resources which provide ties wit the past and constitute a heritage value to residents and visitors.

Implementation Measure K: Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.

Implementation Measure L: The County shall address archaeological and historical resources for discretionary projects in accordance with the California Environmental Quality Act (CEQA).

Implementation Measure M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.

Implementation Measure N: The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.

Implementation Measure O: On a project specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.

City of Taft 2007 Preservation Plan

The City's Preservation Plan establishes the City limits as the boundaries of its Historic Preservation District (District). Per this Plan, City staff is to identify and select buildings within the District to be included on the City's Qualified Historic Structures List. The buildings will be identified as historic based on their architecture and/or due to their historical association with local important people. The plan does not allow for automatic historic listing of these properties, but provides for property owners to voluntarily request such designation. Those who select the historic designation will be requested to comply with the design standards found in the plan and will be given a Certificate of Recognition. Designation as a historic building does not require a property owner to comply with recommendations for alterations or demolitions proposed to historic buildings and compliance with the plan for new construction in the historic district is also voluntary. The plan states that such design recommendations are not mandatory unless funded through City programs. The plan does not identify any such funding mechanisms.

4.9.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Following PRC Sections 21083.2 and 21084.1, and Section 15064.5 and Appendix G of the State CEQA Guidelines, cultural resource impacts are considered to be significant if implementation of the project considered would result in any of the following:

1) Cause a substantial adverse change in the significance of a historical resource as defined in Public Resources Code section 21084.1 and CEQA Guidelines section 15064.5, respectively;

2) Cause a substantial adverse change in the significance of an archaeological resource as defined in Public Resources Code section 21083.2, 21084.1, and CEQA Guidelines section 15064.5, respectively;

3) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature; or

4) Disturb any human remains, including those interred outside of formal cemeteries.

State CEQA Guidelines Section 15064.5 defines "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired.

CEQA Guidelines, section 15064.5, subdivision (b)(2), defines "materially impaired" for purposes of the definition of "substantial adverse change" as follows:

The significance of an historical resource is materially impaired when a project:

1) demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

2) demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

3) demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

CEQA requires that if a project would result in an effect that may cause a substantial adverse change in the significance of a historical resource, or would cause significant effects on a unique archaeological resource, then alternative plans or mitigation measures must be considered. Therefore, prior to assessing effects or developing mitigation measures, the significance of cultural resources must first be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

- Identify potential historical resources and unique archaeological resources;

- Evaluate the eligibility of historical resources; and
- Evaluate the effects of the project on eligible historical resources

METHODOLOGY

PMC staff completed all archeological and historic investigations associated with the proposed project. Efforts to identify cultural resources which could be affected by the project included a records search completed at the Southern San Joaquin Valley Information Center at California State University, Bakersfield. In addition, a sacred lands file search was completed by the NAHC and Native American representatives were mailed written correspondence requesting information regarding cultural resources on January 16, 2009. In addition, a search of the University of California Museum of Paleontology (UCMP) collections database was completed. The potential impacts of the General Plan Update on cultural resources were evaluated by considering both potential future construction activities as well as the operational impacts of potential proposed projects which could occur under the updated General Plan. Archaeological and historical investigations for the Planning Area are adequate to identify typical prehistoric and historic resources that would likely be present in the Planning Area.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan polices are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant GPU policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan polices were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

PROJECT IMPACT S AND MITIGATION MEASURES

Potential Direct Destruction or Damage to Known and Undiscovered Historical Resources

Impact 4.9.1 Future development to implement the proposed project could potentially cause a direct substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines Section 15064.5. This would be a **potentially significant** impact.

Though records searches at the Southern San Joaquin Valley Information Center, located at California State University, Bakersfield, for the Planning Area identified 401 historic and pre-historic sites within the Planning Area, specific historical building surveys have not been completed in the Planning Area. However, a number of the buildings have been identified as being constructed during the "early years" of Taft, in the City's 2007 Preservation Plan, including six church buildings and 14 other buildings identified as examples for commercial uses, including

school, apartment, banks, and other types of uses. These buildings have not been evaluated for historical significance.

Future development allowed under the proposed General Plan Update could result in the destruction of historic buildings and inappropriate alterations resulting in the loss of historic character-defining features of buildings. The Preservation Plan does not provide for the protection of historic resources, as compliance to the plan is voluntary and the historic designation criteria are not consistent with those of CEQA. In addition, the Southern San Joaquin Valley Information Center recommended in its records search letter of January 28, 2009, addressed to PMC's Leann Taagepera that "any structure more than 45 years old be evaluated for historic significance by a qualified professional architectural historian prior to demolition or rehabilitation in order to determine if they might be eligible for nomination to the National Register of Historic Places or some local registry." Therefore impacts from direct destruction to known and undiscovered Historic Resources are considered to be **potentially significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update contains the following policies and action items that would assist in reducing impacts to historic properties.

Policy LU-5: Analyze all development projects in accordance with the provisions of CEQA.

Policy C-55: Encourage the preservation of significant cultural sites and historic structures.

Action C-55a: Implement the 2007 Historic Preservation Plan, including establishment of a historic district.

Action C-55b: Develop and regularly update a comprehensive historic resources survey, in compliance with guidelines of the Office of Historic Preservation.

Action C-55c: Seek funding sources or consider participation in programs to assist in the maintenance or restoration of historic preservation projects.

Policy C-56: Discourage structures that are architecturally incompatible with existing structures in historic neighborhoods.

Policy C-57: Protect and preserve paleontological, prehistoric and historic archaeological resources to honor the cultural heritage of the City of Taft.

Action C-57a: Establish and promote programs that identify, maintain, and protect sites, or other features of the landscape possessing paleontological, historic or cultural significance.

Action C-57b: Require an evaluation of any proposed demolition or modification to historic or architectural resources that are either

listed in or determined eligible for inclusion in the National Registry of Historical Places (NHRP), the California Registry of Historic Resources (CRHR), or the local historical registry, to determine whether the project proposal would result in an adverse impact on the historic resource. If an adverse impact to the resource is identified, feasible measures shall be identified to mitigate the impact, which may include modification of the design, reuse of the structure, or avoidance of the structure.

Action C-57c: Require all projects to be conditioned as follows:

- The Planning Department shall be notified immediately if any prehistoric, archaeological, or fossil artifact or resource is uncovered during construction.

- All construction must stop if any human remains are uncovered, and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the procedures outlined in CEQA Section 15064.5 (d) and (e) shall be followed.

Implementation of the proposed General Plan policies and action items listed above will minimize impacts to historical resources by requiring an evaluation of any proposed demolition or modification to historic or architectural resources that are either listed in or determined eligible for inclusion in the National Registry of Historical Places (NHRP), the California Registry of Historic Resources (CRHR), or the local historical registry, to determine whether the project proposal would result in an adverse impact on the historic resource. This impact would be **less than significant.**

Mitigation Measures

None required

Potential Destruction or Damage to Known and Undiscovered Prehistoric Resources and Human Remains

Impact 4.9.2 Future development to implement the proposed General Plan Update could result in the potential disturbance of cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features) and human remains within the Planning Area. This would be a **potentially significant** impact.

Archaeological investigations have been conducted within the Planning Area, but the entire area has not been subjected to investigation. Cultural resources have been identified by previous investigations across the Planning Area, and it is anticipated that cultural resources may be

discovered in all areas encompassed Planning Area. The Information Center commented in its records search letter of January 28, 2009, to PMC's Leann Taagepera that "the Taft area and its outlying regions are considered extremely culturally sensitive." The letter further stated that "The probability of finding subsurface cultural resources is considered moderate to high in the entire project area." The Information Center recommends that "prior to any ground disturbance activities…an updated Record Search [should] be conducted on that specific property so that [they] can make a specific recommendation." Development which could occur per the General Plan Update could destroy and/or degrade known and unknown prehistoric resources, historic resources, or human remains. Therefore, impacts from the destruction or damage to known and undiscovered prehistoric resources and human remains are considered to be **potentially significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update contains the following policies and action items that would assist in reducing impacts to cultural resources.

Policy LU-5: Analyze all development projects in accordance with the provisions of CEQA.

Policy C-57: Protect and preserve paleontological, prehistoric and historic archaeological resources to honor the cultural heritage of the City of Taft.

Action C-57a: Establish and promote programs that identify, maintain, and protect sites, or other features of the landscape possessing paleontological, historic or cultural significance.

Action C-57c: Require all projects to be conditioned as follows:

- The Planning Department shall be notified immediately if any prehistoric, archaeological, or fossil artifact or resource is uncovered during construction.

- All construction must stop if any human remains are uncovered, and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the procedures outlined in CEQA Section 15064.5 (d) and (e) shall be followed.

Previous cultural resources investigations, Information Center comments, and the known prehistory and history of the Planning Area and surrounding region (i.e., the County and the San Joaquin Valley) indicate that future projects being approved within the Planning Area have the potential to disturb prehistoric and historic resources and human remains. Implementation of the policies and action items above would assist in reducing impacts to known and undiscovered prehistoric resources and human remains to a **less than significant** level.

Mitigation Measures

None required

Potential Destruction or Damage to Known and Undiscovered Paleontological Resources

Impact 4.9.3 Adoption of the proposed General Plan Update could result in the potential disturbance of paleontological resources (i.e., fossils and fossil formations) within the Planning Area. This would be a **potentially significant** impact.

A search of the University of California, Berkeley Museum of Paleontology collections database for the Planning Area did not identify any paleontological resources or any formal paleontological investigations within its boundaries. However, the database search did identify paleontological resources in Kern County. Consequently, the sensitivity of the Planning Area for the presence of paleontological resources has not been determined, and it is possible that paleontological resources similar to those identified in other areas of Kern County could be present in the Planning Area. Development under the General Plan Update could impact undiscovered paleontological resources in all areas encompassed by the Planning Area because they are present in Kern County and the sensitivity of the Planning Area is unknown. Therefore, impacts from the destruction or damage to known and undiscovered paleontological resources are considered to be **potentially significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update contains the following policies and action items that would assist in reducing impacts to paleontological resources.

Policy LU-5: Analyze all development projects in accordance with the provisions of CEQA.

Policy C-57: Protect and preserve paleontological, prehistoric and historic archaeological resources to honor the cultural heritage of the City of Taft.

Action C-57a: Establish and promote programs that identify, maintain, and protect sites, or other features of the landscape possessing paleontological, historic or cultural significance.

Action C-57c: All projects shall be conditioned to require the following:

- The Planning Department shall be notified immediately if any prehistoric, archaeological, or fossil artifact or resource is uncovered during construction.
- All construction must stop if any human remains are uncovered, and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety

Code. If the remains are determined to be Native American, the procedures outlined in CEQA Section 15064.5 (d) and (e) shall be followed.

Previous investigations indicate that future projects being approved within the Planning Area have the potential to disturb paleontological resources. Implementation of the policies and action items above would assist in reducing impacts to known and undiscovered prehistoric resources and human remains to a **less than significant** level.

Mitigation Measures

None required.

4.9.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting associated with the project includes proposed, planned, reasonably foreseeable, and approved projects within the Planning Area and the surrounding area within the San Joaquin Valley (see **Table 4.0-1**). Developments and planned land uses within the City and its Planning Area could contribute to potential conflicts with cultural and paleontological resources. Proposed and approved development projects in the Planning Area, including adoption of the City's General Plan Update and any development projects associated with it, could impact known and unknown cultural resources and paleontological resources (see **Table 4.0-1**). The cumulative setting also includes full buildout of the General Plan Planning Area as proposed by the project (occurring after year 2035). Regional growth and development, including proposed and approved development projects in the Planning Area, including adoption of the City's General Plan Update and any development projects associated with it would contribute to potential conflicts with cultural and paleontological resources. These resources include archaeological resources associated with Native American activities and historic resources associated settlement, farming, and economic development.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Prehistoric Resources, Historic Resources, and Human Remains

Impact 4.9.4 Adoption of the General Plan Update, its associated subsequent projects and specific plans within the Planning Area, in combination with all other foreseeable development projects within Kern County and surrounding areas within the San Joaquin Valley, has the potential to disturb cultural resources (i.e., prehistoric sites, historic sites, historic buildings, and isolated artifacts and features) and human remains. This would be a **cumulatively considerable** impact.

Archaeological and historical investigations have identified cultural resources in the Planning Area, Kern County, and the San Joaquin Valley. However, archaeological and historical

investigations have not been conducted within all areas encompassed by the Planning Area. Based on the results of previous archaeological and historical investigations within the Planning Area, it is likely that development in these areas would discover previously unidentified cultural resources and human remains. Consequently, development under the General Plan Update and development in Kern County and the San Joaquin Valley could impact known and undiscovered cultural resources and human remains and contribute to the cumulative loss of cultural resources. The contribution of development under the General Plan Update could be considerable, when combined with other past, present, and foreseeable development in Kern County and the San Joaquin Valley.

Proposed General Plan Policies and Action Items That Provide Mitigation

The proposed General Plan Update contains several goals, policies, and actions that would assist in reducing this potential cumulative impact to prehistoric resources, historic resources and human remains. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers.

Land Use Element

Policy LU-5

Open Space and Conservation Element

Policy C-55; Action C-55a; Action C-55b; Action C-55c; Policy C-56; Policy C-57; Action C-57a; Action C-57b; Action C-57c

The proposed General Plan policies and action items mentioned above would outline procedures and methods for the identification, avoidance, protection, and preservation of cultural resources. Implementation of these policies would reduce any impacts to cultural resources associated with development under the General Plan Update to a **less than cumulatively considerable** level for cultural and human remains.

Mitigation Measures

None required.

Paleontological Resources

Impact 4.9.5 Adoption of the General Plan Update, its associated subsequent projects and specific plans within the Planning Area, in combination with all other foreseeable development projects within Kern County and surrounding areas within the San Joaquin Valley, has the potential to disturb paleontological resources (i.e., fossils and fossil formations). This would be a potentially **cumulatively considerable** impact.

A search of the University of California, Berkeley Museum of Paleontology collections database for the Planning Area did not identify any paleontological resources or any formal paleontological investigations within its boundaries. However, the database search did identify paleontological resources in Kern County. Consequently, the sensitivity of the Planning Area for the presence of paleontological resources has not been determined, and it is possible that paleontological resources similar to those identified in other areas of Kern County could be present in the Planning Area. Development under the General Plan Update could impact undiscovered paleontological resources in all areas encompassed by the Planning Area because they are present in Kern County and the sensitivity of the Planning Area is unknown.

Proposed General Plan Policies and Action Items That Provide Mitigation

The proposed General Plan Update contains several goals, policies, and actions that would assist in reducing this potential impact to prehistoric resources, historic resources and human remains. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Land Use Element

Policy LU-5

Open Space and Conservation Element

Policy C-57; Action C-57a; Action C-57c

The proposed General Plan policies and action items mentioned above would outline procedures and methods for the identification, avoidance, protection, and preservation of paleontological resources. Implementation of these policies would reduce any impacts to paleontological resources associated with development under the General Plan Update to a **less than cumulatively considerable** level for paleontological resources.

Mitigation Measures

None required.

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4.10
BIOLOGICAL RESOURCES

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") describes the existing biological resources including the special-status species and sensitive habitats known to occur or that potentially occur in the proposed City of Taft General Plan Update Planning Area ("Planning Area"), the regulations and programs which provide for their protection, and an assessment of the potential impacts of implementing the City of Taft General Plan Update. This section also includes a discussion of mitigation measures necessary to reduce impacts to a less than significant level, where feasible.

The biological resources within the Planning Area were determined from a review of previous environmental documentation for the Planning Area including the Taft General Plan 2020 (City of Taft 1986) and the Kern County Valley Floor Habitat Conservation Plan (VFHCP) (Garcia and Associates 2006). Furthermore, a number of other resources were used for this evaluation including an online list of federally listed species for the project vicinity provided by the U.S. Fish and Wildlife Service (USFWS) Endangered Species Office (USFWS 2009a), the California Department of Fish and Game's (CDFG) California Natural Diversity Data Base (CNDDB) (CDFG 2009), and the California Native Plant Society's (CNPS) Electronic Inventory (CNPS 2009) for the Taft, California U.S. Geological Survey (USGS 1950) 7.5-minute quadrangle and surrounding quadrangles. Methodology used in the analysis for this section is further described under the Project Impacts and Mitigation Measures subsection.

EXISTING SETTING

REGIONAL SETTING

The Planning Area is located within the southern portion of the San Joaquin Valley, the southernmost hydrologic basin of the Great Central Valley Region. Historically, the Planning Area was located within a region of broad arid plains, often with an extensive cover of saltbush. The Tulare Subbasin, along with the Carrizo Plain, Cuyama Valley and the surrounding foothills, once contained over six million acres of native grasslands, shrublands, woodlands and riparian habitat (Garcia and Associates 2006). By the 1860s, grazing was severe, especially in time of drought, and the effect on plant cover was substantial (City of Bakersfield 1994). Irrigation developed rapidly in the late 1880s and large areas were converted to farmlands (City of Bakersfield 1994). Since 1900, the oil and gas industry has developed rapidly in the Planning Area which has led to increased growth. As a result of the past 140 years of human activity, the plant and animal communities that now exist within the region are either highly modified (but still recognizable) remnants of native communities or have been almost completely altered from their former state. More than 90 percent of the native habitats of the valley floor have been converted to human uses (Garcia and Associates 2006).

LOCAL SETTING

The Planning Area is located in Kern County (County) which extends east beyond the southern slope of the eastern Sierra Nevada Range (Sierras) into the Mojave Desert. From the Sierras the County extends across the valley floor to the eastern edge of the Temblor Range, part of the Coastal Ranges. To the south, the County extends over the ridge of the Tehachapi Mountains. Kern County covers approximately 8,161 square miles (5,223,040 acres) of land. Kern County is

bounded on the north by Kings, Tulare, and Inyo counties, on the east by San Bernardino County, and on the south and west by San Luis Obispo, Santa Barbara, Ventura and Los Angeles counties. The City of Taft (City) is located approximately 40 miles southwest of the City of Bakersfield and about 100 miles northwest of the City of Los Angeles. The City's regional location is shown in **Figure 3.0-1**.

The proposed project area or the General Plan Planning Area for the City of Taft General Plan Update includes the incorporated City and land outside the City limits (Expansion Area), as shown in **Figure 3.0-2**. The Planning Area covers roughly 157,570 acres of land, or about 246.2 square miles.

The topography of the Planning Area is generally flat, with a relatively constant elevation and no major topographical features. The Planning Area does, however, include "Honolulu Hills", which lies between the cities of Taft and Bakersfield. The City itself generally slopes from south and southwest to the north and northeast. The valley floor is generally flat. Elevations within the Planning Area range from 91 meters (298.56 feet) to 518 meters (1699.48 feet) above mean sea level (msl). The Kern River, the California Aqueduct, and other minor watercourses wind through the Planning Area. Lake Webb and Lake Evans are also located within the Planning Area.

There is a wide range of land uses in the Planning Area which are summarized in Section 4.1, Land Use and illustrated in **Figure 4.1-1**. The principal land uses within the Planning Area include agriculture (56.7 percent); industrial including commercial oil production and refining (10.9 percent); public and institutional uses including parks, the California Aqueduct and other canals, and federal lands/petroleum reserves (14.1 percent); and vacant/undeveloped lands (13.2 percent). Most urban development is located within the City limits of Taft while most agriculture and oil production-related uses are located in the adjacent unincorporated lands.

Climate for the City of Taft area is considered hot and arid (U.S. Department of Agriculture 1997). The average annual precipitation is 5.8 inches (Western Regional Climate Center 2007) and the mean freeze-free period is about 250 to 300 days (U.S. Department of Agriculture 1997). The City of Taft area has an average annual minimum of 53.1 degrees Fahrenheit (°F) and an average annual maximum of 78.1°F (Western Regional Climate Center 2007). During the summer the average maximum temperature reaches a high of 98°F in July while an average minimum of 41.7°F is reached in December.

Land Cover Types

For planning and mapping purposes, eight land cover types have, been identified within the Planning Area. Habitat values of each of the land cover types are discussed in greater detail below. The land cover types are listed in **Table 4.10-1** below and are displayed in **Figure 4.10-1**. The map indicating the land cover types in the Planning Area, was created using data from the California State University, Stanislaus, Endangered Species Recovery Program (Phillips *et al.* 2004).

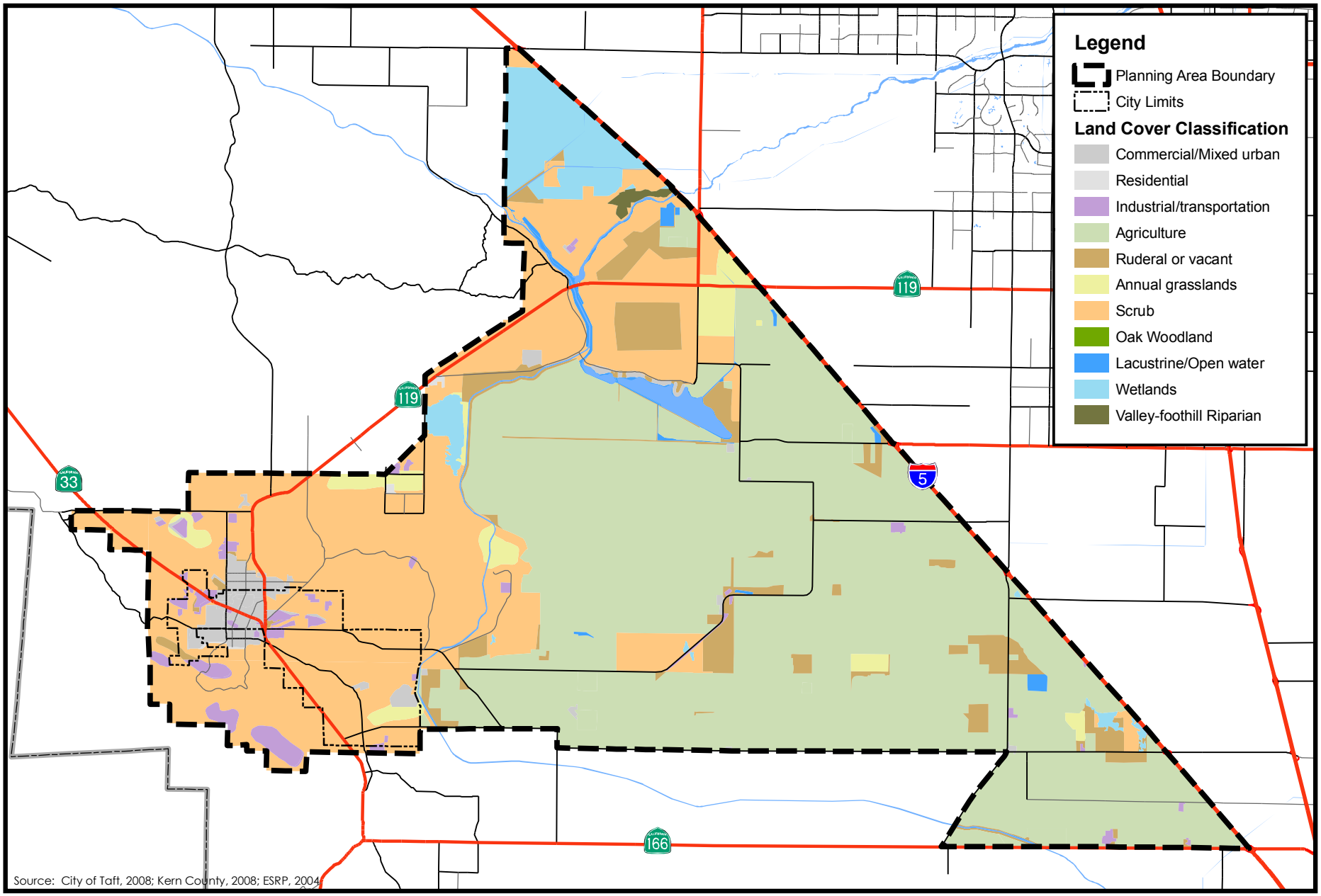

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Figure 4.10-1

Vegetative Communities within the Planning Area Boundary

PMC

TABLE 4.10-1
ACREAGE OF LAND COVER TYPES WITHIN THE PLANNING AREA

Vegetation Communities	Acres
Agriculture[1]	83,849
Annual Grassland	3,467
Lacustrine/Open Water	2,381
Ruderal/Vacant	8,447
Scrub	47,149
Urban[2]	6,015
Valley-Foothill Riparian	298
Wetlands	5,965
TOTAL	**157,571***

Source: California State University, Stanislaus, Endangered Species Recovery Program (Phillips et al. 2004).
[1]Includes Field Crops, Vineyards/Orchards, Confined Feeding, and Idle/Retired Farmland.
[2]Includes Commercial/Mixed Urban, Industrial/Transportation, and Residential land cover types.
** Any minor discrepancies (± 1 acre) with total acreages are attributable to rounding errors.*

Agriculture

For the purposes of this community description, the agricultural land cover type includes various agricultural practices including confined feeding, field crops, idle/retired farmland, and vineyards/orchards. Please see Section 4.2, Agriculture Resources Section of this DEIR for additional details.

Typically, agricultural fields are monotypic; however, trees are sometimes planted as windbreaks at field edges, and some ruderal (weedy) vegetation can be found along roadsides, at field edges, between rows, and under the canopies in orchards. Cover crops are frequently planted between rows in orchards, creating microhabitat for insects and other wildlife. In the Planning Area, agricultural lands are most commonly associated with scrub, annual grassland, or ruderal/vacant communities. Transitions between habitats are generally abrupt, marking the edge of cultivated areas. Due to their high degree of disturbance, agricultural areas generally have a low habitat value for wildlife, although a number of species adapted for disturbed conditions can utilize these areas. Orchard, cropland, and vineyard generally provide less suitable habitat for wildlife than do pastures because of weed control, tilling, and insect control practices. Agricultural lands generally occur in areas that once supported productive and diverse biological communities. The conversion of native vegetation to agricultural lands has greatly reduced the wildlife species diversity and habitat value. However, some common and agricultural "pest" species forage in these habitats, and cultivated vegetation can provide benefits such as cover, shade, and moisture for these and other species during hot summer months. Fruit and nut orchards and fields of corn or pasture provide food and cover for squirrels, numerous birds, raccoons (*Procyon lotor*), and mule deer (*Odocoileus hemionus*). Other species that take advantage of these food sources are feral pig (*Sus scrofa*), ring-necked pheasant (*Phasianus colchicus*), American crow (*Corvus brachyrhynchos*), Norway rat (*Rattus norvegicus*), coyote (*Canis latrans*), opossum (*Didelphis virginiana*),

and striped skunk (*Mephitis mephitis*). Seasonally flooded pastures can provide important habitat for migratory waterfowl.

Annual Grassland

Grassland communities occur throughout most of California at virtually all elevations and are dominated by annual and perennial grasses and forbs. Community composition in grassland varies depending on habitat characteristics. Annual grasses and forbs dominate areas that are heavily grazed or otherwise disturbed. Grazing pressure can encourage invasion from non-native annual species. Dominant species in these areas may include brome (*Bromus* spp.), wild oats (*Avena fatua*), Italian ryegrass (*Lolium multiflorum*), and others. In areas lacking disturbance, perennial grasses, such as purple needlegrass (*Nasella pulchra*) and creeping wild rye (*Leymus triticoides*), can be dominant.

The annual grassland community has the potential to contain vernal pools and other seasonal wetlands. Wetlands support a variety of plants adapted to saturated or inundated soil conditions. These are classified as palustrine emergent wetlands under the Cowardin (Cowardin et al. 1979) system, and can include a number of wetland grasses and forbs, as well as various species of rush (*Juncus* spp.), spikerush (*Eleocharis* spp.), and sedge (*Carex* spp.). Wetland features are described in more detail below.

Many wildlife species use grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or woody vegetation for cover, breeding, and resting habitat. Grasslands may also provide forage for migratory waterfowl on a seasonal basis. Many wildlife species use annual grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or habitats with woody plants for breeding, resting, and cover. Characteristic reptiles that breed in annual grasslands include the western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis*) and western rattlesnake (*Crotalus viridis helleri*). Mammals typically found in this habitat include the black-tailed jackrabbit (*Lepus californicus*), Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), coyote (*Canis latrans*), and California ground squirrels (*Spermophilus beecheyi*). Birds known to breed in annual grasslands include a California species of special concern, the burrowing owl (*Athene cunicularia*), horned lark (*Eremophila alpestris*), and western meadowlark (*Sturnella neglecta*). This habitat also provides important foraging habitat for turkey vulture (*Cathartes aura*), northern harrier (*Circus cyaneus*), American kestrel (*Falco sparverius*), and the state-threatened Swainson's hawk (*Buteo swainsoni*).

Lacustrine/Open Water

The Kern River and the California Aqueduct are the largest channels of lacustrine habitat within the Planning Area. There are several minor watercourses that wind through the Planning Area as well. Minor watercourses such as Buena Vista Creek and Broad Creek traverse the Planning Area to the north of the City. Sandy Creek runs through the City's central downtown area and Bitterwater Creek crosses into the Planning Area along the Planning Area's southern border. The Buena Vista Aquatic Recreation Area, located roughly ten miles to the northeast of the City, is the largest open water habitat within the Planning Area. The Buena Vista Aquatic Recreation

Area is made up of Lake Webb and Lake Evans. There are several small freshwater ponds also present within the Planning Area.

Lacustrine habitats are inland depressions or dammed riverine channels containing standing water. Depth can vary from a few centimeters to hundreds of meters. Typical lacustrine habitats include permanently flooded lakes and reservoirs, intermittent lakes and ponds. Most permanent lacustrine systems, including the California Aqueduct, support fish life; intermittent types usually do not.

Suspended organisms such as plankton are found in the open water of lacustrine habitats. Submerged plants such as algae and pondweeds serve as supports for smaller algae and as cover for swarms of minute aquatic animals. As sedimentation and accumulation of organic matter increases toward the shore, floating rooted aquatics such as water lilies (*Nymphaea* spp.) and smartweed (*Polygonum amphibium* var. *stipulaceum)* often appear. Floating plants offer food and support for numerous herbivorous animals that feed both on plankton and floating plants. Lacustrine habitats are used by species from the following groups: 18 mammals, 101 birds, 9 reptiles, and 22 amphibians for reproduction, food, water, and cover (CDFG 2002). Various raptor species and wading birds forage in lacustrine waters. The endangered bald eagle (*Haliaeetus leucocephalus*) feeds on fish and some birds taken from lakes.

<u>Ruderal</u>

Ruderal communities occur in areas of disturbances such as along roadsides, trails, parking lots, etc. These communities are subjected to ongoing or past disturbances (e.g., vehicle activities, mountain bikes, mowing). Ruderal habitat in these disturbed areas supports a diverse weedy flora. Vascular plant species associated with these areas typically include Johnson grass, Canadian horseweed (*Conyza canadensis*), milk thistle (*Silybum marianum*), yellow star-thistle (*Centaurea solstitialis*), wild radish (*Raphanus sativus*), mustards (i.e. *Brassica nigra*), winter vetch (*Vicia villosa*), and field bindweed (*Convolvulus arvensis*). Fallow fields support field bindweed turkey mullein, wild lettuce (*Lactuca serriola*), prickly sow thistle (*Sonchus arvensis*), and common mallow (*Malva neglecta*). Mediterranean hoary-mustard (*Hirschfeldia incana*) and curly dock (*Rumex crispus*) are also typical of this area.

Ruderal habitats, because of their disturbed nature, support a mixture of native and exotic plant and wildlife species. Exotic plant species may provide valuable habitat elements such as cover for nesting and roosting, as well as food sources such as nuts or berries. Native and introduced wildlife species that are tolerant of disturbances and/or human activities often thrive in ruderal habitats. Birds and mammals that occur in these areas typically include introduced species adapted to human habitation, including rock pigeon (*Columba livia*), European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), house mouse (*Mus musculus*) and Norway rat (*Rattus norvegicus*). Some native species persist in ruderal habtiat, including western toad (*Bufo boreas*), western fence lizard (*Sceloporus occidentalis*), Brewer's blackbird, house finch, western scrub jay (*Aphelocoma californica*), yellow-billed magpie (*Pica nuttalli*), and American crow.

Scrub

The scrub land cover type within the Planning Area consists of two scrub communities, valley sink scrub and valley saltbush scrub, according to the VFHCP (Garcia and Associates 2006). The following descriptions originate from the VFHCP.

Valley sink scrub is characterized by low, open to dense succulent plants dominated by alkali-tolerant shrubs with little or no understory development (Holland 1986). Though adapted to saline or alkaline clays, these perennial plants draw water from the high groundwater table associated with Kern, Buena Vista, Tulare and Goose lakes in the San Joaquin Valley. Valley sink scrub lands are open to dense shrublands dominated by alkali-tolerant plants of the goosefoot family (Chenopodiaceae) such as iodine bush (*Allenrolfea occidentalis*) and bush seepweed (*Suaeda moquinii*). Understory growth is usually absent, though a sparse cover of red brome can develop which makes this vegetation type much more prone to elimination by fire than in an undisturbed condition (Pellant 1989). Other plant species found in this vegetation type include recurved larkspur (*Delphinium recurvatum*), saltgrass (*Distichlis spicata*), and Mojave red sage (*Kochia californica*) (Holland 1986).

The valley saltbush scrub community is also dominated by chenopod shrubs, but differs from valley sink scrub in that the shrubs are typically less alkali-tolerant and support an herbaceous annual understory, typically dominated by non-native annual grasses which greatly increase susceptibility of this vegetation type to fire (Pellant 1989). This vegetation type is typically found on rolling, dissected alluvial fans composed of sandy to sandy loam, non-alkaline soils. Species dominance varies geographically according to spatial variation in soil conditions and topography, and includes common saltbush (*Atriplex polycarpa*), arrowscale saltbush (*A. phyllostegia*), spiny saltbush (*A. spinifera*), alkali heath (*Frankenia grandifolia*), cheesebush (*Hymenoclea salsola*), and Bakersfield cactus (*Opuntia basilaris* var. *treleasei*) (Holland 1986).

Valley Foothill Riparian

Riparian woodland habitats within the Planning Area have been reduced to a narrow corridor associated with the Kern River. Generally, no flows reach west of SR 43. Riparian woodlands along the Kern River are characterized by medium to tall, broad-leaved deciduous trees including Fremont's cottonwood (*Populus fremontii*) and black cottonwood (*P. trichocarpa*), western sycamore (*Platanus racemosa*), Goodding's black willow (*Salix gooddingii*), red shining willow (*S. lucida lasiandra*), narrow-leaved willow (*S. exigua* [= *S. hindsiana*]), and arroyo willow (*S. lasiolepis*) (Holland 1986). The transition between riparian is and adjacent non-riparian vegetation is often abrupt. Within the Planning Area, the riparian community is surrounded by scrub communities.

Valley foothill riparian communities provide resources for a variety of mammals, birds, reptiles, and amphibians. These resources include nesting and foraging habitat, as well as resting, thermal, and escape cover. To name a few, species that utilize this community include coyote, raccoon, Virginia opossum, wrentit (*Chamaea fasciata*), northern flicker (*Colaptes auratus*), great horned owl (*Bubo virginianus*), common garter snake (*Thamnophis sirtalis*), Pacific treefrog (*Pseudacris regilla*), and western fence lizard.

Urban

The urban land cover type contains both native and exotic species maintained in a relatively static composition within a downtown, residential, or suburbia setting. Species richness in these areas depends greatly upon community design (i.e., open space considerations) and proximity to the natural environment. Vegetation in these areas consists primarily of introduced ornamental trees and shrubs and manicured lawns as well as invasive weeds in disturbed areas.

The wildlife value of urban habitats varies from very low in dense, highly urbanized areas to relatively high in areas with a lower human density and a significant amount of natural vegetation remaining. Urban areas occur throughout California in association with every major habitat type. Animal species that occur in these areas typically include introduced species adapted to human habitation. The most densely developed urban areas provide wildlife habitat for western scrub-jay, rock dove (*Columba livia*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), Brewer's blackbird (*Euphagus cyanocephalus*), and American crow (*Corvus brachyrhynchos*). Associated mammals include house mouse (*Mus musculus*), Norway rat, little brown myotis (*Myotis lucifugus*), raccoon, opossum, squirrels, and striped skunk. Suburban areas provide habitat for a greater diversity of native birds and mammals, such as bushtits (*Psaltriparus minimus*), oak titmouse (*Baeolophus inornatus*), chestnut-backed chickadee (*Poecile rufescens*), California quail, and mule deer.

Wetlands

Seasonal wetlands and fresh emergent wetlands are present within the Planning Area (**Figure 4.10-1**). Seasonal wetlands are relatively shallow bodies of water that pond for a short duration, support a low diversity of plant species, and tend to support species with a high tolerance for disturbance. They also typically qualify as wetlands under Section 404 of the federal Clean Water Act and are under U.S. Army Corps of Engineers (USCOE) jurisdiction. Seasonal wetlands, including the aquatic environments that occur on the floor of flood control channels, are often formed when ditches and depressions are excavated. Former marshland that has been partially filled with rock, soil, and debris often develops into seasonal wetlands. Wetland plant species that are either low-growing, tenacious perennials that tolerate disturbance or annuals that tolerate seasonal wetness often colonize seasonal wetlands. Characteristic plant species in seasonal wetlands include cattails (*Typha* spp.) and California blackberry (*Rubus ursinus*).

Fresh emergent wetlands are characterized by erect, rooted herbaceous hydrophytes. Dominant vegetation is generally perennial monocots 2 meters (6.6 feet) tall. All emergent wetlands are flooded frequently, enough so that the roots of the vegetation in an anaerobic environment. The vegetation may vary in size from small clumps to vast areas covering several kilometers. On the upper margins of this habitat, saturated or periodically flooded soils support several moist soil plant species for example: big-leaf sedge, Baltic rush (*Juncus balticus*), redroot flatsedge (*Cyperus erythrorhizos*), nutgrass (*Cyperus* spp.), and on more alkali sites, saltgrass (*Distichlis spicata*). On wetter sites, common cattail (*Typha* spp.), bulrushes (*Scirpus* spp.), and arrowhead (*Sagittaria* spp.) are potential dominant species.

The upland limit of fresh emergent wetlands and deep water habitats is the deep water edge of the emergent vegetation. It is generally accepted that the demarcation is at or above the 2 meter (6.6 ft) depth to which emergent wetland plants normally grow. Fresh emergent wetlands are among the most productive wildlife habitats in California. They provide food, cover, and water for more than 160 species of birds, and numerous mammals, reptiles and amphibians (CDFG 2002). Many species rely on fresh emergent wetlands for their entire life cycle. The rare giant garter snake (*Thamnophis gigas*) (federally listed Threatened) uses these wetlands as its primary habitat. The Aleutian Canada goose (*Branta hutchinsii leucopareia*) (delisted), bald eagle (*Haliaeetus leucocephalus*) (delisted except for Sonoran Desert Distinct Population Segment), and peregrine falcon *(Falco peregrinus*) (delisted) each may use fresh emergent wetlands as feeding areas and roost sites.

Many wildlife species are dependent on wetland habitats for foraging, nesting, and cover. Slow-moving waters provide important resting and foraging habitats for migratory water birds such as the Aleutian Canada goose, mallard (*Anas platyrhynchos*), and cinnamon teal. Wetlands also provide habitat for the American coot (*Fulica americana)*, great blue heron (*Ardea herodias*), great egret (*Ardea alba)*, and black phoebe (*Sayornis nigricans*).

Sensitive Habitats, Including Critical Habitat

Sensitive habitats include a) areas of special concern to resource agencies, b) areas protected under CEQA, c) areas designated as sensitive natural communities by CDFG, d) areas outlined in Section 1600 of the California Fish and Game Code, e) areas regulated under Section 404 of the federal Clean Water Act (CWA), f) areas protected under Section 402 of the CWA, and g) areas protected under local regulations and policies. Some of the biological communities found in the Planning Area are sensitive habitats, including seasonal wetlands, protected by various agencies. Seasonal wetlands, including vernal pools, are potential habitat for listed vernal pool crustaceans. In addition, the riverine and riparian habitats within the Planning Area are sensitive habitats under the jurisdiction of CDFG and USCOE. Freshwater emergent wetland and other wetland areas are potentially protected by the USCOE and provide potential habitat for special-status species. Special-status species and their habitat are described in more detail under the heading Special-status Species.

USFWS defines critical habitat as a specific area that is essential for the conservation of a federally listed species and which may require special management considerations or protection. No critical habitat is located within the Planning Area; however, there is designated critical habitat for the Buena Vista Lake ornate shrew (*Sorex ornatus relictus*) adjacent to the Planning Area on the east side of Interstate 5 north of Copus Road (USFWS 2009b).

Wildlife Corridors

Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link otherwise fragmented acres of undisturbed area. Maintaining the continuity of established wildlife corridors is important to sustain species with specific foraging requirements, preserve a species' distribution potential, and retain diversity among many wildlife

populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource. Irrigation channels and agricultural land may provide enough cover to function as a migratory corridor for some species. The waterways and any surrounding riparian corridor within the Planning Area serve as an aquatic and terrestrial wildlife migration corridor for areas within and surrounding the Planning Area. The agricultural and open space lands may also be used by a variety of wildlife species as wildlife corridors.

SPECIAL-STATUS SPECIES

Special-status plant and animal species are those that are afforded special recognition by federal, state, or local resource agencies or organizations. Special-status species are of relatively limited distribution and generally require specialized habitat conditions. Special-status species are defined as:

- Species listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA).
- Species considered as candidates for listing as threatened or endangered under FESA or CESA.
- Plants listed as Endangered or Rare under the California Native Plant Protection Act.
- Plants on the California Native Plant Society (CNPS) List 1B (plants, rare, threatened, or endangered in California and elsewhere) or List 2 (plants rare, threatened or endangered in California but more common elsewhere.
- Species identified by the CDFG as California Species of Special Concern.
- Wildlife fully protected in California under the California Fish and Game Code.
- Species that receive consideration during environmental review under CEQA.

The potential for special-status species to occur within the Planning Area was evaluated by querying the CNDDB (CDFG 2009), the USFWS (2009a), and the CNPS (2009) for previously recorded occurrences of special-status species within the Taft, California USGS 7.5-minute quadrangle (USGS 1950) and surrounding eight quadrangles (East Elk Hills, Tupman, Fellows, Elkhorn Hills, West Elk Hills, Mouth of Kern, Maricopa, and Pentland) (**Appendix 4.10**).

CDFG maintains records for the distribution and known occurrences of sensitive species and habitats in the CNDDB. The CNDDB is organized into map areas based on 7.5-minute topographic maps produced by USGS. The CNDDB comprises actual recorded occurrences or historic records and does not constitute an exhaustive inventory of resources. Detailed field surveys may be required to provide a conclusive determination on presence or absence of sensitive resources from a particular location where there is evidence of potential occurrence.

Figure 4.10-2 depicts the locations of special-status species recorded within the Planning Area. **Tables 4.10-2** and **4.10-3** below identify the special-status plant and animal species, respectively, which have potential to be affected by projects occurring within the region of the Planning Area. The habitat preferences for each special-status species were carefully reviewed and considered in the context of the Planning Area limits. Species having no potential for occurrence are not expected to occur based on the known elevation or distribution range of the species, or the lack of suitable habitat.

Special-Status Plants

Twenty-five (25) special-status plant species have the potential to occur within the Planning Area (**Table 4.10-2**). The CNDDB (CDFG 2009) identified the occurrence of 15 sensitive plants within a one-mile radius of the Planning Area (**Figure 4.10-2**). **Table 4.10-2** below includes the common name and scientific name for each species, regulatory status (federal, state, local, CNPS), and the habitat descriptions for each special-status plant species that has potential to occur within the Planning Area.

These plants are afforded special protection in the California environmental review process and are considered sensitive resources. Habitats supporting conditions suitable for these species should be considered sensitive and as such should be surveyed prior to further development in these areas. If some or all of these species are found in areas proposed for development, the appropriate resource agencies should be contacted and, if possible, those areas should be avoided.

Special-Status Wildlife

Thirty-three (33) special status wildlife species have the potential to occur in the Planning Area (**Table 4.10-3**). The CNDDB (CDFG 2009) identified the occurrence of 25 special-status wildlife species within a one-mile radius of the Planning Area (**Figure 4.10-2**). **Table 4.10-3** below includes the common name and scientific name for each species, regulatory status (federal, state, local), and the habitat description for each special-status wildlife species that has potential to occur within the Planning Area.

TABLE 4.10-2
SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING WITHIN THE PLANNING AREA

Scientific Name	Common Name	Habitat	Status		
			Federal[1]	State[2]	CNPS[3]
Atriplex subtilis	Subtle orache	Annual Grassland	~	~	1B
Atriplex tularensis	Bakersfield smallscale	Scrub	~	SE; SLC	1B
California macrophylla	Round-leaved filaree	Annual Grassland	~	~	1B
Calochortus striatus	Alkali mariposa lily	Scrub, Wetlands	~	~	1B
Caulanthus californicus	California jewelflower	Scrub, Annual Grassland	FE	SE	1B
Caulanthus coulteri var. lemmonii	Lemmon's jewelflower	Annual Grassland	~	~	1B
Cordylanthus mollis ssp. hispidus	Hispid bird's-beak	Annual Grassland, Wetlands	~	~	1B
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Wetlands	~	~	1B
Layia leucopappa	Comanche Point layia	Scrub, Annual Grassland	~	SLC	1B
Opuntia basilaris var. treleasei	Bakersfield cactus	Scrub, Annual Grassland	FE	SE	1B
Stylocline masonii	Mason's neststraw	Scrub	~	~	1B
Lepidium jaredii ssp. jaredii	Jared's pepper-grass	Annual Grassland	~	SLC	1B
Pterygoneurum californicum	California chalk moss	Scrub, Annual Grassland	~	~	1B
Atriplex cordulata	Heartscale	Scrub, Annual Grassland	~	~	1B
Astragalus hornii var. hornii	Horn's milk-vetch	Wetlands	~	~	1B
Eremalche kernensis	Kern mallow	Scrub, Annual Grassland	FE	~	1B
Atriplex vallicola	Lost Hills crownscale	Scrub, Annual Grassland	~	~	1B
Layia munzii	Munz's tidy-tips	Scrub, Annual Grassland	~	SLC	1B
Stylocline citroleum	Oil neststraw	Scrub	~	~	1B
Layia heterotricha	Pale-yellow layia	Annual Grassland	~	~	1B
Delphinium recurvatum	Recurved larkspur	Scrub, Annual Grassland	~	~	1B
Monolopia congdonii	San Joaquin woollythreads	Scrub, Annual Grassland	FE	~	1B
Cirsiusm crassicaule	Slough thistle	Scrub, Valley-Foothill Riparian, Wetlands	~	~	1B
Eriogonum temblorense	Temblor buckwheat	Annual Grassland	~	SLC	1B
Eschscholzia lemmonii ssp. kernensis	Tejon poppy	Scrub, Annual Grassland	~	SLC	1B

CODE DESIGNATIONS

Federal Status[1]	State Status[2]	CNPS[3]
FE = Listed as endangered under the Federal Endangered Species Act	SE = Listed as endangered under the California Endangered Species Act	1B = Plant species that are rare, threatened, or endangered in California and elsewhere.
Other		
SLC = Species of Local or Regional Concern or conservation significance, as identified in the KCVFHCP (Kern County 2006) and/or the Recovery Plan for Upland Species of the San Joaquin Valley (USFWS 1998).		

Sources: CNDDB (CDFG 2009), the USFWS (2009a), and the CNPS (2009)

Map ID	Scientific Name	Common Name	Federal Listing	State Listing	CNPS Listing
1	*Actinemys marmorata pallida*	southwestern pond turtle	None	None	
2	*Agelaius tricolor*	tricolored blackbird	None	None	
3	*Ammospermophilus nelsoni*	Nelson's antelope squirrel	None	Threatened	
4	*Astragalus hornii var. hornii*	Horn's milk-vetch	None	None	1B.1
5	*Athene cunicularia*	burrowing owl	None	None	
6	*Atriplex cordulata*	heartscale	None	None	1B.2
7	*Atriplex tularensis*	Bakersfield smallscale	None	Endangered	1B.1
8	*Atriplex vallicola*	Lost Hills crownscale	None	None	1B.2
9	*Calochortus striatus*	alkali mariposa-lily	None	None	1B.2
10	*Caulanthus californicus*	California jewel-flower	Endangered	Endangered	1B.1
11	*Charadrius alexandrinus nivosus*	western snowy plover	Threatened	None	
12	*Cirsium crassicaule*	slough thistle	None	None	1B.1
13	*Coccyzus americanus occidentalis*	western yellow-billed cuckoo	Candidate	Endangered	
14	*Cordylanthus mollis ssp. hispidus*	hispid bird's-beak	None	None	1B.1
15	*Delphinium recurvatum*	recurved larkspur	None	None	1B.2
16	*Dendrocygna bicolor*	fulvous whistling-duck	None	None	
17	*Dipodomys ingens*	giant kangaroo rat	Endangered	Endangered	
18	*Dipodomys nitratoides brevinasus*	short-nosed kangaroo rat	None	None	
19	*Dipodomys nitratoides nitratoides*	Tipton kangaroo rat	Endangered	Endangered	
20	*Eremalche kernensis*	Kern mallow	Endangered	None	1B.1
21	*Eriastrum hooveri*	Hoover's eriastrum	Delisted	None	4.2
22	*Eschscholzia lemmonii ssp. kernensis*	Tejon poppy	None	None	1B.1
23	*Eumops perotis californicus*	western mastiff bat	None	None	
24	*Euproserpinus euterpe*	Kern primrose sphinx moth	Threatened	None	
25	*Gambelia sila*	blunt-nosed leopard lizard	Endangered	Endangered	
26	*Great Valley Mesquite Scrub*	Great Valley Mesquite Scrub	None	None	
27	*Lasthenia glabrata ssp. coulteri*	Coulter's goldfields	None	None	1B.1
28	*Layia leucopappa*	Comanche Point layia	None	None	1B.1
29	*Lytta hoppingi*	Hopping's blister beetle	None	None	
30	*Masticophis flagellum ruddocki*	San Joaquin whipsnake	None	None	
31	*Onychomys torridus tularensis*	Tulare grasshopper mouse	None	None	
32	*Perognathus inornatus inornatus*	San Joaquin pocket mouse	None	None	
33	*Phrynosoma coronatum (frontale population)*	coast (California) horned lizard	None	None	
34	*Plegadis chihi*	white-faced ibis	None	None	
35	*Sorex ornatus relictus*	Buena Vista Lake shrew	Endangered	None	
36	*Stylocline citroleum*	oil neststraw	None	None	1B.1
37	*Taxidea taxus*	American badger	None	None	
38	*Thamnophis gigas*	giant garter snake	Threatened	Threatened	
39	*Toxostoma lecontei*	Le Conte's thrasher	None	None	
40	*Valley Sacaton Grassland*	Valley Sacaton Grassland	None	None	
41	*Valley Saltbush Scrub*	Valley Saltbush Scrub	None	None	
42	*Valley Sink Scrub*	Valley Sink Scrub	None	None	
43	*Vulpes macrotis mutica*	San Joaquin kit fox	Endangered	Threatened	
44	*Xanthocephalus xanthocephalus*	yellow-headed blackbird	None	None	

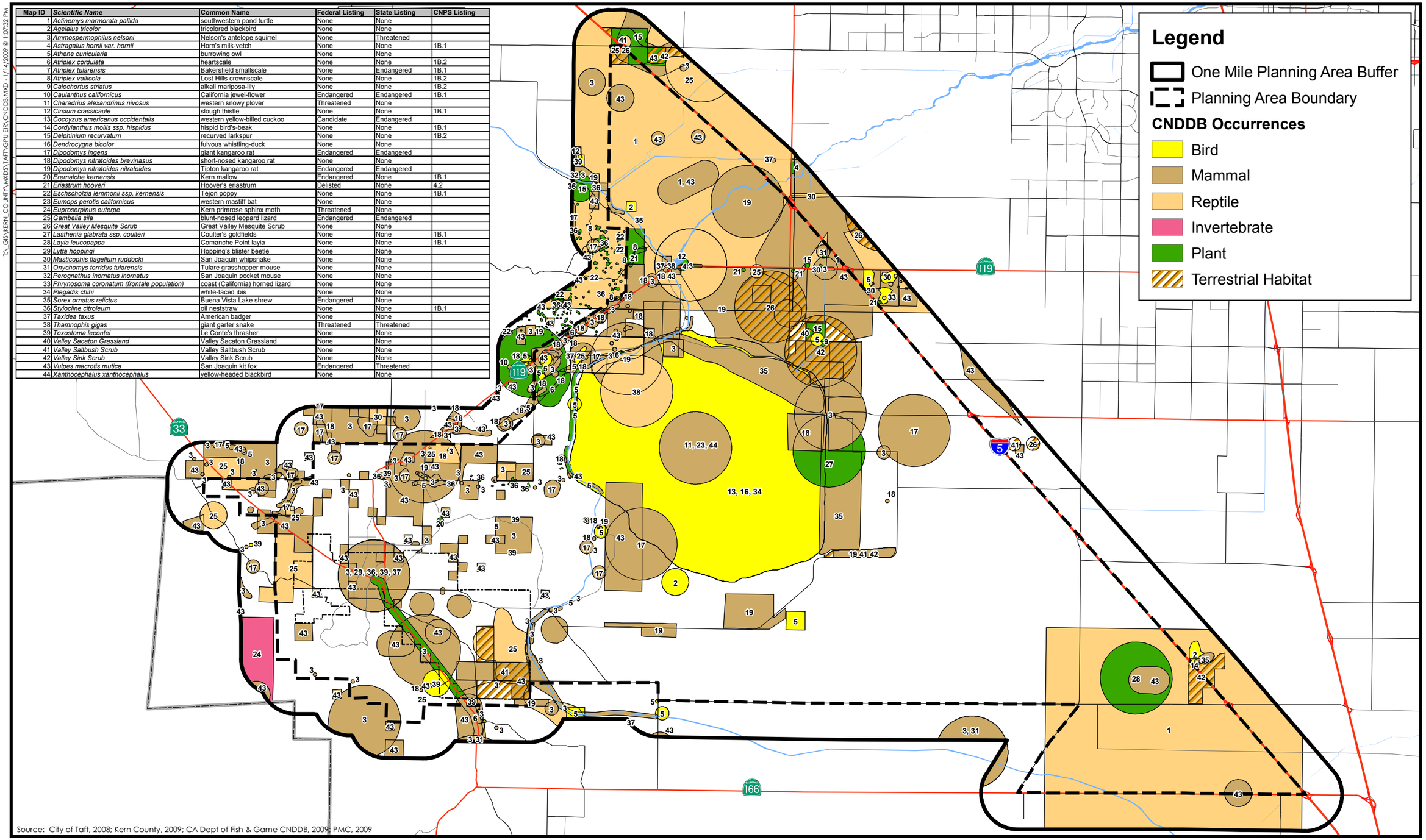

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Figure 4.10-2
Recorded Occurrences of Special-status Species within One Mile of the Planning Area

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TABLE 4.10-3
SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING WITHIN THE PLANNING AREA

Scientific Name	Common Name	Habitat	Status	
			Federal[1]	State[2]
Euproserpinus euterpe	Kern primrose sphinx moth	Agriculture, Annual Grassland, Scrub	FT	~
Spea hammondii	Western spadefoot	Scrub, Annual Grassland, Wetlands	~	CSC
Actinemys marmorata pallida	Southwestern pond turtle	Scrub, Annual Grassland, Wetlands	~	CSC
Gambelia sila	Blunt-nosed leopard lizard	Scrub, Annual Grassland	FE	SE; CFP; SLC
Thamnophis gigas	Giant garter snake	Annual Grassland, Wetlands, Valley-Foothill Riparian	FT	ST
Masticophis flagellum ruddocki	San Joaquin whipsnake	Scrub, Annual Grassland	~	SLC
Phrynosoma coronatum (frontale population)	Coast (California) horned lizard	Scrub, Annual Grassland	~	CSC; SLC
Charadrius alexandrinus nivosus	Western snowy plover	Annual Grassland, Wetlands, Valley-Foothill Riparian	FT; MNBMC	CSC
Ardea alba	Great egret	Wetlands, Valley-Foothill Riparian	MNBMC	~
Egretta thula	Snowy egret	Wetlands, Valley-Foothill Riparian	MNBMC	~
Plegadis chihi	White-faced ibis	Wetlands, Valley-Foothill Riparian	~	CSC
Gymnogyps californianus	California condor	Scrub, Annual Grassland	FE; MNBMC	~
Buteo swainsoni	Swainson's hawk	Agriculture, Annual Grassland, Scrub, Valley-Foothill Riparian	FSC; MNBMC	ST
Elanus leucurus	White-tailed kite	Annual Grassland, Valley-Foothill Riparian	MNBMC	CFP
Falco mexicanus	Prairie falcon	Annual Grassland	MNBMC	CSC
Haliaeetus leucocephalus	Bald eagle	Lacustrine/Open Water	FT; FPD; MNBMC	SE; CFP
Agelaius tricolor	Tri-colored blackbird	Lacustrine/Open Water, Valley-Foothill Riparian, Agriculture, Annual Grassland	MNBMC	CSC
Toxostoma lecontei	Le Conte's thrasher	Scrub	MNBMC	SLC
Lanius ludovicianus	Loggerhead shrike	Valley-Foothill Riparian, Agriculture, Annual Grassland	MNBMC	CSC
Eremophila alpestris actia	California horned lark	Annual Grassland	MNBMC	CSC
Xanthocephalus xanthocephalus	Yellow-headed blackbird	Valley-Foothill Riparian, Agriculture, Annual Grassland	MNBMC	~

Scientific Name	Common Name	Habitat	Status	
			Federal[1]	State[2]
		Lacustrine/Open		
Athene cunicularia hypugea	Western burrowing owl	Scrub, Annual Grassland	MNBMC	CSC
Antrozous pallidus	Pallid bat	Scrub, Annual Grassland	FSC	CSC
Dipodomys nitratoides brevinasus	Short-nosed kangaroo rat	Scrub	~	SLC
Perognathus inornatus inornatus	San Joaquin pocket mouse	Scrub, Annual Grassland	~	~
Eumops perotis californicus	Western mastiff bat	Agriculture, Annual Grassland, Scrub	~	CSC
Vulpes macrotis mutica	San Joaquin kit fox	Agriculture, Annual Grassland, Scrub	FE	ST; SLC
Taxidea taxus	American badger	Agriculture, Annual Grassland, Scrub	~	CSC; SLC
Dipodomys nitratoides nitratoides	Tipton kangaroo rat	Scrub	FE	SE; SLC
Dipodomys ingens	Giant kangaroo rat	Scrub, Annual Grassland	FE	SE; SLC
Onychomys torridus tularensis	Tulare grasshopper mouse	Scrub	~	CSC; SLC
Ammospermophilus nelsoni	Nelson's antelope squirrel	Scrub, Annual Grassland	~	ST
Sorex ornatus relictus	Buena Vista lake shrew	Scrub, Valley-Foothill Riparian, Wetlands	FE	CSC; SLC

Sources: CNDDB (CDFG 2009), the USFWS (2009a), and the CNPS (2009)

CODE DESIGNATIONS

Federal status[1]	State status[2]
FE = Listed as endangered under the Endangered Species Act	SE = Listed as endangered under the California Endangered Species Act ST = Listed as threatened under the California Endangered Species Act
FT = Listed as threatened under the Endangered Species Act	CSC = Species of Concern as identified by the CDFG
FPD = Federally Proposed to be Delisted identified by USFWS	CFP = Listed as fully protected under DFG code
FSC = Federal Species of Concern identified by USFWS	
MNBMC = Migratory Nongame Bird of Management Concern, protected under the Migratory Bird Treaty Act	

Other

SLC = Species of Local or Regional Concern or conservation significance, as identified in the KCVFHCP (Kern County 2006) and/or the Recovery Plan for Upland Species of the San Joaquin Valley (USFWS 1998).

REGULATORY FRAMEWORK

The following describes federal, state, and local environmental laws and policies that are relevant to the General Plan planning process.

FEDERAL

Endangered Species Act

Provisions of the federal Endangered Species Act (FESA), as amended (16 USC 1531), protect federally listed threatened and endangered species and their habitats from unlawful take. "Take" under the FESA includes activities such as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS regulations define harm to include some types of "significant habitat modification or degradation." In the case of *Babbitt, Secretary Of Interior, et al., Petitioners v. Sweet Home Chapter Of Communities For A Great Oregon, et al.* (No. 94-859) (U.S. Supreme Court 1995), the United States Supreme Court ruled on June 29, 1995, that "harm" may include habitat modification "...where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering."

For projects with a federal nexus, Section 7 of the FESA requires that federal agencies, in consultation with the USFWS or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries), use their authorities to further the purpose of the FESA and to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in destruction or adverse modification of critical habitat. Section 10(a)(1)(B) allows non-federal entities to obtain permits for incidental taking of threatened or endangered species through consultation with USFWS or NOAA Fisheries. In general, NOAA Fisheries is responsible for protection of federally listed marine species and anadromous fish while other listed species come under USFWS jurisdiction. Key provisions of the FESA are summarized below under the section that implements them.

<u>Section 10</u>

Section 10 of the FESA provides a means for nonfederal entities (states, local agencies, and private parties) that are not permitted or funded by a federal agency to receive authorization to disturb, displace, or kill (i.e., take) threatened and endangered species. It allows USFWS and/or NOAA Fisheries to issue an incidental take permit authorizing take resulting from otherwise legal activities, as long as the take would not jeopardize the continued existence of the species. Section 10 requires the applicant to prepare a Habitat Conservation Plan (HCP) addressing project impacts and proposing mitigation measures to compensate for those impacts. The HCP is subject to USFWS and/or NOAA Fisheries review and must be approved by the reviewing agency or agencies before the proposed project can be initiated. Because the issuance of the incidental take permit is a federal action, USFWS and/or NOAA Fisheries must also comply with the requirements of the FESA Section 7 and the National Environmental Policy Act (NEPA).

Section 7

Section 7 of the FESA applies to the management of federal lands as well as other federal actions, such as federal approval of private activities through the issuance of federal permits, licenses, funding, or other actions that may affect listed species. Section 7 directs all federal agencies to use their existing authorities to conserve threatened and endangered species and, in consultation with USFWS, to ensure that their actions do not jeopardize listed species or destroy or adversely modify critical habitat. Critical habitat is defined as specific areas that are essential to the conservation of federally listed species.

Clean Water Act, Section 404

The objective of the Clean Water Act (CWA 1977, as amended) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Discharge of fill material into waters of the U.S., including wetlands, is regulated by USACE under Section 404 of the federal Clean Water Act (33 USC 1251-1376). USACE regulations implementing Section 404 define waters of the U.S. to include intrastate waters, including lakes, rivers, streams, wetlands, and natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce. Wetlands are defined for regulatory purposes as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3; 40 CFR 230.3). The jurisdictional boundaries for other waters of the U.S. are identified based on the presence of an ordinary high water mark (OHWM) as defined in 33 CFR 328.3(e). The placement of structures in "navigable waters of the U.S." is also regulated by USACE under Section 10 of the federal Rivers and Harbors Act (33 USC 401 et seq.). Projects are permitted under either individual or general (e.g., nationwide) permits. Specific applicability of permit type is determined by USACE on a case-by-case basis.

In 1987 USACE published a manual (Environmental Laboratory 1987) that standardized the manner in which wetlands were to be delineated nationwide. To determine whether areas that appear to be wetlands are subject to USACE jurisdiction (i.e., are "jurisdictional" wetlands), a wetlands delineation must be performed. Under normal circumstances, positive indicators from three parameters, (1) wetland hydrology, (2) hydrophytic vegetation, and (3) hydric soils must be present to classify a feature as a jurisdictional wetland. More recently, the USACE developed the Arid West Regional Supplement (Supplement) (USACE 2006) for identifying wetlands and distinguishing them from aquatic habitats and other nonwetlands. The Supplement presents wetland indicators, delineation guidance, and other information that is specific to the arid west region. For any wetland delineations submitted after June 5, 2007, the USACE is requiring that the site be surveyed according to both the 1987 manual and the Supplement guidelines. In addition to verifying wetlands for potential jurisdiction, USACE is responsible for the issuance of permits for projects that propose filling of wetlands. Any permanent loss of a jurisdictional wetland as a result of project construction activities is considered a significant impact.

Clean Water Act, Section 401

Sections 401 of the CWA requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate Regional Water Quality Control Board regulates Section 401 requirements.

The Central Valley Regional Water Quality Control Board (CVRWQCB) is responsible for enforcing water quality criteria and protecting water resources within the Planning Area. The CVRWQCB is responsible for controlling discharges to surface waters of the state by issuing waste discharge requirements (WDR) or commonly by issuing conditional waivers to WDR's. CVRWQCB requires that a project proponent obtain a CWA Section 401 water quality certification for Section 404 permits granted by USACE. A request for water quality certification (including WDR's) by CVRWQCB and a Notice of Intent (NOI) application for a General Permit for Storm Water Discharges Associated with Construction Activities are prepared and submitted following completion of the CEQA environmental document and submittal of the wetland delineation to the USACE.

Migratory Bird Treaty Act

Migratory birds are protected under the MBTA of 1918 (16 USC 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The vast majority of birds found in the Planning Area are protected under the MBTA.

Bald and Golden Eagle Protection Act

The bald eagle and golden eagle are federally protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c). It is illegal to take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export, or import at any time or in any manner a bald or golden eagle, alive or dead; or any part, nest or egg of these eagles unless authorized by the Secretary of the Interior. Violations are subject to fines and/or imprisonment for up to one year. Active nest sites are also protected from disturbance during the breeding season.

STATE

California Endangered Species Act

Under the CESA, CDFG has the responsibility for maintaining a list of endangered and threatened species (California Fish and Game Code 2070). CDFG maintains a list of "candidate species" which are species that CDFG formally notices as being under review for addition to the list of endangered or threatened species. CDFG also maintains lists of "species of special concern" which serve as species "watch lists." Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed

endangered or threatened species may be present in the project site and determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFG encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under California Fish and Game Code Section 206.591. Authorization from CDFG would be in the form of an Incidental Take Permit.

Porter-Cologne Water Quality Control Act

Water quality in California is governed by the Porter-Cologne Water Quality Control Act. This law assigns overall responsibility for water rights and water quality protection to the State Water Resource Control Board (SWRCB) and directs the nine statewide Regional Water Quality Control Boards (RWQCBs) to develop and enforce water quality standards within their boundaries.

State Definition of Covered Waters

Under California State law, "waters of the state" means "any surface water or groundwater, including saline waters, within the boundaries of the state." Therefore, water quality laws apply to both surface and groundwater. After the US Supreme Court decision in *Solid Waste Agency of Northern Cook County* v. *Army COE of Engineers* (*SWANCC v. USCOE*), the Office of Chief Counsel of the SWRCB released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act, discharges to wetlands and other waters of the state are subject to State regulation, and this includes isolated wetlands. In general, the RWQCBs regulate discharges to isolated waters in much the same way as they do for federal-jurisdictional waters, using Porter-Cologne rather than CWA authority.

Streambed Alteration Agreement (Sections 1600-1607 of the California Fish and Game Code)

State and local public agencies are subject to Section 1602 of the California Fish and Game Code, which governs construction activities that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by CDFG. Under Section 1602, a discretionary Streambed Alteration Agreement permit must be issued by CDFG to the project developer prior to the initiation of construction activities within lands under CDFG jurisdiction. As a general rule, this requirement applies to any work undertaken within the 100-year floodplain of a stream or river containing fish or wildlife resources.

Native Plant Protection Act

The Native Plant Protection Act (California Fish and Game Code Sections 1900-1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by CDFG). An exception to this prohibition in the act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFG and give that state agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed (Fish and Game Code Section 1913 exempts from "take" prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way"). Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

Birds of Prey

Under Section 3503.5 of the California Fish and Game Code it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

"Fully Protected" Species

California statutes also accord "fully protected" status to a number of specifically identified birds, mammals, reptiles, and amphibians. These species cannot be "taken," even with an incidental take permit. Section 3505 of the California Fish and Game Code makes it unlawful to "take" "any aigrette or egret, osprey, bird of paradise, goura, numidi, or any part of such a bird." Section 3511 protects from "take" the following "fully protected birds": (a) American peregrine falcon (*Falco peregrinus anatum*); (b) brown pelican (*Pelecanus occidentalis*); (c) California black rail (*Laterallus jamaicensis coturniculus*); (d) California clapper rail (*Rallus longirostris obsoletus*); (e) California condor (*Gymnogyps californianus*); (f) California least tern (*Sterna albifrons browni*); (g) golden eagle; (h) greater sandhill crane (*Grus canadensis tabida*); (i) light-footed clapper rail (*Rallus longirostris levipes*); (j) southern bald eagle (*Haliaeetus leucocephalus leucocephalus*); (k) trumpeter swan (*Cygnus buccinator*); (l) white-tailed kite (*Elanus leucurus*); and (m) Yuma clapper rail (*Rallus longirostris yumanensis*).

California Fish and Game Code Section 4700 identifies the following "fully protected mammals" that cannot be "taken": (a) Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*); (b) bighorn sheep (*Ovis canadensis*), except Nelson bighorn sheep (subspecies *Ovis canadensis nelsoni*); (d) Guadalupe fur seal (*Arctocephalus townsendi*); (e) ring-tailed cat (genus *Bassariscus*); (f) Pacific right whale (*Eubalaena sieboldi*); (g) salt-marsh harvest mouse (*Reithrodontomys raviventris*); (h) southern sea otter (*Enhydra lutris nereis*); and (i) wolverine (*Gulo gulo*).

Fish and Game Code Section 5050 protects from "take" the following "fully protected reptiles and amphibians": (a) blunt-nosed leopard lizard (*Crotaphytus wislizenii silus*); (b) San Francisco garter snake (*Thamnophis sirtalis tetrataenia*); (c) Santa Cruz long-toed salamander (*Ambystoma*

macrodactylum croceum); (d) limestone salamander (*Hydromantes brunus*); and (e) black toad (*Bufo boreas exsul*).

Fish and Game Code Section 5515 also identifies certain "fully protected fish" that cannot lawfully be "taken" even with an incidental take permit. The following species are protected in this fashion: (a) Colorado River squawfish (*Ptychocheilus lucius*); (b) thicktail chub (*Gila crassicauda*); (c) Mohave chub (*Gila mohavensis*); (d) Lost River sucker (*Catostomus luxatus*); (e) Modoc sucker (*Catostomus microps*); (f) shortnose sucker (*Chasmistes brevirostris*); (g) humpback sucker (*Xyrauchen texanus*); (h) Owens River pupfish (*Cyprinoden radiosus*); (i) unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); and (j) rough sculpin (*Cottus asperrimus*).

California Native Plant Society

The CNPS is a nongovernmental agency that classifies native plant species according to current population distribution and threat level, in regard to extinction. The following description of the CNPS classification system is relevant to identifying potential impacts to biological resources due to implementation of the project.

The CNPS maintains a list of plant species native to California that has low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California (CNPS 2009). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

List 1A: Plants believed to be extinct

List 1B: Plants that are rare, threatened, or endangered in California and elsewhere

List 2: Plants that are rare, threatened, or endangered in California, but are more numerous elsewhere

All of the plant species on List 1 and List 2 meet the requirements of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (CESA) of the California Fish and Game Code and are eligible for state listing. Plants appearing on List 1 or List 2 are considered to meet the criteria of CEQA Section 15380 and effects on these species are considered "significant" in this EIR. Classifications for plants listed under "List 3: Plants about which we need more information (a review list)" and/or "List 4: Plants of limited distribution (a watch list)," as defined by CNPS, are not currently protected under state or federal law. Therefore, no detailed descriptions or impact analysis was performed for qualifying species under these classifications.

LOCAL

Draft Tulare Basin Riparian and Wildlife Corridor Plan

A draft plan completed by Tulare Basin Wildlife Partners (2009) focusing on riparian and wildlife corridors that connect the Tulare Basin with the foothills on three sides: the Sierra Nevada to the east, the Transverse Ranges to the south, and the Coast Ranges to the west; as well as the San Joaquin Valley to the north. The Tulare Basin Wildlife Partners have completed four comprehensive conservation plans including three regions in the Tulare Basin: Sand Ridge - Tulare Lake, Goose Lake and Buena Vista Lake – Kern Lake, as well as a fourth plan evaluating 32 riparian and wildlife corridors which flow into the Basin. Portions of the City of Taft and the proposed Planning Area are located within the Buena Vista Lake-Kern Lake planning area boundary and within the Lokern/Elk Hills/Buena Vista Hill Wildlife, Bitter Creek Riparian and Wildlife, San Emigdigo Creek Riparian and Wildlife, and Tejon/El Paso Creek Riparian and Wildlife corridors.

Water Quality Control Plan for the Tulare Lake, Second Edition

The *Water Quality Control Plan for the Tulare Lake, Second Edition* (California Regional Water Quality Control Board Central Valley Region 2004) (Basin Plan) designates beneficial uses, establishes narrative and numerical water quality objectives, and contains implementation plans and policies for protecting all waters of the Tulare Lake Basin. The Basin Plan incorporates by reference plans and policies of the State Water Resources Control Board. These requirements implement the Basin Plan. The Basin Plan does not specifically identify beneficial uses for creeks (including Sandy Creek) within the South Valley Floor Hydrological Unit (HU 557), but does designate beneficial uses for Valley Floor Waters. The Basin Plan (Table II-1) designates Valley Floor Waters as a warm freshwater habitat, wildlife habitat, and habitat for rare, threatened or endangered species.

Draft Kern County Valley Floor Habitat Conservation Plan

The Planning Area lies within the coverage area of the draft VFHCP (Garcia and Associates 2006). The draft VFHCP is a long-term program designed to conserve federally protected species, state-protected species, and/or other species of concern. The draft VFHCP establishes the conditions under which Kern County, the California Division of Oil, Gas, and Geothermal Resources (DOGGR), and other program beneficiaries are seeking authorization to allow the taking of multiple federally and state-protected species incidental to development and other land use activities within the historical range of federally protected plant and animal species, state-protected plant and animal species, and/or other species of concern. Species covered within the VFHCP are classified as Species of Local Concern (SLC) in this report. The City of Taft has requested participation in the VFHCP once it gets adopted by Kern County.

The Recovery Plan for Upland Species of the San Joaquin Valley, California

The Planning Area lies within the coverage area of The Recovery Plan for Upland Species of the San Joaquin Valley, California (USFWS 1998). The primary objective of this recovery plan is the

recovery of 11 endangered and threatened species, along with protection and long-term conservation of candidate species and species of special concern. The species covered in the plan inhabit grasslands and scrublands of the San Joaquin Valley, adjacent foothills, and small valleys. Species covered within this plan are classified as Species of Local *Concern* (SLC) in this report. The Recovery Plan does not identify the area within and surrounding the Planning Area as having regional biological significance for the species covered within the plan. The Planning Area is not near or within areas proposed for reserves. The Planning Area does include designated areas (along drainages) where connectivity and linkages should be promoted.

U.S Fish and Wildlife Service Draft Vernal Pool Recovery Plan

The USFWS designated critical habitat for certain vernal pool crustaceans and plants in 34 counties in California and identified such habitat in its final rule of the vernal pool recovery plan on February 10, 2006, entitled, *Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants in California and Southern Oregon; Evaluation of Economic Exclusions From August 2003 Final Designation* (71 Fed. Reg. 28, to be codified at 50 CFR Part 17). The Recovery Plan identifies a five-part strategy to ameliorate or eliminate threats to affected species and to preserve intact vernal pools. The five key elements of the Recovery Plan are habitat protection; adaptive habitat management, restoration, and monitoring; status surveys; research; and participation and outreach. The Recovery Plan identifies habitat loss, fragmentation, and isolation of functional vernal pool ecosystems as the greatest threat to the survival and recovery of listed species and species of concern that are found in vernal pools. According to the Recovery Plan, habitat loss is generally the result of urbanization, agricultural conversion, and mining. Habitat loss may also occur from habitat alteration and degradation as a result of changes to natural hydrology; invasive species; incompatible grazing regimes, including insufficient grazing for prolonged periods; and infrastructure projects such as roads, water storage and conveyance, and utilities. In addition, recreational activities such as off-highway vehicles and hiking, erosion, contamination, and inadequate management and monitoring may result in habitat loss. Habitat fragmentation is generally the result of activities associated with habitat loss due to road and other infrastructure projects that contribute to the isolation and fragmentation of vernal pool habitats.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

To determine the level of significance of an identified impact, the criteria outlined in the California Environmental Quality Act (CEQA) Guidelines were used. CEQA (Section 15065) directs lead agencies to find that a project may have a significant effect on the environment if it has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish and wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory.

CEQA (Section 15206) further specifies that a project shall be deemed to be of statewide, regional, or area-wide significance if it would substantially affect sensitive wildlife habitats including, but not limited to, riparian lands, wetlands, bays, estuaries, marshes, and habitats for rare and endangered species.

CEQA (Section 15380) further provides that a plant or animal species, even if not on one of the official lists, may be treated as "rare or endangered" if, for example, it is likely to become endangered in the foreseeable future.

Additional criteria to assess significant impacts to biological resources due to the proposed project are specified in the CEQA Guidelines Section 15382 (Significant Effect on the Environment) "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."

Based on the Environmental Checklist in Appendix G of the CEQA Guidelines, a proposed project could be considered to have significant biological resource impacts if it would have:

- A substantial adverse effect, either directly or through habitat modifications, on any special-status species;
- A substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS;
- A substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

METHODOLOGY

The impact assessment was based on the project description (Section 3.0, Project Description), information available from various existing planning documents and database searches, and the standards of significance described above. The assessment discusses potential impacts that could occur upon implementation of the General Plan Update for the City of Taft. Impacts were determined by comparing existing habitat baseline data and sensitive species associations to the

City's General Plan Land Use Map (Section 4.1, Land Use and Planning) and by determining effects that could occur through future development.

Land Cover Assessment: The biological communities within the Planning Area were defined and mapped (**Figure 4.10-1**) using data from the California State University, Stanislaus, Endangered Species Recovery Program (Phillips et al. 2004). This data has not been verified with field surveys. As such, this data may be inaccurate due to the methods by which this data was obtained at the intended project-level scale the data was meant to be used. This data is not intended for use in project-specific biological mapping.

Special-status Species Assessment: Special-status species, identified from the literature and database searches, were determined to have potential to occur in the Planning Area if their documented geographic range from the literature and database search includes the project vicinity and if suitable habitat for the species was identified within or near the Planning Area. The CNDDB was queried for a list of special-status wildlife, plant, and fisheries resources that are known to occur within the Planning Area or vicinity (CDFG 2009). A database search was performed for special-status species within the Taft, California USGS 7.5-minute quadrangle (USGS 1950) and surrounding eight quadrangles (East Elk Hills, Tupman, Fellows, Elkhorn Hills, West Elk Hills, Mouth of Kern, Maricopa, and Pentland). Locations of special-status species occurrences as recorded in the CNDDB within a one-mile radius of the Planning Area are shown in **Figure 4.10-2**.

The CNPS electronic online inventory was also searched for rare or endangered plants that may occur within the Planning Area and surrounding vicinity (CNPS 2009). This query was performed for CNPS List 1A, List 1B, and List 2 special-status plants occurring in the USGS 7.5-minute quadrangles listed above. List 1A species are presumed extinct in California. List 1B species are considered rare or endangered in California and elsewhere. List 2 species are considered rare or endangered in California, but are more common elsewhere. As described further above, (Regulatory Framework subsection) classifications for List 3 and List 4 plants, as defined by CNPS, are not currently protected under state or federal law. As such, no detailed descriptions or impact analysis was performed for qualifying species under these classifications.

In addition, the online USFWS list for the USGS 7.5-minute quadrangles listed above was queried and reviewed for federally listed or candidate plant and animal species that could potentially be affected by the proposed action (USFWS 2009a).

Appendix 4.10 presents the results of the CNDDB, CNPS, and USFWS database queries for special-status species that may occur within the region of the Planning Area and vicinity. This generalized list of species was reviewed, analyzed and refined to provide inclusive lists of species that could occur specifically in the Planning Area **(Tables 4.10-2** and **4.10-3).** A special-status species was determined to have the potential to occur in the Planning Area if its documented geographic range from the literature and database searches includes the project vicinity, if there is a known occurrence near the Planning Area, and if suitable habitat for the species was identified within or near the Planning Area. Range and habitat information of special-status plant and wildlife species was obtained from the California Wildlife Habitat Relationships (CWHR)

program version 8 (CDFG 2002) as well as other sources. No species-specific or protocol-level surveys for special-status species were conducted specifically to support this analysis.

This impact analysis is organized by the significance criteria noted above: special-status plant and wildlife species; sensitive vegetation communities including wetlands; wildlife movement; and compliance with existing Habitat Conservation Plans (HCP) or other plans and policies. Each impact category includes a description of the specific potential impacts, as well as avoidance and mitigation measures that can potentially reduce and mitigate potentially significant impacts.

The reader is referred to Section 3.0, Project Description for specific features of the proposed project.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan polices are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant updated General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan polices were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

ASSUMPTIONS

Conflicts between planned land uses and natural resources have been identified for the proposed project. Since the exact nature, extent, and location of all development associated with the proposed project is not known at this time, it is likely that some level of natural resources would be retained within each project parcel. Please refer to the Project Description (Chapter 3.0) of this document, or the General Plan Update document, for specific language on allowed uses under each land use designation. Specific proposed policies from the Land Use and Open Space and Conservation Elements, which provide mitigation to impacts to special-status species, sensitive habitats, wildlife movement, etc., are presented in the impact analysis below.

PROJECT IMPACTS AND MITIGATION MEASURES

Impacts to Special-Status Plant and Wildlife Species

Impact 4.10.1 Implementation of the General Plan Update could result in loss of populations or essential habitat for special-status plant and wildlife species. This would be a **potentially significant** impact.

Land use and development consistent with the proposed General Plan Update could result in adverse impacts on special-status species or essential habitat for special-status species in the Planning Area. As indicated in **Tables 4.10-2** and **4.10-3**, the Planning Area may provide habitat for a number of special-status species. Any development within areas that are currently

undeveloped, including vacant/infill sites and idle/fallow agricultural fields, could result in impacts to habitat resources that may support special-status species. Construction of future projects could result in direct "take" of habitat and loss of individuals of these species. Where there are direct impacts to special-status species, indirect impacts could occur as well. Indirect impacts include increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to development of previously undeveloped areas. These impacts would be considered **potentially significant** but mitigable with the implementation of the proposed General Plan Update policies and actions identified further below.

According to **Table 4.1-1** (Section 4.1, Land Use), there are currently 21,117.1 acres of undeveloped, vacant land within the Planning Area. These vacant lands include infill sites and areas surrounding the City which are primarily utilized for agricultural and oil and gas production purposes. Very little area immediately surrounding the City is used for agriculture (**Figure 3.0-3**). The intent of the Open Space and Conservation Element of the proposed General Plan Update is to ensure that there will be a sufficient amount of public open space to preserve and enhance the natural environment that contributes to the quality of life in and around Taft, and to make certain that growth does not adversely affect natural resources.

Since some degree of use or impact has been or is allowed within the areas designated as Open Space and Natural Resources, the actual acreage of impacts is unknown at this time. The actual acreage impacted would be determined by future development design proposals, which will be subject to the application of updated General Plan policies that address protection of biological resources, as well as possible further review on a project-by-project basis.

As discussed previously, further environmental review may be necessary, depending on whether the potential environmental impacts of future proposed projects within the Planning Area have the potential to cause one or more direct or reasonably foreseeable indirect physical changes in the environment that have not already been adequately considered in this DEIR. This DEIR is a programmatic analysis of the broad environmental effects of the overall proposed General Plan Update. Goals, polices, and actions contained within the proposed General Plan Update would apply to all future improvement plans within the Planning Area. Future proposed projects that have the potential to cause a direct or reasonably foreseeable indirect physical change in the environment will undergo additional, project-specific CEQA-review, as required by statute. Those future projects will also be subject to the FESA and CESA, as appropriate.

<u>Increased Human/Wildlife Interactions</u>

The major circulation features identified in the Circulation Element of the General Plan Update would result in increased vehicular traffic (auto and pedestrian), increasing the amount and severity of indirect impacts to wildlife and habitat in the Planning Area. Development of residential and nonresidential uses would result in increased human presence in areas formerly uninhabited by humans. Additionally, development of previously undeveloped land for residential uses can expose species to impacts from feral and unconfined pets.

Habitat Fragmentation and Edge Effects

Much of the habitat within the Planning Area that may support or is occupied by special-status species is currently interconnected with large areas of open space and sparse development that has a minor impact on plant and wildlife species in the Planning Area. Any development within existing undeveloped areas (i.e., vacant lands) or open space/natural resource areas could further fragment the existing open space. Development within the Planning Area consistent with the proposed General Plan Update could result in small pockets of conserved habitat that are no longer connected by streams and open space, resulting in indirect impacts to species diversity and movement within the Planning Area. Habitat fragmentation may result in reduced home ranges and loss of foraging habitat that could decimate a population or reduce the fitness of an individual, resulting in indirect take of listed species.

Encroachment by Exotic Weeds

Generally, landscaping installed as part of development in the region has relied heavily on exotic, non-native plant species for decoration. However, some of these species can spread to natural areas, causing native plant life to be replaced by exotic species. Construction activities, grading, and other ground or vegetation-clearing disturbances can eliminate the native plant population and allow invasive non-native species to become established. As native plants are replaced by exotic species, indirect impacts to the habitat of listed species would occur such as modification or degradation of habitat.

Changes in Surface Water Flows

As development occurs, surface water flows normally increase due to an increase in impermeable surfaces through, for example, the placement of building materials and paving over permeable surfaces. In addition, surface water flows are modified due to changes in surface flow by point source stormwater infrastructure installed in order to handle greater flows from the increasing impermeable surfaces as well as from the introduction of drainage flows during seasons when waterways and wetland features are typically dry (commonly referred to as "summer nuisance flows"). Some cover types that contain habitat for listed species can be indirectly impacted by such changes. For example, seasonal wetland and vernal pool communities survive along a rigid set of soil, water, and climatic conditions. Alteration of current inundation and desiccation regimes due to altered hydrology could substantially alter the characteristics of seasonal wetland habitat, resulting in loss or degradation of seasonal wetland and vernal pool habitat in developed and undeveloped areas of the Planning Area.

Table 4.10-4 below lists the acres of vegetation communities within designated proposed land use areas. The vegetation community acreage listed represents the potential of that community to be impacted by the designated land use; however, it is not an attempt to quantify the acreage that may be impacted by implementation of the proposed General Plan Update. The exact nature and degree of development on individual parcels is unknown at this time. The actual acreage ultimately impacted may be less than that shown in **Table 4.10-4** as future development design proposals will be subject to the application of General Plan policies that address

protection of biological resources, as well as possible further review on a project-by-project basis. These policies and possible further review are expected to reduce the potential for impacts.

Please refer to **Tables 4.10-2** and **4.10-3** for special-status species associated with each land cover type/vegetation community.

TABLE 4.10-4
VEGETATION COMMUNITY ACRES WITHIN DESIGNATED PROPOSED LAND USES AREAS

Existing Land Use/Cover Types	Proposed Land Use	Acres
Within the City Limits		
Annual Grasslands	Natural Resources[1]	281.02
	Public Facilities	6.11
Total		*287.13*
Agriculture[2]	Natural Resources[1]	1.89
Total		*1.89*
Commercial/Mixed Urban	General Commercial	56.96
	High Density Residential	68.83
	Industrial	49.89
	Low Density Residential	413.94
	Medium Density Residential	32.95
	Mixed Use	225.99
	Natural Resources[1]	111.74
	Open Space	40.76
	Public Facilities	323.54
Total		*1,324.60*
Industrial/Transportation	General Commercial	98.18
	High Density Residential	2.48
	Industrial	123.35
	Low Density Residential	85.37
	Medium Density Residential	5.47
	Mixed Use	67.58
	Natural Resources[1]	114.05
	Open Space	3.86
	Public Facilities	123.45
Total		*623.79*
Residential	Low Density Residential	0.09
	Medium Density Residential	7.71

Existing Land Use/Cover Types	Proposed Land Use	Acres
Total		*7.80*
Ruderal/Vacant	General Commercial	3.77
	Industrial	30.95
	Low Density Residential	0.41
	Mixed Use	0.12
	Natural Resources[1]	46.72
	Open Space	3.31
	Public Facilities	2.39
Total		*87.67*
Scrub	General Commercial	381.70
	Industrial	340.90
	Low Density Residential	1,024.11
	Medium Density Residential	95.56
	Mixed Use	62.81
	Natural Resources[1]	4,863.88
	Open Space	51.64
	Public Facilities	475.82
Total		*7,296.41*
City Limits Total Impact Acreage		**9,629.29**
Between the City Limits and the Sphere of Influence		
Annual Grasslands	Natural Resources[1]	250.07
Total		*250.07*
Commercial/Mixed Urban	General Commercial	83.34
	High Density Residential	12.60
	Industrial	14.86
	Low Density Residential	724.02
	Medium Density Residential	15.15
	Mixed Use	77.79
	Natural Resources[1]	73.90
	Open Space	18.65
	Public Facilities	32.61
Total		*1,052.92*
Industrial/Transportation	General Commercial	0.03
	Industrial	7.59

Existing Land Use/Cover Types	Proposed Land Use	Acres
	Low Density Residential	1.99
	Medium Density Residential	0.05
	Mixed Use	36.39
	Natural Resources[1]	1,272.95
	Open Space	0.47
Total		*1,319.47*
Residential	Low Density Residential	8.71
	Medium Density Residential	10.17
	Open Space	5.36
	Public Facilities	1.24
Total		*25.48*
Ruderal/Vacant	Low Density Residential	11.04
	Medium Density Residential	0.25
	Mixed Use	49.32
	Natural Resources[1]	100.97
	Open Space	0.32
	Public Facilities	1.48
Total		*163.38*
Scrub	General Commercial	7.33
	High Density Residential	0.83
	Industrial	4.05
	Low Density Residential	333.01
	Medium Density Residential	38.46
	Mixed Use	93.18
	Natural Resources[1]	10,698.93
	Open Space	34.44
	Public Facilities	16.36
Total		*11,226.58*
Sphere of Influence Total Impact Acreage		**14,037.89**
Between the Sphere of Influence and the Planning Area		
Annual Grasslands	Natural Resources[1]	1,681.32
	General Commercial	147.50
	Agriculture	1,100.68
Total		*2,929.50*

Existing Land Use/Cover Types	Proposed Land Use	Acres
Agriculture[2]	Agriculture	72,143.29
	General Commercial	595.76
	Industrial	236.47
	Natural Resources[1]	10,320.14
	Public Facilities	226.71
	Specific Plan	324.33
Total		*83,846.70*
Commercial/Mixed Urban	Agriculture	125.99
	General Commercial	12.14
	Industrial	0.03
	Low Density Residential	2.28
	Natural Resources[1]	60.47
	Public Facilities	320.90
	Specific Plan	8.45
Total		530.25
Industrial/Transportation	Agriculture	586.88
	General Commercial	74.22
	Industrial	104.50
	Natural Resources[1]	248.24
	Public Facilities	18.80
Total		*1,032.64*
Lacustrine/Open Water	Agriculture	550.72
	General Commercial	14.65
	Industrial	31.39
	Low Density Residential	6.01
	Natural Resources[1]	593.71
	Public Facilities	1,135.54
	Specific Plan	49.01
Total		*2,381.03*
Residential	Agriculture	4.39
	General Commercial	0.26
	Industrial	0.02
	Low Density Residential	0.39
	Natural Resources[1]	40.89

Existing Land Use/Cover Types	Proposed Land Use	Acres
	Public Facilities	0.02
	Estate Residential	52.02
Total		*97.99*
Ruderal/Vacant	Agriculture	3,078.37
	General Commercial	35.58
	Industrial	664.72
	Low Density Residential	3.90
	Natural Resources[1]	3,373.11
	Public Facilities	297.72
	Estate Residential	6.22
	Specific Plan	736.66
Total		*8,196.29*
Scrub	Agriculture	4,010.90
	General Commercial	267.46
	Industrial	848.86
	Low Density Residential	442.99
	Natural Resources[1]	21,598.48
	Public Facilities	194.51
	Estate Residential	138.85
	Rural Residential	29.32
	Specific Plan	1,094.14
Total		*28,625.52*
Valley-Foothill Riparian	Natural Resources[1]	297.60
Total		*297.60*
Wetlands	Agriculture	5,651.26
	Natural Resources[1]	313.60
Total		*5,964.87*
Planning Area Total Impact Acreage		**133,902.382**
Grand Total		***157,569.56****

[1] Most of the land within the Natural Resources land use designation is utilized for oil-related uses, including exploration, reserves, pipelines, and storage facilities. Much of this land also provides secondary benefits, such as open space and wildlife habitat. The maximum dwelling density for this designation is 1 dwelling unit per 5 gross acres.

[2] Agriculture includes Field Crops, Vineyards/Orchards, Confined Feeding, and Idle/Retired Farmland.

** Any minor discrepancies (± 1 acre) with total acreages are attributable to rounding errors.*

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan Update policies, and actions proposed in the Land Use Element and the Open Space and Conservation Element would assist in reducing any potential biological impacts to special-status species:

Land Use

Policy LU-5: Analyze all development projects in accordance with the provisions of CEQA.

Conservation Policies and Actions: Natural Resource Conservation

Policy C-3: Work with public agency, private, and nonprofit partners to provide a means to preserve open space and agricultural lands.

Action C-3a: Require applicants of private and public development projects that are proposing conversion of agricultural lands classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance under the Farmland Mapping and Monitoring Program to provide a 1:1 acreage replacement ratio.

Policy C-13: Seek to conserve plant and animal habitat through regional planning efforts.

Action C-13a: Work with Kern County to participate in the Kern County Valley Floor Habitat Conservation Plan, Tulare Basin Riparian and Wildlife Corridor Conservation Plan, and other conservation efforts.

Action C-13b: Work with other organizations and agencies to create Habitat Conservation Areas.

Policy C-14: Protect natural open spaces, wetlands, watersheds, and environmentally sensitive areas such as creeks and riparian areas and other open spaces.

Action C-14a: Prepare an Open Space Master Plan which identifies and prioritizes high priority preservation areas and provides minimum open space standards. Include areas such as those that support key features of the local or regional ecosystem, provide habitat for special-status species, or provide buffers for agricultural zones.

Action C-14b: Work to assure that the Kern County Valley Floor Habitat Conservation Plan and the Tulare Basin Riparian and Wildlife Corridor Plan protect the interests of the City.

Action C-14c: Support the restoration and enhancement of historical native plant communities within park and open space areas in support of native wildlife habitat.

Action C-14d: Provide adequate buffers from the banks of creeks and rivers, where possible, in consultation with the City and appropriate agencies, such as the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and U.S. Army Corps of Engineers.

Action C-14e: Require applicants of private and public development projects on sites with wetlands to prepare an evaluation pursuant to CEQA and to demonstrate compliance with state and federal regulations. The evaluation should map wetlands and waters of the U.S. and the State in delineations approved by the U.S. Army Corps of Engineers and make recommendations for avoidance.

Action C-14f: Require applicants of private and public development projects that are proposing the conversion of wetlands to provide feasible mitigation on-site for land where complete avoidance of wetlands is not possible. Require appropriately times resource inventories designed to assess the presence of wetlands. Off-site wetland mitigation may occur and shall be coordinated with the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), and the Army Corps of Engineers, as appropriate.

Policy C-15: Preserve areas through avoidance, when feasible, where special-status plant and animal species and critical habitat areas are known to be present or potentially occurring that may be adversely affected by public or private development projects. Where preservation through avoidance is not possible, include appropriate mitigation in the public or private project. "Special-status" species are generally defined as species considered to be rare, threatened, endangered, or otherwise protected under local, state, and/or federal policies, regulations, or laws.

Action C-15a: Require applicants of private and public development projects on previously undeveloped lands to prepare a biological baseline report, evaluation, or survey to consider the potential for significant impacts on special-status species.

Action C-15b: Explore the feasibility of various mitigation measures in consultation with the City and appropriate governmental agencies, such as the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG), for impacts to special-status species and habitat including conservation of similar

quality and quantity of replacement habitat, enhancement of existing habitat areas, or paying in-kind funds to an approved wildlife habitat improvement and acquisition fund. Replacement habitat may occur either on-site or at approved off-site locations.

Policy C-16: Employ a full suite of land conservation techniques to protect natural open spaces and resources, including but not limited to the acquisition of fee simple interest through purchase, donation, or bequest and public access and conservation easements.

Policy C-17: Use site planning, project design, and all other practical design-related mitigation measures to avoid and minimize impacts on sensitive resources.

Action C-17a: Develop a list of appropriate plant species that may be used in the installation of landscaping for all development projects to encourage the use of native plant species.

Policy C-18: Require rehabilitation of natural ecosystems after mineral production is completed in areas zoned as Natural Resources (NR).

Policy C-19: Pursue programs to address oil and natural gas production as it relates to special-status species protection laws.

Action C-19a: Work with affected state and federal agencies to establish consistent policies for environmental protection activities related to oil and natural gas production and oilfield waste disposal.

Implementation of the proposed General Plan update policies and actions listed above, in addition to those identified for water quality impacts under Section 4.11 (Hydrology and Water Quality), would ensure that impacts from future development that may be possible under the updated General Plan to special-status species are identified and mitigated to ensure viability of the species, and to ensure that habitat areas are avoided or mitigated if avoidance is determined to be infeasible. The proposed General Plan update policies and actions contain specific, enforceable requirements and/or restrictions that address this impact. As such, this impact is considered **less than significant**.

Mitigation Measures

None required.

Impacts to Sensitive Natural Communities Including Waters of the US

Impact 4.10.2 Land uses and development consistent with the proposed project could result in the loss of riparian habitat and other sensitive natural communities including Waters of the U.S. This would be considered a **potentially significant** impact.

Implementation of the General Plan update could result in disturbance, degradation, and removal of valley foothill riparian and wetland habitats. Approximately 8,345.90 acres of wetland and lacustrine/open water habitats and approximately 297.60 acres of foothill/riparian habitat would be in direct conflict with the proposed land use designations. These acreages include lands designated as Natural Resources. While these lands *provide secondary benefits, such as open space and wildlife habitat*, mo*st of the land within the Natural Resources land use designation is utilized for oil-related uses, including exploration, reserves, pipelines, and storage facilities.* In addition, implementation of the proposed General Plan update could result in disturbance, degradation, and removal of up to 3,466.70 acres of annual grassland habitat, which has potential to support vernal pools (a CDFG sensitive habitat) (see **Table 4.10-4**). Vernal pools require the surrounding upland habitat to maintain their habitat value and function. However, all of these habitats, with the exception of annual grasslands, are found outside city boundaries (**Figure 4.10-1**).

Riparian habitat supports a high diversity of wildlife species and provides shade for streams and wetlands, maintaining stream temperatures, and reducing stream evaporation. Riparian obligates (those species dependent on riparian habitat) require a minimum of a 100-foot setback (Ledwith 1996). The benefits of riparian corridor buffers increase if they are adjacent to larger tracts of conserved land.

These habitats are considered to be sensitive natural communities by CDFG. Therefore, disturbance and loss of these habitats would be considered a **potentially significant** impact with the implementation of the proposed General Plan Update.

Proposed General Plan Policies and Action Items that Provide Mitigation

The General Plan Update goals, policies, and actions proposed in the Land Use Element and Open Space and Conservation Element, as described under Impact 4.10.1 above, would assist in reducing any potential biological impacts to sensitive natural communities, including waters of the U.S. These policies and actions include the following: Land Use Policy LU-5, and Conservation Policies and Actions C-3, C-3a, C-13, C-13a, C-13b, C-14, C-14a, C-14b, C-14c, C-14d, C-14e, C-14f, C-15, C-15a, C-15b, C-16, C-17, C-17a, C-18, C-19, and C-19a. Implementation of these proposed General Plan Update policies and actions would help to reduce and minimize impacts to sensitive natural communities from future development that may be possible under the updated General Plan. Therefore, impacts to sensitive natural communities, including waters of the U.S., would be reduced to a **less than significant** level.

Mitigation Measures

None required.

Wildlife Corridors

Impact 4.10.3 Land uses and development consistent with the proposed General Plan Update could restrict aquatic or terrestrial wildlife movement through travel corridors. This would be considered a **potentially significant** impact.

Wildlife movement corridors are routes frequently utilized by wildlife that provide shelter and sufficient food supplies to support wildlife species during migration. Movement corridors generally consist of riparian, woodland, or forested habitats that span contiguous acres of undisturbed habitat. Migratory birds may use the rivers, creeks, and other natural habitats within the Planning Area during migration. Furthermore, open space provides an opportunity for dispersal and migration of wildlife species. The primary travel corridors available in the Planning Area include the riparian habitats which provide adequate cover and vegetation to be used as a migratory corridor for common and special-status fish and wildlife species. Corridors provided by these streams and drainages provide important routes for species moving through the area as well as for local species that use these corridors to spread to new habitat, to mate, and to disperse genetic material.

Implementation of the proposed General Plan Update may result in disturbance, degradation, and removal of important corridors for the movement of common and special-status wildlife species. In addition open space, including agricultural lands, chaparral, woodlands, and annual grasslands, provides an opportunity for dispersal and migration of wildlife species. Large-scale development of the Planning Area could isolate these areas from one another and adversely impact these areas and movement corridors. Additionally, construction of roadways and improvement of existing roadways as identified in the proposed Circulation Element could sever or further sever connections between habitats and vegetation types in the Planning Area. Roadway improvement and construction also could negatively impact ephemeral drainages and jurisdictional waters of the U.S. Channelization of existing streams, culvert additions, and otherwise engineered or manipulated drainages have been shown to reduce opportunities for some species' movement. The proposed project could result in habitat degradation due to additional traffic, increased human presence, and degradation of the water quality. This would be considered a **potentially significant** impact unless mitigation is incorporated.

Proposed General Plan Policies and Action Items that Provide Mitigation

The General Plan Update goals, policies, and actions proposed in the Land Use Element and Open Space and Conservation Element, as described under Impact 4.10.1 above, would assist in reducing any potential biological impacts to wildlife movement corridors. These policies and actions include the following: Land Use Policy LU-5, and Conservation Policies and Actions C-3, C-3a, C-13, C-13a, C-13b, C-14, C-14a, C-14b, C-14c, C-14d, C-14e, C-14f, C-15, C-15a, C-15b, C-16, C-17, C-17a, C-18, C-19, and C-19a. Implementation of these proposed General Plan Update policies and actions would help to reduce and minimize impacts to wildlife corridors from future development that may be possible under the updated General Plan. Therefore, impacts to wildlife corridors would be reduced to a **less than significant** level.

Mitigation Measures

None required.

Conflicts with Local Policies or Ordinances, or Adopted Habitat or Natural Community Conservation Plans

Impact 4.10.4 Proposed policies in the proposed General Plan Update that affect biological resources may differ from local policies and ordinances currently in effect. However, potential conflicts would be addressed by the revisions of the implementing ordinances to ensure that they conform to the proposed policies. In addition, land uses and development consistent with the General Plan Update would not conflict with any adopted Habitat or Natural Community Conservation Plans. This would be considered a **less than significant** impact.

The proposed project would update policies regarding biological resources, particularly those related to riparian corridors, wetlands, special-status species, sensitive natural communities, and wildlife movement corridors. Upon adoption of the new policies, in particular Land Use Policy LU-5 and Conservation Policies C-13, C-14, C-15, C-16, C-17, C-18, and C-19 contained within the General Plan Update, applicable City ordinances would be updated to conform to the policies so that these conflicts would no longer exist. As a result, this impact would be considered **less than significant**. No additional mitigation is required.

Land uses and development consistent with the proposed project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan. No such conservation plans have been adopted encompassing all or portions of the City of Taft, and no impact is anticipated. As a result, this impact would be **less than significant**. No additional mitigation is required.

Mitigation Measures

None required.

CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

The City of Taft, the Expansion Area, and the surrounding area of Kern County as a whole must be considered for the purpose of evaluating land use conversion issues associated with biological resources on a cumulative level. In particular, this cumulative setting condition includes the proposed and approved projects listed in **Table 4.0-1** (Section 4.0, Assumptions), existing land use conditions, planned development under the proposed project, and planned and proposed land uses and development patterns in communities within and near the Planning Area and surrounding portions of unincorporated Kern County as well as full build out of the General Plan Planning Area as proposed in the General Plan Update (occurring after year 2035). These land uses and developments have the potential to adversely affect the biological resources in the region and could contribute to the loss of potential habitat within the region. In addition to specific project proposals, future developments would require on- and off-site improvements to provide water, wastewater, storm drainage, solid waste disposal, and other such services at the City's required level of service. Anticipated development, public projects, and related improvements could contribute to the loss of potential habitat within the region.

On a cumulative level, the change in land uses will contribute to a loss of potential habitat for special-status species that currently inhabit the area or could inhabit the area in the future. In addition to potential direct impacts on biological resources from project implementation, the increased human presence would be anticipated to cause potential indirect impacts that could result in direct mortality, habitat loss, deterioration of habitat suitability, and avoidance of habitat. The wildlife species associated with each habitat will likely be affected as well.

Cumulative Impacts to Special-Status Species

Impact 4.10.5 The proposed project, in combination with other reasonably foreseeable projects, would result in direct mortality and loss of habitat for special-status species, and waters of the U.S., including wetlands. This would be a **cumulatively considerable** impact.

The vegetation communities/habitats within the Planning Area are important for the protection of several sensitive species. Implementation of the proposed project may result in degradation of wildlife habitat through a variety of actions which, when combined with other habitat impacts occurring from development within surrounding areas, would result in significant cumulative impacts. Future development within the Planning Area and the surrounding vicinity would have an unknown and unquantifiable impact on special-status species, biologically sensitive habitats, and potentially jurisdictional features (wetlands and waters of the U.S.). The loss of wetlands and riparian woodland along the Kern Creek corridor within the Planning Area would result in a decline in water quality condition, which may result in adverse effects to downstream aquatic resources and riparian habitat. Furthermore, increased development and disturbance created by human activities (e.g., fires, wildlife struck by horse or bike, increased nighttime lighting) would result in direct mortality, habitat loss, and deterioration of habitat suitability.

<u>Proposed General Plan Policies and Action Items that Provide Mitigation</u>

The proposed General Plan Update contains several goals, policies, and actions that would assist in reducing this potential impact to biological resources. The following list contains those policies and actions that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers.

Land Use Policy LU-5

Conservation Policies C-3, C-13, C-14, C-15, C-16, C-17, C-18, and C-19

Actions C-3a, C-13a, C-13b, C-14a, C-14b, C-14c, C-14d, C-14e, C-14f, C-15a, C-15b, C-17a, and C-19a

Implementation of the above General Plan Update policies and associated actions, as described under Impact 4.10.1 above, will reduce the proposed project's impacts to these resources to a less than significant level through either resource avoidance or replacement measures.

Therefore, the project's cumulative contribution to impacts on these resources would be reduced to a **less than cumulatively considerable** level.

Mitigation Measures

None Required.

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4.11
HYDROLOGY AND WATER QUALITY

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") identifies the hydrologic resources, existing drainage conditions, and surface and groundwater quality of the General Plan Planning Area (Planning Area). This section also evaluates the potential impacts of implementing the proposed General Plan Update with respect to flooding, drainage, erosion, water quality, and water supply (as it relates to groundwater resources), and identifies appropriate mitigation measures to lessen the identified impacts, where necessary. The information provided in this section is based primarily on two reports: (1) the City of Taft Storm Drainage Technical Report for the General Plan Update and EIR prepared by Storm Water Consulting, Inc. (2009); and (2) the City of Taft 2009 General Plan Update Water Supply Evaluation prepared by Tully and Young (2009). Other sources of information include the California Department of Water Resources; the California Regional Water Quality Control Board, Central Valley Region; the California Stormwater Quality Association (CASQA); and the U.S. Environmental Protection Agency (USEPA).

4.11.1 EXISTING SETTING

CLIMATE AND PRECIPITATION

Precipitation in the Taft area is limited, with the average annual total depth of precipitation being about 5.8 inches. Because of the area's low elevations, mild winters and relatively dry, warm summers characterize the local climate. Most of the annual precipitation is received in the winter months and falls as rain as a result of storms. Snowfall events are very rare and limited in their depth and duration. The average maximum temperature in the Planning Area is approximately 98.7 degrees Fahrenheit in July while the average minimum temperature is approximately 41.7 degrees Fahrenheit in December (Storm Water Consulting, 2009, Pg 6).

SURFACE HYDROLOGY AND DRAINAGE

Topography

The topography of the Planning Area is highly variable. The Buena Vista Lake Bed is very flat with elevations ranging between about 285 and 290 feet above mean sea level (msl). Within the alluvial fan areas in the southern portion of the Planning Area, gradients range from about 0.7 to 1.0 percent from south to north. Elevations in this area range between about 430 feet above msl along the south boundary of the Planning Area to about 290 feet at the edge of the Buena Vista Lake Bed. The topography is relatively steep in the lower slopes of the Temblor Range in the western portion of the Planning Area. Existing creeks (such as Sandy Creek) have gradients ranging from roughly 2 to 5 percent in upslope segments, decreasing to roughly 1.5 percent in downstream segments. In the City of Taft, elevations range from about 1,160 feet above msl near the Sandy Creek crossing of Midoil Road to about 750 feet along Sandy Creek at the east end of the Taft-Kern County Airport. The northern and northeastern portions of the Planning Area are relatively flat, with gradients ranging between about 0.1 and 0.2 percent falling in a southwesterly direction between Interstate 5 and the Buena Vista Lake Bed (Storm Water Consulting, 2009, Pgs 6-7).

Soils

According to the Soil Survey for Kern County prepared by the U. S. Department of Agriculture, Soil Conservation Service (now known as the Natural Resource Conservation Service, or NRCS), the soils that are present within the Planning Area include all four NRCS Soil Group designations (Soil Groups A, B, C, and D). These soil groups are defined by the NRCS as follows:

Group A: *Low runoff potential* soils having high infiltration rates even when thoroughly wetted and consisting chiefly of deep, well-drained sands or gravels. These soils have a high rate of water transmission.

Group B: Soils having *moderate infiltration* rates when thoroughly wetted and consisting chiefly of moderately deep to deep, moderately well to well-drained sandy-loam with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission.

Group C: Soils having a *low infiltration* rate when thoroughly wetted and consisting chiefly of silt-loam soils with a layer that impedes downward movement of water, or soils with moderately fine to fine texture. These soils have a slow rate of water transmission.

Group D: *High runoff potential* soils having very slow infiltration rates when thoroughly wetted and consisting chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a clay pan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have slow rate of water transmission.

The slopes in the western portion of the Planning Area are very sandy, with high infiltration rates and predominantly consist of Soil Groups A and B. The alluvial fan areas along the southern portions of the Planning Area are predominantly Soil Group C, with areas of Soil Group B. Low-lying agricultural areas and the Buena Vista Lake Bed in the central and eastern portions of the Planning Area consist primarily of Soil Group D. The northern portion of the Planning Area consists mostly of Soil Group B (Storm Water Consulting, 2009, Pg 7).

Drainage Features

There are a wide variety of drainage features and conditions within the Planning Area. These drainage features include:

- Buena Vista Lake Bed;
- Large coalescing alluvial fan areas emanating from the base of San Emigdio Mountains to the south;
- Defined, highly erodable channels that have been cut through sandy soils in the slopes along the base of the Temblor Range mountain front in the west area, including Sandy Creek and tributaries extending through the City of Taft;

- Kern River (lowest reach of the river);
- California Aqueduct (with respect to its impact on drainage);
- Irrigation and drainage canals, sloughs, and ditches;
- Roadside ditches and surface drainage features;
- Underground storm drains serving portions of the City of Taft (within the City limits);
- Dry creek beds and channels; and
- Cross-drainage structures at streets and highways.

These drainage features are generally shown on **Figure 4.11-1** and are described in more detail below. The existing Planning Area land uses include urban development associated with the City of Taft (and the contiguous Ford City, South Taft, and Taft Heights communities) in a portion of the west area, natural slopes along the base of the Temblor Range mountain front in the west area, oil fields in the west and north areas, and agricultural uses with some natural areas in the central, south, and east areas (Storm Water Consulting, 2009, Pg 1).

Buena Vista Lake Bed

The Buena Vista Lake Bed is a large, low-lying area situated near the central portion of the Planning Area. It is roughly 35 square miles in area and is a point of terminal drainage for the substantial majority of surface runoff generated within the Planning Area and from off-site flooding sources entering the Planning Area. It is predominantly a dry lake bed and is subjected to intermittent flooding produced during major storm events. Due to the intermittent nature of flooding of the area, the Buena Vista Lake Bed is actively utilized for agricultural purposes (Storm Water Consulting, 2009, Pgs 1-2).

Off-site Watersheds

There are numerous off-site watersheds contributing storm runoff to the Planning Area. They generally originate from three characteristic off-site sources. They are:

- Creeks and canyons originating in the San Emigdio Mountains to the south.
- Creeks originating from the Temblor Range to the west.
- Kern River and local drainage ditches and sloughs originating from the northeast and entering the Planning Area via drainage culverts and bridges crossing Interstate 5.

The various creeks and canyons originating from the San Emigdio Mountains to the south are well defined within the mountain areas but become poorly defined and distributary at the base of the mountain front prior to entering the Planning Area. These creeks and canyons include Coal

Oil Canyon, Telegraph Canyon, Pleito Creek, Pleitito Creek, San Emigdio Creek, Los Lobos Creek, Muddy Creek, Santiago Creek, Bitter Creek, Cienaga Canyon Creek, and Devils Gulch. The headwaters for these creeks and canyons reach elevations exceeding 8,800 feet at Sawmill Mountain and Mount Pinos within the watershed for San Emigdio Creek. Numerous coalescing alluvial fans have formed at the base of the mountain front, resulting from historical sediment discharges from these creeks and canyons. The broader alluvial fan areas extend into the Planning Area and terminate at the Buena Vista Lake Bed. The California Aqueduct extends transversely across these alluvial fans, allowing runoff to cross at several large overcrossings of siphoned segments of the aqueduct. During major storms, runoff will enter the south portion of the Planning Area and produce sheet flooding across broad areas.

The creeks originating from the Temblor Range to the west include Bitterwater Creek, Sandy Creek, Buena Vista Creek, and several smaller, unnamed creeks. The headwaters for these creeks reach elevations of about 3,500 feet in the Temblor Range. These creeks traverse through very sandy soils and are highly erodable. Sandy Creek and its tributaries extend through the City of Taft and adjacent communities, and consist of highly eroded channels with steep and sometimes vertical banks. These creeks eventually cross over or under the California Aqueduct and subsequently discharge to the Buena Vista Lake Bed.

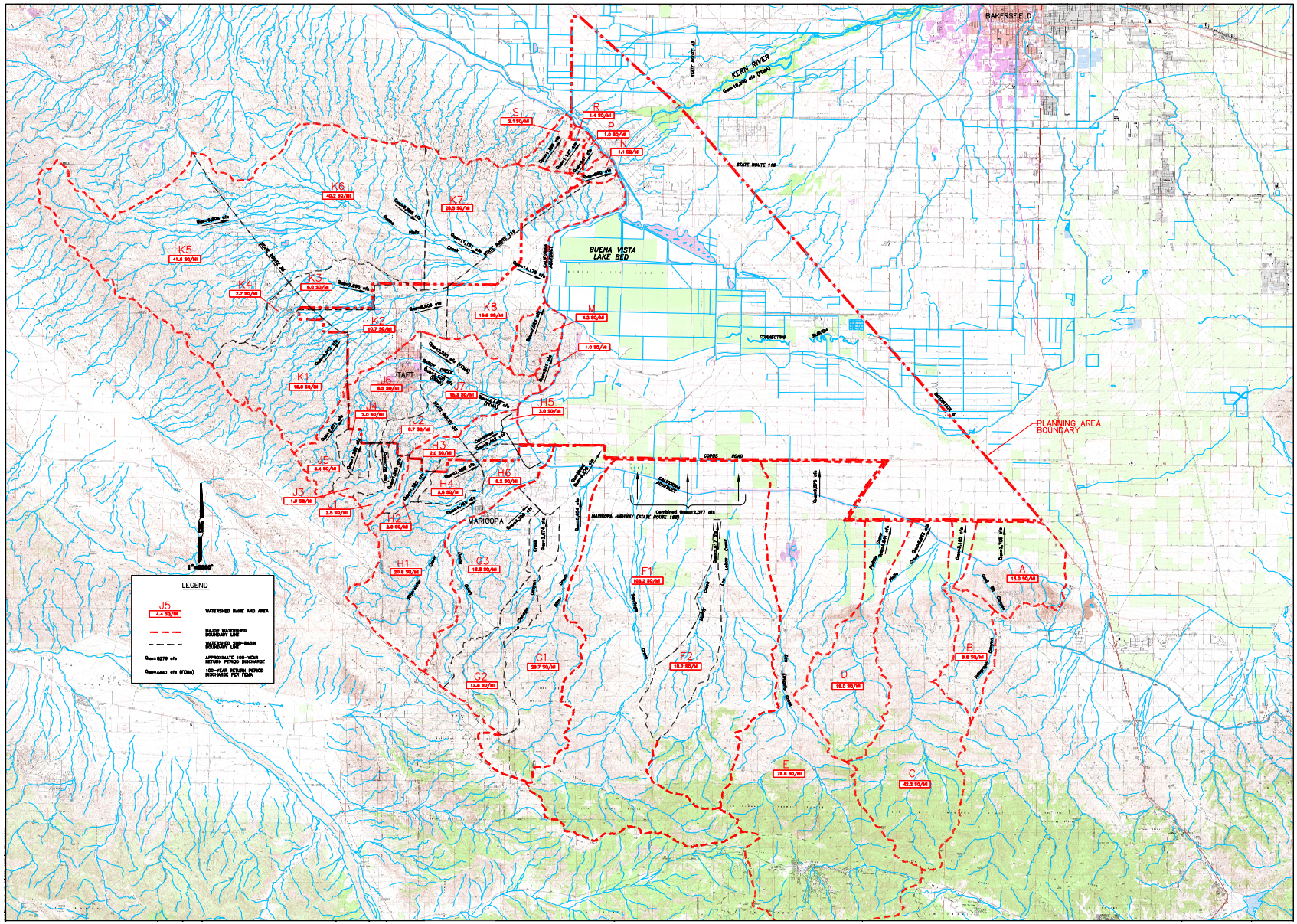
The north and northeast portions of the Planning Area receive storm runoff from the Kern River (described in the following subsection) and ditches and sloughs traversing through relatively flat areas upstream to the northeast. Storm runoff enters the Planning Area via several culvert and bridge crossings of Interstate 5, ultimately draining to the Vista Aquatic Recreation Area and/or the contiguous Buena Vista Lake Bed (Storm Water Consulting, 2009, Pg 2).

Approximate 100-year discharges were estimated for each of the watersheds and subbasins described here and are contained in **Appendix 4.11a**.

Kern River

The most significant stream entering the Planning Area is the Kern River which originates in the Sierra Nevada mountain range to the east of Bakersfield near Mount Whitney. The Kern River is regulated by Isabella Dam which controls roughly 2,074 square miles of upstream watershed, but floodwaters can still accumulate from approximately 333 square miles of watershed downstream of the dam. Within the Planning Area and roughly 21 miles downstream of Bakersfield, the Kern River enters the Buena Vista Lake Bed or flows to Tulare Lake via the Kern River Flood Canal. Flow in the Kern River can also be diverted to the California Aqueduct via the Kern River-California Aqueduct Intertie. The Kern River traverses southwesterly through the northernmost portion of the Planning Area between Interstate 5 and its intersection with the California Aqueduct roughly 3.5 miles downstream of Interstate 5 (Storm Water Consulting, 2009, Pg 6).

T:_CS\Work\Taft, City of\Figures, June 2009



Source: Stormwater Consulting, 2009

Figure 4.11-1

Drainage Features in the Planning Area

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Existing Drainage Practices

Under existing conditions, the primary means utilized for conveyance of storm runoff is surface flow, with culvert crossings at selected streets and highways being utilized for cross drainage of channels, creeks, and ditches. The only area where underground storm drains are utilized to any level of significance is within the urbanized areas within the City limits. During storms, runoff is conveyed in defined creeks and channels or as sheet flow or surface drainage in streets and roadside ditches where defined creeks and channels do not exist. At present, stormwater detention is not generally being utilized as a means of limiting discharges to downstream receiving channels in the urbanized areas within and adjacent to the City of Taft (Storm Water Consulting, 2009, Pg 9).

Flooding

According to Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM) Panels 2225, 2250, 2257, 2275, 2625, 2638, 2639, 2643, 2650, 2675, 2700, 2725, 3050, 3075, 3100, 3125, and 3150, Kern County, California and Incorporated Areas dated September 26, 2008, significant portions of the Planning Area are located in the Special Flood Hazard Area (SFHA) subject to inundation by the 1 percent annual chance flood (or 100-year return period flood). The majority of the SFHA is associated with flooding originating from canyons and creeks emanating from the San Emigdio Mountains to the south and the Temblor Range to the southwest, ultimately draining to the Buena Vista Lake Bed. There is also a large SFHA associated with the Kern River that traverses through the northern portion of the Planning Area.

The majority of the SFHAs designated by FEMA are classified as Zone A, an approximate flood zone delineation that does not include any information regarding base flood (or 100-year return period flood) elevations. Sandy Creek and North Sandy Creek were studied in detail by FEMA as they pass through the Taft City limits, and their SFHAs are represented on applicable FIRM Panels as Zone AE and shaded Zone X. Zone AE includes detailed base flood elevations. There are no designated "floodways," a highly restrictive floodplain designation, within the Planning Area. The SFHAs designated by FEMA within the Planning Area are shown on **Figure 4.11-2**.

The SFHAs designated within the Planning Area are defined by FEMA as follows:

- *Zone A* – Zone A is the flood insurance rate zone that corresponds to the 1 percent annual chance floodplain (100-year return period floodplain) that is determined by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no base flood elevations or base flood depths are shown within this zone.

- *Zone AE* – Zone AE is the flood insurance rate zone that corresponds to the 1 percent annual chance floodplain (100-year return period floodplain) that is determined by detailed methods. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

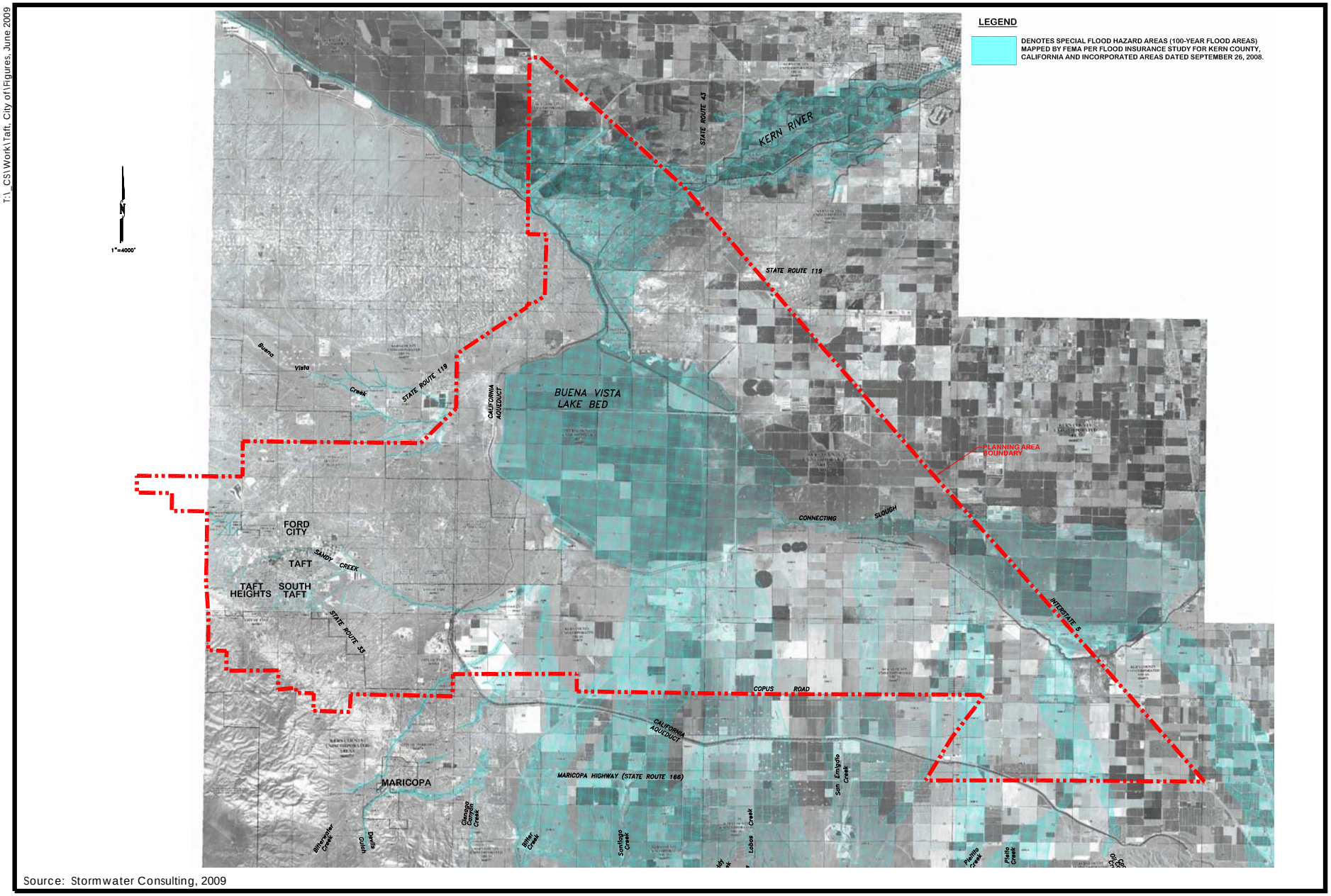
- *Zone X (shaded)* – Zone X (shaded) is the flood insurance rate zone that depicts areas having a 0.2 percent annual chance of flooding (500-year return period floodplain), or a 1 percent annual chance of flooding (100-year return period floodplain) with average depths of less than one foot or with drainage areas of less than one square mile, or areas protected by levees from the 1 percent annual chance flood (100-year return period flood) (Storm Water Consulting, 2009, Pg 8).

Dams

There is one upstream dam listed by the Department of Water Resources Division of Safety of Dams that would potentially have a significant impact on flooding within the Planning Area if it were to fail. Isabella Dam forms Isabella Lake along the Kern River and its tributaries in the Sierra Nevada to the east of the Planning Area. The dam is owned and operated by the U.S. Army Corps of Engineers and was constructed in 1953. It impounds up to 568,000 acre-feet of water originating from a contributing watershed area of 2,074 square miles. In the unlikely event of a failure of this dam, significant downstream areas would be flooded, including large portions of the Planning Area. The highest depths of flooding within the Planning Area would occur in the lowest-lying areas within and around the Buena Vista Lake Bed. The U.S. Army Corps of Engineers recently completed the initial preparation of updated maps showing projected downstream flooding data in the unlikely event of a dam failure, including peak inundation depths, maximum velocities, and time to one foot inundation for the overall projected inundation area. These maps are provided in **Appendix 4.11a**.

Responsibility for the safety of dams under federal jurisdiction belongs to the agency constructing the dam, in this case the U.S. Army Corps of Engineers. Federal agency programs to maintain dam safety are based on the Federal Guidelines for Dam Safety prepared by FEMA.

The probability of a failure of Isabella Dam is very remote and is considered to be beyond the realm of reasonable foresee ability in the analysis of the Planning Area. Also, the time to one foot inundation within applicable portions of the Planning Area in the event of a dam failure generally exceeds 24 hours, and the projected land uses within these areas consist predominantly of agriculture and natural resources uses (with limited commercial/industrial uses). These conditions would aid in the feasibility of effective evacuation of affected areas within the Planning Area in the unlikely event of a dam failure (Storm Water Consulting, 2009, Pgs 8-9).



Source: Stormwater Consulting, 2009

T:_CS\Work\Taft, City of\Figures, June 2009

Figure 4.11-2

Special Flood Hazard Areas in the Planning Area

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GROUNDWATER HYDROLOGY

Regional Aquifer System

The Great Central Valley of California contains the largest basin-fill aquifer system in the state. The valley is in a structural trough about 400 miles long and ranges from 20 to 70 miles wide, extending over more than 20,000 square miles. The trough is filled to great depths by marine and continental sediments, which are the result of millions of years of inundation by the ocean and erosion of the rocks that form the surrounding mountains. Sand and gravel beds in this basin-fill material form an important aquifer system.

The Department of Water Resources divides this aquifer system into two groundwater basins, the Sacramento Valley Groundwater Basin and the San Joaquin Valley Groundwater Basin. It further divides the San Joaquin Valley Groundwater Basin into subbasins including the Kern County Groundwater Subbasin which lies at the southern end of the San Joaquin Basin and underlies the entire Planning Area (DWR, 2004).

Local Groundwater Resources

As described above, the Planning Area is located within the boundaries of the Kern County Groundwater Subbasin (DWR Basin No. 5-22.14) within the San Joaquin Valley Groundwater Basin. The subbasin is bounded on the north by the Kern County line and the Tule Groundwater Subbasin, on the east and southeast by granitic bedrock of the Sierra Nevada foothills and Tehachapi Mountains, and on the southwest and west by the marine sediments of the San Emigdio Mountains and Coast Ranges (DWR, 2006).

The Kern County Water Agency (KCWA) estimates the total water in storage in the subbasin to be 40,000,000 acre per feet and dewatered aquifer storage to be 10,000,000 acre per feet. It appears that these calculations consider areas of the subbasin which are known to overlay useable groundwater, which they report to be about 1,000,000 acres per feet (Tully and Young, 2009, Pg 16).

Groundwater Levels and Recharge

Historically, the upper aquifer system of the subbasin was recharged by precipitation, infiltration from rivers and lakes and lateral inflow along the basin boundaries. The main surface water feature in the subbasin is the Kern River. Before European settlement the Kern River flowed to Kern and Buena Vista lakes and extensive wetlands. During wet periods, the lakes overflowed to Tulare Lake to the north, which itself overflowed into the San Joaquin River watershed. Groundwater levels varied but reached artesian conditions in the lowest parts of the subbasin.

In the 1860s, ranchers raised livestock and dry farmed wheat in the San Joaquin Valley portion of Kern County. In the 1870s, farmers began diverting the waters of the Kern River to irrigate their crops. For two decades, irrigators relied almost exclusively on surface waters for their water supplies, but in the 1890s, some took advantage of improvements in pumping technology and began turning to more reliable groundwater supplies. This increased use of groundwater caused

the water table in parts of Kern County to fall by as much as 400 feet by 1960. Additionally, groundwater extraction between 1926 and 1970 caused the ground surface to subside by 8 to 9 feet in the central part of the subbasin.

Surface water imports to the area began in 1949 with the completion of the Central Valley Project's (CVP) Friant-Kern Canal and increased in the 1960s and 1970s, as water from the State Water Project (SWP) became available. Many irrigators contracted for deliveries of imported surface water and were able to reduce their use of groundwater. As a result, groundwater levels in some parts of the southern San Joaquin Valley began to rise.

The subbasin's average water level is essentially unchanged from 1970 to 2000, after experiencing a cumulative 15-foot decrease through 1978, a 15-foot increase through 1988, and an 8-foot decrease through 1997. However, net water level changes in different portions of the subbasin were quite variable through the period 1970-2000. These changes ranged from increases of over 30 feet at the southeast valley margin and in the Lost Hills/Buttonwillow areas to decreases of over 25 and 50 feet in the Bakersfield area and McFarland/Shafter areas, respectively.

Water banking was initiated in the subbasin in 1978, and as of 2000, seven projects contain over 3 million acre-feet (MAF) of banked water in a combined potential storage volume of 3.9 MAF. Approximately two-thirds of this storage is in the Kern River Fan area west of Bakersfield; the remainder is in the Arvin-Edison Water Storage District (WSD) in the southeastern subbasin or in the Semitropic WSD in the northwestern subbasin (Hundley, 2001; Tully & Young, 2009, Pg 16).

WATER QUALITY

Surface Water Quality

The California Clean Water Act Section 303(d) list identifies water bodies with impaired water quality. None of the rivers, creeks, or streams in the Planning Area are on the most recent (2006) California Clean Water Act Section 303(d) list and according to the Tulare Basin Water Quality Control Plan surface water quality in the basin is generally good. The nearest Section 303(d) stream to the Planning Area is the Cuyama River about 13 miles southwest of the Planning Area. The contaminant identified in the Cuyama River is boron but the source is currently unknown. Completion of a Total Maximum Daily Load (TMDL) for the river is not expected until 2019 (SWRCB, 2006; CVRWQCB, 2004, Pg III-2).

Groundwater Quality

The eastern portion of the subbasin contains primarily calcium bicarbonate waters in the shallow zones, increasing in sodium with depth. Bicarbonate is replaced by sulfate and lesser chloride in an east to west trend across the subbasin. Westside waters are primarily sodium sulfate to calcium-sodium sulfate type. The average total dissolved solids (TDS) of groundwater is 400-450 milligrams per liter (mg/L) with a range of 150–5,000 mg/L.

The greatest long-term water quality problem facing the entire Tulare Lake Basin, which covers the drainage area of the San Joaquin Valley located south of the San Joaquin River, is the increase of salinity in groundwater. Even though an increase in the salinity of groundwater in a closed basin is a natural phenomenon, salinity increases in the basin have been accelerated by human activity, with the major impact coming from intensive use of soil and water resources by irrigated agriculture. Other issues include shallow groundwater in the western portion of the basin which presents problems for agriculture. Additionally, high TDS, sodium chloride, and sulfate are associated with the axial trough of the subbasin, and elevated arsenic concentrations are associated with lakebed deposits. Finally, nitrate, DBCP (dibromochloropropane), and EDB (ethylene dibromide) concentrations exceed applicable Maximum Contaminant Levels (MCL) in various areas of the subbasin (Tully & Young, 2009, Pgs 16-17; CVRWQCB, 2004, Pg IV-1).

DOMESTIC WATER SERVICE

Water Purveyors

The City of Taft and its existing Sphere of Influence (SOI) lie entirely within the service boundaries of the West Kern Water District (WKWD). However, the larger Planning Area expands well beyond the boundaries of the WKWD. Although WKWD purchases water from other water districts that are outside the Planning Area for service to residential connections in its service area, WKWD is the only retail supplier of water for residential, commercial, and industrial uses within the City of Taft and the Planning Area. The Planning Area includes the following eight water supply entities:

- Arvin-Edison Water Storage District,
- Buena Vista Water Storage District,
- Henry Miller Water District,
- Kern Delta Water District,
- Kern Water Bank,
- Rosedale-Rio Bravo Water Storage Districts,
- West Kern Water District, and
- Wheeler Ridge-Maricopa Water Storage District.

These entities are shown in **Figure 4.11-3**.

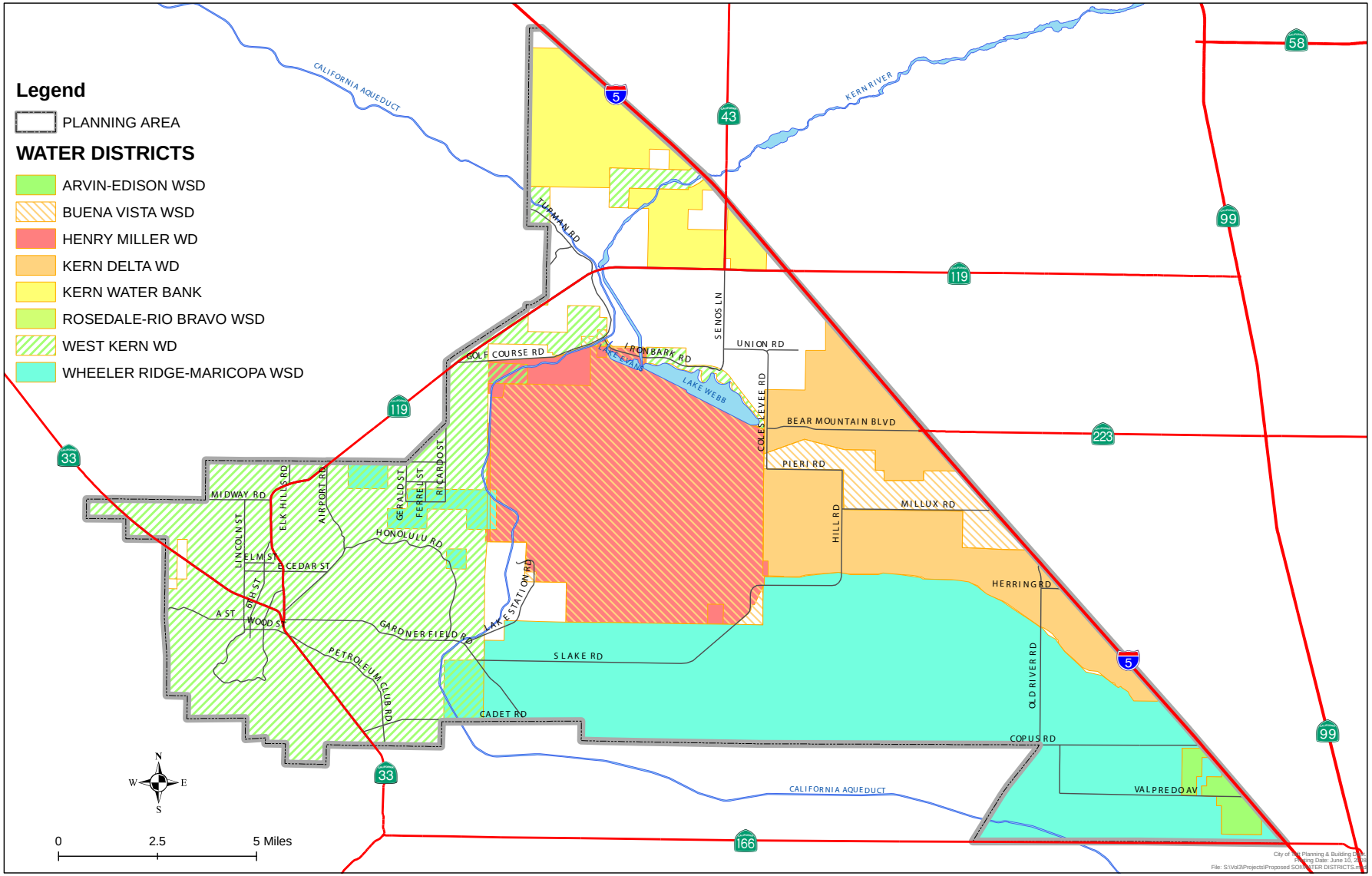
<u>West Kern Water District</u>

The West Kern Water District (WKWD) was formed in 1959 and is a regional municipal and industrial water supply provider. WKWD provides water service to the incorporated cities of Taft and Maricopa, along with the westside communities of Taft Heights, South Taft, Ford City, Tupman, Dustin Acres, Valley Acres, Derby Acres, Fellows, and McKittrick.

WKWD's irregular and disjointed boundary encompasses a service area of approximately 300 square miles. As shown in **Figure 4.11-3**, WKWD's service area overlaps the boundaries of other regional water purveyors. WKWD provides municipal water supplies to approximately

7,200 metered domestic accounts. These accounts serve approximately 16,800 people. Population within the City of Taft's SOI accounts for approximately 80 percent of the total population within WKWD's service area. This SOI includes the unincorporated areas of Taft Heights, South Taft, and Ford City.

WKWD also supplies industrial water to approximately 410 industrial accounts. All service connections are metered. Approximately 80 percent of WKWD's total water supply is provided to these industrial accounts. The industrial customers include oil and electrical power generating industries in western Kern County. Beginning in 2006, WKWD required new industrial facilities to provide water supplies to meet new industrial usage. Municipal and commercial water sales account for the remaining 20 percent of annual use. WKWD does not provide water service for agricultural operations (Tully and Young, 2009, Pgs 9 and 11).



Source: Stormwater Consulting, 2009

Figure 4.11-3

Water Agency Service Boundaries in the Planning Area

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T:_CS\Work\Taft, City of\Figures, June 2009

WKWD Water Supplies

WKWD water supplies include both surface water and groundwater. WKWD's surface water supplies are derived entirely from the SWP via a contract with the Kern County Water Agency, which holds a master contract with the State to receive water from the SWP. WKWD's SWP entitlement totals 31,500 acre-feet per year. WKWD takes delivery of the majority of its SWP water through a complicated water exchange system that involves Buena Vista Water Storage District (BVWSD). In simple terms, BVWSD takes WKWD's SWP contract entitlement and uses that water supply for BVWSD's purposes. In exchange for this delivery to BVWSD, WKWD pumps groundwater to serve its customers. This arrangement is more fully described below as well as in **Appendix 4.11b**. The reliability of SWP supplies can vary significantly depending on hydrologic year type. For instance, WKWD received only 35 percent of its contractual entitlement in 2008 and is projecting that it will receive only 15 percent of its contractual entitlement in 2009 because of the ongoing statewide drought.

In some years, WKWD has also acquired surface water supplies via appropriative water rights and the Central Valley Project to exchange with other entities to allow them to access additional groundwater from their well field. There are numerous complicated agreements and accounting mechanisms associated with these water acquisitions, which are described in more detail in **Appendix 4.11b**.

The last surface water supply component involves WKWD and the Wheeler Ridge-Maricopa Water Storage District (Wheeler). WKWD has a contract with Wheeler to provide residential service in Wheeler's service area. This service is limited to a few residential houses but is indicative of the intent to allow WKWD to continue to be the sole municipal water provider at this time for residential developments in the Planning Area.

While WKWD has an annual entitlement to SWP water and also obtains surface water from other sources, WKWD has no surface water treatment facility so all of the municipal water it supplies is pumped from its groundwater wells. WKWD operates eight groundwater wells located at its well field in the Kern River Alluvial Fan. The depths of WKWD's wells range from 650 feet to 850 feet below ground surface (bgs). Pumps are located at approximately 350 feet bgs and can be placed at lower levels if necessary. WKWD has also installed six groundwater monitoring wells within the perimeter of its well field. WKWD estimates that it has approximately 200,000 acre-feet of banked groundwater.

As discussed in the surface water supply section above, WKWD has an in-lieu banking and exchange program with the BVWSD. BVWSD typically obtains water from a number of sources depending upon availability including water from the Kern River, SWP, CVP, and from local groundwater pumping. These water supply acquisitions may take the form of in-lieu water deliveries where BVWSD may obtain a surface water supply in one location and deliver that water supply to another water provider in exchange for the second water supplier forbearing from pumping groundwater. In other cases, BVWSD obtains these water supplies and spreads the supplies over "spreading basins" so as to percolate into the groundwater aquifer and directly "recharge" the groundwater basin. In all of these cases, BVWSD accumulates a groundwater supply to which it has exclusive rights through specific water accounting criteria.

As discussed above, BVWSD takes WKWD's SWP water from the California Aqueduct instead of pumping local groundwater. BVWSD then uses that water to recharge the subbasin. WKWD can then pump groundwater or bank (store) a volume of water equivalent to the amount which BVWSD takes from the SWP diversion (or other sources acquired by WKWD). As part of the in-lieu banking and exchange arrangement with WKWD, BVWSD can "turn back" SWP water in extremely wet years where it can meet its needs through other sources of supply – most likely Kern River water supplies. In these years, WKWD will exchange or take delivery of the SWP water through conveyance facilities provided by the Kern Water Bank Authority or the Cross Valley Canal. This SWP water can then be delivered to WKWD's groundwater spreading area and credited to its groundwater banking program (Tully and Young, 2009, Pgs 11-14). WKWD's groundwater banking and recharge program is more fully described in **Appendix 4.11b**.

According to WKWD's 2005 Urban Water Management Plan, WKWD anticipates meeting its demands with the water supplies shown in **Table 4.11-1**.

TABLE 4.11-1
PLANNED WEST KERN WATER DISTRICT WATER SUPPLIES

Water Supply Source	Supply (acre-feet per year)				
	2005	2010	2015	2020	2025
SWP Water (from KCWA)	28,350	24,318	24,318	24,318	24,318
Transfer In (Kern Water Bank Authority)	-	6,000	6,000	6,000	6,000
Exchanges In (Rosedale-Rio Bravo WSD)	-	3,333	3,333	-	-
Additional Sources	10,279	3,000	3,000	3,000	3,000
Kern River Alluvial Fan (WKWD Bank Extraction)	17,023	19,001	19,001	22,334	22,334
Totals	**55,652**	**55,652**	**55,652**	**55,652**	**55,652**

Source: Tully and Young, 2009, Pg 26

Other Water Purveyors

As described above, there are seven other water purveyors in the Expansion Area. These districts include Arvin-Edison Water Storage District, Buena Vista Water Storage District, Henry Miller Water District, Kern Delta Water District, Kern Water Bank, Rosedale-Rio Bravo Water Storage District, and Wheeler Ridge-Maricopa Water Storage District (see **Figure 4.11-3** for a map depicting the locations of these districts). None of these districts provides municipal water service for residential connections.

The primary purposes of all of the aforementioned districts are to provide water for agricultural purposes and to store water in the ground for future extraction or exchange. Several of the districts provide water for industrial uses – primarily oil wells and power generation. All of these districts are active participants in the regional banking and exchange programs and, as mentioned above, some of them provide water to WKWD. None of these water purveyors have any future plans to provide municipal service to residential customers in the Planning Area (Tully & Young, 2009, Pg 18).

Recycled Water

The City of Taft supports the use of recycled water and has a long-term goal of using all treated wastewater effluent for both landscape and agricultural irrigation. The City owns and operates the correction facility's wastewater treatment plant. The City also owns a majority share (with Kern County as the other owner), operates, and maintains the northerly wastewater treatment plant. The prison wastewater treatment plant has a capacity of approximately 0.5 million gallons per day (mgd) and the northerly wastewater treatment plant has a capacity of approximately 1.5 mgd. The City plans to investigate doubling the capacity of both treatment plants as well as upgrading them to tertiary treatment to enable the use of the effluent for landscape irrigation.

Currently, the City owns land adjacent to the northerly wastewater treatment plant and provides treated wastewater effluent for agricultural irrigation on this land leased by a local farmer. Upgrading to tertiary treatment along with doubling the combined capacity of both wastewater treatment plants to a total average daily demand of approximately 4.0 mgd would result in an annual effluent flow of about 4,500 acre-feet per year. Using this effluent for irrigation of landscaped medians, parks, school playfields, and golf courses would significantly reduce demands for potable water within the Planning Area. However, because the City has not formally pursued this supply, it is not included as part of the City's future water supply portfolio and, therefore, cannot be factored into providing for future increases in water demand (Tully & Young, 2009, Pg 19).

4.11.2 REGULATORY FRAMEWORK

FEDERAL

Clean Water Act

The Clean Water Act (CWA), initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System Program (NPDES Program). Section 402(p) requires that stormwater associated with industrial activities that discharge either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and issues NPDES permits to cities and counties through Regional Water Quality Control Boards (RWQCBs). The Planning Area is located within a portion of the state that is regulated by the RWQCB's Central Valley Region.

SWRCB has issued a statewide General Permit (Water Quality Order No. 99-08-DWQ) for construction activities within the state. The Construction General Permit (CGP) is implemented and enforced by the RWQCBs. The CGP applies to any construction activity that disturbs one acre or more and requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that identifies best management practices (BMPs) to minimize

pollutants from discharging from a given construction site to the maximum extent practicable (MEP).

SWRCB has also issued a statewide General Permit (Water Quality Order No. 97-03-DWQ) for regulating stormwater discharges associated with industrial activities. This General Permit requires the implementation of management measures that will achieve the performance standard of best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT). It also requires the development of an SWPPP, a monitoring plan, and the filing of an annual report.

Certain actions during construction may also need to conform to a General Permit (Water Quality Order No. 5-00-175) that regulates dewatering and other low-threat discharges to surface waters, provided that they do not contain significant quantities of pollutants and are either (1) four months or less in duration, or (2) the average dry weather discharge does not exceed 0.25 mgd. Examples of activities that may require coverage under this General Permit include well development water, construction dewatering, pump/well testing, pipeline/tank pressure testing, pipeline/tank flushing or dewatering, condensate discharges, water supply system discharges, and other miscellaneous dewatering/low threat discharges. However, the actions applicable to development of a given site may already be covered under the CGP and therefore, separate coverage under this General Permit is not always required.

RWQCB's Central Valley Region has not included any local or downstream waters in proximity to the Planning Area on their Clean Water Act Section 303(d) List of Water Quality Limited Segments. Section 303(d) of the federal CWA requires states to identify the waters of the state that do not meet the CWA's national goal of "fishable, swimmable" and to develop "total maximum daily loads" (TMDLs) for such waters, with oversight of the United States Environmental Protection Agency (USEPA). The majority of the Planning Area is a "closed basin" that drains to the Buena Vista Lake Bed as its point of terminal discharge and is not affected by the CWA Section 303(d) List of Water Quality Limited Segments.

The City of Taft and the Planning Area are not currently listed by RWQCB as an NPDES Phase II program municipality that must comply with Water Quality Order No. 2003-0005-DWQ pertaining to post-construction stormwater Best Management Practices (BMPs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems. NPDES Phase II program municipalities must meet the requirements in Provision D of the General Permit which requires the development and implementation of a Storm Water Management Program (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable. The SWMP must include the following six minimum control measures:

- Public Education and Outreach on Stormwater Impacts
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Stormwater Runoff Control
- Post-Construction Stormwater Management in New Development

- Redevelopment and Pollution Prevention/Good Housekeeping for Municipal Operations.

The City of Taft is not currently required to obtain a permit under Phase I or Phase II of the NPDES program pertaining to stormwater. It currently falls below the population threshold for being classified as a Phase I municipality (100,000 people) and below the population and growth thresholds for being considered a Phase II small municipality. However, the possibility exists that it will be given such a designation by the RWQCB in the future as the City's population continues to grow.

Sections 401 and 404 of the Clean Water Act, administered through the Regulatory Program of the U.S. Army Corps of Engineers (USACE), regulate the water quality of all discharges of fill or dredged material into waters of the United States including wetlands and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water-quality certification requirements for "any applicant applying for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters."

Section 404, Title 33, Section 1344 of CWA in part authorizes the USACE to:

- Set requirements and standards pertaining to such discharges: subparagraph (e);
- Issue permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites:" subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if "the discharge of such materials into such area would have an unacceptable, adverse effect on municipal water supplies and fishery areas:" subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual state or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such state or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain federal or state projects from regulation under this Section: subparagraph (r); and
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).

Section 401 certification is required from RWQCB prior to final issuance of Section 404 permits by USACE.

Federal Emergency Management Agency

The City of Taft and Kern County are participants in the National Flood Insurance Program (NFIP), a federal program administered by the FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted, as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood of a magnitude that has a 1 percent chance of occurring in any given year. It is also referred to as a 100-year return period flood, although such a flood may occur in any given year. The City and County are occasionally audited by the California Department of Water Resources to ensure the proper implementation of FEMA floodplain management regulations.

STATE

Senate Bills (SB) 610 and 221

The State of California enacted legislation that is applicable to the consideration of larger development projects under CEQA. SB 610 (Chapter 643, Statutes of 2001; Section 21151.9 of the Public Resources Code and Section 10910 et seq. of the Water Code) requires the preparation of "water supply assessments" (WSAs) for large developments (i.e., more than 500 dwelling units or nonresidential equivalent). These assessments, prepared by "public water systems" responsible for serving project areas address whether existing and projected water supplies are adequate to serve the project while also meeting existing urban and agricultural demands along with the needs of other anticipated developments in the service area in which the project is located. If the most recently adopted Urban Water Management Plan (UWMP) accounted for the projected water demand associated with the project, the public water system may incorporate the requested information from the UWMP. If the UWMP did not account for the project's water demand, or if the public water system has no UWMP, the project's WSA shall discuss whether the system's total projected water supplies (available during normal, single-dry, and multiple-dry water years during a 20-year projection) would meet the project's water demand in addition to the system's existing and planned future uses, including agricultural and industrial uses.

Based on all the information in the record relating to the project, including all applicable WSAs and all other information provided by the relevant public water systems, the city or county must determine whether sufficient water supplies are available to meet the demands of the project, in addition to existing and planned future uses. Where a WSA concludes that insufficient supplies are available, the WSA must describe its plans to obtain the necessary supply and lay out the steps that would be required to develop the necessary supply. The WSA is required to include (but is not limited to) identification of the existing and future water supplies over a 20-year projection period. This information must be provided for normal, single-dry, and multiple-dry years. The absence of an adequate current water supply does not preclude project approval, but it does require a lead agency to address a water supply shortfall in its project findings.

If the proposed project is approved, additional complementary statutory requirements, created by 2001 legislation known as SB 221 (Government Code Section 66473.7), apply to the approval of tentative subdivision maps for more than 500 residential dwelling units. This statute requires cities and counties to include, as a condition of approval of such tentative maps, the preparation of a "water supply verification." The verification, which must be completed by no later than the time of approval of a final map, is intended to demonstrate that there is a sufficient water supply for the newly created residential lots. The statute defines sufficient water supply as follows:

> [T]he total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection period that would meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses.

A number of factors must be considered in determining the sufficiency of projected supplies:

- The availability of water supplies over a historical record of at least 20 years;
- The applicability of an urban-water-shortage contingency analysis that includes action to be undertaken by the public water system in response to water supply shortages;
- The reduction in water supply allocated to a specific water-use sector under a resolution or ordinance adopted or a contract entered into by the public water system, as long as that resolution, ordinance, or contract does not conflict with statutory provisions giving priority to water needed for domestic use, sanitation, and fire protection; and
- The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives.

Assembly Bill (AB) 162

AB 162 was signed into law in October 2007 and requires cities and counties in California to incorporate flood hazards in their general plans in order to minimize risk in flood-prone areas. The bill further requires that each city and county submit their draft safety element, or draft amendment to the safety element of its general plan to the Central Valley Flood Protection Board (formerly the State Reclamation Board) for review and comment at least 90 days prior to adoption.

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act governs the coordination and control of water quality in the state, and includes provisions relating to non-point source pollution. The California Coastal Commission, pursuant to the coastal act, specified duties regarding the federally approved California Coastal Management Program. This law requires that the State Water Resources Control Board, along with the California Coastal Commission, regional boards, and other

appropriate state agencies and advisory groups, prepare a detailed program to implement the state's non-point source management plan on or before February 1, 2001. The law also requires that the state board, in consultation with the Commission and other agencies, submit copies of prescribed state and regional board reports containing information related to non-point source pollution, on or before August 1 of each year.

Water Quality Control Plan - Tulare Lake Basin

The Central Valley Regional Water Quality Control Plan for the Tulare Lake Basin covers the drainage area of the San Joaquin Valley located south of the San Joaquin River. This plan describes the beneficial uses to be protected in these waterways, water quality objectives to protect those uses, and implementation measures to make sure those objectives are achieved.

LOCAL

Urban Water Management Plan

The West Kern Water District is currently preparing an Urban Water Management Plan. A final, adopted version of the document was not available at the time this document was prepared.

Kern County General Plan

The Kern County General Plan was originally adopted by the Board of Supervisors in June 2004. Minor amendments to the plan were subsequently adopted in 2006 and 2007. The plan contains policies related to development of lands under County jurisdiction, which include the Expansion Area. **Figure 4.1-2** depicts the County General Plan land use designations within the Expansion Area. Most of the County land within the Expansion Area is designated Agriculture (A) and Natural Resources (NR).

Kern County General Plan goals, policies, and implementation measures related to hydrology and the proposed project are provided below.

Land Use, Open Space, and Conservation Element

Physical and Environmental Constraints

Policy 8: Encourage the preservation of the floodplain's flow conveyance capacity, especially in floodways, to be open space/passive recreation areas throughout the County.

Policy 9: Construction of structures that impede water flow in a primary floodplain will be discouraged.

Policy 11: Protect and maintain watershed integrity within Kern County.

Measure F: The County will comply with the Colbey-Alquist Floodplain Management Act in regulating land use within designated floodways.

Measure G: Continue to identify areas in which the Kern County Engineering and Survey Services Department should initiate studies for flood hazard where studies have not previously been made and for which urban development is proposed.

Measure H: Development within areas subject to flooding, as defined by the appropriate agency, will require necessary flood evaluations and studies.

Measure I: Designated flood channels and water courses, such as creeks, gullies, and riverbeds, will be preserved as resource management areas or in the case of urban areas, as linear parks whenever practical.

Measure J: Compliance with the Floodplain Management Ordinance prior to grading or improvement of land for development or the construction, expansion, conversion or substantial improvements of a structure is required.

Resource

Policy 10: To encourage effective groundwater resource management for the long-term economic benefit of the County the following shall be considered:

(a) Promote groundwater recharge activities in various zone districts.

(b) Support for the development of Urban Water Management Plans and promote Department of Water Resources grant funding for all water providers.

(c) Support the development of groundwater management plans.

(d) Support the development of future sources of additional surface water and groundwater, including conjunctive use, recycled water, conservation, additional storage of surface water and groundwater and desalination.

City of Taft Municipal Code – Floodplain Management Ordinance

The City of Taft recently updated the Floodplain Management Ordinance in its Municipal Code. Chapter 5-12 of the City's Municipal Code contains regulations related to floodplain management. It states that the purpose of the ordinance is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas via legally enforceable regulations applied uniformly throughout the community to all publicly and privately owned land within flood prone, mudslide (i.e. mudflow) or flood-related erosion areas. The regulations are designed to:

A. Protect human life and health;

B. Minimize expenditure of public money for costly flood control projects;

C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

D. Minimize prolonged business interruptions;

E. Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in areas of special flood hazard;

F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future blighted areas caused by flood damage;

G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and

H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

In order to accomplish its purposes, the ordinance includes regulations to:

A. Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;

B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C. Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;

D. Control filling, grading, dredging, and other development which may increase flood damage;

E. Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

The detailed requirements and restrictions contained in this ordinance apply to all areas of special flood hazard (100-year flood areas) designated on FEMA FIRMs within the jurisdiction of the City of Taft. These areas may be supplemented by studies for other areas that are recommended to the City Council by the City's Floodplain Administrator.

City of Taft Drainage Design Standards

At present, the City of Taft is not utilizing the drainage design standards for new development (other than provisions in the Floodplain Management Ordinance). Requirements are currently assessed on a case-by-case basis.

4.11.3 PROJECT IMPACT ANALYSIS

STANDARDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines the proposed City of Taft General Plan would result in a significant impact to hydrology or water quality if it would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- 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;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structure which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Inundation by seiche, tsunami, or mudflow.

In addition, based on recent state legislation, the proposed City of Taft General Plan would result in a significant impact to hydrology if it would result in future development within areas that do not have a minimum 200-year flood protection.

METHODOLOGY

The hydrology and water quality analysis presented below is based on a review of published information, reports and plans regarding regional and local hydrology, climate, topography, and geology obtained from private and governmental agencies as well as from Internet websites. Primary sources include the Storm Drainage Technical Report for the Taft General Plan Update and EIR prepared by Storm Water Consulting, Inc. (2009) and the City of Taft 2009 General Plan Update Water Supply Evaluation prepared by Tully and Young (2009). Agencies consulted include WKWD, Central Valley Regional Water Quality Control Board, and FEMA.

The analysis takes into account the density and type of existing and proposed land uses within the Planning Area, as well as proposed and anticipated development in the City of Taft and surrounding unincorporated areas of Kern County that are anticipated to occur by 2050 (i.e., build out of the Planning Area). The reader is referred to **Table 4.0-1** and Section 4.0, Introduction to the Analysis and Assumptions Used, regarding assumed land uses and development conditions in this area.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

PROJECT IMPACTS AND MITIGATION MEASURES

Degrade Surface Water Quality

Impact 4.11.1 Implementation of the proposed General Plan Update could result in the discharge of polluted runoff during construction and operation of future urban development potentially violating water quality standards or otherwise substantially degrading surface water quality. This impact is **less than significant**.

Construction and operation of new development associated with the land uses allowed by the proposed General Plan Land Use Map will increase local runoff production and will introduce constituents into stormwater that are typically associated with urban development. These constituents include heavy metals (such as lead, zinc, and copper), petroleum hydrocarbons, pesticides, and fertilizers. The transport of sediment will also increase down steeper slopes that are present below site drainage discharge points that will serve proposed development areas. Steeper slopes produce higher velocities for flow, which in turn increase erosion and sediment discharge capacities. Best management practices, energy dissipation measures, stabilization

measures, and Low Impact Development (LID) practices can be utilized to minimize this effect on stormwater quality.

The State Water Resources Control Board is responsible for implementing the Clean Water Act and has issued a statewide General Permit (Water Quality Order 99-08-DWQ) for construction activities within the state. The Construction General Permit (CGP) is implemented and enforced by the Regional Water Quality Control Boards. The CGP applies to construction activities that disturb one acre or more and requires the preparation and implementation of a Storm Water Pollution Prevention Plan that identifies BMPs to minimize pollutants from discharging from the construction site to the maximum extent practicable.

The BMPs that must be implemented can be grouped into two major categories: (1) erosion and sediment control BMPs and (2) non-stormwater management and materials management BMPs. Erosion and sediment control BMPs fall into four main subcategories:

- Erosion controls
- Sediment controls
- Wind erosion controls
- Tracking controls

Erosion controls include practices to stabilize soil, to protect the soil in its existing location, and to prevent soil particles from migrating. Examples of erosion control BMPs are preserving existing vegetation, mulching, and hydroseeding. Sediment controls are practices to collect soil particles after they have migrated, but before the sediment leaves the site. Examples of sediment control BMPs are street sweeping, fiber rolls, silt fencing, gravel bags, sand bags, storm drain inlet protection, sediment traps, and detention basins. Wind erosion controls prevent soil particles from leaving the site in the air. Examples of wind erosion control BMPs include applying water or other dust suppressants to exposed soils on the site. Tracking controls prevent sediment from being tracked off site via vehicles leaving the site to the extent practicable. A stabilized construction entrance not only limits the access points to the construction site, but also functions to partially remove sediment from vehicles prior to leaving the site.

Non-stormwater management and material management controls reduce non-sediment-related pollutants from potentially leaving the construction site to the extent practicable. The CGP prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges (such as irrigation and pipe flushing and testing). Non-stormwater BMPs tend to be management practices with the purpose of preventing stormwater from coming into contact with potential pollutants. Examples of non-stormwater BMPs include preventing illicit discharges and implementing good practices for vehicle and equipment maintenance, cleaning, and fueling operations, such as using drip pans under vehicles. Waste and materials management BMPs include implementing practices and procedures to prevent pollution from materials used on construction sites. Examples of materials management BMPs include:

- Good housekeeping activities such as storing of materials in a central location that is covered and elevated off the ground.

- Securely locating portable toilets away from the storm drainage system and performing routine maintenance.
- Providing a central location for concrete wash-out and performing routine maintenance.
- Providing several dumpsters and trash cans throughout the construction site for litter/floatable management.
- Covering and/or containing stockpiled materials and overall good housekeeping on the site.

Prior to construction on any site within the Planning Area exceeding one acre in size, a SWPPP must be developed and submitted to the city that identifies the specific BMPs to be implemented and maintained on the site. A Notice of Intent must also be filed with RWQCB. The CGP also requires that construction sites be inspected before and after storm events and every 24 hours during extended storm events. The purpose of the inspections is to identify maintenance requirements for the BMPs and to determine the effectiveness of the BMPs that are being implemented. The SWPPP is a "living document" and as such can be modified as construction activities progress.

Furthermore, groundwater may be encountered during certain construction activities, such as drilling and excavating for building footings and foundations and trenching for infrastructure. As a result, dewatering may be required, both of construction sites and any saturated material removed during construction. Dewatering refers to the removal of non-stormwater (such as groundwater encountered during drilling or excavations) and accumulated precipitation from a construction site so that construction work may be accomplished (CASQA, 2003). Although such water is generally considered to be relatively pollutant-free, it would likely contain sediments, particularly remnants of mud from drilling and excavations. Discharge of these sediments and the release of pollutants associated with the sediments to downstream waters or the underlying groundwater aquifer could violate water quality standards.

SWRCB has also issued a statewide General Permit (Water Quality Order R5-2008-0081, NPDES No. CAG995001) for dewatering and other low-threat discharges to surface waters within the state. Proponents of projects under the proposed General Plan Update requiring dewatering would be required to submit a Notice of Intent, as well as a Best Management Practice Plan, to comply with the general permit. The BMP Plans would include disposal practices to ensure compliance with the general permit such as the use of sediment basins or traps, dewatering tanks, or gravity or pressurized bag filters. Monitoring and reporting would also be performed to ensure compliance with the permit (CVRWQCB, 2004; CASQA, 2003).

Furthermore, Section 10-3-11 of the City of Taft Municipal Code requires all tentative maps to comply with Chapter 70 of the Uniform Building Code adopted by the City Council which contains requirements for grading and erosion control, including the prevention of sedimentation or damage to off site property.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following policy and actions are included in the proposed General Plan Update in the Safety Element and would reduce impacts associated with surface water quality:

Policy S-7: Require all new urban development projects to incorporate runoff control measures, such as Low Impact Development (LID) techniques, to minimize peak flows of runoff.

Action S-7a: Assist in financing or otherwise implementing drainage improvements as needed and appropriate, including the recommendations of the City of Taft Sandy Creek Hydrology Study (2005).

Action S-7b: As part of the review of development projects, assure that runoff control measures and potential access constraints are planned and provided for. Where appropriate, require a site-specific geotechnical study to evaluate the site's soils and potential for shallow and/or deep subsidence.

Action S-7c: Coordinate with the Regional Water Quality Control Board and other appropriate agencies on best management practices available for incorporation into development projects.

Action S-7d: Develop and adopt a Grading and Erosion Control Ordinance with minimum standards of review and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects.

In conformance with proposed General Plan Policy S-7, new development would be required to incorporate runoff control measures such as Low Impact Development (LID) techniques which offer significant mitigations to development impacts on stormwater quality. LID practices include measures such as bioretention and rain gardens; vegetated swales, buffers, and strips; roof leader disconnection; rain barrels and cisterns, permeable pavers, and impervious surface reduction and disconnection. LID practices affect the more frequent storm events, generally up to and including the 2-year storm event.

In addition, as the City of Taft continues to grow and develop, it is likely to be listed as an NPDES Phase II program municipality by CVRWQCB. This would mean that the City's storm drain system would be subject to the requirements of the State's NPDES Phase II Program including the preparation and implementation of a Storm Water Quality Plan. Such a plan would include BMPs to protect stormwater from urban pollutants.

Continued compliance with SWRCB's statewide General Permits for construction and dewatering and the Uniform Building Code and implementation of the policies of the proposed General Plan Update will minimize the potential degradation of stormwater quality and

downstream surface waters associated with future development. This impact is considered to be **less than significant**.

Mitigation Measures

None required.

Degrade Groundwater Quality

Impact 4.11.2 Implementation of the proposed General Plan Update could result in the degradation of groundwater quality resulting from construction and operation of future urban development. This is considered a **less than significant** impact.

As discussed above in Impact 4.11.1, development of the Planning Area under the proposed General Plan Update could contribute constituents to stormwater runoff such as heavy metals, petroleum hydrocarbons, fertilizers, and pesticides. This polluted runoff could potentially contaminate groundwater resources if not properly treated with water quality controls. The statewide NPDES permits for construction runoff and dewatering and other low-threat releases to surface water as well as the LID techniques required by Policy S-6 require the provision of water quality control measures that would protect groundwater quality.

Several technical studies have been conducted regarding water quality control feature impacts on groundwater (e.g., City of Fresno Nationwide Urban Runoff Project and California Storm Water Best Management Practices Handbook prepared by the California Stormwater Quality Association). These studies have identified that water quality control features such as infiltration basins have been successful in controlling water quality and avoiding groundwater quality impacts. As runoff infiltrates into the ground, particulates and attached contaminants such as metals and nutrients are removed as they become attached to soil particles. Dissolved constituents are also absorbed by soil particles (USEPA, 1999). Depth to groundwater in the Planning Area varies but is generally greater than 100 feet below ground surface, providing more than sufficient depth for infiltration (DWR, 2008). Therefore, any pollutants that may remain in runoff after implementation of the water quality control measures described above will not contaminate groundwater supplies. Therefore, this impact is considered to be **less than significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following policies and actions are included in the proposed General Plan Update in the Safety Element and Public Facilities Element and would reduce impacts associated with groundwater quality:

Policy S-7: Require all new urban development projects to incorporate runoff control measures, such as Low Impact Development (LID) techniques, to minimize peak flows of runoff.

Action S-7b: As part of the review of development projects, assure that runoff control measures and potential access constraints are planned and provided for. Where appropriate, require a site-specific geotechnical study to evaluate the site's soils and potential for shallow and/or deep subsidence.

Action S-7c: Coordinate with the Regional Water Quality Control Board and other appropriate agencies on best management practices available for incorporation into development projects.

Action S-7d: Develop and adopt a Grading and Erosion Control Ordinance with minimum standards of review and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects.

Policy PF-11: Protect the quality and quantity of groundwater resources, including those that serve households and businesses which rely on private wells.

In conformance with proposed General Plan Policy S-7, new development would be required to incorporate runoff control measures such as Low Impact Development techniques which offer significant mitigations to development impacts on stormwater quality. LID practices include measures such as bioretention and rain gardens; vegetated swales, buffers, and strips; roof leader disconnection; rain barrels and cisterns, permeable pavers, and impervious surface reduction and disconnection. LID practices affect the more frequent storm events, generally up to and including the 2-year storm event. Policy PF-11 is related to the protection of groundwater quality and quantity. Together these policies would help to ensure that groundwater quality is protected. This is a **less than significant** impact.

Mitigation Measure

None required.

Deplete Groundwater Supplies

Impact 4.11.3 Implementation of the proposed General Plan Update would increase demand for water supply to the City, requiring increased groundwater production and potentially depleting groundwater supplies. This is considered a **significant and unavoidable** impact.

As described previously in this section, the Planning Area is served by WKWD and other water purveyors that obtain at least a portion of their water supplies from groundwater. The updated General Plan Land Use Map proposes a variety of land use types within the Planning Area including residential, commercial, industrial, mixed use, open space, agriculture, and natural resources. These proposed land uses differ in type, density, and prevalence from the existing General Plan Land Use Map and would therefore be expected to result in different projected future water demands. A summary of the projected increases in residential and nonresidential

potable water demands resulting from implementation of the proposed Land Use Map (i.e., build out of the Planning Area) is presented in **Table 4.11-2** below.

TABLE 4.11-2
SUMMARY OF ADDITIONAL WATER DEMANDS WITHIN THE PLANNING AREA AT BUILD OUT (2050)

Land Use Category	Difference from Existing General Plan Land Use Map	Additional Demand in WKWD Service Area (acre-feet per year)	Additional Demand in Other Service Areas (acre-feet per year)
Residential	+8,307 units	6,007	91
Commercial, Industrial, Public Facilities	+1,695 acres	2,159	1,531
Subtotals	-	8,165	1,622
Total Additional Demand	**-**	**9,788**	

Source: Tully & Young, 2009, Pg 26

As shown in **Table 4.11-2** above, at buildout of the proposed General Plan Land Use Map, the projected future water demand of the Planning Area would be 9,788 acre per feet per year greater than under the existing General Plan. A portion of this water would be pumped from the Kern County Subbasin at WKWD's well field on the Kern River Alluvial Fan and/or by other water purveyors through the various water exchange programs described in this section. Due to the complex nature of the water rights, contracts, and water exchange programs of WKWD and other water purveyors in the Planning Area, as well as the highly variable nature of the SWP allocations, it is not possible to determine exactly how much of this water would be obtained directly from the aquifer's existing supplies in any given year.

The various water purveyors in Kern County have, for many years, actively managed their surface and groundwater supplies to take advantage of the unique characteristics of each water source. Specifically, they utilized in lieu recharge and direct recharge management practices. In-lieu recharge is a water management practice that modifies the irrigation practices of water users who have access to surface water and groundwater supplies. It substitutes surface water for irrigation in-lieu of normal groundwater pumping to increase groundwater supplies and conserve groundwater for future use. Direct recharge (artificial recharge) is a water management practice that applies water to percolation ponds to increase groundwater recharge and store water in an aquifer for later extraction.

Although the subbasin has historically been over-pumped for irrigation purposes leading to significant water level declines and land subsidence, in more recent years the subbasin's groundwater elevations appear to have rebounded and remain relatively constant, primarily due to the importing of surface water supplies via the SWP and CVP and the groundwater management efforts of the various water purveyors within the subbasin. WKWD and other water purveyors will continue to manage the aquifer, surface water resources, and irrigation practices to utilize the available water supplies in an efficient manner and to minimize overdraft

of the aquifer. Furthermore, new development within the Planning Area would be required to integrate water conservation features into new projects in accordance with existing regulations.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following policies are included in the proposed General Plan Update in the Land Use Element, Open Space and Conservation Element, and Public Facilities Element and would reduce impacts associated with groundwater quantity:

Policy LU-71: Promote the appropriate planting of trees and provide irrigation in existing parkways using reclaimed water.

Policy C-10: Encourage efficient water use to enhance agriculture and grazing, employing techniques such as use of reclaimed water.

Policy C-21: Encourage water conservation and the use of reclaimed water through the application of best management practices.

Action C-21a: Work with the West Kern Water District and other water providers to create a master plan for a "purple-pipe" system and other mechanisms to promote water conservation.

Action C-21b: Seek funding to develop a water conservation program to collect baseline data and provide education and outreach and strategic direction for water conservation efforts.

Action C-21c: Establish a program to achieve a 20 percent reduction in per-capita water use by 2020 or such other reduction goal as may be set by the State.

Action C-21d: Identify and implement programs for the reuse of treated wastewater, particularly in landscaping, irrigation, and public facilities. Coordinate with wastewater system operators, as appropriate.

Action C-21e: Encourage xeriscape landscaping in municipal facilities, public roadway landscape, and new development projects.

Action C-21f: Require development to install infrastructure to transport existing or future supplies of reclaimed water ("purple pipe") or pay an in-lieu fee equal to the cost of installation, to be used toward the implementation of a purple pipe master plan.

Action C-21g: Develop a plan to utilize a "purple pipe" system that allows reclaimed water to be used to irrigate City-owned properties.

Action C-21h: Develop a plan to utilize a "purple pipe" system that allows reclaimed water to be used to irrigate landscaping on private properties.

Policy PF-10: Require water supply and delivery systems to be available in time to meet the demand created by new development.

Action PF-10a: Amend the Taft Municipal Code to require the following for all development projects, excluding subdivisions:

- That an assured water supply and delivery system be available at the time of project approval. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project.

- That all required water infrastructure for the project be assured through the use of financial guarantees to the City's satisfaction prior to the issuance of any building permit.

- That all required water infrastructure for a property be in place prior to the issuance for a Certificate of Occupancy for any structure or building on a site.

- That water infrastructure be phased to coincide with the phased development of large-scale projects.

Action PF-10b: Amend the Taft Municipal Code to require the following for all subdivisions to the extent allowed by state law.

- That proposed water supply and delivery systems be identified at the time of tentative map approval to the satisfaction of the City. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project.

- That the agency providing water service to the subdivision demonstrate prior to the approval of the Final Map by the City that sufficient capacity would be available to accommodate the subdivision plus existing development, other approved projects in the same service area, and other projects that have received commitments for water service.

- That off-site and on-site water infrastructure sufficient to provide adequate water to the subdivision be in place prior to

the approval of the Final Map, or their financing be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.

Policy PF-11: Protect the quality and quantity of groundwater resources, including those that serve households and businesses which rely on private wells.

Implementation of proposed General Plan policies LU-71, C-10 and C-21 and associated actions would encourage the use of reclaimed water from the wastewater treatment plants operated by the City, thereby reducing demands for groundwater supplies. Action C-21c would reduce water demands from existing and future development. Policy PF-10 and associated actions would require an adequate water supply and all necessary infrastructure to be in place prior to implementation of new development projects and tentative map approvals. Policy PF-11 is related to the protection of groundwater quality and quantity. Together these policies would reduce potential impacts on groundwater supplies. However, due to the unreliable nature of SWP and CVP surface water allocations and the constantly increasing demand on groundwater supplies from ongoing development in the valley, as well as the anticipated effects of climate change on overall water supplies in the state, the anticipated increase in demand for groundwater resources would be considered a **significant and unavoidable** impact.

Mitigation Measure

No further feasible mitigation is available.

Increase Storm Runoff and Flooding Potential

Impact 4.11.4 Implementation of the proposed General Plan Update would increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could result in increased runoff and potential flooding impacts. This impact is considered to be **potentially significant**.

When land is in a natural or undeveloped condition (including agricultural lands), soils, mulch, vegetation, and plant roots absorb rainwater. This absorption process is called infiltration or percolation. Much of the rainwater that falls on natural or undeveloped land slowly infiltrates into the soil and is stored either temporarily or permanently on the surface or in underground layers of soil. When the soil becomes completely saturated with water or the rate of rainfall exceeds the infiltration capacity of the soil, the rainwater begins to flow over the surface of the land to low lying areas, ditches, channels, streams, and rivers as stormwater runoff.

The infiltration and runoff process is altered when a site is developed with urban uses. Buildings, roads, and parking lots introduce asphalt, concrete, and roofing materials to the landscape. These materials are relatively impervious, which means that they absorb less rainwater. Grading associated with development also eliminates many of the low-lying areas that may have been providing a degree of surface storage. In addition, construction of underground storm drains as part of urban development provide for efficient conveyance of runoff to downstream locations of discharge. As impervious surfaces are added to the ground conditions

and surface and underground drainage conveyance becomes more efficient and more concentrated, the natural infiltration and storage processes are reduced. As a result, the frequency, volume and flow rate of stormwater runoff increases. The effect of these increases in runoff frequency, rates and volumes will be more pronounced during storms of lower magnitude and higher frequency. This is due to reductions in initial abstraction (infiltration and surface storage) and time of concentration (travel times) that will be created by urban development. The increased frequency, volumes and flow rates of stormwater runoff may result in increased downstream flooding and/or erosion/sedimentation processes if not properly mitigated.

New development associated with implementation of the proposed General Plan Land Use Map will increase flow rates and volumes of runoff by introducing streets, residential structures, commercial and industrial buildings, other buildings, parking areas, and other impervious surfaces and by providing improved facilities for drainage conveyance.

In addition, within the Planning Area, soils are highly erodable and there are segments of Sandy Creek and its tributaries that have already been experiencing significant headcutting and erosion. These processes will be exacerbated if the frequency, rates and volumes of runoff are increased by the introduction of impervious surfaces with new development. Under existing conditions, undeveloped lands in the Planning Area do not produce runoff during smaller storms due to the presence of soils having a very high capacity for infiltration. Further increases in the frequency of runoff events are likely to accelerate the erosion and headcutting processes that are occurring along Sandy Creek and its tributaries in the absence of appropriate mitigation.

New development in the Planning Area will also increase peak rates of runoff conveyed in Sandy Creek and tributaries during major storms (such as a 100-year storm event). According to the Storm Drainage Study prepared for the proposed project (**Appendix 4.11a**), a recommendation was made as part of a previous study for the City to construct a detention basin on the upstream side of Midoil Road. This proposed detention basin would be located in a reach of Sandy Creek upstream of the majority of existing and planned future urban development as proposed by the General Plan Land Use Map. Funding and construction of the detention basin could serve to offset increases in discharge rates during major storm events that would otherwise be caused by new development. It should also be noted that the Meyer Civil Engineering study warns that the soils in the City are water sensitive to both shallow and deep subsidence, and detention basins may need to incorporate a liner to reduce the potential for settlement.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following policies and actions are included in the proposed General Plan Update in the Open Space and Conservation Element and Safety Element and would reduce impacts associated with storm runoff and flooding:

Policy OS-2: Ensure that development of parkland, recreation facilities, programming capacity, and natural open space capacity keeps pace with development and growth in the City's Planning Area.

Action OS-2c: Collaborate with the County of Kern and the West Side Park and Recreation District to acquire, develop, and program additional regional park facilities.

Policy OS-5: Pursue the shared use and management of private and public facilities, including schools, libraries, stormwater basins, and other civic locations, to meet community needs for open space, parks, recreation programs, and facilities.

Policy C-14: Protect natural open spaces, watersheds, and environmentally sensitive areas such as creeks and riparian areas and other open spaces.

Policy S-5: Strongly discourage the use of fill in the 100-year floodplain to create buildable areas. Review such requests to determine potential impacts on wildlife, habitat, and flooding on other parcels.

Policy S-6: Prohibit the creation of parcels where the presence of easements, floodplain, marsh or riparian habitat, or other features would leave insufficient land to build, maintain, and use structures except for open space lots specifically created for dedication to the City or another appropriate party for habitat protection, flood control, drainage, or wetland maintenance.

Policy S-7: Require all new urban development projects to incorporate runoff control measures, such as Low Impact Development (LID) techniques, to minimize peak flows of runoff.

Action S-7a: Assist in financing or otherwise implementing drainage improvements as needed and appropriate including the recommendations of the City of Taft Sandy Creek Hydrology Study (2005).

Action S-7b: As part of the review of development projects, assure that runoff control measures and potential access constraints are planned and provided for. Where appropriate, require a site-specific geotechnical study to evaluate the site's soils and potential for shallow and/or deep subsidence.

Action S-7c: Coordinate with the Regional Water Quality Control Board and other appropriate agencies on best management practices available for incorporation into development projects.

Action S-7d: Develop and adopt a Grading and Erosion Control Ordinance with minimum standards of review and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects.

The policies in the Open Space and Conservation Element would help reduce stormwater runoff and flooding impacts by ensuring adequate open space areas and stormwater basins to help slow runoff and provide retention areas. Policy S-6 would ensure that new parcels are appropriate for development and do not conflict with flood control measures. In conformance with proposed General Plan Policy S-7, it is recommended that new development be required to incorporate runoff control measures such as Low Impact Development (LID) techniques to minimize runoff events and peak flows of runoff. LID techniques have the capability of reducing the frequency of the more common runoff events to pre-development levels. LID practices include measures such as bioretention and rain gardens; vegetated swales, buffers and strips; roof leader disconnection; rain barrels and cisterns, permeable pavers, and impervious surface reduction and disconnection. LID practices affect the more frequent storm events, generally up to and including the two-year storm event. Actions S-7a and S-7b would require implementation of the recommendations made in the Sandy Creek Hydrology Study as well as the preparation of a geotechnical study to evaluate soil conditions at proposed development sites. These measures would serve to offset the impacts of new development on stormwater flows and volumes by addressing both frequent storm events and the rarer, high-magnitude storm events. Together, these policies and actions would minimize potential impacts related to increase stormwater runoff and flooding and this impact is considered **less than significant**.

Mitigation Measures

None required

Flooding Hazards

Impact 4.11.5 Implementation of the proposed General Plan Update could result in the development of urban uses within areas subject to flooding and/or dam failure inundation. This impact is considered to be **potentially significant**.

Much of the Planning Area is located in a Special Flood Hazard Area designated by FEMA. Should any future development proposed under the General Plan Update (particularly buildings and aboveground utilities) encroach into this Special Flood Hazard Area it will be subject to the City's Floodplain Management Ordinance. This includes requirements for elevating applicable site facilities above the base flood (100-year flood) elevation and other requirements cited in the ordinance. Compliance with these requirements, as well as with the proposed General Plan policies listed below, will ensure that no housing is put at risk of flooding from the 100-year storm and that the risk of loss, injury, or death involving flooding is minimized.

Another issue associated with development within or surrounded by areas that are subject to flooding is the availability of access to buildings during a flood event. This issue should be included in determining site development requirements on a case-by-case basis. Development conditions may need to include requirements for construction of capital improvements (such as drainage culverts, bridges, or elevated roadways) in some instances. Neither existing regulation nor the proposed General Plan specifically requires that this issue be reviewed prior to approval of development projects. Therefore, this impact is considered to be **potentially significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following policies are included in the proposed General Plan Update in the Safety Element and would reduce impacts associated with flooding hazards:

Policy S-3: Limit development on land subject to flooding during a 100-year event, based on the most recent floodplain mapping prepared by the Federal Emergency Management Agency (FEMA) or updated mapping acceptable to the City. Allow potential development in areas subject to flooding to be clustered onto portions of a site which are not subject to flooding, consistent with other policies of this General Plan.

Action S-3a: Prepare and operate a flood management program with the support of Kern County.

Policy S-4: Require a buildable area outside the 100-year floodplain on every residential lot sufficient to accommodate a residence and accessory structures. Require fill placed to create a buildable area occur only if approved by the City and in accordance with all other applicable policies and regulations.

Policy S-6: Prohibit the creation of parcels where the presence of easements, floodplain, marsh or riparian habitat, or other features would leave insufficient land to build, maintain, and use structures except for open space lots specifically created for dedication to the City or another appropriate party for habitat protection, flood control, drainage, or wetland maintenance.

Policies S-3 and S-4 and associated action in the Safety Element relate specifically to land that is within the 100-year floodplain and require development to be placed outside of the areas subject to flooding, and the City's approval is required if fill is proposed to create a buildable area within a floodplain. Policy S-6 would ensure that new parcels are appropriate for development and does not conflict with flood control measures. These policies would help reduce potential flooding hazards; however, the impact would be **potentially significant** without mitigation.

Mitigation Measures

MM 4.11.5 The following policy shall be added to the Safety Element of the City of Taft General Plan prior to its approval:

Consider potential access constraints during a flooding event as part of the site plan review process prior to approval of development applications submitted to the City. If required to ensure adequate access during a flooding event, require construction of or the contribution of a fair share portion of the cost to construct capital improvements such as drainage culverts, bridges, elevated roadways, or other similar improvements.

Implementation of mitigation measure **MM 4.11.5** will ensure that future development is designed and constructed in a manner that will provide adequate site access during flood events thereby further minimizing the risk of loss, injury, or death involving flooding. With mitigation, this impact is considered to be **less than significant**.

4.11.4 CUMULATIVE IMPACT ANALYSIS

CUMULATIVE SETTING

The cumulative hydrology and water quality analysis involves three separate settings – one for surface water, one for groundwater, and one for drainage. As previously described, the Planning Area is located in the Tulare Lake Basin. More specifically, the City of Taft is part of the Kern River watershed. For this Draft EIR, therefore, the cumulative setting for hydrology and water quality impacts includes the entirety of the watershed. The cumulative setting includes all existing, proposed, approved, and planned projects in the City of Taft General Plan Planning Area and surrounding portions of unincorporated Kern County as well as full buildout of the General Plan Planning Area as proposed in the General Plan Update (anticipated to occur around the year 2050). The cumulative setting for hydrology and water quality also includes the projects included in **Table 4.0-1** in Section 4.0, Introduction to the Environmental Analysis and Assumptions Used, of this EIR.

The Planning Area also overlies the Kern County Groundwater Subbasin. The surface area of the subbasin is approximately 3,040 square miles and is bounded on the north by the Kern County line and the Tule Groundwater Subbasin, on the east and southeast by granitic bedrock of the Sierra Nevada foothills and Tehachapi Mountains, and on the southwest and west by the marine sediments of the San Emigdio Mountains and Coast Range. The setting for the analysis of cumulative groundwater impacts, including water quality impacts, encompasses this area and includes each of the incorporated cities and unincorporated communities in the Kern County Groundwater Subbasin boundaries (i.e., the cities of Bakersfield, Shafter, and Wasco and the communities of Delano, Oildale, Maricopa, McKittrick, Ford City, and others).

Storm drainage is an issue that is linked primarily to development in a specific area. Typically, storm drainage systems for cities are not connected to those of other cities nor are there typically regional storm drainage systems. The City of Taft's storm drainage system is not connected to those of other cities or communities outside the Planning Area nor is it part of a regional system. Outside the City, there are no public drainage facilities. Therefore, for this EIR, the cumulative setting for storm drainage is limited to the Planning Area.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Water Quality Impacts

Impact 4.11.6 Implementation of the proposed General Plan Update, in combination with existing, proposed, approved, and reasonably foreseeable development activities within the watershed, would contribute to a cumulative degradation

of water quality from construction activities and increased urban runoff. This is considered a **less than cumulatively considerable** impact.

Construction and operation of the land uses allowed by the proposed General Plan Land Use Map would result in increased urban runoff and the introduction of constituents and pollutants to runoff. This would add to other potential development activities and the ongoing urban runoff processes within the Kern River watershed and the Kern County Groundwater Subbasin, as described in Section 4.0. This could result in cumulative water quality impacts to both surface water and groundwater supplies.

As described in Impact 4.11.1, all development projects that would disturb one acre or more would be subject to the state's NPDES program which requires the implementation of BMPs to protect water quality. Per proposed General Plan Policy S-6, new development within the Planning Area will be required to incorporate Low Impact Development techniques which not only serve to minimize peak flows of runoff but also to reduce the pollutant load of runoff through the use of bioretention and rain gardens; vegetated swales, buffers, and strips; roof leader disconnection; rain barrels and cisterns, permeable pavers, and impervious surface reduction and disconnection. As described in Impact 4.11.2, implementation of the state's NPDES program would also protect groundwater quality by minimizing the pollutant load of runoff before it can reach the aquifer.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing cumulative water quality impacts. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Safety Element

Policy S-7; Action S-7a; Action S-7b; Action S-7c; Action S-7d

Public Facilities and Services Element

Policy PF-11 In conformance with proposed General Plan Policy S-7, require new development to incorporate runoff control measures such as Low Impact Development techniques which offer significant mitigations to development impacts on stormwater quality. LID practices include measures such as bioretention and rain gardens; vegetated swales, buffers, and strips; roof leader disconnection; rain barrels and cisterns, permeable pavers, and impervious surface reduction and disconnection. LID practices affect the more frequent storm events, generally up to and including the 2-year storm event.

Implementation of the proposed General Plan policies listed above and continued compliance with the State's NPDES general permits for construction and dewatering would minimize the

proposed project's impacts to water quality. Although the cumulative impact of water quality degradation within the greater Kern River watershed and Kern County Groundwater Subbasin may be considered significant, the proposed General Plan Update's contribution to this impact is considered to be **less than cumulatively considerable**.

Mitigation Measures

None required

Cumulative Flooding Impacts

Impact 4.11.7 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the watershed, would increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions along the Kern River, Sandy Creek, and/or other local waterways. In addition, the proposed General Plan Update may allow for development within existing flood hazard zones, including the inundation area of Isabella Dam. This is considered a **potentially cumulatively considerable** impact.

As discussed under Impact 4.11.4, development within the Planning Area and throughout the Kern River watershed would increase runoff and restrict natural percolation by creating new impervious surfaces such as roadways and building roofs. Therefore, implementation of the proposed General Plan, in combination with cumulative development in the watershed, could increase flood conditions for area waterways. In addition, future development could potentially be located within existing flood zones (as delineated by FEMA) and the inundation area of Isabella Dam, resulting in a greater number of people and structures at risk of flooding and associated hazards.

The City maintains a public storm drainage system to manage stormwater runoff but does not currently utilize detention facilities to slow flows or prevent downstream flooding. The system will, however, continue to be expanded upon and improved as the Planning Area is developed and stormwater volumes increase (see proposed General Plan policies below). For instance, Action S-7a requires the City to help finance and implement drainage improvements as needed including those recommended in the Sandy Creek Hydrology Study (2005). These recommendations include the construction of a detention basin on Sandy Creek to offset increases in discharge rates during major storm events resulting from new development. Furthermore, future development within the Planning Area, and throughout the state, planned for construction within FEMA-designated flood zones would be required to comply with National Flood Insurance program standards to ensure safety. In addition, dams throughout the watershed are regulated at either the federal or state level to ensure proper design and maintenance to prevent failure and subsequent flooding hazards. As such, the failure of Isabella Dam or any other dam within the watershed is considered extremely unlikely.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing cumulative flooding impacts. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Open Space and Conservation Element

Policy OS-2; Action OS-2c; Policy OS-5; Policy C-14

Safety Element

Policy S-3; Action S-3a; Policy S-4; Policy S-5; Policy S-6; Policy S-7; Action S-7a; Action S-7b; Action S-7c; Action S-7d;

The policies in the Open Space and Conservation Element would help reduce stormwater runoff and flooding impacts by ensuring adequate open space areas and stormwater basins to help slow runoff and provide retention areas. Policies S-3 and S-4 in the Safety Element relate specifically to land that is within the 100-year floodplain and require development to be placed outside of the areas subject to flooding, and the City's approval is required if fill is proposed to create a buildable area within a floodplain. Policy S-6 would ensure that new parcels are appropriate for development and does not conflict with flood control measures. In conformance with proposed General Plan Policy S-7, it is recommended that new development be required to incorporate runoff control measures such as Low Impact Development techniques to minimize runoff events and peak flows of runoff. LID techniques have the capability of reducing the frequency of the more common runoff events to pre-development levels. LID practices include measures such as bioretention and rain gardens; vegetated swales, buffers, and strips; roof leader disconnection; rain barrels and cisterns, permeable pavers, and impervious surface reduction and disconnection. LID practices affect the more frequent storm events, generally up to and including the 2-year storm event. These policies would help reduce storm runoff and flooding.

Continued maintenance and expansion of the City's storm drainage system, particularly as areas of the Planning Area are annexed into the City and developed in accordance with the proposed General Plan, would minimize the potential for greater risk of flooding due to increased storm runoff. Incorporation of LID techniques in new development projects per Policy S-6 would further minimize flooding potential by reducing runoff volumes. Continued compliance with the NFIP and implementation of the proposed General Plan policies listed above would also minimize risks associated with developing in FEMA flood zones. However, the impact would be **potentially cumulatively considerable** without mitigation.

Mitigation Measures

Implementation of the above General Plan policies and mitigation measures **MM 4.11.4** and **4.11.5** would reduce the project's cumulative contribution to flooding impacts in the watershed to **less than cumulatively considerable.**

Cumulative Groundwater Supply Depletion

Impact 4.11.8 Implementation of the proposed General Plan Update, in combination with existing, approved, proposed, and other reasonably foreseeable development activities in the Kern County Groundwater Subbasin, would contribute to an increased demand for municipal water supply, requiring increased groundwater pumping and potentially contributing to groundwater level declines and overdraft of the aquifer. This is considered a **less than cumulatively considerable** impact.

As noted under Impact 4.11.3, the groundwater elevations of the subbasin have rebounded and stabilized in recent years after a long period of decline and associated land subsidence. This is due primarily to the increased reliance on surface water imported into the region through the SWP and the CVP as well as an increased awareness of the impacts of over-pumping the aquifer and subsequent groundwater management and conservation efforts.

The growth anticipated under the proposed General Plan as well as throughout the subbasin will increase demands for groundwater pumping, potentially resulting in declines in the aquifer, renewed land subsidence, and ultimately sustained overdraft conditions. This is a regional problem caused primarily by agricultural irrigation and urban development throughout Kern County. However, as described under Impact 4.11.3, implementation of the proposed General Plan Update will not, individually, result in a significant impact on the aquifer.

As shown in **Table 4.11-2**, at buildout of the proposed General Plan Land Use Map, the projected future water demand of the Planning Area would be 9,788 acre-feet per year greater than under the existing General Plan. Other areas served by groundwater supplies from the Kern County Subbasin are also projected to grow, resulting in even greater groundwater pumping and less pervious area available for recharge of the aquifer.

In general, water demand rates for new urban development will likely be far less than existing development due to denser land use patterns, drought-tolerant landscaping, water metering, and installation of low-flow water fixtures. Furthermore, as areas continue to develop, urban uses will replace agricultural lands which typically have far greater water demands than new urban development. Overall water demands may therefore experience a net decline in such areas. Furthermore, as described in Impact 4.11.3, WKWD and other water purveyors in Kern County actively manage their groundwater supplies to maximize efficiency and prevent overdraft through both direct and indirect aquifer recharge programs.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing cumulative groundwater supply impacts. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Land Use Element

Policy LU-71

Open Space and Conservation Element

Policy C-10; Policy C-21; Action C-21a; Action C-21b; Action C-21c; Action C-21d; Action C-21e; Action C-21f; Action C-21g; Action C-21h

Public Facilities and Services Element

Policy PF-10; Action PF-10a; Action PF-10b; Policy PF-11

Policies LU-71, C-10, and C-21 and associated actions would encourage the City to expand the use of reclaimed water from its wastewater treatment plants in lieu of groundwater or surface water supplies. Policy PF-10 and associated actions would require an adequate water supply and all necessary infrastructure to be in place prior to implementation of new development projects and tentative map approvals. Policy PF-11 would protect groundwater including well supplies. These policies would reduce the project's contribution to the environmental impacts of cumulative groundwater extraction. As such, the proposed project's contribution to the environmental impacts of cumulative groundwater extraction would be **less than cumulatively considerable**.

Mitigation Measures

None required.

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4.12
VISUAL RESOURCES

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") describes the existing aesthetic character and visual resources within the General Plan Planning Area (Planning Area) and surrounding vicinity and discusses the potential impacts to those resources resulting from implementation of the proposed General Plan Update. The analysis focuses on the anticipated alteration of the landscape characteristics and visual resources in the vicinity of the proposed project. Visual impacts were evaluated using a combination of site reconnaissance, aerials, and geographic information system (GIS) maps.

4.12.1 EXISTING SETTING

REGIONAL SETTING

Central Valley

The Planning Area is located within the San Joaquin Valley (Valley), which is geographically described as the valley south of the Sacramento and San Joaquin deltas, north of the Tehachapi Mountains, with the Coast ranges to the west and Sierra Nevada Mountains to the east. On clear days, both of these ranges are visible from the Valley floor.

Prior to the introduction of widespread irrigation and agriculture, the natural landscape and hence the aesthetic character of the San Joaquin Valley was much different than it is today. Valley oak and other woodlands were widespread along the major river corridors and floodplains of the Merced, Fresno, and Tuolumne rivers. Freshwater marshes were once widespread throughout the Central Valley, which generally refers to both the San Joaquin and the Sacramento valleys. These marshes are now restricted to fringes of waterways and historic oxbows of the San Joaquin River.

Today the San Joaquin Valley is one of the most productive agricultural regions in the world, and its landscape reflects this character. Croplands, irrigated pasture, and farming-related development have been the dominant landscape features in this region since the turn of the 19th century. Current development pressures within the Valley are drastically changing its pastoral and rural character. Significant residential and commercial development is encroaching as a result of pressure to provide affordable housing and services to the growing region. "Big box" retailers and highway commercial development have become a major feature of the landscape along State Route 99 (SR 99) and Interstate 5 (I-5) which run north-south through the Valley. However, agricultural and industrial buildings still represent significant features of the built environment in the region. Such buildings include barns, warehouses, grain silos, livestock enclosures, processing plants, and equipment yards.

Community design standards vary throughout San Joaquin Valley cities and towns. The majority of new commercial and residential development is built in the "Spanish revival" design characterized by stucco and tile that is widespread throughout California. Development within the downtown centers of valley towns is significantly distinct in character to that of the growth that has occurred in the last 60 years. Typical downtown and residential development was historically built around an urban core, along railroad lines, and within an interconnected grid network of streets. Later development patterns are typified by a separation of residential

subdivisions from larger commercial centers. Many features of the historical architecture are still found within the remaining agricultural communities and within the downtown centers of the region. A wide variety of architectural styles is found within the San Joaquin Valley, representing different cultures and time periods in which they were built. Common styles include farmhouse, California bungalow, Victorian, and Spanish revival, as well as more modern architecture.

Due to the reduced air quality in the San Joaquin Valley, many of the features of the landscape are often obscured. Particulate matter - which is largely generated by dust-disturbing activities such as agriculture and construction - limits visibility at times, particularly during the summer months.

Kern County

Kern County (County) is located at the southern end of the San Joaquin Valley and includes the southern portion of the Sierra Nevada Range, a portion of the Coast Range to the west, and a large section of the Mojave Desert to the southeast. A wide range of uses affect the County's landscape, including agricultural uses, oil production, steep slopes, and urban areas (MIG, 2008, p. 4). Urbanized areas within the County include the cities of Bakersfield, Delano, Wasco, Arvin, Ridgecrest, Shafter, Tehachapi, McFarland and Taft. Kern's natural and rural areas include mountains, deserts, valleys, a significant river and lake system, agriculture, scenic views, wildlife and habitats (MIG, 2008, p. 21).

In addition, Kern County includes portions of several scenic parks and forests, including the Sequoia National Forest, Red Rock Canyon State Park, the Los Padres National Forest and Tehachapi Mountain Park. These parks are important visual resources in the County and are described in more detail below.

Sequoia National Forest – The Sequoia National Forest lies in the southern Sierra Nevada, just east of the San Joaquin Valley. The park is characterized by some of the world's largest sequoia trees, as well as immense mountains, rugged foothills, deep canyons, and vast caverns (NPS, 2009).

Red Rock Canyon State Park - The Red Rock Canyon State Park features scenic desert cliffs, buttes and rock formations. The park is located where the southernmost tips of the Sierra Nevadas converge with the El Paso Range and each tributary canyon is unique, with dramatic shapes and vivid colors. In addition, after wet winters, the park has stunning wildflower displays California State Parks, 2009).

Los Padres National Forest - The Los Padres National Forest includes semi-desert land in interior areas and redwood forest lands towards the coast. Forested land includes mixed evergreen forests, oak woodland, pinyon-juniper woodland, and conifer forest. Most of the forest is composed of steep, rugged coastal mountains and land that is unroaded and primitive (USFS, 2009).

Tehachapi Mountain Park - The Tehachapi Mountain Park lies 8 miles southwest of the town of Tehachapi. The park has elevations ranging from 4,000 to 7,000 feet and contains many scenic

vistas with views of mountainous areas of mixed conifer forests in the park and surrounding area (Kern County, 2009).

LOCAL SETTING

Planning Area

The Planning Area consists of the existing City limits as well as the lands outside the City limits, which is collectively considered the General Plan Expansion Area (Expansion Area). The following describes the visual characteristics of areas within the City of Taft and within the Expansion Area.

City of Taft

The City of Taft (City) emerged as a result of the oil industry and the railroads, and the City's history as an oil "boomtown" makes up a large part of its current visual character. The City limits contain a mixture of primarily commercial, public/institutional, and residential buildings and are bisected by SR 33. The majority of homes are single-family, detached units. Many of the City's housing units are older and in a dilapidated condition. According to the *City of Taft 2002-2007 Housing Element*, 585 of the City's 2,494 housing units, or 23 percent of the City's housing stock, were in need of rehabilitation or replacement (City of Taft, 2002-2007, p. 12). The City's downtown core area consists of a central business district that contains both retail shops and residences that are architecturally significant (City of Taft, 1999, p. 2). However, this area is also in aesthetic decline due to age of structures and increased retail presence outside of the area (City of Taft, 1999, p. 2). In fact, the City of Taft has in recent history suffered from a negative image of an industrial town in decline, hampered by environmental conditions associated with the oil industry and a poor public image (City of Taft, 1999, pp. 3-4). The current aesthetic character of the City's downtown reflects that image, with views along Main Street one block south of the heart of downtown including mostly buildings that look more abandoned than in use (City of Taft, 1999, pp. 3 - 4).

Due to fires and natural disasters, most of the buildings in the downtown area were destroyed in the 1940's and 1950's. Furthermore, many others were replaced in the 1960's and 1970's. Therefore, many different styles of architecture are juxtaposed throughout the City, particularly in the downtown area (City of Taft, 1999, p. 2). For the most part, architectural styles coexist in an aesthetically compatible manner. The predominant architectural styles consist of Spanish (hospitals and churches) and Art Deco

style buildings on Center Street and the Taft Union High School campus (City of Taft, 2007, p. 5). Other examples of historic architecture still exist in the City limits, including many residences, six churches, and several non-residential buildings such as Taft Union High School and the commercial buildings on the 300 to 600 blocks of Center Street (City of Taft, 2007, p. 6).

Portions of the City located outside the residential and commercial development areas are predominately developed with oil fields and associated oil wells, well and equipment pads, paved and unpaved access roads, pipelines, utility lines.

Expansion Area

The Expansion Area is generally flat, with a relatively constant elevation and no major topographical features. The Expansion Area does, however, include "Honolulu Hills", which lies between the City of Taft and Bakersfield. The City itself generally slopes from south and southwest to the north and northeast. The Valley floor is generally flat. The Expansion Area is crossed by four state highways (SR 119, 33, 43, and 223), with I-5 comprising the eastern boundary and SR 166 comprising a segment of the southern boundary. Portions of the Kern River, the California Aqueduct, Pioneer Canal, East Side Canal, Main Canal, Buena Vista Canal, Stine Canal, New Rim Ditch, several seasonal creeks, and unnamed ditches are located throughout the Expansion Area, as are active and abandoned oil wells and water wells, a significant recreational area, and extensive agricultural areas.

The Expansion Area predominantly consists of agricultural land with rural residential developments. Various agricultural practices, including confined feeding, field crops, idle/retired farmland, and vineyards/orchards, occur within the Expansion Area and the visual character of each farm depends on the type of agriculture. The agricultural landscape can be considered a scenic resource as many people consider the open space, row crops, fruit and nut orchards, etc. associated with agriculture to be aesthetically pleasing. Therefore, agricultural lands are an important visual aspect of the Taft Planning Area landscape. The proposed General Plan contains policies that would encourage the conservation and continued use of agricultural lands in the Planning Area. These policies, as well as impacts to agricultural lands, are discussed in Section 4.2, Agricultural Resources, of this Draft EIR.

Aside from active agricultural land, the majority of the Expansion Area is covered with scrub land, which is characterized by low-lying shrubs and bushes, as well as some annual grasses. A portion of the Kern River is located within the Planning Area. The Kern River is designated as a Wild and Scenic River by the National Wild and Scenic Rivers Program (National Wild and Scenic Rivers, 2009). However, that portion of the Kern River that flows within the Planning Area is not designated as wild and scenic. The active channel of the Kern River within the Planning Area, which flows from its eastern boundary to the California Aqueduct, is surrounded by a narrow corridor of riparian woodlands that are characterized by medium to tall, broad-leaved deciduous trees. The transition between riparian and adjacent non-riparian vegetation (generally scrub land) in this area is often abrupt.

The Kern Water Bank Habitat Conservation Plan overlaps the northeastern portion of the Planning Area between the California Aqueduct and I-5 and north of SR 199. This area is generally characterized as scrub land with scattered agricultural fields and riparian vegetation along the Kern River.

Scenic Roadways

There are no roadways or vistas in the Planning Area that have been designated as scenic by the City. In addition, the State of California does not designate any roadways in the Planning Area as state scenic highways (Caltrans, 2009.)

Railroads

A Southern Pacific Railroad line formerly ran through downtown Taft and extended southeast to a point east of the City of Maricopa. The right-of-way is being reused as the Rails-to-Trails system, partially built. The only railroad tracks remaining within the Planning Area are northeast of Taft where they serve the industrial area. They cross I-5 heading east.

Airports

The Taft-Kern County Airport is located just east of the City of Taft near the intersection of SR 119 and SR 33. The airport is small, sitting on approximately 71 acres and consisting of just one runway. The airport is generally characterized by large, open areas of land surrounding the runway and several industrial-type buildings including hangars and maintenance buildings.

Mining

Large portions of the Planning Area are utilized as oil and gas production operations. These areas are generally characterized by large, undeveloped areas crossed by unpaved roads and containing scattered equipment such as oil derricks.

Light and Glare

The urbanized areas of the Planning Area include existing sources of daytime glare and nighttime lighting and illumination. Sources of daytime glare include direct beam sunlight and reflections from windows, architectural coatings, glass, and other shiny reflective surfaces. Nighttime lighting and associated glare can be divided into stationary and mobile sources. Stationary lighting sources include structure illumination, decorative landscape lighting, lighted signs, streetlights and other reflective sources. The major source of mobile nighttime light is the headlights of motor vehicles. However, due to the relatively compact size of the City, this lighting is not as pronounced as other larger cities in the area. In addition, the rural lands surrounding Taft serve as a buffer between the City and surrounding urban areas and reduce the impact of lighting on nighttime sky views.

Lands within the Expansion Area are primarily used for oil production and agriculture. These land uses, particularly the large land areas dedicated to rural residences and agricultural crops, typically do not generate substantial amounts of glare, lighting, or illumination, and their ambient nighttime lighting and illumination levels are very low. The oil production sites, however, are brightly lit at night and contribute to substantial amounts of glare and nighttime lighting in the Expansion Area.

4.12.2 REGULATORY FRAMEWORK

STATE

Nighttime Sky – Title 24 Outdoor Lighting Standards

The California Energy Commission adopted changes to Title 24, Parts 1 and 6, Building Energy Efficiency Standards, on November 5, 2003. These new standards became effective on October 1, 2005. Included in the changes to the Standards were new requirements for outdoor lighting. The standards contain lighting power allowances for newly installed equipment and specific alterations that are dependent on which lighting zone the project is located in. Existing outdoor lighting systems are not required to meet these lighting power allowances. However, alterations that increase the connected load, or replace more than 50 percent of the existing luminaires, for each outdoor lighting application that is regulated by the standards, must meet the lighting power allowances for newly installed equipment. An important part of the standards is to base the lighting power that is allowed on how bright the surrounding conditions are. The eyes adapt to darker surrounding conditions, and less light is needed to properly see; when the surrounding conditions get brighter, more light is needed to see. The least power is allowed in Lighting Zone 1 and increasingly more power is allowed in Lighting Zones 2, 3, and 4. The Energy Commission defines the boundaries of lighting zones based on U.S. Census Bureau boundaries for urban and

rural areas as well as the legal boundaries of wilderness and park areas. By default, government designated parks, recreation areas and wildlife preserves are Lighting Zone 1; rural areas are Lighting Zone 2; and urban areas are Lighting Zone 3. Lighting Zone 4 is a special use district that may be adopted by a local government (CEC, 2009). The City of Taft is in Lighting Zone 3.

LOCAL

City of Taft Municipal Code

The City of Taft Municipal Code contains several regulations associated with the visual character of the City. Applicable regulations are discussed below.

Tree Regulations

Title 2, Chapter 1 of the Taft Municipal Code sets forth the City's Tree Regulations. The regulations allow the Planning Commission to authorize and determine the types and varieties of trees for planting along or overhanging the streets and after consulting tree lists approved by horticulturists and/or arborists.

Underground Utilities

Title 10, Chapter 5, Section 10-5-16 of the Taft Municipal Code requires all utility distribution facilities (including, but not limited to, electric, communication and cable television lines) installed in, and for the purpose of supplying service to, any residential or commercial subdivision to be placed underground except equipment appurtenant to underground facilities.

Improvement Standards

Title 10, Chapter 6, Section 10-6-7 of the Taft Municipal Code provides for subdivision improvements, such as street trees and lighting, to be provided pursuant to City Council approval and at the expense of the subdivider.

Optional Design and Improvement Standards

Title 10, Chapter 7 of the City of Taft Municipal Code permits exceptions to the City's design and improvement standards when a subdivider signifies his intent to enhance the livability, convenience and appearance of modern site planning techniques in the arrangements of lots, circulation pattern and by providing permanent open space and appropriate means of access to blocks, schools, shopping centers and other uses. The intent of the chapter is to provide incentives to projects that create better overall communities and produce an environment of stable, desirable character. The standards encourage the reservation of green or open spaces that result in more efficient and aesthetic use of the property and promote buildings, structures and landscaping that are in harmony with other structures and improvements in the area.

City of Taft Zoning Ordinance

The City of Taft Zoning Ordinance, found in Title 6 of the Municipal Code, contains standards, guidelines, and procedures intended to implement the goals, objectives, policies, and programs of the General Plan and to manage future growth and change in accordance with the General Plan. The Zoning Ordinance is also intended to protect the physical, social, and economic stability and vitality of residential, commercial, industrial, public, institutional and open space uses within the City to assure their orderly development; to reduce or eliminate hazards to the public resulting from potentially inappropriate location, use, or design of buildings and other improvements; and to attain the physical, social, and economic advantages resulting from comprehensive and orderly land use and resource planning. The Zoning Code contains substantial protection for the visual character of the City, as discussed below.

Scenic Resource Regulations

Chapter 10, Section 6.10.280, of the Zoning Ordinance sets forth the City's Scenic Resource Regulations, which are intended to establish development standards that protect, preserve and enhance the aesthetic resources of the City by incorporating design considerations which minimize interference with the preservation of unique natural resources, roadside views, and scenic corridors. It is also the intent of the Scenic Resources Regulations to implement state and federal programs and regulations regarding scenic highway routes. The Scenic Resource Regulations apply to areas with unique views of mountain and valley areas or any other aesthetic natural land formations.

The Scenic Resource Regulations require the following criteria to be used when a land use is proposed within a scenic area:

- **Building and Structure Placement** - The building and structure placement must be compatible with and not detract from the visual setting or obstruct significant views.

- **Setbacks** - Intensive land development proposals must be designed to blend into the natural landscape and maximize visual attributes of the natural vegetation and terrain. The design of such development proposals shall also provide for maintenance of a natural open space parallel to the right-of-way representing the visible land area outside the highway right-of-way which may be described as the "view from the road."

- **Access Drives** - Right-of-way access drives shall be minimized. Developments involving concentrations of commercial activities shall be designed to function as an integral unit with common parking and right-of-way access drives when feasible.

- **Roads, Pedestrian Walkways, Parking and Storage Areas** – Large-scale development must restrict the number of access points by providing common access roads and parking and outside storage areas must be screened from view, to the maximum extent feasible from adjacent scenic or recreational resources by placement of buildings or by landscaping.

- **Aboveground Utilities** - Utilities shall be constructed and routed underground except in those situations where natural features prevent the underground routing or where safety considerations necessitate aboveground construction and routing. Aboveground utilities shall be constructed and routed to minimize detrimental effects on the visual setting of the designated area. Where practical, aboveground utilities shall be screened from view from adjacent scenic or recreational resources by placement of buildings and structures.

- **Grading** - The alteration of the natural topography of the site shall be minimized and shall, to the extent feasible and practical, avoid detrimental effects to the visual setting of the designated area and the existing natural drainage system.

- **Storage Areas** - Outside storage areas associated with commercial or industrial activities shall be completely screened from view from the right-of-way with landscaping and plantings.

Design Criteria

Chapter 2 of the Zoning Ordinance contains both residential and non-residential design criteria for proposed and newly renovated development and requires that all new residential and commercial development submit to the design review process. In part, the intent of the Design Review process is to assist private and public developments to be more cognizant of public concerns for the aesthetics of development. The Design Criteria include requirements for design themes, setbacks, and other requirements that encourage a harmonious appearance of the development with the surrounding environment and existing developments. The Design Criteria also include lighting standards that restrict lighting on new non-residential development so as not to result in nuisance levels of light or glare on adjacent properties.

Lighting Standards

Chapter 10, Section 6.10.140, of the Zoning Ordinance sets forth development standards for lighting. The Ordinance requires that all outdoor lighting associated with both residential and nonresidential uses, excluding recreational uses, be shielded and directed away from surrounding residential uses and lighting is not allowed to blink, flash, oscillate or be of unusually high intensity or brightness. Nonresidential uses are prohibited from having lighting exceeding 0.5 foot-candles of illumination beyond the property containing the nonresidential uses and residential uses are not allowed to have outdoor pole lighting exceeding 12 feet in height.

Reflective Material Restriction

Chapter 10, Section 6.10.250, of the Zoning Ordinance requires roofing materials which will be visible to the public from adjacent streets or property to be of a non-reflective composition.

Screening Requirements

Chapter 10, Section 6.10.290, of the Zoning Ordinance sets forth screening requirements for commercial or industrial developments abutting a residentially zoned parcel. There are also requirements for the screening of outdoor storage areas and refuse storage areas.

Street Lighting and Tree Planting

Chapter 10, Section 6.10.360 of the Zoning Ordinance provides for the planting of at least one street tree per parcel frontage and for streetlights in all tentative tract maps and other residential, commercial, or industrial developments.

Underground Utilities

Chapter 10, Section 6.10.380 of the Zoning Ordinance requires that existing and proposed utility lines be installed underground in conjunction with new development projects. The undergrounding of utility lines includes, but is not limited to, all new electrical distribution lines, existing electrical distribution lines of 34,500 volts (V) or less, telephone, street light service lines, cable television and similar service wires or cable which: provide new service to the property being developed, are existing and located within the boundaries of the property being developed, are existing between the property line and the centerline of the peripheral streets of the property being developed; or are along the project perimeter boundary.

Performance Standards

Chapter 12 of the Zoning Ordinance contains performance standards which set maximum limits on adverse environmental effects created by any use or development of land. The performance standards restrict lighting from creating illumination exceeding 0.5 foot- candles on any adjacent property and also require that storage areas for maintenance equipment or vehicles, refuse and collection areas, and service areas be enclosed or effectively screened from public view by a fence, wall, landscaped area, or berm.

Downtown Specific Plan

The City of Taft Downtown Specific Plan provides a plan for land use, development regulation, and development incentives aimed at revitalizing and preserving the downtown area. The plan emphasizes the preservation of the architectural heritage of downtown in order to maintain an attractive visual theme. Recommendations are made with regards to streetscape improvements, parking, signage, and other amenities. The plan also presents a procedure for reviewing building and property improvements to ensure the visual integrity of downtown is reasonably maintained and enhanced (City of Taft, 1999, p. 2),

Conceptual Design Guidelines for the Downtown Revitalization

The Conceptual Design Guidelines for the Downtown Revitalization provide ideas and guidelines for downtown revitalization, with a focus on identifying historical styles and materials

and establishing standards for the rehabilitation of existing buildings and new construction (Lesovsky Donaldson Architects, n.d., p. 1).

Historic Preservation Plan 2007

The Taft Historic Preservation Plan 2007 identifies a Historic Preservation District which encompasses the City Limits of the City of Taft and a Qualified Historic Structures List. Buildings on the list were selected by City staff either for the original architectural character of their specific time period or for the histories of the people who once lived in them. The Historic Preservation Plan sets forth basic guidelines to promote the importance of preserving and protecting historic buildings in order to enhance the architectural integrity of the district and encourages property owners to take special care in preserving, protecting, or enhancing historic buildings. While the guidelines are not mandatory, the Preservation Plan is intended to help property owners understand why any alteration or addition should reflect the historic fabric or features of the building. Property owners are encouraged to undertake any alterations in accordance with plan guidelines, and to seek financial assistance, incentives, or preservation resources made available by City staff, preservationists, and neighbors within the district, as well as state and federal programs (City of Taft, 2007, p. 3).

The plan shall serves as the local registry of historic structures, sites, or places for the City of Taft.

Kern County General Plan

The Kern County General Plan was originally adopted by the County Board of Supervisors in June 2004. Minor amendments to the plan were subsequently adopted in 2006 and 2007. The plan contains policies related to development of lands under County jurisdiction, which include the City of Taft Expansion Area. Kern County's Land Use, Conservation, and Open Space Element provides for a variety of land uses for future economic growth while also assuring the conservation of Kern County's agricultural, natural, and resource attributes.

Kern County General Plan goals, policies, and implementation measures related to visual resources are provided below.

Land Use, Open Space, and Conservation Element

Nonjurisdictional Land

Goal 1: To promote harmonious and mutually beneficial uses of land among the various jurisdictions and land management entities present in Kern County.

Physical and Environmental Constraints

Policy 6: Regardless of percentage of slope, development on hillsides will be sited in the least obtrusive fashion, thereby, minimizing the extent of topographic alteration required and reducing soil erosion while maintaining soil stability.

Residential

Policy 1: Varied approaches to residential development will be actively encouraged and given favorable consideration, in order to foster a variety of housing types and densities and a more efficient use of the land, while preserving the character of individual communities.

Policy 11: Provide for an orderly outward expansion of new urban development so that it maintains continuity of existing development, allows for the incremental expansion of infrastructure and public service, minimizes impacts on natural environmental resources, and provides a high-quality environment for residents and businesses.

Commercial

Policy 6: Linear commercial development of shallow depth, lacking demonstrated demand, will be discouraged along streets or highways when it can be shown that it impairs the traffic-carrying functions of the highways, it detracts from the aesthetic enjoyment of the surroundings, or if it can be demonstrated that equally effective services can be provided in an alternative configuration.

Implementation Measure B: Evaluation of applications for any General or Specific Plan Amendment to commercial designation will include sufficient data for review of new commercial development proposals consistent with General Plan policies, using the following criteria and guidelines on:

i. Location suitability with respect to market area demand.

ii. Provision of adequate ingress and egress and the mitigation of traffic impacts.

iii. Provision of adequate water, sewer, and other public services to be used.

iv. Provision of adequate on-site nonpublic water supply and sewage disposal, if no public systems are available or used.

v. Compatibility with adjacent uses (scale, noise, other nuisances, etc.) and methods for buffering.

vi. Design, layout, and visual appearance within a coordinated commercial setting.

vii. Overall consistency with the General Plan.

Implementation Measure F: Proposed commercial developments shall demonstrate compatibility with adjacent residential development through:

i. Attention to noise impacts

ii. Reduction or minimization of light and glare

iii. Buffering of residential from the commercial development through use of walls, landscaping, etc.

iv. Placing loading/unloading areas as far as practicable from residences.

Industrial

Policy 6: Encourage upgrading the visual character of existing industrial areas through the use of landscaping, screening, or buffering.

Policy 7: Require that industrial uses provide design features such as screen walls, landscaping, increased height and/or setbacks, and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to light, noise, sound, and vibration.

Implementation Measure A: Evaluation of applications for any General or Specific Plan Amendment to an industrial designation will include sufficient data for review to facilitate desirable new industrial development proposals consistent with General Plan policies, using the following criteria and guidelines:

i. Location suitability with respect to market demand area.

ii. Provision of adequate access, ingress and egress facilities and services, and the mitigation of traffic impacts.

iii. Provision of adequate water, sewer, and other public services to be used.

iv. Provision of adequate on-site, nonpublic water supply and sewage disposal if no public systems are available or used.

v. Compatibility with adjacent uses (scale, noise, emissions, or other nuisances, etc.) and methods for buffering.

vi. Design, layout, and visual appearance coordinated with existing adjacent industrial uses.

vii. Overall consistency with the General Plan.

viii. General Provisions 1.10.7 Light and Glare

Policy 47: Ensure that light and glare from discretionary new development projects are minimized in rural as well as urban areas.

Policy 48: Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.

Implementation Measure AA: The County shall utilize CEQA Guidelines and the provisions of the Zoning Ordinance to minimize the impacts of light and glare on adjacent properties and in rural undeveloped areas.

General Provisions 1.10.8 Smart Growth

Policy 49: Discretionary development projects should be encouraged to incorporate innovative or "smart growth" land use planning techniques as design features, as follows:

a) Higher density development, where compatible, to maximize the efficient use of land.
b) Mixed use developments that promote reduced vehicle trips by having residential, commercial, and public uses proximate to each other.
c) Variety of housing types, including those using energy efficient design, and densities to address Kern County's housing needs.
d) Master planned communities that feature interconnected roads, transit stops, sidewalks, landscaping, and trails to encourage efficient vehicle and pedestrian movement.
e) Compact development that conserves open space, agricultural land, flood prone areas, creeks, hillsides, ridge tops, wetlands, and other natural features.
f) Adequate infrastructure (i.e. roads, sewer, water, parks, etc.) is provided as a condition of development approval by the project proponent.
g) Aesthetically pleasing and unifying design features that promote a visually pleasing environment.

General Provisions 1.10.10 Oak Tree Conservation

Policy 65: Oak woodlands and large oak trees shall be protected where possible and incorporated into project developments.

Policy 66: Promote the conservation of oak tree woodlands for their environmental value and scenic beauty.

4.12.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

The following significance thresholds are based on Appendix G of the State CEQA Guidelines. A project is considered to have a significant visual impact if it would result in any of the following:

1) A substantial adverse effect on a scenic vista.

2) Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

3) Substantial degradation of the existing visual character or quality of the site and its surroundings.

4) Creation of a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

For the purposes of this analysis, a "substantial" alteration is characterized by a negative "sense of loss" of character or unique resources or a change that is an obvious and disharmonious modification of the overall scene, to the extent that the change clearly dominates the view.

METHODOLOGY

The visual resources analysis is based on field observations, aerial photography, and review of the topographic conditions from GIS maps for the Planning Area. It should be noted that any analysis of impacts to visual character is subjective by nature since the qualities that create an aesthetically pleasing setting will vary from person to person. For the purposes of this analysis, the results of the observations and field reviews were analyzed in order to consider the existing community character and to determine the consistency of visual changes resulting from the proposed project with the surrounding setting. The analysis also considered whether the alteration of visual character anticipated from the proposed General Plan Update would constitute a significant adverse effect to existing views and scenic resources.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan polices are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant updated General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan polices were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

IMPACTS AND MITIGATION MEASURES

Alteration of Scenic Resources within a State Scenic Highway

Impact 4.12.1 There are no designated scenic highways within the Planning Area. Therefore, implementation of the proposed General Plan Update would result in **no impact** to scenic resources within a State Scenic Highway.

As described above in the Existing Setting subsection, there are no officially designated state or County designated scenic highways or any highways eligible for such designation within the Planning Area. Therefore, implementation of the proposed General Plan Update would result in **no impact** to scenic resources within a scenic highway.

Mitigation Measures

None required.

Degradation of Scenic Vistas

Impact 4.12.2 Implementation of the proposed project would encourage new development and redevelopment activities that could potentially degrade existing scenic vistas. This is considered a **less than significant** impact.

Although there are no officially designated scenic vistas surrounding the Planning Area, there are views of the nearby Sierra Nevada to the east and the Coast ranges to the west. In addition, the surrounding hilly areas in Kern County include scenic views of agricultural fields and open scrub lands in the Planning Area, all of which are important components of the region's visual character. Although implementation of the General Plan would allow for development of some new areas, a large portion of the Planning Area would retain land use designations consistent with current agricultural uses. Furthermore, proposed General Plan policies encourage infill development and the preservation of agricultural land within the Planning Area. In addition, proposed Policy LU-85 provides for a positive visual image from transportation corridors and City entry points. Therefore, impacts associated with degradation of scenic vistas would be reduced to a **less than significant** level.

Proposed General Plan Policies and Action Items that Provide Mitigation

All new development and any redevelopment projects would be required to comply with the following General Plan policies that address degradation of scenic vistas:

Policy LU-4: Support alternative development techniques to promote the conservation of land for open space, natural resource, or agricultural uses.

Policy LU-61: Promote infill development that is aesthetically pleasing and compatible with existing development.

Policy LU-71: Promote the appropriate planting of trees and provide irrigation in existing parkways using reclaimed water.

Policy LU-75: Protect and maintain the urban tree canopy as a vital local resource.

Action LU-75a Develop and implement an Urban Tree Canopy Master Plan.

Action LU-75b Attain status as a Tree City USA.

Action LU-75c Identify and apply for urban forestry grants to pay for the planting of trees.

Policy LU-85: Improve gateways identified in Figure 4.0-1a and Figure 4.0-1b (Circulation Maps) with an entrance feature and enhanced landscaping.

Action LU-86a Develop a gateway beautification plan to include landscaping and signage.

Policy LU-86: Control development of commercial signage, including restrictions of off-site signage, and set development standards for all types of commercial signage.

Policy C-6: Prioritize infill development over the conversion of agricultural lands to accommodate future growth.

Policy C-58: Protect watercourses for their habitat value and scenic qualities.

Action C-58a Balance resource protection and improvement of watercourses with amenities such as pedestrian trails and lighting.

Policy C-59: Designate hillsides to be preserved.

Action C-59a Develop standards for hillside development to ensure safety and prevent slope instability.

Mitigation Measures

None required.

Alteration of Visual Character

Impact 4.12.3 Development allowed under the proposed General Plan Update could result in the conversion of existing agricultural lands and open space to urban uses and could alter the visual character of the Planning Area. This is a **significant** impact.

Implementation of the proposed General Plan Update would change the visual character of the Planning Area through intensification of urban uses within the existing City limits and the introduction of urban uses outside the City limits.

Under the General Plan Update, compact development near existing community areas is encouraged. New residences could be constructed (up to one single-family residence per legal parcel and one second unit) throughout the currently unincorporated County area. Grazing lands and naturally vegetated areas all contribute to the visual character and scenic resources in the County, and, therefore, any changes from one vegetation assemblage to another would not be considered significant. The General Plan Update does not encourage development or alteration of landscapes in scenic resource areas. Rather, it promotes and maintains land use patterns that currently make up the visual landscape characteristics of the unincorporated area of the County.

As discussed under Existing Setting above, much of the existing development within the City limits is aging and in aesthetic decline. Under the proposed project, redevelopment and infill within and near existing urban areas are encouraged. Implementation of the General Plan Update could result in an increase in low-density residential development, mixed use development, and public facilities (such as schools, post office, City hall, hospitals, etc.) within the City limits. The proposed General Plan contains numerous policies that encourage infill development to be aesthetically pleasing and compatible with existing development. These policies also encourage the preservation of the historic features and nature of the City, particularly in the downtown area. Implementation of the General Plan Update, therefore, would likely result in improved aesthetic conditions in the downtown area, as well as in existing residential and commercial areas suffering from blight and deterioration.

However, the Expansion Area predominantly consists of various types of agricultural land with rural residential developments, along with scrub land characterized by low-lying shrubs and bushes, as well as some annual grasses. These agricultural lands are an important visual aspect of the Planning Area landscape. For the most part, the General Plan Update does not encourage development or alteration of landscapes in the Expansion Area outside of the City limits. Rather, it promotes and maintains land use patterns that currently make up the visual landscape characteristics of the area. However, there are portions of the Planning Area where the General Plan Update proposes to allow expansions of residential, commercial, industrial (including oil production), and mixed-use development on land that is currently characterized by active agricultural operations and open space. Though these proposed land use designations are limited to areas in the northern and southern ends of the Planning Area, the expansion of urban uses into these areas has the potential to interrupt views of existing agricultural resources and convert agricultural and open space lands to urban development, thereby changing the aesthetic value of these resources[1]. In addition, other types of development could also affect the quality of scenic views and resources, such as the construction of microwave transmission towers or other uses that do not blend in with the natural environment. Other impacts could include placement

1 It should be noted that the extension of urban use designations into these areas has been made consistent with previous land use designations contained in the existing Kern County General Plan.

of structures or roadways or other improvements, such as grading on ridgelines that are out of character with the landscape characteristics of the view. Current views of agricultural lands would be replaced by more extensive residential, commercial, and industrial development which would vary in size, mass, and scale depending on the specific use. Existing vegetation and agricultural areas would need to be removed in order to allow for such development. In addition, the construction of parking, recreation, and other areas associated with such development would further alter views in the Expansion Area. Although there is no officially designated scenic vista or viewshed in the unincorporated portion of the County, subsequent land use activities associated with implementation of the General Plan Update may result in the development of urban uses, such as residential or commercial uses, which have the potential to change existing viewsheds. This is, therefore, considered to be a significant impact.

Proposed General Plan Policies that Provide Mitigation

All new development and any redevelopment projects would be required to comply with the following General Plan policies that address preservation of the visual character of the Planning Area:

Policy LU-1: Encourage infill development in the existing urban areas of the Planning Area.

Policy LU-4: Support alternative development techniques to promote the conservation of land for open space, natural resource, or agricultural uses.

Policy LU-22: Promote attractive, well designed, and adequately maintained residential neighborhoods.

Action LU-22a Develop Residential Design Guidelines to promote:

- Tree-lined streets.
- Neighborhood parks.
- Architecturally pleasing dwellings.
- Common areas maintained by Community Facilities Districts, Landscaping and Lighting Districts, or other financing mechanisms.

Policy LU-27: Promote commercial development that is aesthetically pleasing.

Action LU-27a Establish Commercial Design Guidelines.

Action LU-27b Modify the development standards for commercial zone districts to upgrade improvements such as parking, landscaping, pedestrian features, transit stops, setbacks, and signage.

Policy LU-28: Encourage commercial infill development.

Action LU-28a Provide incentives, such as flexible zoning, for commercial infill projects.

Policy LU-29: Encourage the location, size, scale, and design of neighborhood commercial uses to complement and meet the needs of the surrounding neighborhood.

Policy LU-35: Encourage industrial infill development.

Action LU-35a Provide incentives, such as flexible zoning, for industrial infill projects.

Policy LU-40: Encourage screening of unsightly operations and landscaping of storage area perimeters.

Action LU-40a Develop standards for outside industrial storage facilities.

Policy LU-50: Encourage property owners and merchants to participate in the improvement of the Downtown.

Action LU-50a Develop methods for financing improvements and beautification.

Action LU-50b Encourage customer-oriented merchandising and operations policies.

Action LU-50c Develop methods for maintaining improvements in the Downtown, such as landscaping, street furniture, parking lots, and lighting.

Action LU-50d Use enforcement powers to cause properties to be brought up to code.

Policy LU-53: Establish and maintain downtown Taft as the community business shopping and activity center for the west side of Kern County with clearly defined trade area boundaries, a recognizable identity, compatible and mutually supportive land uses, and a pleasant and pleasing atmosphere.

Policy LU-58: Protect and enhance the integrity of historical resources as identified in the Historic Preservation Plan.

Action LU-58a Encourage the adaptive reuse, protection, and/or enhancement of historical buildings.

Policy LU-61: Promote infill development that is aesthetically pleasing and compatible with existing development.

Action LU-61a Provide incentives, such as flexible zoning regulations, for infill projects.

Policy LU-63: Upgrade public improvements in blighted neighborhoods, including sidewalks, alleys, street trees, roadways, parkways, and streetlights as opportunities arise and resources permit.

Action LU-63a Establish a program of repairing or replacing broken curbs, gutters, and sidewalks.

Action LU-63b Replant vacant parkways with street trees.

Action LU-63c Improve alleys with pavement.

Action LU-63d Install landscaped medians where collector or arterial streets have the necessary right-of-way width.

Policy LU-65: Promote maintenance of properties by property owners.

Policy LU-67: Actively promote reinvestment in existing neighborhoods.

Action LU-67a Seek state and federal grant funds that can assist in the elimination of blight in residential neighborhoods.

Action LU-67b Use tax increment funds and low to moderate housing income funds to eliminate conditions of blight in residential neighborhoods, including use of funds for additional housing and improvements that benefit housing.

Policy LU-71: Promote the appropriate planting of trees and provide irrigation in existing parkways using reclaimed water.

Policy LU-74: Ensure that street sweeping, trash pickup, and the maintenance of public grounds and buildings are completed on a regular basis and require a comparable program for the maintenance of private properties, particularly commercial and industrial properties.

Policy LU-75: Protect and maintain the urban tree canopy as a vital local resource.

Action LU-75a Develop and implement an Urban Tree Canopy Master Plan.

Action LU-75b Attain status as a Tree City USA.

Action LU-75c Identify and apply for urban forestry grants to pay for the planting of trees.

Policy LU-76: Facilitate a landscaping program in park strips and medians that promote shading, color, art, and interesting design.

Action LU-76a Update street standards to include landscaping along all roadways.

Action LU-76b Establish a street beautification and enhancement fee that pays for the construction, landscaping, and maintenance of street medians.

Policy LU-78: Ensure that the provision of new or enlarged parking facilities does not adversely affect the livability and desirability of the surrounding neighborhoods.

Action LU-78a Develop landscaping and tree shading standards for parking facilities, including maintenance requirements

Policy LU-80: Require parking areas to be improved with paving, striping, and lighting and incorporate designated pedestrian facilities.

Policy LU-84: Provide median and parkway landscaping along all landscaped roadways identified in Figure 4.0-1a and Figure 4.0-1b (Circulation Plans).

Action LU-84a Update street standards to include a parkway standard.

Policy LU-85: Improve gateways identified in Figure 4.0-1a and Figure 4.0-1b (Circulation Plans) with an entrance feature and enhanced landscaping.

Action LU-85a Develop a gateway beautification plan to include landscaping and signage.

Policy LU-86: Control development of commercial signage, including restrictions of off-site signage, and set development standards for all types of commercial signage.

Policy C-6: Prioritize infill development over the conversion of agricultural lands to accommodate future growth.

Policy C-55: Encourage the preservation of significant cultural sites and historic structures.

Action C-55a Implement the 2007 Historic Preservation Plan, including establishment of a historic district.

Action C-55b Develop and regularly update a comprehensive historic resources survey, in compliance with guidelines of the Office of Historic Preservation.

Action C-55c Seek funding sources or consider participation in programs to assist in the maintenance or restoration of historic preservation projects.

Policy C-56: Discourage structures that are architecturally incompatible with existing structures in historic neighborhoods.

Policy C-58: Protect watercourses for their habitat value and scenic qualities.

Action C-58a Balance resource protection and improvement of watercourses with amenities such as pedestrian trails and lighting.

Policy C-59: Designate hillsides to be preserved.

Action C-59a Develop standards for hillside development to ensure safety and prevent slope instability.

Policy C-60: Retain landscape features and views from public parks and other publicly owned properties in accordance with the City's 2007 Historic Preservation Plan.

Implementation of the above General Plan policies and Action Items would assist in reducing impacts associated with land use changes that have the potential to change the overall visual character of the Planning Area. Since all new development would have to comply with the General Plan policies, the scale, massing, and height of all new development would be sensitive to potential impacts on the existing visual character of the area to be developed. In addition, the City's Zoning Ordinance contains substantial protection for visual resources and aesthetic character, as discussed under Regulatory Framework. Furthermore, a large portion of the Planning Area would retain land use designations consistent with current agricultural uses. Therefore, impacts would be reduced to a **less than significant** level.

Mitigation Measures

None required.

Daytime Glare and Nighttime Lighting

Impact 4.12.4 Implementation of the proposed General Plan Update could increase the amount of daytime glare and nighttime lighting in developed portions of the Planning Area and create new sources in undeveloped areas. These increased daytime glare and nighttime lighting levels could have an adverse effect on adjacent areas and land uses. This is considered a **potentially significant** impact.

The proposed project includes land uses and policies that would result in new development and redevelopment in the Planning Area. Such development could introduce new light and glare sources into the Planning Area, particularly in the rural and undeveloped portions of the Planning Area. Lighting nuisances typically are categorized by the following:

1) Glare – Intense light that shines directly or is reflected off of a surface into a person's eyes.

2) "Skyglow"/Nighttime Illumination – Artificial lighting from urbanized sources that alters the rural landscape in sufficient quantity to cause lighting of the nighttime sky and reduction of visibility of stars and other astronomical features.

3) "Spillover" Lighting – Artificial lighting that spills over onto adjacent properties, which could interrupt sleeping patterns or cause other nuisances to neighboring residents.

The main source of daytime glare in the unincorporated portion of the County is from sunlight reflecting off structures with reflective surfaces such as windows. The proposed land uses would include various densities of commercial, office, recreation, and other public uses containing structures and other potential sources of glare. Building materials (for example, reflective glass and polished surfaces) are the most substantial sources of glare. Glare is usually most acute at sunrise and sunset because the angle of the sun is lower during these times.

Nighttime lighting levels could increase substantially over current levels in undeveloped portions of the Planning Area and incrementally with future projects in developed areas. New light sources would include, but not be limited to, new residential developments, street lighting, parking lot lights, and security-related lighting for non-residential uses. These new light sources could result in adverse effects to adjacent land uses through the "spilling over" of light into these areas and "sky glow" conditions. Implementation of the proposed General Plan Update would result in intensified nighttime lighting levels associated with increased traffic levels and further residential and commercial development. Increased nighttime lighting and daytime glare is considered a **potentially significant** impact.

Proposed General Plan Policies and Action items that Provide Mitigation

Policy LU-22: Promote attractive, well designed, and adequately maintained residential neighborhoods.

Action LU-22a Develop Residential Design Guidelines to promote:

- Tree-lined streets.
- Neighborhood parks.
- Architecturally pleasing dwellings.
- Common areas maintained by Community Facilities Districts, Landscaping and Lighting Districts, or other financing mechanisms.

Policy LU-27: Promote commercial development that is aesthetically pleasing.

Action LU-27a Establish Commercial Design Guidelines.

Action LU-27b Modify the development standards for commercial zone districts to upgrade improvements such as parking, landscaping, pedestrian features, transit stops, setbacks, and signage.

Policy LU-29: Encourage the location, size, scale, and design of neighborhood commercial uses to complement and meet the needs of the surrounding neighborhood.

The proposed policies require the implementation of design guidelines which would include standards for lighting. In addition to the above mitigation measures, the Zoning Ordinance sets

development standards for lighting. The Zoning Ordinance requires that all outdoor lighting associated with both residential and nonresidential uses, excluding recreational uses, be shielded and directed away from surrounding residential uses and lighting is not allowed to blink, flash, oscillate or be of unusually high intensity or brightness. Nonresidential uses are prohibited from having lighting exceeding 0.5 foot-candles of illumination beyond the property containing the nonresidential uses and residential uses are not allowed to have outdoor pole lighting exceeding 12 feet in height.

Compliance with both General Plan policies and the Zoning Ordinance would assist in reducing daytime glare nighttime light and illumination impacts to a **less than significant** level.

Mitigation Measures

None required.

4.12.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The land use policies in the proposed General Plan Update would provide direction for growth within the City limits, while the Kern County General Plan policies provides direction for growth outside the City limits, but within the Planning Area boundaries (until land areas are annexed into the City). Thus, the setting for this cumulative analysis includes existing, proposed, approved, and planned projects in the City of Taft General Plan Planning Area and surrounding portions of unincorporated Kern County as well as full buildout of the General Plan Planning Area as proposed in the General Plan Update (occurring after year 2035). Development in the region identified in Section 4.0 would change the intensity of land uses in the region. In particular, this cumulative development scenario would provide additional housing, employment, shopping, and recreational opportunities.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Visual Resources Impacts

Impact 4.12.5 Implementation of the proposed project, in combination with other reasonably foreseeable projects within Kern County and the San Joaquin Valley, would contribute to cumulative impacts to visual resources in the region. The project's contribution is considered **cumulatively considerable**.

Increased urbanization within the communities along the San Joaquin Valley would result in cumulatively considerable changes in the visual character of the area. As discussed in Existing Setting above, current development pressures within the Valley are drastically changing its pastoral and rural character as residential and commercial development encroaches into agricultural land as a result of pressure to provide affordable housing and services to the growing region. As undeveloped areas transition from a rural to an urban character, existing viewsheds within the County would be affected, existing vistas of orchards and open row-crop lands would

be changed to urban uses, and views of the Coast ranges and Sierra Nevada Mountains may be obstructed. The land uses proposed under the General Plan Update would contribute to this trend in alteration of the visual character of the area by converting rural uses to urban development.

Furthermore, under cumulative conditions, the proposed project would substantially contribute to daytime glare and nighttime lighting impacts through the development of a range of uses, including residential, commercial, and industrial, within the Planning Area. Cumulative development would introduce new sources of daytime glare and substantially would change nighttime lighting and illumination levels in the region. One adverse impact resulting from increased cumulative development would be increased "sky glow" conditions in the region that would reduce visibility of the nighttime sky.

Proposed General Plan Policies That Provide Mitigation

The proposed General Plan Update contains several goals, policies, and action items that would assist in reducing the project's cumulative visual resources impacts. The following list contains those policies and action items that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing (though not eliminating) this impact. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Land Use Element

Policy LU-1; Policy LU-4; LU-22; Action LU-22a; Policy LU-27; Action LU-27a; Action LU-27b; Policy LU-28; Policy LU-29; Policy LU-35; Action LU-35a; Policy LU-40; Action LU-40a; Policy LU-50; Action LU-50a; Action LU-50b; Action LU-40c; Action LU-40d; Policy LU-53; Policy LU-58; Action LU-58a; Policy LU-61; Action LU-61a; Policy LU-63; Action LU-63a; Action LU-63b; Action LU-63c; Action LU-63d; Action LU-64; Policy LU-67; Action LU-67a; Action LU-67b; Policy LU-71; Policy LU-74; Policy LU-75; Action LU-75a; Action LU-75b; Action LU-75c; Policy LU-76; Action LU-76a; Action LU-76b; Policy LU-78; Action LU-78a; Policy LU-80; Policy LU-84; Action LU-84a; Policy LU-86; Action LU-86a; Policy LU-86;

Open Space and Conservation Element

Policy C-6; Policy C-55; Action C-55a; Action C-55b; Action C-55c; Policy C-56; Policy C-58; Action C-58a; Policy C-59; Action C-59a; Policy C-60

Implementation of the proposed General Plan policies would assist in reducing the project's contribution to the cumulative alteration of visual character and light/glare impacts within the region. These policies would ensure that the scale, massing, and height of all new development would be sensitive to potential impacts on the existing visual character of the area. These policies would also help preserve the existing visual character of the Planning Area by requiring new development to comply with certain development standards, by encouraging the redevelopment and improvement of existing blighted development, and by helping to protect the existing

historic characteristics of the downtown area. In addition, the General Plan provides for the protection and continuation of agricultural operations in the Planning Area.

However, regardless of the mitigation provided by these policies, the change in the visual character of the region from implementation of the proposed General Plan Update in addition to other anticipated development in the County, would be considerable. Therefore, the proposed project would have a **cumulatively considerable** contribution to the **significant and unavoidable** cumulative impact on visual character and light and glare.

Mitigation Measures

No feasible mitigation is available.

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4.13
PUBLIC SERVICES AND UTILITIES

This section of the Draft Environmental Report ("Draft EIR"; "DEIR") describes the public services and utilities that would serve the proposed City of Taft General Plan Planning Area (Planning Area), if the Planning Area were annexed to the City of Taft (City). Specifically, this section includes an examination of fire protection and emergency medical services, police services, water infrastructure, wastewater service, solid waste, schools, parks, and electrical, natural gas, and telephone services. Each subsection includes descriptions of existing facilities, service standards, potential environmental impacts resulting from implementation of the proposed project, mitigation measures where appropriate, and cumulative impacts.

4.13.1 FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

4.13.1.1 EXISTING SETTING

KERN COUNTY FIRE DEPARTMENT

Prior to 2007, the City of Taft Fire Department provided fire protection services to the City from one fire station located on Center Street. On May 8, 2007, the City of Taft entered into a Fire Protection Agreement with the Kern County Fire Department (KCFD). As a result of the Agreement, the KCFD became the exclusive provider of fire protection services to the City of Taft and the City's fire personnel were absorbed within the KCFD (Thompson, 2008). The KCFD currently provides fire protection services to an area spanning over 8,000 square miles, including the unincorporated areas of Kern County (County) and the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi and Wasco. The KCFD is comprised of 725 personnel, including 546 uniformed firefighters, 79 non-uniform/civilian personnel, and 100 "extra help" personnel. In addition, the KCFD has 14 Mutual Aid Agreements with neighboring fire suppression organizations (including the Bureau of Land Management), as well as a contract with the California Department of Forestry and Fire Protection (CALFIRE) to protect designated State Responsibility Area (SRA) lands (Thompson, 2008). Services provided by KCFD firefighters include: Fire Suppression; Emergency Medical Services; Hazardous Materials Mitigation; Fire Prevention; Rescue; Air Operations; Training and Public Education; Arson Investigation; and Apparatus Maintenance (Kern County Fire Department, 2008).

Facilities and Equipment

The KCFD currently operates 46 fire stations throughout Kern County. The City of Taft is primarily served by the KCFD fire station located at 303 10th street in Taft. This station has a response area of 172 square miles (Kern County Fire Department, 2008). The staff and equipment at this station includes Engine 21 with a Captain, Firefighter Truck 21 with a Captain and Engineer, and Firefighter Battalion 2 with an Engineer. The Taft station is a Battalion Chief headquarters station (Thompson, 2008).

Response Times and Service Standards

The KCFD does not have any adopted service standards. However, the KCFD does have an unofficial goal that has not yet been approved by the Board of Supervisors. The unofficial goal

of the KCFD is 1 on-duty firefighter per 3,000 population. The KCFD's recommended response time standards are 4 minutes in suburban areas and 9 minutes in rural areas (Thompson, 2008).

ISO Rating

ISO is an independent organization that serves insurance companies, fire departments, insurance regulators, and others by providing information about risk. ISO's Public Protection Classification (PPC) service gauges the quality of local fire departments by collecting information on a community's public fire protection and then analyzing the data using a Fire Suppression Rating Schedule (FSRS). ISO then assigns a PPC from 1 to 10. Class 1 represents the best public protection, and Class 10 indicates no recognized protection. A community's PPC depends on the following criteria (ISO, 2008):

Fire alarm and communications systems, including telephone systems, telephone lines, staffing, and dispatching systems;
The fire department, including equipment, staffing, training, and geographic distribution of fire companies; and
The water supply system, including condition and maintenance of hydrants, and a careful evaluation of the amount of available water compared with the amount needed to suppress fires.

The KCFD currently has an ISO PPC rating of Class 5 in suburban areas, Class 9 in rural areas with water supplies, and Class 10 in areas that do not have readily available water supplies (Thompson, 2008).

Funding

The KCFD is primarily funded through Fire Fund Property Tax revenues, which average approximately 9% of the 1% of assessed value. Fire Fund Property Tax revenues account for approximately 45% of total KCFD revenues. The KCFD is also funded through Program Revenues such as the State Contract with CALFIRE, other fire protection agreements (including those with Cities such as Taft for $345,112 in FY 08-09), and Local Public Safety funds. These Program revenue funds account for approximately 39.8% of total KCFD revenues. Finally, the County General Fund contributes 15.2% of total KCFD revenues (Thompson, 2008).

The KCFD currently does receive a small amount of revenue from Developer fees. However, the County has hired a consultant to explore various ways to fund the Capital Improvement Plan approved by the Kern County Board of Supervisors.

Emergency Medical Services

Emergency medical services in the City of Taft are provided by Hall Ambulance Services (HAS), which operates under a performance-based contract with Kern County (Hall Ambulance Services, 2008). The Kern County Emergency Medical Services Department (KCEMSD), which is discussed further under Regulatory Framework below, oversees all such EMS performance contracts and coordinates emergency service providers and hospitals throughout Kern County. The KCEMSD has divided the County into Exclusive Operating Areas (EOAs) that are assigned

to one ambulance provider responsible for serving the entire EOA. The City of Taft is within EOA 9, (Taft, Maricopa, Belridge), which is assigned to HAS. HAS is the 9-1-1 paramedic provider for 87 percent of Kern County, including EOAs 2, 4, 5, 8, and 9.

HAS has a total of 381 employees, including 95 paramedics and 148 Emergency Medical Technicians (EMTs). Hall Ambulance's equipment includes 63 Advanced Life Support (ALS) ambulances, 3 four-by-four ambulances, one Critical Care Transport (CCT) air unit, one CCT ground unit, and 6 Field Supervisor units (Hall Ambulance Services, 2008).

4.13.1.2 REGULATORY FRAMEWORK

FEDERAL

National Fire Protection Association

The National Fire Protection Association (NFPA) is an international nonprofit organization that provides consensus codes and standards, research, training, and education on fire prevention and public safety. The NFPA develops, publishes, and disseminates more than 300 consensus codes and standards intended to minimize the possibility and effects of fire and other risks (National Fire Protection Association, 2008). The NFPA publishes the NFPA 1, Uniform Fire Code, which provides requirements to establish a reasonable level of fire safety and property protection in new and existing buildings.

STATE

City Emergency Response/Evacuation Plans

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

California Fire Code and Building Code

The 2007 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to fire fighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure throughout the State of California (CBSC, 2008, p. 3). The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

The California Building Code also contains regulations to safeguard against fire hazards, including requirements for sprinkler systems, fire alarms, and fire resistant building materials.

California Health and Safety Code

Additional State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which include regulations for building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building, childcare facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Fighting Equipment," the California Occupational Safety and Health Administration (Cal OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire housing sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

LOCAL

County of Kern Emergency Medical Services Department

The Kern County Emergency Medical Services Department (KCEMSD) is the lead agency for the emergency medical services system in Kern County and is responsible for coordinating all system participants in the County. Participants include the public, emergency service providers, and hospitals throughout the County. The KCEMSD provides various training programs for emergency medical services such as certification and re-certification for local EMS personnel (Kern County, 2008). As previously discussed, the KCEMSD has divided the County into 10 geographic regions, or Exclusive Operating Areas (EOAs). Each EOA has been assigned to one ambulance provider that is responsible for serving the entire EOA at the minimum standards contained in the Kern County Ambulance Ordinance 8.12, the Kern County Ambulance Service Performance Standards, and the specific performance agreement (contract) between the County and each provider. The City of Taft is within EOA 9 (Taft, Maricopa, Belridge). Hall Ambulance Services is the provider responsible for providing services to EOAs 2, 4, 5, 8, and 9.

Although there are numerous requirements and performance standards in which an ambulance provider is required to satisfy, the most visible and significant standards are response time requirements (shown in **Table 4.13.1-1** below). Two factors are used to determine the required response time: the Time Zone (location of the incident), and Priority Code (severity of the patient's condition). There are five time zones - Metro, Urban, Suburban, Rural, and Wilderness. Each square mile in the County is designated as one of these zones. These time zones are generally based on population density, call volume, proximity to fixed ambulance stations, and historical precedence. The Metro time zone requires the fastest response time and response time requirements become less stringent the further away calls are from a Metro area. There are nine

Priority Codes used in Kern County's EMS system, numbered Priority Codes 1 through 9. A brief description of Priority Codes is provided below (Kern County, 2008):

- **Priority 1:** Life-Threatening Pre-hospital Emergencies - All prehospital life-threatening emergency requests, as determined by the dispatcher in strict accordance with Department authorized EMSD protocol.

- **Priority 2:** Time-sensitive Pre-hospital Emergencies - All prehospital non-life-threatening emergency requests, including emergency standby requests, as determined by the dispatcher in strict accordance with Department authorized EMD protocol.

- **Priority 3:** Urgent Pre-hospital - Emergency medical call where ambulance provider takes immediate steps to dispatch a response, as determined by the dispatcher in strict accordance with Department authorized EMD protocol. These include public safety standby requests.

- **Priority 4:** Time-sensitive Interfacility Emergencies - medically necessary requests from an acute care hospital for a hot response for an emergency interfacility transfer. Time-sensitive Interfacility Emergencies - medically necessary requests from an acute care hospital for a hot response for an emergency interfacility transfer.

- **Priority 5:** Urgent Interfacility - medically necessary requests from an acute care hospital for an emergency interfacility transfer, based on patient acuity/condition.

- **Priority 6:** Scheduled Transfer or Long Distance Transfer - All prescheduled patient transfer requests, including long distance transfer requests, as requested by caller.

- **Priority 7:** Unscheduled Transfer - All non-emergency patient transfers, as requested by the caller. These may include transfer directly off- the-floor to SNF, home, etc.

- **Priority 8:** Special Event Stand-by - paid special event stand-by requests.

- **Priority 9:** Miscellaneous - ambulance responses that are requests for service outside Kern County.

TABLE 4.13.1-1
KERN COUNTY EMERGENCY MEDICAL SERVICES DEPARTMENT
RESPONSE TIME REQUIREMENTS

Priority Code	Response Time Requirements (in Minutes)				
	Metro Time Zone	Urban Time Zone	Suburban Time Zone	Rural Time Zone	Wilderness Time Zone
1	8:59 min	15:59 min	25:59 min	50:59 min	75:59 min
2	10:59 min	15:59 min	25:59 min	50:59 min	75:59 min
3	20:59 min	25:59 min	30:59 min	50:59 min	75:59 min
4	15:59 min	25:59 min	30:59 min	50:59 min	75:59 min
5	60:59 min	60:59 min	60:59 min	60:59 min	75:59 min
6	0:00 min	0:00 min	0:00 min	0:00 min	0:00 min
7	0:00 min	0:00 min	0:00 min	0:00 min	0:00 min
8	0:00 min	0:00 min	0:00 min	0:00 min	0:00 min
9	0:00 min	0:00 min	0:00 min	0:00 min	0:00 min

Note: A 0:00 response time requirement means that there is no requirement for response times for this priority code.
Source: http://www.co.kern.ca.us/ems/ambperfrm.asp. Accessed November 19, 2008.

City of Taft Zoning Ordinance

Chapter 10, Section 6.10.240, of the Zoning Ordinance allows for the City to require that areas of real property within a subdivision or other residential, commercial, or industrial development be reserved for parks and recreational facilities, fire stations, libraries, or other public uses such as, but not limited to, domestic water and sewage facilities.

4.13.1.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A fire protection and emergency services is considered significant if implementation of the project would:

Create substantial adverse physical impacts associated with the provision of new or physically altered fire related facilities or services, the construction and/or provision of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection and emergency services.

Expose people or structures to significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

METHODOLOGY

Evaluation of potential fire protection and emergency medical service impacts was based on information provided by the KCFD, as well as review of the applicable fire codes and regulations and other relevant literature. A detailed list of reference material used can be found at this end of this section. This material was then compared to the proposed GPU's specific fire and emergency medical service-related impacts. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

PROJECT IMPACTS AND MITIGATION MEASURES

Fire Protection and Emergency Medical Services

Impact 4.13.1.1 Implementation of the project would result in the need for additional fire protection and emergency medical staff, equipment, and facilities that could result in physical environmental impacts. This would be a **less than significant** impact.

Implementation of the proposed GPU would facilitate new residential, commercial, industrial, and public facilities development. Increased development and associated population growth would increase the demand for fire protection and emergency medical services, which could in turn generate the need for new and physically altered fire protection and emergency medical service facilities in the Planning Area that could cause significant environmental impacts. At buildout (2050), a population of 68,018 persons is anticipated for the Planning Area. Using the KCFD's unofficial goal of 1 on-duty firefighter per 3,000 population, the GPU could result in

the need for 23 firefighters within the Planning Area. In addition to facilities, adequate water supply and fire flows would be necessary to ensure fire protection for future development.

The proposed General Plan Land Use Map does not identify any location for new facilities to meet future fire protection needs, nor does it identify any requirements for future developments to provide a site for a fire station. Until such time that the fire stations are designed and located, it is not possible to assess the specific environmental effects which will be addressed in the appropriate environmental documents prepared at that time. Typical environmental effects regarding the construction and operation of a fire facility may involve issues with noise (sirens), air quality (during the construction of the facility), biological resources (depending on location), cultural resources (depending on location), public utilities (demand for electric, water and wastewater service) and traffic on a local level due to the interruption of traffic light timing by fire engines. Furthermore, the proposed GPU could require the installation of new water lines or the replacement of existing lines in order to maintain adequate water supply and fire flows necessary for fire protection. Sub-section 4.13.6, Water Supply, of this section discusses the potential environmental impacts associated with new or improved water service infrastructure. The environmental effects of construction of such facilities have been programmatically evaluated in the technical analyses of this EIR as part of overall development of the Planning Area as part of overall development identified in the General Plan Update Land Use Map (see Sections 4.1 though 4.13). Future fire facility or water infrastructure projects would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency. Additionally, all residential, commercial, and industrial developments would be subject to California Fire Code regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas. This impact is considered **less than significant**.

Proposed General Plan Policies and Action Item that Provide Mitigation

Policy PF-6 Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council.

Policy PF-7 Require new development to pay its fair share portion of its impacts on public facilities and infrastructure.

Action PF-7a Establish development impact fees that fairly represent the cost of obtaining public facility improvements that serve new development and that provide a bridge for public, tax-supported services to be provided until tax revenues are received. Review the fees periodically.

Action PF-7b Require the installation of improvements necessary to serve the demand created by development projects and to be consistent with infrastructure master plans, rather than collect impact fees. The cost of oversizing improvements may be eligible for reimbursement over time, as allowed by the City.

Policy PF-8 Partner with other public entities such as the Kern County Fire Department, the Kern County Sheriff's Department, and other agency public safety departments in the financing and construction of public facilities.

Policy PF-12 Require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs.

Policy PF-16 Work with the Kern County Fire Department and local ambulance service providers to assure persons in the Taft area are well served relative to response time by fire and emergency services personnel.

Policy S-20 Continue to coordinate with the Kern County Fire Department to reduce fire hazards, assist in fire suppression, and promote fire safety.

Action S-20a Review new development for adequate water supply and pressure, fire hydrants, and access to structures by firefighting equipment and personnel.

Action S-20b Review projects for compliance with the Fire Code as part of the building permit process.

Policy S-21 Promote fire prevention methods to reduce service protection costs.

Action S-21a Promote high-visibility fire prevention programs, such as those which provide voluntary home inspections and awareness of home fire prevention measures.

Action S-21b Continue to educate the public about fire safety at home and in the workplace.

Policy S-22 Restrict the use of fire-prone building materials in areas defined by the fire services as presenting high fire risk.

Implementation of the General Plan policies listed above would ensure that new development would fund new public facilities such as those needed for fire protection and emergency medical services (PF-7 and PF-8), that development projects would be reviewed for concerns associated with the provision of fire protection services (PF-12, S-20, and S-22), and that the City would coordinate with the appropriate service providers to ensure adequate fire protection and emergency medical services (PF-16, and S-20). In addition, Policy S-21 requires the promotion of fire prevention. Compliance with these policies, along with the California Fire Code, would assist

in reducing impacts associated with increased demand for fire protection and emergency services.

The environmental effects of the development of additional fire protection facilities in the Planning Area have been programmatically considered in this Draft EIR as part of overall development identified in the General Plan Update Land Use Map (see Sections 4.1 though 4.13). As such, this impact is considered **less than significant**.

Mitigation Measures

None required.

4.13.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for fire protection and emergency medical services includes the service area boundaries of the KCFD and HAS. The KCFD currently provides fire protection services to the unincorporated areas of Kern County and the cities of Arvin, Bakersfield, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi and Wasco. In addition, the KCFD has 14 Mutual Aid Agreements with neighboring fire suppression organizations, as well as a contract with the California Department of Forestry and Fire Protection (CALFIRE) to protect designated State Responsibility Area (SRA) lands. HAS is the 9-1-1 paramedic provider for 87 percent of Kern County, including EOAs 2, 4, 5, 8, and 9. The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development within the KCFD and HAS service areas that currently place demand on these services or is expected to place demand on them in the future, as well as the full development of the Planning Area, which is expected to occur after 2035. The reader is referred to Section 4.0 regarding the cumulative setting and buildout under the proposed project and **Table 4.0-1** in Section 4.0 of this EIR contains a list of regional development projects that would be included in the cumulative setting.

Cumulative Demand for Fire Protection and Emergency Medical Services

Impact 4.13.1.2 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the KCFD and HAS service areas, would increase the demand for fire protection and emergency medical services and could therefore require additional staffing, equipment, and related facilities. The project's contribution to the need for expanded fire protection and emergency medical services is considered **less than cumulatively considerable**.

New development facilitated by the GPU would contribute to growth in the region. Future regional growth would result in a cumulative demand for fire protection and emergency medical services throughout Kern County that would require KCFD and HAS to provide increased levels of fire protection and emergency medical services to its service area commensurate with increased demand. As discussed under Impact 4.13.1.1 above, the environmental effects of

construction of such facilities within the Planning Area have been programmatically evaluated in the technical analyses of this EIR and future fire protection/EMS facilities projects would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency. This is a **less than cumulatively considerable** impact.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan policies identified under Impact 4.13.1.1 above would reduce the proposed GPU's contribution to cumulative impacts associated with providing fire protection and emergency medical services. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers.

Public Facilities and Services Element

Policy PF-6; Policy PF-7; Action PF-7a; Action PF-7b; Policy PF-8; Policy PF-12; Policy PF-16

Safety Element

Policy S-20; Action S-20a; Action S-20b; Policy S-21; Action S-21a; Action S-21b; Policy S-22

Implementation of the proposed General Plan policies, along with compliance with the California Fire Code, would ensure the project's contributions to the continued provision of fire protection and emergency medical response services in the cumulative setting would be considered **less than cumulatively considerable**.

Mitigation Measures

None required.

4.13.2 LAW ENFORCEMENT SERVICES

4.13.2.1 EXISTING SETTING

CITY OF TAFT POLICE DEPARTMENT

The Taft Police Department (TPD) provides law enforcement and animal control services to the City of Taft. TPD personnel consist of the Police Chief, 4 Sergeants, and 9 Patrol Officers. In addition, there are 5 Dispatchers, 2 Community Service Officers, an Animal Control Officer, an Animal Shelter Technician, 11 Administrative staff, 3 Reserve Officers, 41 Correctional Officers, 2 Senior Correctional Officers, 4 Correctional Officer Sergeants, 4 Correctional Officer Lieutenants, a Correctional Officer Captain, and a Correctional Officer Manager (McMinn, 2008). These 80 personnel provide full-time, 24-hour police coverage with a full-time dispatch center for Police, Fire, and Ambulance (Taft Policy Department, 2008). Each Officer is equipped with a "take home" vehicle, as well as handguns, automatic weapons, shotguns, tazers, and vests (McMinn, 2008).

The TPD has mutual aid agreements with the Kern County Sheriff's Department, the California Highway Patrol, the Kern County Street Interdiction Team, the Wasco State Prison, and the Wackenhut Federal Prison (McMinn, 2008) (LSA, 2004, p. 2-11).

Facilities

The Police Department is headquartered at a modern, one-story structure at 320 Commerce Way in Taft (McMinn, 2008). This facility can accommodate up to 30 officers and serves as the City's Emergency Operations Center. The TPD has a Class 1 Jail Facility for pre-arraignment prisoners that is capable of housing up to 20 detainees, both men and women (McMinn, 2008).

The TPD also operates a 544-bed Community Correctional Facility (CCF) under contract with the State of California Department of Corrections and Rehabilitation to house state inmates (City of Taft, 2008). The CCF houses low-level, non-violent offenders with less than three years left on their sentence. The CCF is staffed by 1 Police Captain, 1 Police Sergeant, 1 Correctional Captain, and 46 Correctional Officers (LSA, 2004, p. 2-12).

The TPD controls the Taft Animal Control Shelter, located at 1080 East Ash Street in Taft. The present building and kennels were constructed in 2000. The Shelter has a capacity to hold 26 dogs (14 in outside kennels and 12 in inside/outside kennels, expandable to 24 if needed) and 18 cats (12 tame and 6 feral). The normal business hours are 8:00 a.m. to 5:00 p.m., Monday through Friday. During non-business hours, the Police Department responds to emergency calls for animal control services, using the animal control impound vehicle if necessary (Kern County Grand Jury, 2008-2009).

Calls for Service

The TPD handled 12,987 incidents in 2008, including calls for service and "on-sight" activity (observations by the officers in the field) (Whiting, 2009).

Service Standards

The TPD does not have an adopted policy or standard in regards to officer-to-population ratio. The current officer-to-population ratio is approximately 1.57 police personnel per 1,000 residents (McMinn, 2008).

Funding

The TPD is funded primarily through the City's General Fund. Sales tax, use tax, permits, and DMV fees all go into the City's General Fund (Whiting, 2009).

4.13.2.2 REGULATORY FRAMEWORK

STATE

Emergency Response/Evacuation Plans

Government Code Section 8607(a) directs the Governor's Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. The program is intended to provide effective management of multi-agency and multijurisdictional emergencies in California. SEMS consists of five organizational levels, which are activated as necessary:

- Field Response
- Local Government
- Operational Area
- Regional
- State

Local governments must use SEMS to be eligible for funding of their response-related personnel costs under state disaster assistance programs. The City of Taft is generally responsible for emergencies that occur within City boundaries and has adopted an Emergency Operations Plan that is consistent with the SEMS.

LOCAL

City of Taft Municipal Code

Title 1, Chapter 17 of the City of Taft Municipal Code establishes a Police reserve as a voluntary organization composed of persons appointed by the Chief of Police to serve gratuitously as a unit of the Police Department to assist regular police officers in law enforcement and the maintenance of peace and order during times designated by the Chief.

4.13.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A significant impact to law enforcement services impact is considered significant if implementation of the proposed project would:

1) Create substantial adverse physical impacts associated with the provision of 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 law enforcement services.

METHODOLOGY

Evaluation of potential law enforcement impacts was based on information provided by the City of Taft Police Department, as well as review of the existing City of Taft General Plan. A detailed list of reference material used can be found at this end of this section. This material was compared to the proposed GPU's specific law enforcement-related impacts. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

PROJECT IMPACTS AND MITIGATION MEASURES

Law Enforcement Services and Facilities

Impact 4.13.2.1 Implementation of the proposed project would increase the Planning Area population and would result in additional residential, commercial, industrial, and recreational uses in the Planning Area, which may result in additional law enforcement protection facilities that could result in physical environmental impacts. This would be a **less than significant** impact.

Implementation of the proposed General Plan update would facilitate new residential, commercial, industrial, and public facilities development. Increased development and associated population growth would increase the demand for law enforcement services, which could in turn generate the need for new and physically altered law enforcement personnel and facilities in the Planning Area that could cause significant environmental impacts.

The TPD has indicated that buildout of the GPU would result in the need for 7 to 10 additional law enforcement officers, along with additional vehicles and individual equipment for those officers such as pistols, cameras, radios, vests, and flashlights (Whiting, 2009).

The TPD anticipates that the current headquarters facility would be able to accommodate the additional officers and equipment needed as a result of growth pursuant to the GPU (Whiting, 2009). No expansion or construction of new facilities would be necessary, as the TPD personnel consists of the Police Chief, 4 Sergeants, and 9 Patrol Officers (14 officers) and the current facility can accommodate up to 30 officers. Furthermore, the TPD does not anticipate additional impact to the courts or Taft correctional facility as the County Sheriff's Department currently

books into the Taft correctional facility and uses Taft courts. Therefore, portions of the Planning Area that are currently under County Sheriff jurisdiction would simply be replacing Sheriff's deputies with TPD officers, hence the need for 7 to 10 additional TPD officers mentioned above.

The environmental effects of constructing such facilities within the Planning Area have been programmatically evaluated in the technical analyses of this EIR as part of overall development of the City. A project-level CEQA document would analyze the potential environmental impacts of a police facility project at the time that the location and design of the facility are known. Since specific projects have not been identified at this time, potential impacts are addressed at a programmatic level only. This impact is considered **less than significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

Policy PF-6 Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council.

Policy PF-7 Require new development to pay its fair share portion of its impacts on public facilities and infrastructure.

Action PF-7a Establish development impact fees that fairly represent the cost of obtaining public facility improvements that serve new development and that provide a bridge for public, tax-supported services to be provided until tax revenues are received. Review the fees periodically.

Action PF-7b Require the installation of improvements necessary to serve the demand created by development projects and to be consistent with infrastructure master plans, rather than collect impact fees. The cost of oversizing improvements may be eligible for reimbursement over time, as allowed by the City.

Policy PF-8 Partner with other public entities such as the Kern County Fire Department, the Kern County Sheriff's Department, and other agency public safety departments in the financing and construction of public facilities.

Policy S-18 Regularly monitor and review the level of police staffing provided in Taft to ensure that sufficient staffing and resources are available to serve local needs.

Policy S-19 Encourage neighborhoods and buildings to be designed to discourage crime and provide security and safety for people and property.

Action S-19a During the review and approval of development plans, encourage projects to incorporate design techniques to maximize visibility, such as the Crime Prevention Through Environmental Design (CPTED) principles.

Implementation of the General Plan policies listed above would ensure that new development would fund new public facilities and personnel such as those needed for fire law enforcement services (PF-7 and PF-7), that development projects would be reviewed for concerns associated with the provision of law enforcement services (S-19), and that the City would review police services regularly to ensure adequate levels of service (S-18). Compliance with these policies would ensure that additional personnel and equipment needed as a result of the GPU would be planned for and funded.

A project-level CEQA document would analyze the potential environmental impacts of a police facility project at the time that the location and design of the facility are known. Since specific projects have not been identified at this time, potential impacts are addressed at a programmatic level only. Adequate sites exist in Ione to locate the facility such that environmental impacts can be adequately avoided or mitigated, and the impacts are considered **less than significant**.

Mitigation Measures

None required.

4.13.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for law enforcement services includes service area boundaries of the TPD. The TPD provides services within the current City limits of Taft and would provide services to areas outside of the City but within the Planning Area when they are annexed into the City. The cumulative analysis includes all existing, planned, proposed, approved, and reasonably foreseeable development within the Planning Area as well as the full development the full buildout of the Planning Area, which is expected to occur after 2035. The reader is referred to Section 4.0 regarding the cumulative setting and buildout under the proposed project.

Cumulative Demand for Law Enforcement Services

Impact 4.13.2.2 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the TPD service area, would increase the demand for law enforcement services which could result in the need for additional staffing, equipment, and related facilities under cumulative conditions. The project's contribution to the need for expanded law enforcement services is considered **less than cumulatively considerable**.

Future regional growth would result in increased demand for law enforcement services in the City of Taft and throughout Kern County. However, the need for additional law enforcement facilities associated with the GPU would be limited to facilities needed to serve the Planning Area as the TPD's service area is limited to the City limits.

As discussed under Impact 4.13.1.1 above, the TPD anticipates that the current headquarters facility would be able to accommodate the additional officers and equipment needed as a result of the GPU (Whiting, 2009). In addition, needed personnel would be planned for and funded by new development.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan policies identified under Impact 4.13.2.1 above would reduce the proposed project's contribution to cumulative impacts associated with providing law enforcement services. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers.

Public Facilities and Services Element

Policy PF-6; Policy PF-7; Action PF-7a; Action PF-7b; Policy PF-8

Safety Element

Policy S-18; Policy S-19; Action S-19a

Implementation of General Plan policies would ensure that new development would fund new public facilities such as those needed for fire law enforcement services (PF-8 and PF-9), that development projects would be reviewed for concerns associated with the provision of law enforcement services (S-19), and that the City would review police services regularly to ensure adequate levels of service (S-18). The environmental effects of the development of additional law enforcement facilities in the Planning Area have been programmatically considered in this Draft EIR as part of overall development identified in the General Plan update Land Use Map (see Sections 4.1 through 4.13). Therefore, the proposed General Plan update would not contribute to cumulative law enforcement service impacts, and this impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

4.13.3 PUBLIC SCHOOLS

4.13.3.1 EXISTING SETTING

The City of Taft is served by two public school districts – the Taft City School District (TCSD) and the Taft Union High School District (TUHSD). The City is also served by the West Kern Community College District.

TAFT CITY SCHOOL DISTRICT (TCSD)

The Taft City School District (TFSD) is a Kindergarten through 8th grade district that currently includes 4 elementary schools, 1 middle school and 1 community day school located in an office complex on 10th Street (Taft Union High School District, 2008). The middle school has a special transitional program for sixth grade at the Lincoln annex, which is a facility built to house students during a modernization project completed in 2007. There are no new facilities planned at this time (Brusa, 2009). The service area for the TCSD encompasses the City of Taft, the communities of South Taft and Ford City, and Dustin Acres and Valley Acres (TCSD, 2008, p. 17).

The most recent enrollment figures for TCSD schools are shown in **Table 4.13.3-1** below. The TCSD has indicated that all schools in the TCSD are currently operating at student capacity, assuming a 20-to-1 student to teacher ratio (Brusa, 2009). In addition, none of the current school sites meet the state-required size as identified in the Guide to School Site Analysis and Development (discussed under Regulatory Framework below). The TCSD has currently modernized three elementary schools - Parkview, Roosevelt, and Taft Primary – and has long-range plans modernize the remaining schools in the district (TCSD, 2008, p. 17).

TABLE 4.13.3-1
TAFT CITY SCHOOL DISTRICT
ENROLLMENT BY SCHOOL 2004-2008

School	2004/05 Enrollment	2005/06 Enrollment	2006/07 Enrollment	2007/08 Enrollment	2008/09 Enrollment
Conley Elementary	292	287	280	299	274
Jefferson Elementary	194	175	167	174	195
Parkview Elementary	319	309	311	304	306
Roosevelt Elementary	496	461	461	472	476
Taft Primary Elementary	197	182	185	184	172
Taft Community Day	2	2	4	7	4
Lincoln Junior High	701	684	675	677	712
Totals	**2,201**	**2,100**	**2,083**	**2,117**	**2,139**

Source: California Department of Education Dataquest website. Accessed November 21, 2008 and May 11, 2009.

TAFT UNION HIGH SCHOOL DISTRICT (TUHSD)

The Taft Union High School District (TUHSD) is a 9th through 12th grade district that consists of Taft Union High School, as well as the Buena Vista Continuation High School and the Westside Independent Study High School (Taft Union High School District, 2008). There are no new facilities planned at this time (Hagstrom, 2009).

Total TUHSD capacity is approximately 1,450, with Taft Union High School having capacity for 1,200 students, Buena Vista Continuation High School having capacity for 150 students, and Westside Independent having capacity for approximately 100 students (Hagstrom, 2009). The most recent enrollment figures for TUHSD schools are shown in **Table 4.13.3-2** below. As shown, none of the high schools in the TUHSD currently exceed capacity.

TABLE 4.13.3-2
TAFT UNION HIGH SCHOOL DISTRICT
ENROLLMENT BY SCHOOL 2004-2008

School	2004/05 Enrollment	2005/06 Enrollment	2006/07 Enrollment	2007/08 Enrollment	2008/09 Enrollment
Taft Union High School	967	912	927	966	950
Buena Vista Continuation High School	70	79	102	112	70
Westside Independent Study High School	N/A	58	71	30	22
Totals	**1,037**	**1,049**	**1,100**	**1,108**	**1,002**

Source: California Department of Education Dataquest website. Accessed November 21, 2008 and May 11, 2009.

WEST KERN COMMUNITY COLLEGE DISTRICT (WKCCD)

The West Kern Community College District (WKCCD) covers 735 square miles and includes Taft College, the Westside Energy Services Training & Education Center, Inc. (WESTEC), and the North Kern Training Center (Taft College, 2008).

Taft Community College

The Taft Community College campus is located at 29 Emmons Park Drive in Taft, and serves the City of Taft, its immediately surrounding communities, and the rest of western Kern County. The 29-acre campus is situated south of Ash Street between Sixth and Tenth Street.

The College offers a variety of AA/AS degrees and certificates and is one of the few schools in California that offers a dental hygiene program. The College also offers short-term vocational training classes through an agreement with Bakersfield College at a facility on Lerdo Highway

near Shafter (Quad-Knopf, 2005, p. 2-6). Approximately 8,000 students attend the College and there are 40 full-time faculty and 59 part-time faculty (Taft College, 2008). Classes are in session primarily from August to May, with summer session from June to August (Quad-Knopf, 2005).

The College is expected to grow from its current level of 8,000 students to 16,000 students by the year 2020 (Quad-Knopf, 2005, p. ES-1). The College uses full time equivalent students (FTES) as its measure of how many students need to be accommodated on campus, with FTES being expected to grow from its current level of 2,000 FTES to 8,000 FTES by the year 2020. The difference between FTES and total enrollment is primarily a result of the large number of students taking very short courses, such as one and two-day certification courses on campus (Quad-Knopf, 2005).

District Funding

Neither the TCSD nor the TUHSD collect developer impact fees. Both districts are funded through bonds and average daily attendance monies from state and local tax revenue. The WKCCD is also not eligible to collect developer impact fees and is funded via tuition and other federal and state monies.

State Funding and Financing Mechanisms

Average Daily Attendance (ADA)/Revenue Limit Income

The State of California uses a school district's average daily attendance (ADA) to determine the amount of general purpose money districts receive per pupil from a combination of state taxes and local property taxes. This income is known as revenue limit income. Categorical aid for specific programs and students is granted in addition to revenue limit income.

A district's ADA is determined by dividing the total number of days of student attendance by the total number of days in the regular school year. A student attending every day would equal one ADA. ADA is not the same as enrollment, which is the number of students enrolled in each school and district. ADA usually is lower than enrollment due to factors such as students moving, dropping out, or staying home due to illness.

Bonds

The Kindergarten-University Public Education Facilities Bond Act of 1998 (Prop 1A)

Proposition 1A, Kindergarten-University Public Education Facilities Bond Act of 1998, was approved by the voters in November 1998. This proposition provided $6.7 billion in general obligation bonds for K–12 public school facilities and provided the first funding for the new School Facility Program. The School Facility Program provides state funding assistance for two major types of facilities construction projects: new construction and modernization. At the time of the passage of this proposition, it was the largest school bond in the history of the state (California Strategic Growth Plan Bond Accountability, 2008)

The Kindergarten-University Public Education Facilities Bond Act of 2002 (Prop 47)

Proposition 47, the Kindergarten-University Public Education Facilities Bond Act of 2002, was the first part of a $25.3 billion statewide bond package. Proposition 47 was a $13.05 billion bond measure approved by voters in November 2002 that provided $11.4 billion in general obligation bonds for K–12 facilities through the School Facility Program, as well as funding for new programs, charter school facilities, critically overcrowded schools, joint-use projects, and small high schools (California Strategic Growth Plan Bond Accountability, 2008). Funds are targeted to areas of greatest need and must be spent according to strict accountability measures. The remaining $1.65 billion was allocated to build, repair, and upgrade community colleges and California State University and University of California facilities in order to provide adequate higher education facilities to accommodate growing student enrollment.

The Kindergarten-University Public Education Facilities Bond Act of 2004 (Prop 55)

On March 2, 2004, voters in California passed Proposition 55, the second part of a $25.3 billion statewide bond package. Proposition 55 authorized $12.3 billion to help fund public school facility needs. The passage of Proposition 55 provided an additional $10.0 billion in general obligation bonds for the construction and renovation of K–12 school facilities. These funds are made available through the School Facility Program and continue to assist school districts with overcrowding, accommodating future enrollment growth, and repairing and modernization of older facilities (California Strategic Growth Plan Bond Accountability, 2008). The remaining $2.3 billion is reserved for community college, California State University, and University of California facilities.

The Kindergarten-University Public Education Facilities Bond Act of 2006 (Prop 1D)

Proposition 1D, officially the Kindergarten-University Public Education Facilities Bond Act of 2006, was approved by the voters in November of 2006 and provided $10.416 billion in general obligation bonds for educational facilities, of which $7.329 billion was earmarked for K–12 projects (California Strategic Growth Plan Bond Accountability, 2008).

4.12.3.2 REGULATORY FRAMEWORK

STATE

Leroy F. Greene School Facilities Act of 1998 (SB 50)

As discussed above, California voters approved Proposition 1A in November of 1998. Proposition 1A's companion legislation (Chapter 407, Statutes of 1998, SB 50) went into effect upon the measure's approval. SB 50 significantly altered the system of fees that can be placed on new development in order to pay for the construction of school facilities. Prior to the passage of Proposition 1A, school districts were limited in the amount of school facility developer fees they could charge. Also, as a result of the Mira, Hart, and Murietta decisions made in the years preceding the passage of Proposition 1A, cities and counties were able to impose additional school facility fees on development as a condition of obtaining land use approval. SB 50 and

Proposition 1A provided a comprehensive school facilities financing and reform program by authorizing the $9.2 billion school facilities bond issue, school construction cost containment provisions, and an eight-year suspension of the Mira, Hart, and Murrieta court cases. SB 50 created different levels of developer fees and prohibited local agencies from denying either legislative or adjudicative land use approvals on the basis that school facilities are inadequate. They also reinstated the school facility fee cap for legislative actions, which is adjusted bi-annually in January of even years. According to Government Code Section 65996, the development fees authorized by SB 50 are deemed to be full and complete school facilities mitigation. These provisions were in effect until 2006 and will remain in place as long as subsequent state bonds are approved and available.

The three levels of developer fees established by SB 50 are described below:

1. Level 1 fees are base statutory fees. As of January 30, 2008, the maximum assessment for fees was $2.97 per square foot of residential development and $0.47 per square foot of commercial/industrial development (SAB, 2008).

2. Level 2 fees allow the school district to impose developer fees above the statutory levels, up to 50 percent of certain costs under designated circumstances. The state would match the 50 percent funding if funds are available.

3. Level 3 fees apply if the state runs out of bond funds after 2006, allowing the school district to impose 100 percent of the cost of the school facility or mitigation minus any local dedicated school monies.

In order to levy the alternate (Level 2) fee and qualify for 50 percent state-matching funds, a school district must prepare and adopt a School Facilities Needs Analysis, apply and be eligible for state funding, and satisfy specified criteria. The ability of a City or County to impose fees is limited to the statutory and potential additional charges allowed by the act, as described above.

California Department of Education

The California Department of Education (CDE) establishes standards for school sites pursuant to Education Code Section 17251 and adopts school site regulations, which are contained in the California Code of Regulations, Title 5, commencing with Section 14001 (CDE, 2000, p. iv)). Certain health and safety requirements for school site selection are governed by state regulations and the policies of the CDE School Facilities Planning Division (SFPD) relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;

- Presence of toxic and hazardous substances;

- Hazardous facilities and hazardous air emissions within one-quarter mile;

- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses; and
- Traffic and school bus safety issues.

The SFPD prepared the *Guide to School Site Analysis and Development* in 1966 (Guide). The Guide assists school districts in determining the amount of land needed to support their educational programs in accord with their stated goals and with recommendations of the CDE. Site size standards were updated in 1999-2000 to reflect significant changes in education, such as class size reduction in kindergarten through grade three, implementation of the (federal) Education Amendments of 1977, Title IX (gender equity), parental and community involvement, and technology. In addition to the educational reforms noted above, changes regarding the expanded use of buildings and grounds for community use and agency joint use and legislative changes in the site-selection process regarding environmental, toxic, and other student and staff safety issues were included in the updated standards.

The Guide also contains specific recommendations for school size and suggests a ratio of 2:1 between the developed grounds and the building area (CDE, 2000, p. 10). CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

Service Standards

All school districts in California are required to prepare a facilities master plan, which include service standards based on student generation rates and school capacities to determine a particular district's needs through its current plan period. FMPs typically have a planning horizon of ten years (e.g., 2000 through 2010) and provide a detailed forecast of the district's needs and identify strategic plans and actions to fulfill those needs. The FMP addresses how many classrooms are needed, at which grade levels, and the cost and timing of identified improvements. The identified improvements are balanced against the available district resources, existing and ultimate capaCity constraints, current and projected revenue sources, and outside funding options. FMPs are influenced by market pressures such as commercial expansion, the phasing and timing and housing developments, availability of state funds, changes in state laws, and the viability and local bond elections. The district selects school sites in accordance with criteria developed by the California Department of Education. The Department of Education must review and approve all sites considered for selection and use by the district.

LOCAL

Taft Community College Facilities Capital Improvement Plan

The Taft Community College Facilities Capital Improvement Plan (FCIP) identifies new construction and remodeling of the Taft Community College campus to accommodate increased enrollment through 2020. The FCIP allows the College to accommodate increased enrollment through improved efficiencies of design and utilization of space.

Capital improvement projects identified in the FCIP will be developed in phases over the 15-year life of the plan and will be financed through various bond sales. It is anticipated that, in 2020, the campus will be 283,000 square feet, which is only 1,000 square feet larger than in 2005 (Quad-Knopf, 2005, p. 2-1).

City of Taft Municipal Code

Title 10, Chapter 9 of the City of Taft Municipal Code regulates school site dedication in the City. As a condition of approval of a final subdivision map, a subdivider who develops or completes the development of one or more subdivisions within a school district within the City is required to dedicates to the school district such lands as the Council deems to be necessary for the purpose of construction of schools necessary to assure the residents of the subdivision adequate school service.

City of Taft Zoning Ordinance

Chapter 10, Section 6.10.240, of the Zoning Ordinance allows for the City to require that areas of real property within a subdivision or other residential, commercial, or industrial development be reserved for parks and recreational facilities, fire stations, libraries, or other public uses such as, but not limited to, domestic water and sewage facilities.

4.13.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A public schools impact is considered significant if implementation of the proposed project would:

1) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services.

METHODOLOGY

The analysis of potential environmental impacts associated with public schools was based on information provided by the Taft City School District and the Taft Union High School District, as well as enrollment information from the California Board of Education. A detailed list of referenced material can be found at the end of this section. This material was compared to the potential number of students that could be generated by the proposed GPU, as well as existing and planned school facilities, in order to determine if the GPU would have a significant effect on the physical environment associated with the provision of public school services.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

IMPACTS AND MITIGATION MEASURES

Public School Facilities

Impact 4.13.3.1 Implementation of the proposed project would result in increased development in the Planning Area, which would subsequently increase student enrollment in TCSD and TUHSD schools. New or expanded school facilities would be necessary to serve the increased demand. This impact is considered to be **less than significant**.

Implementation of the proposed GPU is expected to result in a total of 25,184 housing units and a population of 68,018 within the Planning Area at buildout. This represents an increase of 19,146 housing units and 49,948 persons over existing conditions within the Planning Area. As discussed above, the TCSD is currently operating at student capacity and would not have the ability to absorb additional students generated by implementation of the GPU. While the TUHSD currently has capacity to absorb some increase in enrollment without major alterations to existing facilities, the GPU would result in the need for new high school facilities to serve the Planning Area. Projected growth would significantly increase student enrollment in the TCSD and TUHSD and would thus result in the need for new or expanded public school facilities, the construction of which could cause significant environmental impacts.

New schools or the expansion of existing schools could result in environmental impacts including, but not limited to, increased traffic, increased noise, potential habitat loss, degradation of air quality, degradation of water quality, potential conversion of agricultural land, and increased demand for public services such as water, wastewater, and solid waste services.

However, the environmental effects of construction of such facilities within the Planning Area have been programmatically evaluated in the technical analyses of this EIR as part of overall development of the Planning Area. The applicable school district would be required to conduct the appropriate environmental review prior to any significant expansion of school facilities or the development of new school facilities.

As discussed under Funding and Financing Mechanisms above, each school district has limited funding to provide for additional services. While ADA funds would increase with increased student attendance, they would be used to fund ongoing operations and would not be sufficient to fund an expansion of services beyond operational needs (Brusa, 2009). Neither school district serving the Planning Area has adequate capacity to accommodate students generated by the proposed GPU, and funding mechanisms are not adequate to pay for the construction of significant expansions or new school facilities. However, as previously noted, the City of Taft has no direct control over school funding or siting in the Planning Area..

Even though the TCSD and TUHD do not currently charge developer impact fees, they have the ability to do so under SB 50. California Government Code Section 65995(h) states that "the payment or satisfaction of a fee, charge or other requirement levied or imposed... [is] deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." This impact, therefore, would be **less than significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects.

Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies.

Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit.

Policy PF-18 Encourage school districts to locate and site facilities in a manner integrated with the rest of the community.

Policy PF-19 While recognizing that school development is not within the jurisdiction of the City, strongly encourage Taft City School District, Taft Union High School, and Taft College to consider the following criteria:

- That traffic impacts on nearby roadways should be addressed and mitigated to meet City standards for Level of Service.

- That schools serve as a focal point of neighborhood activity and should be interrelated with churches, parks, greenways, and off-street paths whenever possible and designed to promote joint use of appropriate facilities.

- That most residences should be within walking distance of a school (one mile or less) and that all residences should be within two miles of a school whenever possible.

Action PF-19a Convene a focused design effort with Taft City School District, Taft Union High School, and Taft College to establish design guidelines for new schools in accordance with City design standards.

Policy LU-89 Convene an annual study session with Taft City School District, Taft Union High School, and Taft College to discuss planning matters that are of mutual interest.

Action LU-89a Have the Community Development Director coordinate with Taft City School District, Taft Union High School, and Taft College to set a date for a joint meeting between the two agencies.

Implementation of the above policies would encourage school siting that minimizes land use and environmental conflicts (Policies PF-18 and PF-19) and would ensure that the City would coordinate with school districts regarding new development and other planning issues (Policies PF-4, PF-9, and LU-89). In addition, future school sites would be subject to CDE standards for school sites. These standards include the consideration of certain environmental, toxic, and other student and staff safety issues during school site selection. These standards would reduce the potential for significant environmental impacts to occur in association with the construction of new school facilities in the Planning Area. Therefore, implementation of the above General Plan policies, along with payment of state and district fees, would ensure that the proposed project's impacts to public schools would be **less than significant**.

Mitigation Measures

None required.

Increased Demand for Post-Secondary Education Facilities

Impact 4.13.3.2 Implementation of the proposed General Plan update would increase population in the Planning Area, which is served by the West Kern Community College District. This is a **less than significant** impact.

Implementation of the GPU is expected to result in increased development within the Planning Area. Although facilities planned by the WKCCD will increase capacity at Taft Community College to 16,000 students by the year 2020, increased development in the Planning Area could result in student enrollment beyond what was planned for in the FCIP. Expansion or construction of new facilities associated with the Taft Community College could result in

environmental impacts such as increased traffic, increased noise, potential habitat loss, degradation of air quality, degradation of water quality, potential conversion of agricultural land, and increased demand for public services such as water, wastewater, and solid waste services. The environmental effects of construction of such facilities within the Planning Area have been programmatically evaluated in the technical analyses of this EIR as part of overall development of the Planning Area. However, the WKCCD would be required to conduct the appropriate environmental review prior to any significant expansion of school facilities or the development of new school facilities. Therefore, this impact would be **less than significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects.

Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies.

Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit.

Policy PF-18 Encourage school districts to locate and site facilities in a manner integrated with the rest of the community.

Policy PF-19 While recognizing that school development is not within the jurisdiction of the City, strongly encourage Taft City School District, Taft Union High School, and Taft College to consider the following criteria:

- That traffic impacts on nearby roadways should be addressed and mitigated to meet City standards for Level of Service.
- That schools serve as a focal point of neighborhood activity and should be interrelated with churches, parks, greenways, and off-street paths whenever possible and designed to promote joint use of appropriate facilities.
- That most residences should be within walking distance of a school (one mile or less) and that all residences should be within two miles of a school whenever possible.

Action PF-19a Convene a focused design effort with Taft City School District, Taft Union High School, and Taft College to establish design guidelines for new schools in accordance with City design standards.

Policy LU-89 Convene an annual study session with Taft City School District, Taft Union High School, and Taft College to discuss planning matters that are of mutual interest.

Action LU-89a Have the Community Development Director coordinate with Taft City School District, Taft Union High School, and Taft College to set a date for a joint meeting between the two agencies.

Implementation of the above policies would encourage the retention and growth of Taft College and the location of new colleges and universities within the City. In addition, Policies PF-18 and PF-19 encourage school siting that minimizes land use and environmental conflicts and Policies PF-4, PF-9, and LU-89 would ensure that the City would coordinate with the WKCD regarding new development and other planning issues. Implementation of General Plan policies, along with the appropriate environmental review of future facilities, would reduce impacts associated with the provision of post-secondary education facilities in the Planning Area to a **less than significant** level.

Mitigation Measures

None required.

4.13.3.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

CUMULATIVE SETTING

Cumulative conditions for public school facilities include all proposed, planned, and approved projects within the district boundaries for the Taft City School District (TCSD) and the Taft Union High School District (TUHSD) for grade school services and the service area of the West Kern Community College District (WKCCD) for post-secondary education services. Under cumulative conditions, it is anticipated that urbanization of the area within these school boundaries and the population in these areas would increase contributing to a cumulative impact on schools and related facilities. In addition, buildout of the Planning Area (beyond year 2035) would result in an incremental cumulative demand for schools and result in additional environmental impacts associated with the development of new sites. The construction of new schools and related facilities would provide additional capacity to accommodate current and future enrollment. However, providing new school sites could result in cumulative environmental impacts on traffic congestion, noise, potential loss of habitat, water, solid waste, etc. The environmental impacts associated with the development of future school sites would be evaluated individually by the school districts for immediate and cumulative impacts as required by the State Board of Education and CEQA.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Public School Impacts

Impact 4.13.3.3 Population growth associated with implementation of the proposed General Plan update, in combination with other existing, planned, proposed,

approved, and reasonably foreseeable development in the cumulative setting, would result in a cumulative increase in student enrollment and require additional schools and related facilities to accommodate the growth. This is a **less than cumulatively considerable** impact.

As discussed under Impact 4.13.3.1 and Impact 4.13.3.2 above, implementation of the proposed GPU is expected to result in population growth that would increase student enrollment in the public schools within the Planning Area and would thus result in the need for new or expanded facilities. These facilities could result in environmental effects, such as those as discussed under Impact 4.13.3.1 above, including increased traffic, noise, potential loss of habitat, water service, water quality, wastewater, solid waste, etc. Specific impacts cannot be known at this time as the potential size and location of future school facilities are unknown. Therefore, this Draft EIR evaluates environmental impacts at a programmatic level. If additional facilities, or expansion of existing facilities, were required under cumulative conditions, environmental impacts would be evaluated at a project level as required by CEQA at the time that projects were being proposed. Cumulative impacts associated with the provision of public school facilities are identical to those considered under Impact 4.13.3.1 and Impact 4.13.3.2 and are, therefore, considered **less than cumulatively considerable**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative public schools impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers.

Public Facilities and Services Element

Policy PF-4; Policy PF-9; Action PF-9a; Policy PF-18; Policy PF-19; Action PF-19a

Land Use Element

Policy LU-89; Action LU-89a

Implementation of the policies listed under Impact 4.13.3.1 and Impact 4.13.3.2 would encourage the retention and growth of Taft College and the location of new colleges and universities within the City. In addition, Policies PF-19 and PF-20 encourage school siting that minimizes land use and environmental conflicts and Policies PF-5, PF-10, and LU-93 would ensure that the City would coordinate with the TCSD, TUHD and WKCCD regarding new development and other planning issues. In addition, future school sites within the TCSD and TUHD districts would be subject to CDE standards for school sites. These standards include the consideration of certain environmental, toxic, and other student and staff safety issues during school site selection. These standards would reduce the potential for significant environmental impacts to occur in association with the construction of new school facilities in the Planning Area. Implementation of General Plan policies, along with the appropriate environmental review

of future facilities, would reduce impacts associated with the provision of education facilities in the Planning Area to a **less than cumulatively considerable** level.

Mitigation Measures

None required.

4.13.4 PARKS AND RECREATION

4.13.4.1 EXISTING SETTING

Park and recreation services are provided to the City of Taft primarily by the Kern County Parks and Recreation Department and the West Side Recreation and Park District. The City also owns and maintains some park facilities. Each entity is described in more detail below.

WEST SIDE RECREATION AND PARK DISTRICT

The West Side Recreation and Park District (WSRPD) serves an area of approximately 407 square miles in western Kern County, including the Planning Area (LSA, 2004, p. 2-24). The purpose of the WSRPD is to provide a well-rounded program of leisure time activities for people residing in the service area through acquisition and development of park and recreation center areas, the development of supervised programs, construction and management of recreation facilities, and cooperative efforts with other agencies in the areas in which they provide like services (Taft Chamber of Commerce, 2009):

- **Community Center** - The Community Center is located at 500 Cascade Place in Taft and has several rooms available for parties, weddings, or other occasions, including an assembly room, auditorium, kitchen, conference room and arts & craft (preschool) room. The Community Center is also used as offices for the WSRPD, for preschool programs, and as a site for a senior nutrition program (Koenig, 2009). There will be an additional two acres added to the Community Center Park when a planned Recreation Center is built in late 2009.

- **A Street Park** - A Street Park is a seven-acre park located on the corner of Hillard Street and 'A' Street in Taft. The park has two covered pavilions, lighted basketball courts, two practice baseball diamonds, off-street parking, restroom facilities and a playground. The pavilions and practice diamonds are available on a first-come, first serve basis unless advance reservations have been made. Both pavilions are covered and have available electricity, lights, water, barbecue grills, and seating for 20. The City contributes to the maintenance of A Street Park.

- **Franklin Field Recreation Complex** - Franklin Field Complex is a 27-acre park located at 281 East Cedar Street in Taft. This park includes three lighted softball diamonds, a BMX/Motocross track, several picnic sites with barbecues, two playground areas, an 18-hole disc golf course, three group picnic pavilions, a 400 capacity parking lot, over 300 shade trees, two restroom facilities and a concession building. The complex is used for

softball leagues and tournaments, instructional baseball and soccer, and special events. The softball diamonds and picnic pavilions are available on a first come, first serve basis unless advance reservations have been made.

- **Mil Potrero Park** – Mil Potrero Park is located 40 miles south of Taft at the foot of Mt. Abel at an elevation of 5,500 feet. The park includes over 47 acres of forest land and lodging (over 40 camping sites and a rental cabin). The park has restrooms, hot showers, a lodge with full kitchen, horse corrals, horseshoe pit, volleyball court, and playground. There is also a fire ring barbecue pit and picnic table at each campsite and the rental cabin has four bedrooms and is fully furnished.

- **West Side Mountain Park** - West Side Mountain Park was established in 1938. It covers 200 acres of land and is located 3 miles north of Pine Mountain Club on Mt. Abel. Elevation ranges from 5,600 - 7,200 feet. There is a cabin and Camp Condor group camping facility available for rent at Mt. Abel. The Camp Condor group camping facility includes ten camper cabins, swimming pool, shower house, craft lodge, infirmary, staff quarters, administrations cabin, cook cabin, and mess hall. During the months of June through August Camp Condor is used by the West Side Children Camp Association who holds a summer camp for boys and girls ages 6 to 14.

- **Walter Glenn Natatorium** - The Walter Glenn Natatorium is the WSRPD's swimming pool facility. The facility consists of two pools, a concession stand, and locker rooms. The first pool is one to three feet in depth and is for children and beginning swimmers. The second is a 35x20-yard pool with a three-meter diving board and a depth ranging from three to twelve feet. The pool is open seven days a week during the summer months for swim lessons, special events and open swim sessions.

- **Skate Escape** - The Skate Escape is a roller-skating facility located at 226 Main Street in Taft. Available activities include roller skating, in-line skating, video games, and music.

- **Skate Park** - The Skate Park is located near the corner of 10th and Kern Streets in the southeast corner of the Community Center Park. The 12,000 square foot skate facility includes a drop-in, rails, half-pipe, pyramid, flat banks and transitions as well as grinding rails, benches, and curbs. The Skate Park is fenced with surrounding grass, trees, lights and restroom facility. The Skate Park is non-supervised and free of charge.

KERN COUNTY PARKS AND RECREATION DEPARTMENT

The Kern County Parks and Recreation Department manages 40 neighborhood parks and 25 public buildings, supervises three golf courses, and landscapes 76 County buildings. Facilities include fishing lakes, Veterans, Senior, Community and Recreation Buildings, group and individual campgrounds, boating, sailing, a soccer park, and museums (Kern County, 2008).

Kern County park and recreation facilities within the Planning Area include (LSA, 2004, p. 2-22 and 2-23) (Wilbanks, 2009) (Kern County, 2009):

- **A. W. Noon Park** – A.W. Noon Park is located within the Planning Area and is bounded by Golf Course Road and Taft Highway (Hwy 119). The park includes the 130-acre Buena Vista Golf Course and approximately 12 acres of developed parkland.

- **Buena Vista Aquatic Recreation Area** – The Buena Vista Aquatic Recreation Area is a 1,585-acre regional park located within the Planning Area approximately 12 miles outside of the City of Taft. Amenities at the recreation area include children's play equipment, two concession buildings, picnic areas, three boat launching sites, and an RV dump station. Activities available at the recreation area include fishing, boating, jet skiing, camping, picnicking, and bicycling.

- **Blanco Little League Complex** – The Blanco Little League Complex is a six-acre neighborhood park within the City of Taft on Cedar Street near Taft Highway (Hwy 119). Amenities at the complex include four little league baseball diamonds, two softball diamonds, concession stands, announcer booths, restrooms, and a picnic shelter.

- **Ford City Park** – Ford City Park is a 4-acre neighborhood park adjacent to the City of Taft along Cedar Street between Polk Street and Tyler Street. The park includes barbeques, picnic areas, restrooms and a playground.

- **Taft Veterans Building** - Taft Veterans Building is located at 218 Taylor Street in Ford City, adjacent to the City of Taft. The building includes two meeting rooms and a kitchen, as well as seating for assemblies and banquets.

City of Taft

The City owns and maintains three facilities: Veterans Memorial Park, a mini-park in downtown, and Rails to Trails. Veterans Memorial Park, located at 209 East Kem Street in Taft, contains 2.9 acres and wraps around City Hall. A mini-park located at 412 Center Street in Taft. It contains 0.15 acres. Rails to Trails is a 1.1-mile walking and bicycling path located between 2nd Street and Hillard Street.

Parkland Standards

<u>West Side Recreation and Park District</u>

The WSRPD does not have an adopted parkland-to-resident ratio, but uses 2.5 acres per 1,000 residents ratio as a guideline. The WSRPD does not currently have a parks master plan (Koenig, 2009).

<u>Kern County Parks and Recreation Department</u>

The Kern County Land Division Ordinance currently requires 2.5 acres of parkland per 1,000 population for Quimby fees (discussed under Regulatory Framework below). However, the County is currently developing a new parks master plan and anticipates an increase to 5 acres parkland per 1,000 population for Quimby fees and a total requirement of 10 acres of parkland

per 1,000 population consistent with National Park and Recreation Association recommendations.

City of Taft

The City does not have an adopted parkland-to-resident ratio.

Funding

West Side Recreation and Park District

The WSRPD is funded through user fees, property taxes (primarily from oil field properties), and grants. The WSRPD is not anticipating any expansion of facilities or services and has not grown within the last ten years due to revenue constraints (LSA, 2004, p. 2-27).

Kern County Parks and Recreation Department

The Kern County Parks and Recreation Department is a general fund department, meaning it is funded through the County's General Fund. The County is also considering implementing a developer fee for parks along with the establishment of assessment districts for the continued maintenance of new parks. If development fees are put into place, funding would increase with new development in the County.

City of Taft

Currently, the City does not require new development to dedicate parkland or pay in-lieu fees to fund new parkland. The City's parks are funded via the General Fund and maintained by the Public Works department (Gorte, 2009).

4.13.4.2 REGULATORY FRAMEWORK

STATE

The California Parklands Act of 1980

Although a recreation element is not mandated by law to be included in a General Plan, recreation resources are to be considered in the Open Space Element of a General Plan (Government Code Section 65560). The California Parklands Act of 1980 (Pub. Res. Code Section 5096.141-5096.143) identifies "the public interest for the state to acquire, develop, and restore areas for recreation…and to aid local governments of the state in acquiring, developing and restoring such areas…" The California Parklands Act also identifies the necessity of local agencies to exercise vigilance to see that the parks, recreation areas, and recreational facilities they now have are not lost to other uses.

Quimby Act

The goal of the 1975 Quimby Act (California Government Code Section 66477) was to have developers help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements if required to do so by local governments. The Quimby Act gave authority for passage of land dedication ordinances only to cities and counties, thus requiring special districts to work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide park and recreation services community-wide. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities (Westrup, 2002).

Originally, the Quimby Act was designed to ensure "adequate" open space acreage in jurisdictions adopting Quimby Act standards (e.g., 3-5 acres per 1,000 residents). In some California communities the acreage fee was very high where property values were high, and many local governments did not differentiate on their Quimby fees between infill projects and green belt developments. In 1982, the Quimby Act was substantially amended via AB 1600. The amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (nexus) to a project's impacts as identified through studies required by CEQA. In other words, AB 1600 requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or park land and the type of development project upon which the fee is imposed (Westrup, 2002). Cities or counties with a high ratio of parkland to inhabitants can set a standard of 5 acres per 1,000 residents for new development. Cities or counties with a lower ratio can only require the provision of up to 3 acres of parkland per 1,000 residents. The calculation of a City's or County's parkland-to-population ratio is based on a comparison of the population count of the last federal census to the amount of City- or County-owned parkland.

LOCAL

City of Taft Zoning Ordinance

Park and Recreation Facilities Requirements

Chapter 10, Section 6.10.200, of the Zoning Ordinance sets forth dedication requirements to implement the proposed General Plan standard of 2.5 acres of neighborhood park, community park, and/or recreational facilities per 1,000 persons residing in the City. The Ordinance also includes provisions for fees paid in lieu of park dedication.

Reservation of Lands for Public Facilities

Chapter 10, Section 6.10.240, of the Zoning Ordinance allows for the City to require that areas of real property within a subdivision or other residential, commercial, or industrial development be reserved for parks and recreational facilities, fire stations, libraries, or other public uses such as, but not limited to, domestic water and sewage facilities.

Outdoor Recreational Facilities (Public)

Chapter 10, Section 6.10.240, of the Zoning Ordinance contains development standards for outdoor recreational facilities. The standards are intended to ensure that outdoor recreational facilities open to the public within or adjacent to a residential district do not adversely impact adjacent residential parcels and are utilized in a manner which protects the integrity of the district while allowing for the enjoyment of a healthful, recreational activity.

4.13.4.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A park and recreation impact is significant if implementation of the proposed project 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.

Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

METHODOLOGY

Evaluation of potential park and recreation service impacts was based on information provided by the City of Taft, the WSRPD, and Kern County. A detailed list of reference material used can be found at this end of this section. This material was compared to the proposed GPU's specific park and recreation service-related impacts. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment.

The City of Taft General plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

IMPACTS AND MITIGATION MEASURES

Increased Demand for Parks and Recreation Facilities

Impact 4.13.4.1 Implementation of the proposed General Plan update would increase the demand for existing facilities and require additional parks and recreational facilities to accommodate the anticipated growth associated with the GPU. This impact is considered to be **less than significant.**

Implementation of the proposed General Plan update is expected to result in a total population of 68,018 within the Planning Area at buildout. This represents an increase of 49,948 persons over existing conditions within the Planning Area. Increased population would increase the use of existing neighborhood and regional parks and recreational facilities. Increased population would also require additional parkland and facilities to accommodate anticipated increased demand. While the City does not currently have an adopted standard relative to parkland, the proposed General Plan establishes a standard of 2.5 acres of neighborhood parks, community parks, and recreational facilities per 1,000 persons residing in the City through dedication of land or payment of in-lieu fees. Based on that proposed standard, the GPU would result in the need for a total of 170 acres of parkland within the Planning Area at buildout (68.018 thousand persons x 2.5 acres per 1,000 persons).

The typical environmental impacts regarding the construction and operation of parks and recreational facilities include noise (during construction and associated with playfields and playgrounds), air quality (during the construction of the facility), biological resources (depending on location), historic/cultural resources (depending on location), public services and utilities (demand for police and fire protection, electric, water, and wastewater service), and traffic on a local neighborhood level. The environmental effects of construction of such facilities within the Planning Area have been programmatically evaluated in the technical analyses of this EIR as part of overall development of the Planning Area. The City would be required to conduct the appropriate project-specific environmental review prior to the development of new park and recreation facilities. This impact is **less than significant**.

Currently, there are limited funding mechanisms available to park and recreation providers in the Planning Area. Neither the WSRPD nor the City currently has measures in place for land dedications or development impact fees to fund new park facilities. In addition, the WSRPD is currently facing budget constraints and would be unlikely to be able to accommodate any increase in growth or upgrading of facilities beyond existing facilities.

<u>Proposed General Plan Policies and Action Items that Provide Mitigation</u>

Policy OS-1 Manage parks, trails, open spaces, and recreational facilities with innovative best management practices to achieve long-term energy, water, and resource conservation.

Policy OS-2 Ensure that development of parkland, recreation facilities, programming capacity, and natural open space capacity keeps pace with development and growth in the City's Planning Area.

Action OS-2a In cooperation with the West Side Recreation and Park District, develop a Park and Recreation Master Plan, outlining future parkland and facility needs, goals, policies, classifications, and standards.

Action OS-2b Develop and implement a Park Impact and Parkland Dedication Ordinance consistent with the Quimby Act.

Action OS-2c Collaborate with the County of Kern and the West Side Recreation and Park District to acquire, develop, and program additional regional park facilities.

Policy OS-4 Expand the system of multi-use paths and trails available for transportation and recreation.

Action OS-4a Prioritize expansion of Rails to Trails as shown on Figure 4.0-2 (Bikeways and Pedestrian Trails Map).

Policy OS-5 Pursue the shared use and management of private and public facilities, including schools, libraries, stormwater basins, and other civic locations, to meet community needs for open space, parks, recreation programs, and facilities.

Action OS-5a Coordinate with the Taft City School District and West Side Recreation and Park District.

Action OS-5b Utilize agreements to share facilities with the Taft City School District and West Side Recreation and Park District.

Policy OS-6 Pursue Joint Use Agreements, Memoranda of Understanding, public access easements, and other means to provide additional trails in conjunction with private and public agency partners, such as the federal Bureau of Land Management (BLM), utility districts, irrigation districts, and transportation providers.

Policy OS-7 Require new residential development projects, including mixed-use projects with residential components, to provide a minimum of 2.5 acres of park land per 1,000 persons through dedication of land or payment of in-lieu fees to contribute to the acquisition and development of parks or recreation facilities consistent with the following:

a) That all lands offered for dedication be of the size, orientation, location, and suitability to provide park and recreation facilities consistent with the City's

park and recreation classifications and standards and with the requirements of the West Side Recreation and Park District.

b) That private trails, school park and recreation facilities, and private parks or open spaces not receive full credit toward the City's land dedication requirements. Such lands may be used for partial credit, not to exceed 50 percent, with approval of the City Council.

Policy OS-8 Use a range of funding and economic development tools to implement development, maintenance, and programming for City parks and recreation facilities, such as tax-increment financing, special assessment districts, and private and public grant funding.

Policy OS-9 Support stewardship of existing and new facilities with volunteer labor and donations.

Action OS-9a Form a public/private partnership program to obtain grants or loans through nonprofit fundraising to "adopt a park" or "adopt a trail."

Policy OS-10 Ensure that all new parks, trails, and recreational facilities are designed for universal access and work to make existing parks, trails, and recreational facilities universally accessible.

Policy OS-11 Ensure that the design of new parks, trails, and facilities enhances community pride by providing wayfinding signage and monumentation that celebrates the City's heritage and minimizes negative impacts to the surrounding neighborhoods.

Action OS-11a Involve the community in the planning and design process for all new parks, trails, and recreational facilities.

Action OS-11b Incorporate, as appropriate, in the design of parks and recreation facilities elements that reflect Taft's character and heritage.

Implementation of the above GPU policies and associated action items would establish parkland standards and funding mechanisms within the Planning Area in order to meet projected growth (Policy OS-2 and Policy OS-7). In addition, the proposed GPU includes a policy requiring the City, in coordination with the WSRPD, to develop a Park and Recreation Master Plan that outlines future parkland and facility needs, goals, policies, classifications, and standards (Policy OS-2). Implementation of the above policies, along with the implementing requirements in City's Zoning Code, would ensure that adequate parkland would be provided concurrent with increased growth in the Planning Area and that parkland development and maintenance would be planned for and funded. Therefore, impacts associated with increased demand for park and recreation facilities would be reduced to a **less than significant** level.

Mitigation Measures

None required.

4.13.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for parks and recreation consists of the GPU Planning Area, as well as the service areas for the WSRPD and the Kern County Parks and Recreation Department. The Kern County Parks and Recreation Department serves all of Kern County, while the WSRPD serves the City of Taft and the surrounding unincorporated areas of Kern County. This setting discussion also include all proposed, planned, reasonably foreseeable, and approved projects within the region (see Section 4.0), as well as full development of the Planning Area as proposed in the proposed project, expected to occur in the year 2035 and beyond. Any existing, planned, proposed, approved, and reasonably foreseeable development within the cumulative setting that currently places demand on the region's park and recreation facilities, or is expected to place demand on them in the future, could contribute to cumulative impacts.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Park and Recreation Demands

Impact 4.13.4.2 Implementation of the proposed project along with other existing, planned, proposed, approved, and reasonably foreseeable development within the service areas of WSRPD and Kern County Parks and Recreation Department, would result in cumulative park and recreation impacts. This impact is considered to be **less than cumulatively considerable**.

Buildout of the Planning Area under the proposed GPU would contribute to the cumulative demand for regional and local park and recreational facilities and services in the WSRPD boundaries and in Kern County. As previously discussed, individual development projects associated with the GPU would be subject to parkland standards per City and Quimby Act requirements, which satisfy the provision of physical parkland. The proposed General Plan update also includes policies requiring the City, in coordination with the WSRPD, to develop a Park and Recreation Master Plan that outlines future parkland and facility needs, goals, policies, classifications, and standards. In addition, Kern County is currently drafting a park and recreation master plan and considering the implementation of development impact fees to fund County park and recreation facilities (Wilbanks, 2009).

Therefore, implementation of the proposed GPU would provide for adequate park and recreation capaCity and sufficient funding to meet projected growth within the Planning Area. Other development projects in the region would be subject to Quimby Act requirements, as well as any further requirements enacted by Kern County. Cumulative parks and recreational facility impacts are anticipated to be **less than cumulatively considerable**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative public schools impact. Since these policies and actions have been

described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers.

Open Space and Conservation Element

Policy OS-1; Policy OS-2; Action OS-2a; Action OS-2b; Action OS-2c; Policy OS-4; Action OS-4a; Policy OS-5; Action OS-5a; Action OS-5b; Policy OS-6; Policy OS-7; Policy OS-8; Policy OS-9; Action OS-9a; Policy OS-10; Policy OS-11; Action OS-11a; Action OS-11b

The proposed General Plan policies identified under Impact 4.13.4.1 above would reduce the proposed GPU's contribution to cumulative impacts associated with providing increased park and recreation services. The proposed policies would establish parkland standards and funding mechanisms within the Planning Area in order to meet projected growth (Policy OS-2 and Policy OS-7). In addition, the proposed GPU includes a policy requiring the City, in coordination with the WSRPD, to develop a Park and Recreation Master Plan that outlines future parkland and facility needs, goals, policies, classifications, and standards (Policy OS-2). Implementation of the above GPU policies and associated action items, and compliance with proposed City standards and development impact fees would reduce the proposed GPU's contribution to park and recreation impacts to **less than cumulatively considerable**.

Mitigation Measures

None required.

4.13.5 WATER SERVICE

4.13.5.1 EXISTING SETTING

CALIFORNIA STATE WATER PROJECT

The California State Water Project (SWP) is a water storage and delivery system of reservoirs, aqueducts, power plants and pumping plants that store water and distribute it to 29 urban and agricultural water suppliers in Northern California, the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and Southern California. The SWP is maintained and operated by the California Department of Water Resources and makes deliveries to two-thirds of California's population. Of the contracted water supply, 70 percent goes to urban users and 30 percent goes to agricultural users. The SWP currently includes 32 storage facilities, reservoirs and lakes; 17 pumping plants; 3 pumping-generating plants; 5 hydroelectric power plants; and about 660 miles of open canals and pipelines (California Department of Water Resources, 2008).

As discussed below, all of the water service agencies serving the Planning Area receive water, either directly or indirectly, from the SWP. However, SWP supplies are often unreliable due to unpredictable rainfall, insufficient storage south of the San Joaquin Delta, and inadequate conveyance facilities. Furthermore, supplies of water from the Eel River became unavailable with the implementation of the Wild and Scenic Rivers Act and a canal to divert water around the Delta is yet to be completed. Endangered species issues in the Delta have reduced the supplies

of water that may be exported from the Delta. Also, an earthquake in the Delta could destroy many of the levees that allow fresh water to be conveyed through the Delta thereby detaching southern California from a primary water supply (Kern Water Bank Authority, 2008). Therefore, water service agencies must obtain water from other sources, including from the open water market, in order to provide an adequate water supply to both urban and agricultural customers in the Planning Area.

KERN COUNTY WATER AGENCY

The Kern County Water Agency (KCWA) serves as the local contracting entity for the SWP and participates in a wide scope of related activities to preserve and enhance Kern County's water supply. The KCWA's functional areas of responsibility include: the SWP; Improvement District No. 4; the Cross Valley Canal; groundwater; groundwater banking; flood control; and outreach activities. The KCWA has long-term contracts with 13 local water districts called "Member Units", as well as Improvement District No. 4, for SWP water (Kern County Water Agency, 2008). The Member Units include the following districts:

- Belridge Water Storage District;
- Berrenda Mesa Water District;
- Buena Vista Water Storage District;
- Cawelo Water District;
- Henry Miller Water District;
- Kern Delta Water District;
- Lost Hills Water District;
- Rosedale-Rio Bravo Water Storage District;
- Semitropic Water Storage District;
- Tehachapi-Cummings County Water District;
- Tejon-Castac Water District;
- West Kern Water District; and,
- Wheeler Ridge-Maricopa Water Storage District.

Since 1968, the Member Units have received over 31 million acre-feet of SWP water. Under the terms of the Monterey Amendment, which was implemented in 1995, KCWA Member Units and the Dudley Ridge Water District agreed to permanently retire 45,000 acre-feet (af) of SWP Entitlement water in exchange for transferring the Kern Water Bank property from the Department of Water Resources to the KCWA. The Kern Water Bank property was simultaneously transferred from the KCWA to the Kern Water Bank Authority in 1995. In addition, the KCWA agreed to allow up to 130,000 af of "Table A" water (first priority for delivery) to be permanently sold to urban contractors on a willing buyer and seller basis (Kern County Water Agency, 2008).

The Cross Valley Canal (CVC) serves as the KCWA's primary conduit for water deliveries to and from the California Aqueduct. In the mid-1970s, the KCWA contracted with various water districts (CVC Participants) for the construction and operation of the CVC. The first 17 miles of

its 21.5-mile length are concrete-lined to minimize seepage losses. The CVC has the ability to deliver up to 1,830 af of water per day through seven lift stations to a combination of participant water districts and water banking projects for agricultural, municipal and water recharge purposes. Construction has commenced on the CVC Expansion Project, which will expand conveyance capacity from 922 cubic feet per second (cfs) to 1,422 cfs (an increase of about 54 percent), plus an additional 500 cfs of capacity in the CVC/Friant-Kern Canal Intertie (Kern County Water Agency, 2008). The CVC Expansion project is scheduled to be completed in 2009 (Prince, 2009).

KERN WATER BANK AUTHORITY

The Kern Water Bank Authority (KWBA) is a Joint Powers Authority (JPA) that was formed in October 1995 when the Kern Water Bank property was transferred from the KCWA. The primary purpose of the KWBA is to recharge, store, and recover water to improve the water supply for participants during periods of water shortages. The Kern Water Bank provides a mechanism to help mitigate the reliability problems associated with the SWP (Kern Water Bank, 2008). Participants in the JPA include the Dudley Ridge Water District; the Kern County Water Agency, Improvement District 4; the Semitropic Water Storage District; the Tejon-Castac Water District; the Westside Mutual Water Company; and the Wheeler Ridge-Maricopa Water Storage District.

The Kern Water Bank is located in the southwestern San Joaquin Valley and occupies approximately 30 square miles of valley floor southwest of Bakersfield. The Water Bank can receive water from the Kern River, the California Aqueduct (collecting water from the northern Sierra Nevada) and the Friant-Kern Canal (collecting water from the central and southern Sierra Nevada). The Kern Water Bank operates by recharging water in recharge basins when it is plentiful, storing the water in an aquifer until needed, and then recovering the stored water through approximately 80 water supply wells located throughout the Water Bank. In addition to the wells, conveyance and recovery facilities include a 6-mile long canal and over 17 miles of pipeline. The wells are drilled to depths ranging from 700 to 1,000 feet and will each produce 2,500 to 5,000 gallons per minute (gpm). The pipelines connect the wells to the Kern Water Bank Canal, California Aqueduct, and the Cross Valley Canal. The Kern Water Bank has the capability of storing over 1,000,000 acre-feet on a long-term basis and the KWBA has stored approximately 1,300,000 acre-feet since its inception. The program also has the capability of extracting approximately 240,000 af per year (af/y) (Kern Water Bank, 2008).

WATER SERVICE PROVIDERS

Currently, the West Kern Water District (WKWD) provides water service to the City of Taft. However, the proposed Planning Area encompasses portions of the service areas of the following agencies: the Arvin Edison Water Storage District, the Buena Vista Water Storage District, the Henry Miller Water District, the Kern Delta Water District, the Kern Water Bank, the Rosedale-Rio Bravo Water Storage District, and the Wheeler Ridge-Maricopa Water Supply District. There is, however, no expectation that any district other than WKWD will provide potable water to accommodate growth associated with the General Plan Update. The other water supply agencies within the Planning Area operate either as water storage districts, agricultural

water suppliers, industrial water providers or water wholesalers. None of them provide municipal water service and the expansion of the City's SOI to the Planning Area will have little, if any, impact on those districts' existing operations (Tulley and Young, 2009, p. 9).

West Kern Water District

The West Kern Water District (WKWD) provides water services to a 250-square mile service area that includes the City of Taft and surrounding area (see **Figure 4.13.5-1**). Currently, the WKWD serves a total of 7,589 connections. Of those, approximately 7,200 are domestic and commercial accounts and 410 are industrial accounts. Domestic water use accounts for approximately 20% of WKWD's sales. Industrial water served by WKWD is primarily used in the oil and electric power generating industries in western Kern County. WKWD also provides water service to three parks, one golf course, one high school, and one junior college's sporting fields (Tulley and Young, 2009, p. 27). The WKWD serves 1,446 residential/non-residential connections in the City of Taft. The WKWD delivered an average of 19,456,373 gpd in 2005/06; 20,956,213 gpd in 2006/07; and 19,951,980 gpd in 2007/08 (Bramlet, 2008).

WKWD Water Supplies

WKWD has several interlinked sources of water supplies. For simplicity purposes, these supplies are categorized as "surface water supplies" and "groundwater supplies" in the following sub-sections. This information is taken from the *Water Supply Evaluation* prepared for the General Plan Update (Tulley and Young, 2009).

Surface Water Supplies

WKWD holds a contract with KCWA to obtain water through the SWP. WKWD entered this contract in 1966. KCWA, in turn, holds a master contract with the State of California to receive water from the SWP. WKWD and 15 other local water districts and cities, called member units, subcontract with KCWA for SWP water (see discussion above). WKWD's SWP entitlement totals 31,500 acre-feet per year. This contractual entitlement is normally subject to reduction by California's Department of Water Resources' delivery reduction criteria. For planning purposes, WKWD relies upon a reduced SWP delivery in all year types. WKWD takes delivery of the majority of its SWP water through a complicated water exchange system that involves Buena Vista Water Storage District (BVWSD). In simple terms, BVWSD takes WKWD's SWP contract entitlement and uses that water supply for BVWSD's purposes. In exchange for this delivery to BVWSD, WKWD pumps groundwater to serve its residential customers. This "in-lieu groundwater pumping/groundwater banking exchange program" has other subtleties but allows the BVWSD to manage SWP surface water to benefit WKWD's groundwater extractions. This arrangement is more fully described in the Groundwater sub-section below.

WKWD has two surface water diversion turnouts on the California Aqueduct. These turnouts have traditionally been used to deliver untreated water to industrial customers. Currently, only one of these turnouts is operated by WKWD, which supplies untreated water – up to 6,500 af/y – to the La Paloma Power Company under a 2001 water service agreement.

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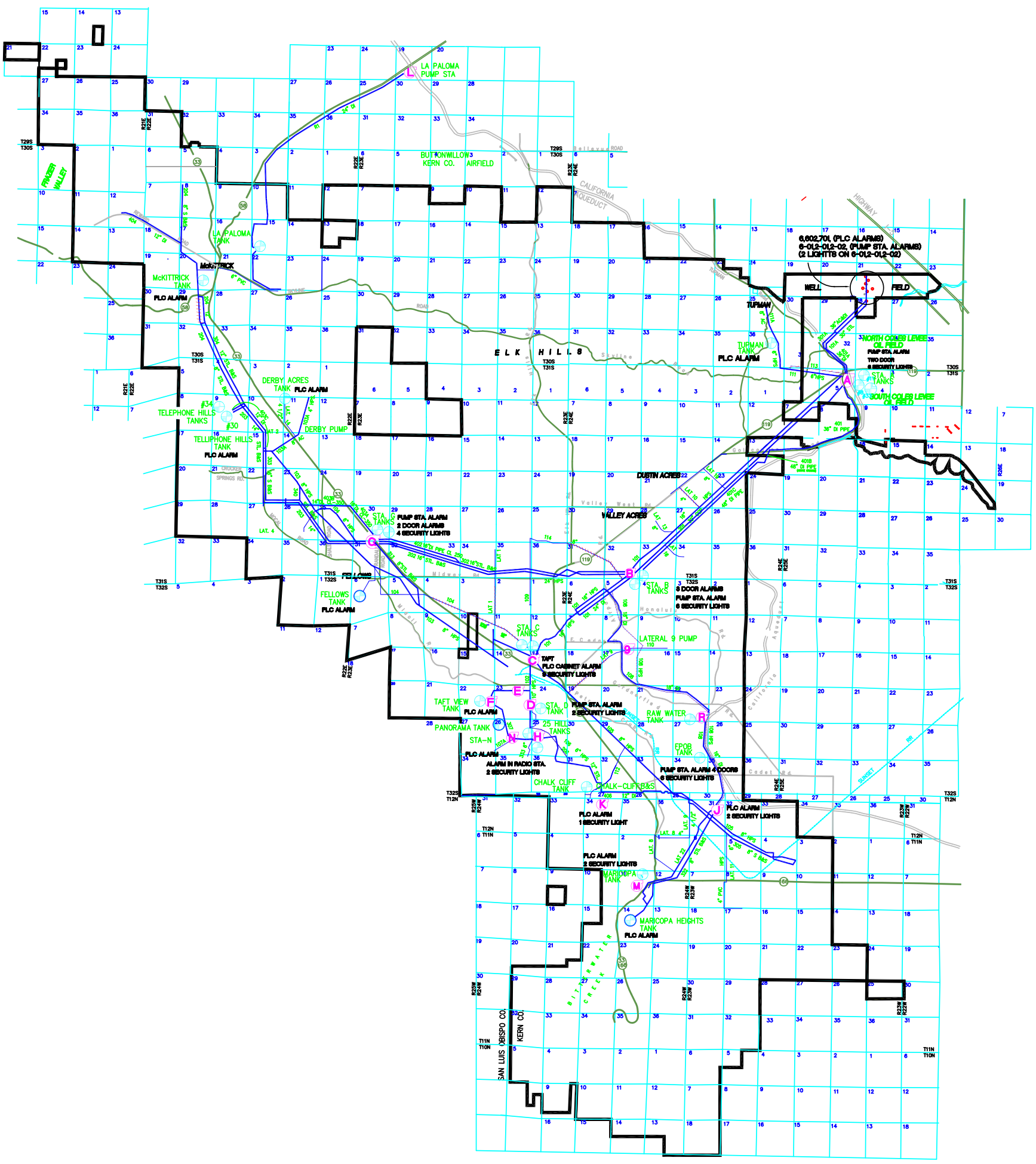

LEGEND

MAIN LINES

LINE NO	DESCRIPTION
101	16" H.P. STEEL
101-A	30" STEEL
102	10" H.P. STEEL
103	8" H.P. STEEL & 12" D.I.
103-A	8" AC
104	6" H.P. STEEL
105	8" H.P. STEEL
106	6" H.P. STEEL
107	6" HPS (ABANDONED)
107-A	6" DI
108	18" & 16" H.P. D.I.
110	6" H.P. STEEL
111	6" H.P. STEEL
111-A	8" AC & 6" H.P. STEEL
112	4" H.P. STEEL
113	8" H.P. STEEL (ABANDONED)
114	8" H.P. STEEL (ABANDONED)
201	30" CCP
202	16" STEEL BELL & SPIGOT
203	14" STEEL BELL & SPIGOT MORTAR LINED

MAIN LINES

LINE NO	DESCRIPTION
204	8" STEEL BELL & SPIGOT MORTAR LINED & 12" D.I.
206	12" STEEL BELL & SPIGOT MORTAR LINED
301	36" AC & DI
302	16" STEEL BELL & SPIGOT MORTAR LINED
303	16" STEEL BELL & SPIGOT MORTAR LINED
304	12" STEEL BELL & SPIGOT MORTAR LINED
305	8" STEEL BELL & SPIGOT MORTAR LINED
307	8" STEEL BELL & SPIGOT MORTAR LINED
313	8" D.I.
322	8" STEEL BELL & SPIGOT MORTAR LINED
333	6" STEEL BELL & SPIGOT MORTAR LINED
340	8" STEEL BELL & SPIGOT MORTAR LINED & D.I.
404	12" D.I.
406	12" DI

LATERALS

1	H.P. STEEL
2	8" AC
3	4 1/2" H.P. STEEL
4	3" H.P. STEEL
8	4" H.P. STEEL
8-A	2" H.P. STEEL
9	4 1/2" H.P. STEEL

LATERALS

10	4" H.P. STEEL (ABANDONED)
11	6" H.P. STEEL
13	STEEL
14	4 1/2" H.P. STEEL
16	4" PVC SCHD. 40
19	8" PVC
22	H.P. STEEL

RAW WATER LINES

1	R1 24" DI BELL & SPIGOT

WATER LINE
ABANDONED LINE
EXISTING WKWD BOUNDARY
PUMP STATION
TANK

Source: West Kern Water District, 2004

N

Figure 4.13.5-1
West Kern Water District
Service Area Boundary and Facilities

PMC

The reliability of SWP supplies can vary significantly depending on hydrologic year type. Most notably, the State of California Department of Water Resources (DWR) recommends relying on only a portion of SWP supplies during normal years. In August 2008, the DWR issued *The State Water Project Delivery Reliability Report 2007*. This report is intended to help local agencies, cities, and counties that use SWP water to develop adequate and affordable water supplies for their communities. This report projected that average, normal-year deliveries of SWP water to contractors such as KCWA would be 66 to 69 percent of full contract amounts in 2027. DWR recommends that this range should be used in water supply planning. SWP supplies are likely to be subject to further reductions during dry periods. In fact, WKWD received only 35 percent of its contractual entitlement in 2008 and is projecting that it will receive only 15 percent of its contractual entitlement in 2009 because of the ongoing statewide drought. WKWD's 2005 Urban Water Management Plan does not rely on its full contractual entitlement of SWP water in its projections. WKWD reduced its SWP allocation to a median percentage of 77.2 percent of its full entitlement based on a 2005 draft of DWR's *State Water Project Delivery Reliability Report*. These constantly changing reports weigh heavily on WKWD's reliability determination for its SWP water supply.

WKWD has no other surface water rights or entitlements other than its SWP contract. WKWD, however, is active in acquiring surface waters in the active regional water market. In some years, WKWD has acquired SWP water that can be delivered directly to BVWSD through the California Aqueduct. In other times, WKWD acquires other types of water supplies – appropriative water rights or Central Valley Project (CVP) water supplies – to exchange with other entities to allow them to access additional groundwater from their well field. There are numerous complicated agreements and accounting mechanisms associated with these water acquisitions. Most of these acquisitions involve banking and exchange arrangements with neighboring (or overlapping) regional water storage districts or the KWBA. Deciphering all of these interconnected instruments is beyond the scope of this analysis.

The last surface water supply component involves WKWD and Wheeler Ridge-Maricopa Water Storage District (Wheeler). WKWD has a contract with Wheeler to provide residential service in Wheeler's service area. This service is limited to a few residential homes but is indicative of the intent to allow WKWD to continue to be the sole municipal water provider at this time for residential developments in the Planning Area.

Groundwater Supplies

WKWD has no surface water treatment facility so all of the water it supplies, with the exception of the untreated water delivered through the two California Aqueduct turnouts for industrial purposes, is pumped from its groundwater wells. As discussed in the surface water supply section above, WKWD has a in-lieu banking and exchange program with BVWSD, which is located near WKWD. BVWSD typically obtains water from a number of sources depending upon availability, including the Kern River, SWP, CVP, and from local groundwater pumping. These water supply acquisitions may take the form of in-lieu water deliveries where BVWSD may obtain a surface water supply in one location and deliver that water supply to another water provider in exchange for the second water supplier forbearing from pumping groundwater. In other cases, BVWSD obtains these water supplies and spreads the supplies over "spreading

basins" so as to percolate into the groundwater aquifer and directly "recharge" the groundwater basin. In all of these cases, BVWSD accumulates a groundwater supply that it has exclusive rights to through specific water accounting criteria. As discussed above BVWSD takes WKWD's SWP water from the California Aqueduct instead of pumping local groundwater. BVWSD then uses that water to recharge the groundwater basin. WKWD can then pump groundwater or bank (store) a volume of water equivalent to the amount which BVWSD takes from the SWP diversion (or other sources acquired by WKWD). As part of the in lieu banking and exchange arrangement with WKWD, BVWSD can "turn back" SWP water in extremely wet years where it can meet its needs through other sources of supply – most likely Kern River water supplies. In these years, WKWD will exchange or take delivery of the SWP water through conveyance facilities provided by the KWBA or the CVC. This SWP water can then be delivered to WKWD's groundwater spreading area and credited to WKWD's groundwater banking program.

WKWD pumps groundwater from the Kern County groundwater sub basin (more specifically from the Kern River Fan) which is part of the San Joaquin Valley Basin as defined by the DWR. The Kern County Groundwater sub basin is bounded on the north by the Kern County line and the Tule Groundwater sub basin, on the east and southeast by granitic bedrock of the Sierra Nevada foothills and Tehachapi Mountains, and on the southwest and west by the marine sediments of the San Emigdio Mountains and Coast Ranges. The average subbasin water level is essentially unchanged from 1970 to 2000, after experiencing cumulative changes of approximately -15 feet through 1978, a 15-foot increase through 1988, and an 8-foot decrease through 1997. However, net water level changes in different portions of the subbasin were quite variable through the period between 1970 and 2000. These changes ranged from increases of over 30 feet at the southeast valley margin and in the Lost Hills/Buttonwillow areas to decreases of over 25 and 50 feet in the Bakersfield area and McFarland/Shafter areas, respectively.

Existing and Projected Water Demand

As represented in WKWD's draft 2005 Urban Water Management Plan, WKWD's historic and projected water demands are described in **Table 4.13.5-1** below. The water demands projected by WKWD in its draft 2005 UWMP assume full use by industrial customers and a small annual increase in population of 0.5 percent. **Table 4.13.5-2** below compares projected demand and projected supply. As shown, WKWD would have a surplus of about 27, 254 af/y in 2025.

TABLE 4.13.5-1
WKWD HISTORIC AND PROJECTED WATER DEMAND

Demand Sector	Demand (af/y)					
	2000	2005	2010	2015	2020	2025
Single-Family	4,280	4,191	4,240	4,291	4,342	4,395
Industrial	10,708	15,623	15,945	15,945	15,945	15,945
Institutional/Government	365	465	465	465	465	465
Landscape	887	812	812	812	812	812
Raw Water (La Paloma)	0	3,442	6,500	6,500	6,500	6,500
Subtotal	**16,240**	**24,553**	**27,962**	**28,064**	**28,064**	**28,117**
Conveyance and Process Losses	810	148	280	281	281	281
Total	**17,050**	**24,681**	**28,242**	**28,293**	**28,345**	**28,398**

Source: Tulley and Young, 2009, p. 27.

TABLE 4.13.5-2
WKWD WATER SUPPLY AND DEMAND BASED ON DRAFT 2005 UWMP

Water Supply Source	Projected Supply (af/y)				
	2005	2010	2015	2020	2025
SWP Water (from (KCWA)	28,350	24,318	24,318	24,318	24,318
Transfers In (KWBA)	0	6,000	6,000	6,000	6,000
Exchanges In (Rosedale-Rio Bravo WSD)	0	3,333	3,333	0	0
Additional Sources	10,279	3,000	3,000	3,000	3,000
Kern River Alluvial Fan (WKWD Bank Extraction)	17,023	19,001	19,001	22,334	22,334
Totals	**55,652**	**55,652**	**55,652**	**55,652**	**55,652**
	Projected Demand (af/y)				
Water Demand	**24,681**	**28,242**	**28,293**	**28,345**	**28,398**
	Projected Surplus (af/y)				
Surplus	**30,971**	**27,410**	**27,359**	**27,307**	**27,254**

Source: Tulley and Young, 2009, p. 30.

WKWD Water Supply Infrastructure

The WKWD supplies customers with groundwater pumped from their well field located east of the California Aqueduct and north of Highway 119. Currently eight water wells provide a capacity of 33,150 gallons per minute (gpm), or 53,471 acre-feet per year (af/yr) (see **Table 4.13.5-3** below). The maximum delivery capacity of the wells is 30 million gallons per day (gpd).

TABLE 4.13.5-3
WEST KERN WATER DISTRICT
INDIVIDUAL WELL CAPACITY

Well Number	Capacity (gallons per minute)	Capacity (acre-feet per year)
2-01	3,200 gpm	5,162 af/yr
2-02	4,800 gpm	7,742 af/yr
6-01	4,000 gpm	6,452 af/yr
6-02	4,000 gpm	6,452 af/yr
6-03	4,000 gpm	6,452 af/yr
6-06	4,750 gpm	7,662 af/yr
7-01	4,000 gpm	6,452 af/yr
7-02	4,400 gpm	7,097 af/yr
Total CapaCity	**33,150 gpm**	**53,471 af/yr**

Source: Bramlet, J.D. Assistant G.M./Operations Manager, West Kern Water District. Personal Communication (Letter). December 2, 2008.

All production water from the well fields is first pumped to Station A located west of the California Aqueduct and south of Highway 119 via a 36 inch pipeline (Quad-Knopf, 2008, p. 4). **Figure 4.13.5-1** below shows the location of WKWD's existing facilities, including main lines, laterals, raw water lines, pump stations, and tanks. As shown, WKWD's transmission pipelines includes 30 main lines sized from 6 to 36 inches and 16 laterals sized from 2 to 8 inches. The WKWD has indicated that many of the 2-, 3-, and 4-inch water lines are undersized and inadequate. Because a smaller pipe generates more friction than a larger pipe for the same amount of water, certain areas within the City of Taft currently experience reduced water pressure and an increased risk for leaks (Urban Futures, 2009). The WKWD has a proposed 10-year Transmission/Distribution Facilities Improvement Plan that identifies transmission and distribution facilities needed to serve the WKWD in the future, which includes upsizing of some of the smaller pipes.

The WKWD has 8 water storage tanks that provide water storage for the "Taft Area", which includes the area within the City limits, Ford City, South Taft, and Taft Heights. The total capaCity of those tanks is 9,710,000 gallons (see **Table 4.13.5-4** below). Although the WKWD has no immediate plans for new water storage tanks, it has identified the potential for new 3 new

tanks - one at Honolulu Road (1,000,000 gallons), one at Taft Heights (1,000,000 gallons), and one near Petroleum Club Road (1,000,000 gallons) – for a total additional capaCity of 3,000,000 gallons. The WKWD states that there are no water storage issues associated with the City of Taft (Bramlet, 2008).

TABLE 4.13.5-4
WEST KERN WATER DISTRICT
INDIVIDUAL WATER STORAGE TANK CAPACITY

Water Storage Tank	Capacity (gallons)
Tank #12 Station C (East)	1,050,000
Tank #13 Station C (West)	1,050,000
Tank #22 Panorama	500,000
Tank#19 Taft View	410,000
Tank #15 25 Hill South	2,500,000
Tank #2 25 Hill North	2,300,000
Tank #35 Station "D"	1,000,000
Tank #18 Station "D"	900,000
Total	**9,710,000**

Neither the City of Taft nor the WKWD own or operate a domestic water treatment facility. Water purchased from the SWP and other purveyors is used to recharge groundwater, which is then pumped from WKWD wells. The WKWD does not identify any water pollution or contamination issues with its water supply (Bramlet, 2008). However, water quality issues are discussed in more detail in Section 4.13, Hydrology and Water Quality, of this Draft EIR.

Arvin Edison Water Storage District

The Arvin-Edison Water Storage District (AEWSD) supplies water to approximately 132,000 acres of agricultural land within the Planning Area. The AEWSD is a conjunctive use program whereby the District acquires water in wet years and stores it in the groundwater basin under AEWSD's service area for use in dry years. The AEWSD and the Metropolitan Water District of Southern California cooperate in a groundwater storage and water exchange, which benefits both agricultural users in the AEWSD service area and urban users in Los Angeles. The program allows Metropolitan Water District to store up to 350,000 af of SWP water at any one time in AEWSD's groundwater basin. Metropolitan Water District has the ability to withdraw up to 75,000 af/y of water via AEWSD's South Canal (Metropolitan District of Southern California, 2009).

Henry Miller Water District

The Henry Miller Water District is an agricultural water district which delivers water to the J.G. Boswell Tomato Company (Lutje, 2008).

Kern Delta Water District

The Kern Delta Water District was formed in December of 1965 under Division 13 of the State Water Code for the purpose of protecting the Kern River Water Rights serving certain lands within the District. Kern Delta currently supplies Kern River water, SWP water, and other surface and groundwater to primarily agricultural users via five water canals: the Kern Island, Buena Vista, Stine, Farmers, and Eastside Canals (Lusich, 2009; Kern Delta Water District, 2009). The total length of these canals is approximately 126 miles. Although the District delivers an average of 182,000 af/yr, delivery is dependent on water supplies for each year. The District's operations area funded through various assessments, tax revenues, rates tolls and other charges (Lusich, 2009).

Buena Vista Water Storage District

The Buena Vista Water Storage District (BVWSD) supplies an average of 145,000 acre-feet per year to farmers for alfalfa, beet, cotton, and grain crops. The BVWSD receives its water supply from the Kern River and from contracts with the SWP (WAKC, 2008-09, p. 8).

Rosedale-Rio Bravo Water Storage District

The Rosedale-Rio Bravo Water Storage District (R-RBWSD) is a water storage district charged with replenishing the underlying aquifer with surface water imported from the SWP and the Kern River. The R-RBWSD makes no physical deliveries of surface water to individual landowners or customers; instead, the R-RBWSD recharges the waters received into percolation ponds placed strategically throughout the approximately 44,000-acre district. The R-RBWSD is contracted to receive 29,900 af/y of surface water from the SWP through the KCWA. The water recharged is intended to replenish water removed/pumped from the aquifer by groundwater users within the district, which include primarily agricultural production users and approximately 6,000 acres of municipal and industrial users (Averett, 2008).

Wheeler Ridge-Maricopa Water Storage District

The Wheeler Ridge-Maricopa Water Storage District (WR-MWSD) is a public agency whose jurisdiction encompasses about 147,000 acres (230 square miles) of land in Kern County. The District was formed in 1959 under California Water Storage District law for the purpose of securing a surface water supply for agricultural purposes from the Feather River Project (now the State Water Project). The WR-MWSD delivers untreated surface water supplies to approximately 90,000 acres of farmland within its boundaries. A small percentage of the water is supplied on a temporary basis for industrial, ground water recharge and in lieu of ground water pumping purposes. The WR-MWSD provides no water treatment and all water delivered is in a raw untreated condition and is not suitable for human consumption without treatment. The WR-

MWSD owns and operates a distribution system of nearly 300 miles of pipelines, 137 booster pumps, 6 wells, and 7 miles of concrete-lined canal. Depending on land leasing patterns in a given year, the WR-MWSD serves between 100 and 150 customers (Wheeler Ridge Maricopa Water Storage District, 2008).

The WR-MWSD water supply is primarily obtained via the California Aqueduct from the SWP under contract with the KCWA. This 197,088 acre-feet supply is allocated and distributed to 72,074 acres of farm lands within the WR-MWSD 's Surface Water Service Area under the terms of recorded long-term agricultural water service contracts. Current WR-MWSD facilities can also provide temporary water service to about 18,000 acres of additional farm lands. However, in the 1990's, the WR-MWSD's SWP supply became increasingly unreliable. Therefore, the WR-MWSD secured additional dry year water supplies for its landowners from the Kern Water Bank, Pioneer Project, Berrenda Mesa Project, new District wells, and Blanca Rosa Improvement District. Additional water supply reliability and cost reliability were also secured through the Monterey Amendments to the SWP contracts (Wheeler Ridge Maricopa Water Storage District, 2008).

4.13.5.2 REGULATORY FRAMEWORK

FEDERAL

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of Americans' drinking water. The SDWA authorizes the United States Environmental Protection Agency (USEPA) to set national health-based standards for drinking water, known as the National Primary Drinking Water Regulations, to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The National Primary Drinking Water Regulations set enforceable maximum contaminant levels for particular contaminants in drinking water and required ways to treat water to remove contaminants. Each standard also includes requirements for water systems to test for contaminants in the water to make sure standards are achieved. In addition to setting these standards, USEPA provides guidance, assistance, and public information about drinking water, collects drinking water data, and oversees state drinking water programs (USEPA, 2008). The USEPA oversees the states, localities, and water suppliers who implement the standards. The SDWA applies to every public water system in the United States.

STATE

California Safe Drinking Water Act

The California Safe Drinking Water Act (CA SDWA) was passed to build on and strengthen the Federal SDWA. The CA SDWA authorizes the California Department of Public Health to enforce both the Federal and State SDWA and protect the public from contaminants in drinking water through regulation of public water systems (Scorecard, The Pollution Information Site, 2008).

California Department of Public Health Drinking Water Program

The California Department of Public Health's (CDPH) Drinking Water Program (DWP) is within the Division of Drinking Water and Environmental Management. The DWP regulates public drinking water systems and is responsible for the enforcement of the federal and California Safe Drinking Water Acts and the regulatory oversight of 7,500 public water systems. The CDPH Field Office Branch staff perform field inspections, issue operating permits, review plans and specifications for new facilities, take enforcement actions for non-compliance with laws and regulations, review water quality monitoring results, and support and promote water system security. In addition, Field Office Branch staff are involved in funding infrastructure improvements, conducting source water assessments, evaluating projects utilizing recycled treated wastewater, and promoting and assisting public water systems in drought preparation and water conservation (California Department of Public Health, 2008). The CDPH also establishes maximum contaminants levels (MCLs) that are at least as stringent as those developed by the EPA, as required by the Federal SDWA. The CDPH lists any contaminants that may have any adverse health effects, based on expert opinion, and may occur in public water systems, including all the substances for which federal MCLs exist (Scorecard, The Pollution Information Site, 2008). The CDPH works with the EPA, the State Water Resources Control Board, Regional Water Quality Control Boards (RWQCBs), and a wide variety of other parties interested in the protection of drinking water supplies (California Department of Public Health, 2008).

Urban Water Management Planning Act and Amendments

The California Department of Water Resources (DWR) provides urban water management planning services to local and regional urban water suppliers. In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610 - 10656). The Act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Act requires that urban water suppliers develop water management plans to actively pursue the efficient use of available supplies. The Act describes the contents of the Urban Water Management Plans as well as how urban water suppliers should adopt and implement the plans (California Department of Water Resources, 2008). The adopted plan must be updated at least once every five years on or before December 31 in years ending in five and zero. An urban water supplier that does not prepare, adopt, and submit its Urban Water Management Plan to the DWR is ineligible to receive drought assistance from the State of California.

The WKWD is in the process of finalizing a 2005 Urban Water Management Plan. However, no plan is currently adopted or available for review.

SB 610

SB 610 makes changes to the Urban Water Management Planning Act to require additional information in Urban Water Management Plans if groundwater is identified as a source available to the supplier. The information required includes a copy of any groundwater management plan

adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if non-adjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current California Department of Water Resources publication on that basin. If the basin is in overdraft, that plan must include current efforts to eliminate any long-term overdraft. A key provision in SB 610 requires that any project subject to the California Environmental Quality Act and supplied with water from a public water system be provided a specified water supply assessment, except as specified in the law (California Department of Water Resources, 2008).

AB 901

AB 901 requires Urban Water Management Plans to include information relating to the quality of existing sources of water available to an urban water supplier over given time periods and the manner in which water quality affects water management strategies and supply (California Department of Water Resources, 2008).

SB 221

SB 221 elaborates on the requirement for water supply assessments by prohibiting approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). This requirement also applies to increases of 10 percent or more of service connections for public water systems with less than 500 service connections. The law defines criteria for determining "sufficient water supply" such as using normal, single-dry, and multiple-dry year hydrology and identifying the amount of water that the supplier can reasonably rely on to meet existing and future planned uses. Rights to extract additional groundwater, if used for the project, must be substantiated (California Department of Water Resources, 2008).

LOCAL

City of Taft Zoning Ordinance

Reservation of Lands for Public Facilities

Chapter 10, Section 6.10.240, of the Zoning Ordinance allows the City to require that areas of real property within a subdivision or other residential, commercial, or industrial development be reserved for parks and recreational facilities, fire stations, libraries, or other public uses such as, but not limited to, domestic water and sewage facilities.

Water Efficient Landscape Requirements

Chapter 10, Section 6.10.390 of the Zoning Ordinance sets forth a water conservation plan to reduce water consumption in the landscaped environment. Pursuant to AB 325, the City has set the goal of implementing measures resulting in the more efficient use of water through landscaping and irrigation design. This may be achieved through the use of drought tolerant

material, reduced turf areas and various irrigation technologies. Public and private landscaping projects are required to adhere to the goal of water efficiency with limited exception.

Landscaping projects subject to the provisions of Ordinance must include a water conservation concept statement summarizing the water efficiency measures included in the project. All landscape projects are required to be evaluated according to an objective point system and the Zoning Ordinance includes "point values for landscaping and planting". Points are awarded for each water-saving component. A minimum of eighty (80) points must be attained in the landscape planting category and one hundred twenty (120) points in the irrigation category for a total of two hundred (200) points for landscape project approval and permit issuance.

4.13.5.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The following significance thresholds are based on Appendix G from the State CEQA Guidelines and apply to the proposed GPU's water supplies and water supply infrastructure system. A project is considered to have a significant water supply/water supply infrastructure impact on the environment when it would:

1) Result in the need for new systems or a substantial expansion or alteration to the local or regional water supplies that would result in a physical impact to the environment;

Result in insufficient water supplies available to serve the project from existing entitlements and resources;

Result in the need for new systems or a substantial expansion or alteration to the local or regional water treatment or distribution facilities that would result in a physical impact to the environment; or

Result in the need for new systems or a substantial expansion or alteration to the local or regional water supplies that would result in a physical impact to the environment.

METHODOLOGY

This section is based on consultation with the West Kern Water District, as well as review of the *City of Taft General Plan Update Water Supply Evaluation* (Tulley and Young, 2009). A detailed list of reference material used can be found at this end of this section. This material was then compared to the proposed GPU's specific water service-related impacts. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the updated General Plan. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the

applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

Increased Demand for Water Supply

Impact 4.13.5.1 Implementation of the proposed project would increase demand for water supply. This additional water supply demand would result in significant effects on the physical environment. This is considered a **significant** impact.

Implementation of the proposed GPU is expected to result in a total of 25,184 housing units and a population of 68,018 within the Planning Area at buildout. This represents an increase of 19,146 housing units and 49,948 persons over existing conditions within the Planning Area. Increased development would require additional water supplies, which would be provided by the WKWD. All other water purveyors within the Planning Area serve strictly agricultural customers. As land is annexed to the City and developed with urban uses it would also be annexed into the WKWD for service. Therefore, the proposed GPU would not adversely impact any water purveyors other than the WKWD.

The *Water Supply Evaluation* prepared for the General Plan Update (Tulley and Young, 2009) found that future development consistent with land uses proposed by the General Plan Update would increase potable water demands within WKWD's service area by 9,788 af/y at buildout of the Planning Area. Addition of these increased demands to WKWD's projections shown in **Table 1.13.5-3 above** indicate that WKWD would still have a surplus of over 17,000 af/y at build out of the Planning Area (27,254 af/y surplus at buildout of WKWD service area – 9,788 af/y in additional demands from buildout of GPU = 17,466 af/y remaining surplus) (Tulley and Young, 2009, p. 30).

However, projected WKWD water supplies may not be reliable. SWP supplies relied upon by WKWD are based on receiving a higher percentage of normal year entitlements than what DWR currently recommends. As previously discussed, WKWD's projected SWP supply of 77.2 percent of its contractual entitlement is based on a 2005 draft of DWR's State Water Project Delivery Reliability Report. More recently, DWR's *2007 State Water Project Delivery Reliability Report* recommends using a range of 66 percent to 69 percent (median of 67.5%) for planning purposes. Additionally, WKWD's 2025 supplies as projected by its 2005 UWMP rely on supplies that are not supported by firm contractual entitlements. Therefore, WKWD's only long-term entitled surface water supply is from the SWP. **Table 4.13.5-5** below compares projected demand and entitled SWP supplies reduced to 67.5 percent of contractual entitlement as recommended by DWR. As shown, if WKWD cannot adequately document water supplies from the Kern River Alluvial Fan (or other sources) as required for any future SB 610 analysis, projected demand would exceed supply by 16,923 af/y at buildout of the General Plan.

TABLE 4.13.5-5
ENTITLED WATER SUPPLY VS. PROJECTED DEMAND

Projected Supply (af/y)	
Water Supply Source	Buildout
SWP Water (from (KCWA)	21,263
Kern River Alluvial Fan (WKWD Bank Extraction)	0
Total Supply	21,263
Projected Demand (af/y)	
Water Supply Source	Buildout
Baseline Water Demand	28,398
Additional Water Demand	9,788
Total Demand	38,186
Projected Balance	
Projected Shortfall	**-16,923**

Source: Tulley and Young, 2009, p. 32.

The WKWD's draft 2005 UWMP explains that domestic and emergency water uses would be met by reducing and/or eliminating industrial water use in the event of a catastrophic interruption in water supplies. The draft 2005 UWMP also details four rationing stages and demand management measures to manage for reduced water supplies. However, there is little discussion of what water supplies would be used during dry periods. Assuming a reduction in SWP supplies to 7 percent of contractual entitlements during a dry year, and assuming 22,334 af/y of WKWD Bank Extraction from the Kern River Alluvial Fan, a shortfall of about 13,646 af is projected during a dry year. WKWD would have to manage this projected dry year shortfall through a combination of three strategies: (1) Reduce deliveries to industrial water customers, domestic water users, or a combination of both; (2) Obtain additional supplies; and (3) Draw from banked groundwater supplies if available (Tulley and Young, 2009, p. 33).

Conservation

The WKWD is actively managing its water system in an attempt to efficiently use its limited water supply. The WKWD currently implements or plans to implement in the future a number of water conservation policies and programs as described below.

System Water Audits, Leak Detection and Repair

WKWD has conducted pre-screening system audits and leak detection since 1990 with a current goal of maintaining a program of less than 7% annual water loss. The WKWD's telemetry system plays a key role in identifying large transmission pipeline failures between pump stations. Smaller leaks are detected by District employees conducting pipeline monitoring, meter reading, routine

maintenance, Underground Service Alert facility locates, and by residential and industrial customers detecting leaks.

The WKWD continues to conduct pre screening audits of its distribution system each month and at the end of each year and the WKWD's monthly metered units of ground water production and metered units of water deliveries are tracked and provided to the DWR each year as part of a Public Water System Statistics Report. Reports covering the past five years indicate the District's system has an annual water loss of less than 5% of total annual production (WKWD, 2005, p. 21).

Metering with Commodity Rates

The WKWD's current customer base consists of approximately 7,500 accounts, which are metered for all customer sectors, including separate meters for residential, industrial, commercial, and institutional/government facilities. To date, there are no un-metered water services requiring retrofit. Any and all new water service accounts will require meters which are installed, maintained and read for billing purposes by the WKWD. Metered accounts may result in a 20% reduction in demand compared to nonmetered accounts. As all services within the WKWD are metered and billed according to volume of use, water conservation efforts by the customers are rewarded in lower water bills (WKWD, 2005, pp. 22-23).

Conservation Pricing for Industrial Users

The majority (82%) of current WKWD deliveries are to industrial users. The WKWD routinely monitors all industrial customers to detect and regulate increased usage and system failure/leak detection. Most industrial users are subject to take-or-pay contracts, which require increasingly accurate water usage projections to correspond with industrial water reclamation/reuse. Industrial usage of reclaimed water generates an estimated 10%-30% reduction of requests for WKWD water supply (WKWD, 2005, pp. 29-30).

Water Waste Prohibition

The WKWD actively pursues incidents of water waste. District Supervisors, Customer Service Person, Meter Reader, and Flushing/Sampling Crew inspect customer usage on a routine basis. Incidents of waste are investigated and recommendations for corrections are provided. Water source is regulated or disconnected in cases of excessive leakage/facilities failure (WKWD, 2005, p. 33).

Public Information and School Programs

The District currently promotes water conservation efforts by distributing public information through brochures, local speaking engagements, and special events such as community and street fairs. The WKWD also provides water conservation education programs to local schools. In addition to the above, the WKWD plans to add water conservation information to its web site in the future (WKWD, 2005, p. 24).

Environmental Effects Associated with Potential Future Water Supply Shortages

Should the WKWD's planned water supplies prove insufficient to adequately serve the future development planned for in the proposed General Plan Update, development could be curtailed and the City's vision for the Planning Area may not be fully realized. In addition, should development be curtailed, a portion of anticipated development fees may not be received and, as a result, certain capital improvement projects (i.e., roadway and intersection improvements, infrastructure improvements, etc.) may be delayed or never constructed. Consequently, additional traffic, public service, utility, and other impacts could result. Similarly, the City's affordable housing and redevelopment programs may not be fully implemented due to a lack of funding.

Secondary Water Supply Opportunities

Although the WKWD has no other surface water rights or entitlements other than its SWP contract, it is active in acquiring surface waters in the active regional water market. In some years, WKWD has acquired SWP water that can be delivered directly to BVWSD through the California Aqueduct. In other times, WKWD acquires other types of water supplies – appropriative water rights or CVP water supplies – to exchange with other entities to allow them to access additional groundwater from their well field. The WKWD currently requires each new residential and non-residential connection to purchase one af of water entitlement in order to meet demand created by new development. Industrial connections are required to purchase water calculated on af basis in addition to a capacity purchase surcharge. The potential exists for these water market purchases to reduce demand on entitled SWP supplies, assuming they are available for purchase.

The WKWD's draft 2005 UWMP does not identify any other secondary water supply opportunities.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policies and action items, contained in the Public Facilities Element of the General Plan update, address issues related to increased demand for water supplies:

Policy PF-2 Require developers to pay their fair share of the costs associated with development and redevelopment except as authorized by the City pursuant to Economic Development goals and strategies.

Policy PF-3 Except when prohibited by state law, require that infrastructure systems be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.

Action PF-3a Require financial guarantees to assure infrastructure development to the City's satisfaction.

Action PF-3b Adopt master plans for the development of public facilities, including phasing of improvements in a logical manner that encourages the orderly development of roadways, water and sewer facilities, and other public facilities.

Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects.

Policy PF-6 Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council.

Policy PF-7 Require new development to pay its fair share portion of its impacts on public facilities and infrastructure.

Action PF-7a Establish development impact fees that fairly represent the cost of obtaining public facility improvements that serve new development and that provide a bridge for public, tax-supported services to be provided until tax revenues are received. Review the fees periodically.

Action PF-7b Require the installation of improvements necessary to serve the demand created by development projects and to be consistent with infrastructure master plans, rather than collect impact fees. The cost of oversizing improvements may be eligible for reimbursement over time, as allowed by the City.

Policy PF-8 Partner with other public entities such as the Kern County Fire Department, the Kern County Sheriff's Department, and other agency public safety departments in the financing and construction of public facilities.

Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies.

Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit.

Policy PF-10 Require water supply and delivery systems to be available in time to meet the demand created by new development.

Action PF-10a Amend the Taft Municipal Code to require the following for all development projects, excluding subdivisions:

- That an assured water supply and delivery system be available at the time of project approval. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project.
- That all required water infrastructure for the project be assured through the use of financial guarantees to the City's satisfaction prior to the issuance of any building permit.
- That all required water infrastructure for a property be in place prior to the issuance for a Certificate of Occupancy for any structure or building on a site.
- That water infrastructure be phased to coincide with the phased development of large-scale projects.

Action PF-10b Amend the Taft Municipal Code to require the following for all subdivisions to the extent allowed by state law:

- That proposed water supply and delivery systems be identified at the time of tentative map approval to the satisfaction of the City. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project.
- That the agency providing water service to the subdivision demonstrate prior to the approval of the Final Map by the City that sufficient capacity would be available to accommodate the subdivision plus existing development, other approved projects in the same service area, and other projects that have received commitments for water service.
- That off-site and on-site water infrastructure sufficient to provide adequate water to the subdivision be in place prior to the approval of the Final Map, or their financing be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.

Policy PF-11 Protect the quality and quantity of groundwater resources, including those that serve households and businesses which rely on private wells.

Policy PF-12 Require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs.

Implementation of the above General Plan policies would ensure that new development would not be approved by the City unless an assured water supply and delivery system were available. The policies would also require the City and WKWD to demonstrate prior to the approval of a final subdivision map that sufficient water supply capacity would be available to accommodate the subdivision plus existing development, other approved projects in the same service area, and other projects that have received commitments for water service.

Even after implementation of the proposed General Plan Update policies, it is speculative to state that a reliable water supply source would be available to serve buildout of the entire Planning Area due to lack of firm contractual water entitlements. Given these conditions, this impact is considered **significant and unavoidable**.

Mitigation Measures

No additional feasible mitigation is available.

Water Supply Infrastructure

Impact 4.13.5.2 Implementation the GPU would require additional water supply infrastructure to meet the projected water demands. This is considered a **less than significant** impact.

Implementation of the proposed GPU would allow for increased development in areas currently not served by WKWD transmission infrastructure. Development of these areas would require the extension of new water transmission pipelines. New development could also increase the demand for water such that more wells would be needed to meet demands. In addition, the City is currently served by several 2-, 3-, and 4-inch water lines that are inadequate and currently experience reduced water pressure and an increased risk for leaks. Increased development associated with the proposed GPU could increase the use of these pipes, thus exacerbating water pressure and leaking problems. Therefore, implementation of the GPU would result in the need for new water infrastructure, as well as the upsizing/upgrading of existing infrastructure.

Water supply infrastructure will be upsized and expanded in areas of new development as such development is proposed. The timing and specific location of this future development is not currently known. The site-specific environmental impacts associated with water supply infrastructure improvements needed to serve new development would be determined through project-level CEQA analysis at such time as they are proposed for development and their design and alignment are known. **Table 4.13.5-3** identifies types of potential project-specific environmental impacts that could result from new or upsized water supply infrastructure. However, the potential programmatic environmental impacts that could be associated with these facilities have been identified and disclosed in this Draft EIR as part of overall development of the Planning Area. These impacts associated with water supply infrastructure are considered to be **less than significant**.

TABLE 4.13.5-3 - TYPES OF POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH NEW WATER SUPPLY INFRASTRUCTURE

Types of Potentially Affected Resources	Related and Potential Impacts
Geology and Soils	Increase in erosion and sedimentation from construction activities; geologic hazards could cause problems for new facilities and their operators if they are not sited carefully.
Water Quality	Changes in stream and reservoir/lake temperature, dissolved oxygen, turbidity, total suspended solids, and other water quality parameters of concern during construction and operation of new facilities.
Fishery Resources including Special-status Species	Change in the amount and quality of fishery habitat in nearby streams and water bodies.
Wetlands	Changes in the amount or functions and values of various types of wetlands from the construction of new facilities.
Botanical Resources including Special-status Species	Disturbance to rare plants and their habitat and other types of vegetation through disturbance by construction activities.
Wildlife Resources including Special-status Species	Changes in the amount and quality of affected wildlife habitat from construction activities.
Visual Resources	Short-term and long-term direct visual impacts associated with construction activities (distribution pipelines, storage tanks, wells).
Agriculture	Permanent direct loss of agricultural productivity (disruption pipeline construction and operation) and potential indirect conversion of agricultural land by expansion of urban services through agricultural land by expansion of urban services through agricultural lands within the Planning Area (distribution pipelines).
Noise	Adverse noise impacts during the operation of expanded or new wells and booster pump stations. Noise (direct) during construction (distribution pipelines, storage tanks, wells).
Cultural Resources	Historic, prehistoric, and ethnographic resources could be affected by the construction and maintenance of new facilities.
Public Utilities	The routing and sitting of new project facilities could interfere with the operation or maintenance of existing or planned public utilities, including communication and energy infrastructure.
Air Quality	Air quality emissions (direct) of oxides of nitrogen (NOx) during construction (distribution pipelines).
Transportation	Local roads would experience traffic increases during construction.
Public Health and Safety	Construction activities could create some safety hazards. Temporary direct disruption of property access during distribution pipeline construction.
Growth-inducing Effects	New water infrastructure would likely cause growth-inducing impacts.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policies and associated action items are included in the Public Facilities Element of the General Plan and would provide partial mitigation of this impact:

Policy PF-2 Require developers to pay their fair share of the costs associated with development and redevelopment except as authorized by the City pursuant to Economic Development goals and strategies.

Policy PF-3 Except when prohibited by state law, require that infrastructure systems be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.

Action PF-3a Require financial guarantees to assure infrastructure development to the City's satisfaction.

Action PF-3b Adopt master plans for the development of public facilities, including phasing of improvements in a logical manner that encourages the orderly development of roadways, water and sewer facilities, and other public facilities.

Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects.

Policy PF-5 Require dedication of easements needed for infrastructure.

Policy PF-6 Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council.

Policy PF-7 Require new development to pay its fair share portion of its impacts on public facilities and infrastructure.

Action PF-7a Establish development impact fees that fairly represent the cost of obtaining public facility improvements that serve new development and that provide a bridge for public, tax-supported services to be provided until tax revenues are received. Review the fees periodically.

Action PF-7b Require the installation of improvements necessary to serve the demand created by development projects and to be consistent with infrastructure master plans, rather than collect impact fees.

The cost of oversizing improvements may be eligible for reimbursement over time, as allowed by the City.

Policy PF-8 Partner with other public entities such as the Kern County Fire Department, the Kern County Sheriff's Department, and other agency public safety departments in the financing and construction of public facilities.

Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies.

Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit.

Policy PF-10 Require water supply and delivery systems to be available in time to meet the demand created by new development.

Action PF-10a Amend the Taft Municipal Code to require the following for all development projects, excluding subdivisions:

- That an assured water supply and delivery system be available at the time of project approval. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project.
- That all required water infrastructure for the project be assured through the use of financial guarantees to the City's satisfaction prior to the issuance of any building permit.
- That all required water infrastructure for a property be in place prior to the issuance for a Certificate of Occupancy for any structure or building on a site.
- That water infrastructure be phased to coincide with the phased development of large-scale projects.

Action PF-10b Amend the Taft Municipal Code to require the following for all subdivisions to the extent allowed by state law:

- That proposed water supply and delivery systems be identified at the time of tentative map approval to the satisfaction of the City. The water agency providing service to the project may provide several alternative methods of supply and/or delivery,

provided that each is capable individually of providing water to the project.

- That the agency providing water service to the subdivision demonstrate prior to the approval of the Final Map by the City that sufficient capacity would be available to accommodate the subdivision plus existing development, other approved projects in the same service area, and other projects that have received commitments for water service.

- That off-site and on-site water infrastructure sufficient to provide adequate water to the subdivision be in place prior to the approval of the Final Map, or their financing be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.

Policy PF-11 Protect the quality and quantity of groundwater resources, including those that serve households and businesses which rely on private wells.

Policy PF-12 Require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs.

Implementation of the above General Plan policies would ensure that the new development under the proposed project would not proceed without adequate water supply infrastructure. Particularly, Action PF-10a requires that all necessary water infrastructure for the project be assured through the use of financial guarantees and Action PF-10b requires that off-site and on-site water infrastructure sufficient to provide adequate water to a subdivision be in place prior to approval of a Final Map. These policies would ensure that impacts would be **less than significant**.

Mitigation Measures

None required.

4.13.5.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative water supply setting consists of the water service area of the WKWD, which is a 250-square mile service area consisting of the City of Taft and surrounding area as shown in **Figure 4.13.5-1**. The cumulative setting includes the full buildout of the Planning Area, which is expected to occur after 2035, as well as all existing, planned, proposed, approved, and reasonably foreseeable development within the WKWD service area that currently places demand on these water supplies or is expected to place demand on them in the future. The reader is referred to Section 4.0 regarding the cumulative setting and buildout under the proposed General Plan

Update as well as Section 4.9, Hydrology and Water Quality, regarding cumulative water supply conditions associated with groundwater usage.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Water Service Impacts

Impact 4.13.5.3 Implementation of the proposed project would contribute to the cumulative demand for water supply in the WKWD's service area. This is considered a **cumulatively considerable** impact.

As stated under **Impact 4.13.5.1** above, WKWD water supplies may not be reliable since SWP supplies relied upon by WKWD are based on receiving a higher percentage of normal year entitlements than what DWR currently recommends and WKWD's 2025 supplies as projected by its 2005 UWMP rely on supplies that are not supported by firm contractual entitlements. If WKWD cannot adequately document water supplies from the Kern River Alluvial Fan (or other sources) as required for any future SB 610 analysis, projected demand would exceed supply by 16,923 af/y at buildout of the General Plan Update. Other existing, planned, proposed, approved, and reasonably foreseeable development within the WKWD service area would place further demands on WKWD's supplies and could result in greater cumulative shortages.

The WKWD is currently implementing conservation measures and requires that new development purchase water rights from the regional market. However, future development in the Planning Area, as well as other regional development, could be constrained by the availability of water rights offered for purchase or the cost of those water rights.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative public schools impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers.

Public Facilities and Services Element

Policy PF-2; Policy PF-3; Action PF-3a; Action PF-3b; Policy PF-4; Policy PF-5; Policy PF-6; Policy PF-7; Action PF-7a; Action PF-7b; Policy PF-8; Policy PF-9; Action PF-9a; Policy PF-10; Action PF-10a; Action PF-10b; Policy PF-11; Policy PF-12

Implementation of the General Plan policies listed under **Impact 4.13.5.1** above would require the City to would ensure that new development would not proceed without adequate water supply and necessary infrastructure. However, given the speculative nature of the WKWD's supplies, the proposed project would contribute significantly to cumulative water infrastructure impacts. The proposed GPU would have a **cumulatively considerable** and **significant and unavoidable** impact.

Mitigation Measures

No additional feasible mitigation is available.

4.13.6 WASTEWATER SERVICE

4.13.6.1 EXISTING SETTING

TAFT WASTEWATER TREATMENT PLANT

The Taft Wastewater Treatment Plant (TWWTP), located at 1120 East Ash Street in Taft, is owned and operated through a joint powers agreement (JPA) between the City of Taft and the Ford City-Taft Heights County Sanitation District (CSD). The City of Taft owns 52 percent of the TWWTP and the Ford City-Taft Heights CSD owns 48 percent (LSA, 2004, p. 2-9). The City of Taft operates the TWWTP via a contractor, Southwest Water Company (formerly Eco Resources, Inc.). A separate City-owned plant (TWWTP No. 2) treats wastewater from the correctional facility.

Originally constructed in 1974, the TWWTP was last updated in 2002 to meet new waste discharge requirements set by the Central Valley Regional Water Quality Control Board (CVRWQCB) and to meet wastewater treatment demands through the year 2012. The upgrade increased the TWWTP capacity to 1.5 million gallons per day (mgd) (LSA, 2004, p. 2-9). Although the TWWTP has a permitted capacity of 1.5 mgd, the current average daily flow at the TWWTP is approximately 1.3 mgd (Urban Futures, 2009). Wastewater treatment is obtained via headworks; four aerated facultative ponds; chlorine contact basin; effluent holding pond; solar sludge drying beds; and a 135-acre effluent disposal area (Kern County Waste Management Department, 2008). It should be noted that the headworks and flow meter system are outdated and thus causing efficiency reductions in the treatment process (Urban Futures, 2009).

The City also maintains a gravity flow sewer collection system, consisting of 26.6 miles of pipelines within the City limits and 18.1 miles of pipelines in the unincorporated areas of Ford City and Taft Heights. There are five major trunk lines in the City – a 1.9 mile trunk line in Ashe Street, a 1.1 mile trunk line in North 10th Street, a 1.7 mile trunk line in the West Area, a 2 mile trunk line in the East Area, and a 1.5 mile trunk line in the Downtown Area (Rice, 2009).

The Southwest Water Company staff reports that there are several deficiencies in the City's wastewater collection system, with certain segments of sewer lines being prone to sewage backups. One deficient line segment is located within the City limits beneath an alley midblock between North and Center Streets (between Fourth and Sixth Streets). Routine sewage backups occur in this area because there is a negative slope or low area in this portion of the line which causes debris to settle in the pipe, eventually causing a blockage. In addition, in the vicinity of Second and Calvin Streets, there is another sewer collection line which is also prone to frequent sewer backups. This area suffered a substantial sewage spill of over 9,000 gallons in June 2008. The primary reason for the recurring sewage backups in this portion of the City's wastewater collection system is ongoing heavy tree root intrusion. Tree roots are a very common problem for a sewer lines constructed prior to the early 1980's, and typical corrective action involves

routinely snaking out the roots, a regular maintenance item. However, the City lacks sufficient modern equipment to ensure that required maintenance undertaken is effective. Furthermore, without the requisite resources, Water Company staff is unable to determine the extent of the deterioration present in the sewer collection system (Urban Futures, 2009).

FORD CITY-TAFT HEIGHTS COUNTY SANITATION DISTRICT (KCSD)

The Ford City-Taft Heights CSD manages wastewater from Ford City and Taft Heights (both unincorporated). Sewer collection for the two communities joins the City of Taft system and gravity flows to the TWWTP. The Ford City-Taft Heights CSD is managed and staffed by the Kern County Waste Management Department (Kern County Waste Management Department, 2008).

4.13.6.2 REGULATORY FRAMEWORK

FEDERAL

Clean Water Act

The Clean Water Act (CWA) is the primary federal legislation governing surface water quality protection. The statute employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water." Pollutants regulated under the CWA include "priority" pollutants, including various toxic pollutants; "conventional" pollutants, such as biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, oil and grease, and pH; and "non-conventional" pollutants, including any pollutant not identified as either conventional or priority. The CWA regulates both direct and indirect discharges (EPA, 2009).

<u>National Pollutant Discharge Elimination System</u>

The National Pollutant Discharge Elimination System (NPDES) program, Section 402 of the CWA, controls direct discharges into navigable waters. Direct discharges or "point source" discharges are from sources such as pipes and sewers. NPDES permits, issued by either EPA or an authorized state/tribe, contain industry-specific, technology-based and/or water-quality-based limits, and establish pollutant monitoring and reporting requirements. (EPA has authorized 40 states to administer the NPDES program.) A facility that intends to discharge into the nation's waters must obtain a permit before initiating a discharge. A permit applicant must provide quantitative analytical data identifying the types of pollutants present in the facility's effluent and the permit will then set forth the conditions and effluent limitations under which a facility may make a discharge (EPA, 2009).

General Pretreatment Regulations

The National Pretreatment Program is the mechanism developed to regulate nondomestic users who discharge pollutants to Publicly Owned Treatment Works (POTWs) that could pass through or interfere with a treatment plant, threaten worker health and safety, or contaminate sludges (EPA, 2004, p. 9-1). The three specific objectives cited in 40 CFR 403.2 of the General Pretreatment Regulations are to:

- Prevent the introduction of pollutants that would cause interference with the POTW or limit the use and disposal of its sludge;
- Prevent the introduction of pollutants that would pass through the treatment works or be otherwise incompatible; and
- Improve the opportunities to recycle or reclaim municipal and industrial wastewaters and sludges.

In addition, improved POTW worker health and safety and reduction of influent loadings to sewage treatment plants are further objectives of pretreatment. The General Pretreatment Regulations detail the procedures, responsibilities, and requirements of EPA, States, POTWs, and industries in achieving the objectives of the regulations (EPA, 2004, p. 9-2).

STATE

State Water Resources Control Board (SWRCB)

Waste Discharge Requirements Program

In general, the Waste Discharge Requirements (WDR) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDR Program also includes the discharge of wastes classified as inert, pursuant to Section 20230 of Title 27. Several SWRCB programs are administered under the WDR Program, including the Sanitary Sewer Order and recycled water programs (SWRCB, 2009).

Recycled Water Regulations (SWRCB and CDPH)

The California Department of Public Health (CDPH) adopts regulations for recycled water, and advises Regional Water Quality Control Boards on their permitting of water recycling projects (California Department of Public Health, 2008). The State Water Resources Control Board (SWRCB) is currently developing a statewide general permit for landscape irrigation uses of recycled water (General Permit). Assembly Bill 1481 (De La Torre, 2007) established California Water Code Section 13552.5, which, in part, requires the SWRCB to adopt the General Permit.

The intent of the new law is to develop a uniform interpretation of state standards to ensure the safe, reliable use of recycled water for landscape irrigation uses, consistent with state and federal water quality law, and for which the CDPH has established uniform statewide standards. The new law is also intended to reduce costs to producers and users of recycled water by streamlining the permitting process for using recycled water for landscape irrigation (California State Water Resources Control Board, 2008).

Sanitary Sewer Overflow Program

A sanitary sewer overflow (SSO) is any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. To provide a consistent, statewide regulatory approach to address SSOs, the SWRCB adopted Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 (Sanitary Sewer Order) on May 2, 2006. The Sanitary Sewer Order requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO database. All public agencies that own or operate a sanitary sewer system that is comprised of more than one mile of pipes or sewer lines which conveys wastewater to a publicly owned treatment facility must apply for coverage under the Sanitary Sewer Order (California State Water Resources Control Board, 2008).

Assembly Bill 885

AB 885 was enacted in September of 2000 to address inconsistencies in the on-site wastewater system requirements of local jurisdictions and to provide uniform requirements related to minimum acceptable operation of on-site wastewater systems, including standards for the protection of beneficial uses of potentially affected water. AB 885 requires the State Water Resources Control Board to develop statewide requirements, including:

- Minimum operating requirements;
- Requirements for on-site wastewater treatment systems adjacent to waters listed as impaired under Section 303(d) of the Clean Water Act;
- Requirements authorizing local agency implementation;
- Corrective action requirements;
- Minimum monitoring requirements;
- Exemption criteria; and,
- Requirements for determining when an existing onsite wastewater treatment system is subject to major repair.

AB 885 also requires the Regional Water Quality Control Boards to incorporate the new statewide regulations into their basin plans. Neither the legislation nor the proposed regulations preempt the RWQCBs or any local agency from adopting or retaining performance requirements for on-site wastewater treatment systems that are more protective of public health or the environment than the new statewide regulations (EDAW, 2005).

REGIONAL

Central Valley Regional Water Quality Control Board

National Pollutant Discharge Elimination System (NPDES) Permit

As authorized by the Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. In California, it is the responsibility of Regional Water Quality Control Boards (RWQCB) to preserve and enhance the quality of the State's waters through the development of water quality control plans and the issuance of waste discharge requirements (WDRs). WDRs for discharges to surface waters also serve as NPDES permits (California State Water Resource Control Board, 2008). The City of Taft is within the Central Valley RWQCB's jurisdiction.

Discharge of treated wastewater to surface waters of the United States, including wetlands, requires an NPDES permit. Obtaining an NPDES permit requires preparation of detailed information, including characterization of wastewater sources, treatment processes, and effluent quality. Whether or not a permit may be issued and the conditions of a permit are subject to many factors, including basin plan water quality objectives, impaired water body status of the receiving water, historical flow rates of the receiving water, effluent quality and flow, the State Implementation Plan (SIP), the California Toxics Rule (CTR), and established Total Maximum Daily Loading (TMDL) rates for various pollutants. These factors are highly specific to the potential discharge point.

Waste Discharge Requirements

The California Water Code (CWC) requires any person discharging waste or proposing to discharge waste (other than into a community sewer system) that could affect the quality of waters of the State to file a report of waste discharge with the applicable RWQCB, which for the City of Taft is the Central Valley RWQCB. Each waste discharge requirements (WDR) order contains conditions intended to ensure the discharge conforms to the Water Code. Multiple factors must be considered in determining reasonable conditions of discharge and the quality that should be maintained in groundwater, including the relevant water quality control plans and water quality objectives (California State Water Resources Control Board, 2008).

The City currently operates under Waste Discharge Requirements (WDRs) Order No. 5-00-080, adopted by the Central Valley RWQCB on April 28 2000 and renewed on April 29, 2005. The WDR prescribes requirements for a monthly average dry weather (May through October) discharge flow of 1.5 mgd from the TWWTP (RWQCB, 2005).

LOCAL

City of Taft Municipal Code

Title 3, Chapter 3 of the City of Taft Municipal Code provides for the maximum possible beneficial public use of the City's sewage collection and treatment facilities through adequate regulation of sewer construction, sewer use and industrial wastewater discharges. The Chapter also provides for equitable distribution of the cost associated with wastewater collection and treatment facilities and sets forth procedures for complying with requirements placed upon the City by other regulatory agencies.

City of Taft Zoning Ordinance

Reservation of Land for Public Facilities

Chapter 10, Section 6.10.240, of the Zoning Ordinance allows for the City to require that areas of real property within a subdivision or other residential, commercial, or industrial development be reserved for parks and recreational facilities, fire stations, libraries, or other public uses such as, but not limited to, domestic water and sewage facilities.

Liquid and Solid Waste

Chapter 12, Section 6.12.90, of the Zoning Ordinance states that no operation or action shall discharge at any point into any public street, public sewer, private sewage disposal system, stream, body of water, or into the ground any materials which can contaminate any water supply, interfere with bacterial processes in sewage treatment, or otherwise cause the emission of dangerous or offensive elements.

4.13.6.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A wastewater service impact is considered significant if implementation of the project would:

1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;

2) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or

3) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments.

METHODOLOGY

Evaluation of potential impacts on wastewater facilities and services was based on consultation with the City of Taft Public Works Department and other relevant literature. A detailed list of reference material used in preparing this analysis can be found at this end of this section. This material was then compared to the proposed GPU's specific wastewater service-related impacts. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment.

The City of Taft General Plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the updated General Plan. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

IMPACTS AND MITIGATION MEASURES

Increased Demand for Wastewater Service/Conveyance and Treatment Facilities

Impact 4.13.6.1 Implementation of the proposed project would substantially increase wastewater flows, thus increasing demand for wastewater service. Increased wastewater flows would also require additional infrastructure and treatment capacity, the construction of which could cause significant environmental effects. This impact is considered **significant**.

Implementation of the proposed GPU is expected to result in a total of 25,184 housing units and a population of 68,018 at buildout. This represents an increase of 19,146 housing units and 49,948 persons over baseline (2008) conditions in the Planning Area. Increased population and development would substantially increase wastewater flows would result in increased demand for wastewater services. Meeting increased demand would require the extension of new wastewater collection system infrastructure including collectors, trunks, and interceptor sewer lines and appurtenances. Increased treatment and disposal capacity would also be required to ensure adequate treatment of the City's wastewater flows.

A flow analysis for the TWWTP was conducted by Carollo Engineers in 2008 based on data obtained from TWWTP staff and the RWQCB. An average per capita flow rate of 93 gallons per person per day was determined. This comparison yielded an average day to average day maximum month flow factor of 1.22. Carollo Engineers recommends using 93 gallons per capita day and a 1.22 maximum month peaking factor for facilities planning purposes. Based on those recommended factors, the proposed GPU would result in buildout wastewater flows of 6.33

million gallons per day (mgd) average flow and 8.23 mgd average day maximum month flow (see **Table 4.13.6-1** below).

TABLE 4.13.6-1
PROJECTED WASTEWATER FLOW AT BUILDOUT OF THE GPU

	Population at Buildout	Flow Factor	Projected Wastewater Flows (mgd)
Average Flow Projection	68,018	93 gallons per person per day	6.33
Average Day Maximum Month Flow	68,018	1.22	8.23

Source: Flow Factors based on personal communication (letter) from Amando Garza, Carollo Engineers to the City of Taft on June 6, 2008.

Wastewater Treatment

The TWWTP currently operates at 86 percent (1.3 mgd) of the total permitted capacity of 1.5 mgd. However, the existing capacity of the TWWTP is not adequate to accommodate the anticipated wastewater flows of 6.33 mgd within the Planning Area at buildout. In addition to projected capacity deficiencies, the overall efficiency of the TWWTP is currently being reduced by aging headworks and an antiquated flow meter system (Urban Futures, 2009). Increased wastewater flows would exacerbate these conditions and could result in inadequate wastewater treatment efficiency.

The City is currently considering a treatment capacity expansion for the TWWTP which would likely include a replacement design with a different process to treat the wastewater effluent. The current system, which utilizes aeration lagoons, is highly susceptible to periodic fluctuations in treatment quality due to seasonal variation and mechanical breakdowns. By switching to an extended aeration process, the City would gain a more reliable treatment process. Also under consideration are plans to direct some of the City's wastewater flows to the TWWTP No. 2 (the correctional facility WWTP). The City plans to double the capacity of both plants by increased capacity in 500 mgd increments (Gorte, 2009). However, plans for expansion of the TWWTP have not been finalized and the extent of any increase in capacity and reliability are not currently known definitively.

Wastewater Conveyance

As discussed under Existing Setting above, the City's current wastewater collection system is deficient and prone to sewage backups. Increased wastewater flows would exacerbate these conditions and could result in inadequate wastewater conveyance. In addition, wastewater conveyance infrastructure would need to be expanded in to areas outside of the current City limits as development is proposed in those areas. The timing and specific location of development is not yet known. The site-specific environmental impacts associated with the wastewater infrastructure improvements needed to serve new development would be determined

through project-level CEQA analysis at such time as they are proposed for development and their design and alignment are known. **Table 4.13.6-2** identifies types of potential project-specific environmental impacts from further plant expansion of the TWWTP and the improvement and/or extension of wastewater conveyance infrastructure. However, the potential programmatic environmental impacts that could be associated with expansion of these facilities have been identified and disclosed in this Draft EIR as part of overall development of the Planning Area.

Impacts resulting from implementation of the proposed project are therefore considered **less than significant**.

TABLE 4.13.6-1
TYPES OF POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH NEW WASTEWATER TREATMENT AND SUPPLY INFRASTRUCTURE

Types of Potentially Affected Resources	Related and Potential Impacts
Geology and Soils	Increase in erosion and sedimentation from construction activities; geologic hazards could cause problems for new facilities and their operators if they are not sited carefully.
Wetlands	Changes in the amount or functions and values of various types of wetlands from the construction of new facilities.
Botanical Resources including Special-status Species	Disturbance to rare plants and their habitat and other types of vegetation from construction activities.
Wildlife Resources including Special-status Species	Changes in the amount and quality of affected wildlife habitat from construction activities.
Visual Resources	Short-term direct visual impacts associated with construction activities (trunk sewers). Addition of new project facilities could affect the visual environment. New pipelines and pumping stations near or in residential areas or highly visited areas would cause negative impacts. Adverse visual impacts during the construction and operation of new or expanded wastewater infrastructure.
Agriculture	Permanent direct loss of agricultural productivity (trunk sewer construction, operation and percolation ponds) and potential indirect conversion of agricultural land by expansion of urban services through agricultural lands within the Planning Area (sewer mains). Some irrigated land or grazing land could be taken out of production where project conveyance facilities need to be located to accommodate growth.
Cultural Resources	Historic, prehistoric, and ethnographic resources could be affected by the construction and maintenance of new facilities.

Types of Potentially Affected Resources	Related and Potential Impacts
Public Utilities	The routing and sitting of new project facilities could interfere with the operation or maintenance of existing or planned public utilities, including communication and energy infrastructure.
Air Quality and Noise	Air quality emissions (direct) of oxides of nitrogen (NOx) during construction (trunk and sewer mains, wastewater treatment capacity expansion). Traffic and loud noises could occur during the construction phase of new projects. Short-term increases in noise during construction (trunk and sewer mains) as well as operational noise from new or expanded lift stations would likely impact nearby residents and recreationists. Adverse odor impacts during the construction and operation of new or expanded wastewater infrastructure.
Transportation	Local roads would experience traffic increases during construction. Property access would be temporarily disrupted during trunk sewer construction.
Public Health and Safety	Construction activities could create some safety hazards. Temporary direct disruption or property access (trunk sewer construction).
Water Quality	Degradation of water quality (groundwater). Any expansion of the TWWTP would require a Waste Discharge Requirement (WDR) permit from the RWQCB. This would substantially reduce the possibility of significant water quality impacts.
Growth-inducing Effects	New wastewater infrastructure would likely cause growth-inducing impacts.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policies and associated action items are included in the Public Facilities Element of the General Plan and would provide partial mitigation of this impact:

Policy PF-2 Require developers to pay their fair share of the costs associated with development and redevelopment except as authorized by the City pursuant to Economic Development goals and strategies.

Policy PF-3 Except when prohibited by state law, require that infrastructure systems be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.

Action PF-3a Require financial guarantees to assure infrastructure development to the City's satisfaction.

Action PF-3b Adopt master plans for the development of public facilities, including phasing of improvements in a logical manner that encourages the orderly development of roadways, water and sewer facilities, and other public facilities.

Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects.

Policy PF-5 Require dedication of easements needed for infrastructure.

Policy PF-6 Phase public facilities in a logical manner to avoid "leapfrog" development and encourage the orderly development of roadways, water and sewer, and other public facilities. Do not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities, as determined in the infrastructure master plans. Interim facilities may be used only if approved by the City Council.

Policy PF-7 Require new development to pay its fair share portion of its impacts on public facilities and infrastructure.

Action PF-7a Establish development impact fees that fairly represent the cost of obtaining public facility improvements that serve new development and that provide a bridge for public, tax-supported services to be provided until tax revenues are received. Review the fees periodically.

Action PF-7b Require the installation of improvements necessary to serve the demand created by development projects and to be consistent with infrastructure master plans, rather than collect impact fees. The cost of oversizing improvements may be eligible for reimbursement over time, as allowed by the City.

Policy PF-8 Partner with other public entities such as the Kern County Fire Department, the Kern County Sheriff's Department, and other agency public safety departments in the financing and construction of public facilities.

Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies.

Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit.

Policy PF-13 Encourage the use of new and alternative technologies, such as high tech "pocket plants" or other appropriate means, to efficiently and effectively provide sewage/wastewater treatment when it is not economically feasible to connect to the sanitary sewer system.

Action PF-13a Identify additional funding sources to obtain the most favorable method of providing sewage/wastewater service.

Policy PF-14 Pursue alternative methods of wastewater disposal including treatment of wastewater for use in landscaping and irrigation.

Policy PF-15 Require that sewage conveyance and treatment capacity be available in time to meet the demand created by new development or be assured through the use of financial guarantees to the City's satisfaction.

Action PF-15a Amend the Taft Municipal Code to require the following for all development projects, excluding subdivisions:

- That sewer/wastewater treatment capacity be available at the time of project approval.
- That all required sewer/wastewater infrastructure for the project be assured through the use of financial guarantees to the City's satisfaction prior to the issuance of any building permit.
- That all required sewer/wastewater infrastructure for a property be in place prior to the issuance for a Certificate of Occupancy for any structure or building on a site.
- That sewer/wastewater infrastructure be phased to coincide with the phased development of large-scale projects.

Action PF-15b Amend the Taft Municipal Code to require the following for all subdivisions to the extent allowed by state law:

- That sewage/wastewater treatment capacity be available at the time of tentative map approval.
- That sufficient capacity be available to accommodate the subdivision plus existing development, other approved projects using the same conveyance lines, and projects which have received sewage treatment capacity commitment.
- That on-site and off-site sewage conveyance systems required to serve the subdivision be in place prior to the approval of the Final Map or their financing be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.

- That sewage conveyance systems within the subdivision be in place and connected to the sewage disposal system prior to the issuance of any Certificates of Occupancy. Model homes may be exempted from this policy as determined appropriate by the City.

As discussed above, the TWWTP and the City's wastewater conveyance infrastructure would not be adequate to accommodate wastewater service demands resulting from the proposed GPU. However, implementation of the proposed General Plan policies listed above would reduce this impact by ensuring that adequate wastewater facilities would be available to serve new development. In particular, Policy PF-15 requires that sewage conveyance and treatment capacity be available in time to meet the demand created by new development and Action PF-3b requires the City to adopt master plans for the development of public facilities. In fact, the City is currently preparing a wastewater master plan to comply with this policy. Therefore, implementation of the proposed General Plan policies and associated action items would ensure that adequate wastewater services would be available, thus reducing wastewater service impacts to less than significant. Furthermore, new or expanded wastewater conveyance and treatment facilities needed to serve new development would undergo site-specific, project-level CEQA analysis at such time as they are proposed for development and their design and alignment are known. Therefore, impacts associated with wastewater conveyance and treatment facilities would be considered **less than significant**.

Mitigation Measures

None required.

Waste Discharge Requirements

Impact 4.13.6.2 Implementation of the proposed GPU could result in wastewater discharge that would exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board. This impact is considered **less than significant.**

As identified under Impact 4.13.6.1 above, the proposed GPU would increase wastewater flows. Although the TWWTP currently operates at only 86percent of the total permitted capacity of 1.5 mgd, the staff at Southwest Water Company states that operating a wastewater WWTP with less than 20 percent of capacity available often diminishes the plant's ability to provide high quality treatment and meet water quality regulations (Urban Futures, 2009). Therefore, increased wastewater flows associated with the proposed GPU could result in failure to meet the discharge requirements set forth by the Central Valley RWQCB potentially resulting significant impacts to the environment. However, the proposed General Policies listed below would reduce this impact to a **less-than-significant** level.

Proposed General Plan Policies and Action Items that Provide Mitigation

All new development and any redevelopment projects would be required to comply with the following General Plan policies that address adequate wastewater treatment capacity and water quality regulations:

Policy PF-15 Require that sewage conveyance and treatment capacity be available in time to meet the demand created by new development or be assured through the use of financial guarantees to the City's satisfaction.

Action PF-15a Amend the Taft Municipal Code to require the following for all development projects, excluding subdivisions:

- That sewer/wastewater treatment capacity be available at the time of project approval.
- That all required sewer/wastewater infrastructure for the project be assured through the use of financial guarantees to the City's satisfaction prior to the issuance of any building permit.
- That all required sewer/wastewater infrastructure for a property be in place prior to the issuance for a Certificate of Occupancy for any structure or building on a site.
- That sewer/wastewater infrastructure be phased to coincide with the phased development of large-scale projects.

Action PF-15b Amend the Taft Municipal Code to require the following for all subdivisions to the extent allowed by state law:

- That sewage/wastewater treatment capacity be available at the time of tentative map approval.
- That sufficient capacity be available to accommodate the subdivision plus existing development, other approved projects using the same conveyance lines, and projects which have received sewage treatment capacity commitment.
- That on-site and off-site sewage conveyance systems required to serve the subdivision be in place prior to the approval of the Final Map or their financing be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.

- That sewage conveyance systems within the subdivision be in place and connected to the sewage disposal system prior to the issuance of any Certificates of Occupancy. Model homes may be exempted from this policy as determined appropriate by the City.

Policy PF-11 Protect the quality and quantity of groundwater resources, including those that serve households and businesses which rely on private wells.

Implementation of the above General Plan update policies would ensure that sewage conveyance and treatment capacity would be available in time to meet the demand created by new development. In addition, the City would be required to submit a report of waste discharge and to comply with prescribed WDRs for any new or expanded wastewater treatment facilities. Furthermore, the City is not currently exceeding any WDR limits and is working closely with the RWQCB to ensure compliance with the WDR order (Gorte, 2009). Therefore, it is anticipated that the City would continue to meet water quality discharge standards in the operation of its wastewater treatment facilities and this impact would be reduced to a **less than significant** level.

Mitigation Measures

None required.

4.13.6.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for wastewater services includes the service area of the TWWTP, which includes the current City limits of Taft, along with the entirety of the proposed Planning Area as future development in these areas would require wastewater services from the City. The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development within the City's wastewater service area, which will be concurrent with the Planning Area at buildout of the proposed General Plan, expected to occur after 2035. The reader is referred to Table 4.0-1 in Section 4.0 of this EIR for a list of development projects within the Planning Area.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Wastewater Service Impacts

Impact 4.13.6.3 Implementation of the proposed General Plan update, as well as existing, planned, proposed, approved, and reasonably foreseeable development within the City's wastewater service area, would substantially increase wastewater flows and require additional infrastructure and treatment capacity to accommodate anticipated demands. However, implementation of proposed General Plan policies would require that wastewater treatment and infrastructure capacity be available in time to meet the demand created by

new development. Therefore, this impact is considered to be **less than cumulatively considerable**.

Under cumulative conditions, the City of Taft would provide wastewater services to the General Plan Planning Area. As discussed under Impact 4.13.6.1 above, the TWWTP and the City's wastewater conveyance infrastructure would not be adequate to accommodate wastewater service demands resulting from the proposed GPU. However, Policy PF-15 requires that sewage conveyance and treatment capacity be available in time to meet the demand created by new development and Action PF-3b requires the City to adopt master plans for the development of public facilities. In addition, while the specific environmental impacts associated with new or expanded wastewater facilities have not been determined since project-level design and CEQA analysis is not within the scope of this Draft EIR, the programmatic environmental impacts associated with these facilities will result in impacts to the environment as discussed under Impact 4.13.6.1. This impact is, therefore, considered **less than cumulatively considerable**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative wastewater impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers.

Public Facilities and Services Element

Policy PF-2; Policy PF-3; Action PF-3a; Action PF-3b; Policy PF-4; Policy PF-5; Policy PF-6; Policy PF-7; Action PF-7a; Action PF-7b; Policy PF-8; Policy PF-9; Action PF-9a; Policy PF-11; Policy PF-13; Action PF-13a; Policy PF-14; Policy PF-15; Action PF-15a; Action PF-15b

The proposed General Plan policies identified under Impact 4.13.6.1 above would reduce the proposed GPU's contribution to cumulative impacts associated with increased demand for wastewater services.

These policies specifically require that public facilities be available on time to maintain desired service levels and avoid capacity shortages and negative effects on safety and quality of life, and that public facilities be funded by new development. Therefore, the proposed GPU would not contribute significantly to cumulative wastewater infrastructure impacts, and this impact is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

4.13.7 SOLID WASTE

4.13.7.1 EXISTING SETTING

SOLID WASTE SERVICES

Westside Waste Management

Westside Waste Management (WSWM) provides residential and commercial solid waste, green waste, and recyclable materials services to residences and businesses in the City of Taft. WSWM's service area includes the City of Taft, the un-incorporated areas of Ford City, Taft Heights, South Taft, Valley Acres, Dustin Acres, Tupman, Derby Acres, Fellows, McKittrick, Lost Hills, and all the unincorporated land to the Kern County line in the north (Hampton, 2008). WSWM picks up residential containers twice weekly and commercial containers one to three times per week. Roll-off boxes (20 to 40 cubic yards) are provided for industrial customers. Drop-off recycling services are provided at the WSWM yard at 274 East Cedar Street in Taft where the Bakersfield Association for Retarded Citizens operates a WSWM recycling buy-back center. WSWM is funded in part through a monthly fee from the City of Taft per a contract between the City and WSWM (Hampton, 2008).

SOLID WASTE FACILITIES

Kern County Waste Management Department

The Kern County Waste Management Department (KCWMD) manages liquid and solid waste facilities in Kern County. The KCWMD is responsible for operating seven landfills, five transfer stations, four transfer bin sites, and two special waste facilities. The KCWMD also provides information to the residents of Kern County regarding recycling and ways to reduce waste (Kern County Waste Management District, 2008).

Landfills

The KCWMD operates seven landfills in Kern County. These include: Taft Sanitary Landfill near Taft; Bakersfield Metropolitan SLF in Caliente; Shafter-Wasco Sanitary Landfill in Shafter; Boron Sanitary Landfill in Boron; Mojave-Rosamond Sanitary Landfill in Mojave; Ridgecrest-Inyokern Sanitary Landfill in Ridgecrest; and Tehachapi Sanitary Landfill in Tehachapi (Kern County Waste Management District, 2008). The unincorporated areas of Kern County disposed of 379,668 tons of waste in landfills in 2007 (California Integrated Waste Management Board, 2008).

Currently, the majority of waste disposed of in the City of Taft is taken to the Taft Sanitary Landfill, located at 13351 Elk Hills Road (LSA, 2004, p. 2-15). According to the California Integrated Waste Management Board (CIWMB) additional waste in the City was also taken to two other landfills in 2007 – the Bakersfield Metropolitan SLF and the Shafter-Wasco Sanitary Landfill (California Integrated Waste Management Board, 2008). **Table 4.13.7-1** below shows the permitted and remaining capacities for these landfills, as well as the maximum permitted daily

disposal. The City of Taft disposed of 10,882 tons of waste in landfills in 2007 (California Integrated Waste Management Board, 2008).

TABLE 4.13.7-1
IMPERIAL COUNTY LANDFILL CAPACITY (AS OF 2000)

Disposal Site	Total Permitted Capacity (in cubic yards)	Total Remaining Capacity (in cubic yards)	Total Remaining Capacity (percentage)	Maximum Permitted Daily Disposal (in tons)
Taft Sanitary Landfill	8,787,547	6,679,433	76%	419
Bakersfield Metropolitan SLF	53,000,000	44,818,958	84.6%	4,500
Shafter-Wasco Sanitary Landfill	11,635,500	7,901,339	67.9%	888

Source: California Integrated Waste Management Board website. Accessed December 1, 2008.

The long-term plan for landfills in Kern County is to have three regional landfills – the Metropolitan Bakersfield (Bena) Sanitary Landfill, a regional landfill located in eastern Kern County, and Lost Hills. The Bena Sanitary Landfill is considered to be a regional landfill and is expected to serve as the model for future regional landfills. If the California Integrated Waste Management Board grants additional permits to develop the remainder of the Bena site, and County-wide waste diversion stabilizes at 50 percent, potential total capacity for the Bena Sanitary Landfill site exceeds 60 years. Following implementation of the three regional landfills, existing area sanitary landfills will be closed or inactivated and transfer stations would provide local waste disposal holding areas (Kern County Planning Department, 2004, p. 4-11-13).

Transfer Stations

The KCWMD operates five transfer stations in Kern County. These include: Buttonwillow Transfer Station; Kern Valley Recycling/Transfer Station; Lebec Transfer Station; McFarland-Delano Recycling/Transfer Station; and Glennville Transfer Station (Kern County Waste Management District, 2008).

Special Waste Facilities

Household Hazardous Wastes (HHHW) are products that are purchased for use in or around the home that when discarded may threaten human health or the environment if disposed of improperly. These products can include; household cleaners; deodorizers; personal hygiene products; pesticides; herbicides; insecticides; pet care products; paint products; photographic chemicals; swimming pool chemicals; and automotive products/fluids. The Kern County Special Waste Facility (located in Bakersfield at 4951 Standard Street) and the Kern County Special Waste Facility Eastern Region (located in Mojave at 17035 Finnin Street at the Mojave Airport) accept household hazardous waste from Kern County residents (Kern County Waste Management District, 2008).

DISPOSAL AND DIVERSION RATES

The California Integrated Waste Management Board (CIWMB) tracks disposal and diversion rates for all California jurisdictions, including the City of Taft. The CIWMB estimates that the average resident daily disposal rate in the City of Taft is approximately three pounds per person per day, which was equal to approximately 5,006 tons of total household waste disposal in 2007 (California Integrated Waste Management Board, 2008).

AB 939 requires cities and counties to divert 50 percent of their waste stream from landfill disposal through source reduction, recycling, composting, and transformation programs. **Table 4.13.2-2** shows waste diversion data from the CIWMB for the City of Taft. As shown, the City regularly exceeds the 50 percent diversion requirement. In addition, as of 2004, all jurisdictions in Kern County with the exception of McFarland met or exceeded the 50 percent diversion requirement (California Integrated Waste Management Board, 2008).

TABLE 4.13.7-2
CITY OF TAFT DIVERSION RATES

Year	Percentage of Waste Diverted (percent)
1996	57
1997	75
1998	63
1999	63
2000	67
2001	72
2002	73
2003	70
2004	72
2005	71*
2006	67*

**Biennial Review not completed, preliminary data.*
Source: California Integrated Waste Management Board. Accessed December 1, 2008.

4.13.2.2 REGULATORY FRAMEWORK

FEDERAL

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), an amendment to the Solid Waste Disposal Act of 1965, was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. The RCRA gives the US Environmental Protection

Agency (USEPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes. The Federal Hazardous and Solid Waste Amendments (HWSA) are the 1984 amendments to RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for USEPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program. Amendments to the RCRA in 1986 enabled USEPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances (USEPA, 2008)

STATE

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939) requires all California cities and counties to reduce the volume of waste deposited in landfills by 50 percent by the year 2000 and continue to remain at 50 percent or higher for each subsequent year. The purpose of AB 939 is to "reduce, recycle, and re-use solid waste generated in the State to the maximum extent feasible."

The California Integrated Waste Management Act requires each City and County in California to prepare, adopt, and submit to the California Integrated Waste Management Board (CIWMB) a source reduction and recycling element (SRRE) that demonstrates how the jurisdiction will meet the Integrated Waste Management Act's mandated diversion goals. Each jurisdiction's SRRE must include specific components, as defined in Public Resources Code (PRC) sections 41003 and 41303. In addition, the SRRE must include a program for management of solid waste generated within the jurisdiction that is consistent with the following hierarchy: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. Included in this hierarchy is the requirement to emphasize and maximize the use of all feasible source reduction, recycling, and composting options in order to reduce the amount of solid waste that must be disposed of by transformation and land disposal (PRC sections 40051, 41002, and 41302) (http://www.ciwmb.ca.gov/, 2008).

California Integrated Waste Management Board Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (§42900-42911 of the Public Resources Code) required the CIWMB to approve a model ordinance for adoption by any local government for the transfer, receipt, storage, and loading of recyclable materials in development projects by March 1, 1993. The act also required local agencies to adopt a local ordinance by September 1, 1993, or to allow the model ordinance to take effect (California Integrated Waste Management Board, 2008).

LOCAL

City of Taft Municipal Code

Title 3, Chapter 2 of the City of Taft Municipal Code requires that the City provide for solid waste handling services, including but not limited to the collection, transfer and disposal of solid waste within the City and establishes that all occupants of premises in the City are liable for refuse collection charges established by the City Council for solid waste handling services. The Chapter also sets forth policies regarding frequency of collection, means of collection and transportation, level of services, charges and fees, and the nature, location, and extent of providing solid waste handling services.

City of Taft Zoning Ordinance

Reservation of Lands for Public Facilities

Chapter 10, Section 6.10.240, of the Zoning Ordinance allows for the City to require that areas of real property within a subdivision or other residential, commercial, or industrial development be reserved for parks and recreational facilities, fire stations, libraries, or other public uses such as, but not limited to, domestic water and sewage facilities.

Solid Waste Reuse and Recycling Regulations

Chapter 10, Section 6.10.340, of the Zoning Ordinance provides for adequate areas for collecting and loading recyclable materials that are compatible with surrounding land uses. The Ordinance requires all new development projects, and some improvement projects, for which an application for a building permit is submitted to include adequate, accessible, and convenient areas for collecting and loading recyclable materials. The Ordinance also includes guidelines for the design of recycling areas.

Recycling Facilities

Chapter 11, Section 6.11.190, of the Zoning Ordinance contains regulations controlling the siting of recycling, redemption and processing facilities, and development standards to ensure that recycling facilities do not create adverse impacts on the surrounding community.

Liquid and Solid Waste

Chapter 12, Section 6.12.90, of the Zoning Ordinance states that no operation or action shall discharge at any point into any public street, public sewer, private sewage disposal system, stream, body of water, or into the ground any materials which can contaminate any water supply, interfere with bacterial processes in sewage treatment, or otherwise cause the emission of dangerous or offensive elements.

4.13.7.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G. A solid waste impact is considered significant if implementation of the proposed project would:

1) Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs; or

2) Fail to comply with federal, state, and local statutes and regulations related to solid waste.

METHODOLOGY

Evaluation of potential solid waste service impacts was based on information from the California Integrated Waste Management Board, as well as information provided by Westside Waste Management. A detailed list of reference material used can be found at this end of this section. This material was compared to the proposed GPU's specific solid waste service-related impacts. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment.

The City of Taft General plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

PROJECT IMPACTS AND MITIGATION MEASURES

Increased Demand for Solid Waste Services

Impact 4.13.7.1 Implementation of the proposed GPU would result in increased demand for solid waste services and facilities to serve the Planning Area. This impact would be considered a **less than significant** impact.

Implementation of the proposed GPU is expected to increase total population within the Planning Area to 68,018 at buildout. Increased population and development would increase demand for solid waste services and facilities.

WSWM would provide solid waste, green waste, and recyclable materials services to new development within the Planning Area. WSWM currently services the entirety of the Planning Area, and fees paid by the City of Taft would be expected to cover the costs of waste collection and disposal at buildout (Hampton, 2009).

The solid waste generated as a result of the proposed GPU is expected to continue to be sent to the Taft Sanitary Landfill. Using the CIWMB average of three pounds per person per day for the City of Taft, buildout of the GPU would result in the generation of 74,479,710 pounds, or 37,240 tons (74,479,710 lbs / 2,000 lbs in a ton), of solid waste annually, and 204,054 pounds, or 102 tons (204,054 lbs / 2,000 lbs in a ton), of solid waste daily. Therefore, waste generated at buildout of the GPU would not exceed the landfill's maximum permitted daily disposal of 419 tons per day. Furthermore, the landfill's total remaining capacity is 6,679,433 cubic yards. According to the CIWMB, household trash has approximately 800 pounds per cubic yard. Therefore, using the formula provided by the CIWMB[1], the Taft Sanitary Landfill has remaining capacity of 2,671,773.2 tons of household waste (California Integrated Waste Management Board, 2008).

Therefore, if the GPU were to immediately generate approximately 37,240 tons of waste annually, it would take 71.74 years for the Taft Sanitary Landfill to reach capacity from current conditions. This calculation is not intended to represent an accurate timeline for landfill capacity, as the GPU is expected to buildout in phases over the course of 65 years and would not be expected to generate the full 37,240 tons annually until full buildout. Waste generated by the City in years prior to buildout would be substantially less in earlier years and would increase gradually towards the eventual buildout number of 37,240 tons annually. In addition, waste other than household waste would be deposited at the landfill, which could result in capacity being reduced at a faster rate. However, these calculations illustrate that the Taft Sanitary landfill has substantial remaining capacity. Therefore, the landfill is expected to have capacity to serve the Planning Area at buildout.

Implementation of the project would also result in increased trips to the landfills to dispose of the waste, which would result in additional air quality and traffic impacts. Traffic, air quality, and noise effects of the proposed GPU, including construction and operation of subsequent development, are programmatically addressed by the impact analyses in the appropriate technical sections of this Draft EIR. Implementation of the proposed project would have a **less than significant** impact on solid waste service.

Proposed General Plan Policies and Action Items that Provide Mitigation

The following General Plan policies and action items, identified in the Public Facilities Element, address impacts related to solid waste services:

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[1] <6,679,433 cubic yards X 800 pounds per cubic yard (waste conversion factor) = 5,343,546,400 pounds/2000 pounds per ton = 2,671,773.2 tons of household waste>

Policy PF-2 Require developers to pay their fair share of the costs associated with development and redevelopment except as authorized by the City pursuant to Economic Development goals and strategies.

Policy PF-3 Except when prohibited by state law, require that infrastructure systems be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.

Action PF-3a Require financial guarantees to assure infrastructure development to the City's satisfaction.

Action PF-3b Adopt master plans for the development of public facilities, including phasing of improvements in a logical manner that encourages the orderly development of roadways, water and sewer facilities, and other public facilities.

Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects.

Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies.

Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit.

Implementation of the above policies would help to reduce the GPU's impacts to solid waste services by requiring that sufficient capacity be available in all public services and facilities on time to maintain desired service levels and avoid capacity shortages. Furthermore, waste generated at buildout of the GPU would not exceed the landfill's daily permitted capacity or maximum permitted capacity. Therefore, impacts would be considered **less than significant**.

Mitigation Measures

None required.

4.13.7.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for solid waste services consists of the Kern County Waste Management Department (KCWMD) service area, which includes the entirety of Kern County. Future development in the County would further increase the amount of waste disposed of at the KCWMD landfills. The development associated with the proposed project would result in a

population increase and contribute to a cumulative impact on solid waste and related facilities. Full development in the Planning Area (expected to occur beyond 2035) would result in an incremental cumulative demand for solid waste collection and disposal. **Table 4.0-1** in Section 4.0 of this EIR contains a list of regional development projects that would be included in the cumulative setting.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Demand for Solid Waste Services

Impact 4.13.7.2 Implementation of the proposed General Plan update, along with other existing, planned, proposed, approved, and reasonably foreseeable development within the WKWMD service area, would result in increased demand for solid waste services. This impact is **less than cumulatively considerable**.

Implementation of the proposed GPU, in combination with other existing, approved, proposed, or reasonably foreseeable development in Kern County may significantly increase the amount of residential, commercial, and industrial development in the WKWMD service area. This development would generate solid waste that would need to be disposed of at one of the County's seven landfills. Sanitary solid waste landfill sites in Kern County and their remaining capaCity in years in parentheses are as follows (Kern County Planning Department, 2004, p. 4-11-14):

- Bena (Bakersfield) (37.9 years – Phase I & IIa)
- Boron (28.08 years)
- Mojave –Rosamond (11.7 years)
- Ridgecrest (38.2 years)
- Shafter-Wasco (21.5 years)
- Taft (125.5 years)
- Tehachapi (6.2 years)

As shown, the majority of the landfills in the County have over 20 years of remaining capaCity. In addition, as previously mentioned, all jurisdictions within the County except one meet or exceed the 50 percent waste diversion requirement. Therefore, adequate landfill capaCity exists to serve cumulative demand. However, due to the increasingly complex permitting and closure procedures for sanitary landfills and the State-mandated necessity to reduce the waste stream, Kern County is planning to use regional landfills to meet long-term demand (Kern County Planning Department, 2004, p. 4-11-13). The County plans to close or inactivate existing area sanitary landfills and rely solely on three regional landfills as described under the Existing Setting subsection above.

Any expansion of the existing landfills, or the construction of new landfills, would be subject to CEQA review. Potential environmental effects of an expanded or additional landfills include, but are not limited to land use impacts, air quality, biological resources (depending on location),

cultural resources (depending on location), hazardous materials, noise and vibration (during construction), traffic, visual resources, water, and soil resources. In addition, the County would need to build additional infrastructure to transfer waste from place-to-place. Impacts for such infrastructure would be similar to those described for landfills and would be evaluated at a project-specific level at such time as they are proposed. Therefore, this impact is considered **less than cumulatively considerable**.

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative solid waste impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers.

Public Facilities and Services Element

Policy PF-2; Policy PF-3; Action PF-3a; Action PF-3b; Policy PF-4; Policy PF-9; Action PF-9a

The proposed General Plan policies identified under Impact 4.13.7.1 above would reduce the proposed GPU's contribution to cumulative impacts associated with increased demand for solid waste services.

As the County currently has landfill capaCity available to serve cumulative demand, and future regional landfills would undergo project-specific environmental review, the project's contribution to cumulative solid waste impacts would be considered **less than cumulatively considerable**.

Mitigation Measures

None required.

4.13.8 ENERGY AND COMMUNICATION SERVICES

4.13.8.1 EXISTING SETTING

ELECTRIC SERVICES

Electrical services in the City of Taft are provided by Pacific Gas and Electric (PG&E). Pacific Gas and Electric Company (PG&E) provides natural gas and electric service to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California (Pacific Gas and Electric, 2008). **Table 4.13.8-1** below shows electricity consumption by land use for PGE's service area from 1996 to 2006 expressed in millions of kWh.

TABLE 4.13.8-1
ELECTRICITY CONSUMPTION FOR PGE'S SERVICE AREA (IN MILLIONS OF KWH) 1996-2006

Year	Ag & Water Pump	Commercial Building	Commercial Other	Industry	Mining & Construction	Residential	Streetlight	Total Usage
1996	5,723	29,466	5,104	20,486	2,629	28,120	542	**92,069**
1997	5,975	31,203	4,897	21,750	2,716	28,599	559	**95,699**
1998	5,000	31,156	4,841	21,117	2,563	29,596	572	**94,845**
1999	6,005	33,176	5,165	20,572	2,585	30,521	509	**98,534**
2000	6,004	34,503	5,279	20,748	2,599	31,646	552	**101,331**
2001	6,350	33,329	4,857	18,893	2,397	29,657	509	**95,993**
2002	6,439	34,220	4,944	18,143	2,283	30,537	503	**97,070**
2003	6,324	35,243	4,682	17,954	2,477	31,976	516	**99,171**
2004	6,778	35,741	4,987	18,352	2,642	32,708	532	**101,740**
2005	5,402	35,819	5,113	18,619	2,863	33,106	537	**101,460**
2006	6,010	36,943	5,407	18,561	2,912	34,345	542	**104,719**

Source: California Energy Consumption Data Management System website. Accessed December 1, 2008.

PG&E's Kern Division is a service territory that includes the City of Taft and the Planning Area, as well as Arvin, Bakersfield, Maricopa, McFarland, Ridgecrest, Shafter, Wasco, unincorporated portions of Kern County and portions of Santa Barbara, San Luis Obispo and San Bernardino Counties. Within the Kern Division, PG&E serves gas and/or electricity to over 154,000 residential customers and approximately 23,000 commercial and industrial customers (Kern County Planning Department, 2004, p. 4-11-11).

NATURAL GAS SERVICES

Natural gas services in the City of Taft are provided by the Southern California Gas Company (SCGC). The Southern California Gas Company provides service to more than 20.3 million customers in over 500 communities (Southern California Gas Company, 2008). **Table 4.13.8-2** below shows natural consumption by land use for Southern California Gas Company's service area from 1996 to 2006 expressed in millions of therms.

TABLE 4.13.8-2
NATURAL GAS CONSUMPTION FOR SOUTHERN CALIFORNIA GAS COMPANY'S SERVICE AREA (IN MILLIONS OF THERMS) 1996-2006

Year	Ag & Water Pump	Commercial Building	Commercial Other	Industry	Mining & Construction	Residential	Total Usage
1996	48	611	130	1,257	2,646	2,482	**7,174**
1997	63	709	87	1,132	3,311	2,441	**7,743**
1998	69	827	87	1,721	2,900	2,812	**8,416**
1999	87	905	92	1,757	2,635	2,870	**8,347**
2000	90	867	87	1,725	2,476	2,692	**7,938**
2001	86	960	74	1,636	2,556	2,707	**8,020**
2002	114	1,136	99	2,044	2,195	2,673	**8,261**
2003	102	939	77	1,529	2,608	2,558	**7,814**
2004	101	968	66	1,569	2,636	2,685	**8,025**
2005	85	965	71	1,578	2,427	2,536	**7,662**
2006	87	938	88	1,458	2,536	2,544	**7,651**

Source: California Energy Consumption Data Management System website. Accessed December 1, 2008.

TELECOMMUNICATION SERVICES

Brighthouse Networks

Brighthouse Networks (BN) is a telecommunications company that provides digital cable, digital phone, and high speed internet services to over two million customers in California, Florida, the Florida Panhandle, Alabama, Indiana, and Michigan (Brighthouse, 2009). The BN service area covers the majority of the City of Taft, the communities of Ford City, South Taft, Taft Heights, and Dustin Acres, as well as the homes just east of the Buena Vista golf course. The Valley Acres development, just southwest of Dustin Acres along SR 119, is also included in the BN service area. Within the Planning Area, BN offers video, high-speed data, and telephone services to both residential and commercial customers (Schoenstein, 2009).

BN infrastructure in the Planning Area is of a hybrid fiber-coax design. BN works closely with other utilities when extending infrastructure into new areas, as BN infrastructure is located on telephone poles when there is access and underground in rights-of-way elsewhere. BN self-funds infrastructure expansion (Schoenstein, 2009).

In addition to Brighthouse Networks, there are several other telecommunications service providers within the Planning Area. Verizon offers land-line telephone services, and many cellular phone companies offer services and/or coverage in the area.

4.13.4.2 REGULATORY FRAMEWORK

STATE

California Public Utilities Commission

The California Public Utilities Commission (CPUC) is the state agency that regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. The CPUC grants operating authority, regulates service standards, sets rates, and monitors utility operations for safety, environmental stewardship, and public interest (CPUC, 2007, p. 10).

Traditionally, general rate cases have been the major form of regulatory proceeding for the CPUC. General rate case applications may be filed every three years, and take about a year to complete. The utility bases its revenue request on its estimated operating costs and revenue needs for a particular future year. Customer rates will be based on the CPUC's determination of how much revenue the utility reasonably requires to operate (CPUC, 2007, p. 10).

California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The Energy Commission adopted the 2008 Standards on April 23, 2008, and the Building Standards Commission approved them for publication on September 11, 2008. The new standards will go in to effect on July 1, 2009 (California Energy Commission, 2008).

LOCAL

City of Taft Municipal Code

Title 2, Chapter 10 of the City of Taft Municipal Code provides for Underground Utility Districts in which utility poles, overhead wires, and associated overhead structures are prohibited. The Chapter states that the City Council may call public hearings to ascertain whether the public necessity, health, safety or welfare requires the removal of poles, overhead wires and associated overhead structures within designated areas of the City and the underground installation of wires and facilities for supplying electric, communication, or similar or associated service.

City of Taft Zoning Ordinance

<u>Reservation of Lands for Public Facilities</u>

Chapter 10, Section 6.10.240, of the Zoning Ordinance allows for the City to require that areas of real property within a subdivision or other residential, commercial, or industrial development

be reserved for parks and recreational facilities, fire stations, libraries, or other public uses such as, but not limited to, domestic water and sewage facilities.

Antennas and Satellite Dishes

Chapter 10, Section 6.11.80, of the Zoning Ordinance contains development standards for antennas and satellite dishes that are intended to reduce the potential safety, aesthetic, and view blocking impacts of antennas and satellite dishes, and to integrate such structures into neighborhoods with the least possible impact.

4.13.4.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G. A utilities impact is considered significant if implementation of the project would:

1) Result in the need for new systems or supplies or a substantial expansion or alteration to electricity, natural gas, or telecommunication systems that results in a physical impact on the environment or would result in inefficient, wasteful and unnecessary consumption of energy (based on State CEQA Guidelines Appendix F).

METHODOLOGY

Evaluation of potential electricity, natural gas, or telecommunication impacts was based on information from the California Energy Commission, the California Public Utilities Commission, and consultation with the service providers. A detailed list of reference material used can be found at this end of this section. This material was then compared to the proposed GPU's specific electricity, natural gas, or telecommunication impacts. The impact analysis below focuses on whether or not the physical environment would be significantly effected.

The City of Taft General plan is intended to be a "self-mitigating" document, in that the General Plan policies are designed to mitigate or avoid impacts on the environment resulting from implementation of the proposed project. To that end, the relevant General Plan policies providing mitigation have been identified for each significant impact in this section. If the applicable General Plan policies were determined not to fully mitigate or avoid impacts, then additional mitigation measures have been provided. These additional mitigation measures have been written as policy statements that can be incorporated into the final General Plan. Each impact discussion includes a determination as to whether the impacts would be mitigated to a less than significant level or would remain significant and unavoidable after implementation of the updated General Plan policies.

IMPACTS AND MITIGATION MEASURES

Increased Demand for Electrical, Natural Gas, and Telecommunications Services

Impact 4.13.8.1 Implementation of the proposed GPU would require additional electrical, natural gas, and telecommunications services, including associated infrastructure. This is considered to be a **less than significant** impact.

Implementation of the proposed GPU is expected to result in a total of 25,184 housing units and a population of 68,018 within the Planning Area at buildout. This represents an increase of 19,146 housing units and 49,948 persons over existing conditions within the Planning Area and thus a greater demand for electrical, natural gas, and telecommunications services and associated infrastructure.

PG&E and the SCGC would provide electrical and natural gas services to future development resulting from implementation of the GPU and is required by the PUC to update the systems to meet any additional demand. Both PG&E and the SCGC build infrastructure on an as-needed basis. All electrical and natural gas distribution lines, substations, transmission, delivery facilities, and easements required to serve the Planning Area would be subject to CEQA review. However, it is expected that much of the distribution infrastructure would be co-located with other utilities within roadway right-of-way that would minimize the extent of environmental effects. Potential environmental effects of obtaining more power through the development of power plants include, but are not limited to, air quality, biological resources, cultural resources (depending on location), hazardous materials, land use, noise and vibration, traffic, visual resources, waste management, water and soil resources, and health hazards. Potential environmental effects for the construction of transmission lines include, but are not limited to, air quality (during construction), biological resources (depending on location), cultural resources (depending on location), hazardous materials and health hazards, land use, noise and vibration (during construction), traffic, visual resources.

It is expected that telecommunications services in the Planning Area would continue to be provided by Brighthouse Networks and various other wireless providers. Infrastructure for telephone and cable service is typically installed at the point of initial development and in accordance with service demand. Wireless infrastructure is market-driven and is installed following initial buildout. The potential environmental effects of increased telecommunications infrastructure would be similar to the effects of increased electrical and natural gas infrastructure as described above.

While the environmental effects of necessary infrastructure to serve development accommodated by the proposed GPU are addressed programmatically in this EIR, the specific environmental impacts resulting from the provision of electrical, natural gas, telephone, and cable television services would be identified by project-level environmental review in conjunction with individual development projects. A project-level CEQA document would analyze the potential environmental impacts of a project involving additional infrastructure at a more specific level and would identify mitigation measures more specific to those impacts. Since specific

infrastructure projects have not been identified at this time, potential impacts are addressed at a programmatic level only. This impact is considered **less than significant**.

Proposed General Plan Policies and Action Items that Provide Mitigation

Policy PF-2 Require developers to pay their fair share of the costs associated with development and redevelopment except as authorized by the City pursuant to Economic Development goals and strategies.

Policy PF-3 Except when prohibited by state law, require that infrastructure systems be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.

Action PF-3a Require financial guarantees to assure infrastructure development to the City's satisfaction.

Action PF-3b Adopt master plans for the development of public facilities, including phasing of improvements in a logical manner that encourages the orderly development of roadways, water and sewer facilities, and other public facilities.

Policy PF-4 Coordinate with all service agencies, including water and sewer providers, school districts, and park and recreation districts, during the review of plans and development projects.

Policy PF-9 Coordinate with independent public service providers, including schools, parks and recreation, reclamation, water, transit, electric and other service districts, in developing financial and service planning strategies.

Action PF-9a Seek state and federal grants for the upgrading and expansion of the infrastructure systems in the City of Taft as opportunities arise and resources permit.

Implementation of the proposed General Plan policies listed above would ensure that public facilities, including electrical, natural gas, and telecommunications services would be available on time to maintain desired service levels and avoid capacity shortages and that the City would coordinate with electrical, natural gas, and telecommunications service providers when planning new development. In addition, subsequent development would be required to comply with energy efficiency standards in Title 24 of the California Code intended to minimize impacts to peak energy usage periods and to reduce impacts on overall state energy needs. Therefore, impacts would be considered **less than significant.**

Mitigation Measures

None required.

4.13.8.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for electrical, natural gas, and telecommunications services encompasses the service areas of the each particular service provider (i.e., PG&E, Southern California Gas Company, Brighthouse Networks, Verizon, etc.) under full development of the Planning Area, expected to occur in the year 2035 and beyond. The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development within these service areas that currently place demand on these services or is expected to place demand on them in the future. **Table 4.0-1** in Section 4.0 of this EIR contains a list of regional development projects that would be included in the cumulative setting.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Demand for Electrical, Natural Gas, and Telecommunications Services

Impact 4.13.8.2 Implementation of the proposed General Plan update, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would contribute to the cumulative demand for electrical, natural gas, and telecommunications services and associated infrastructure. This is considered a **less than cumulatively considerable** impact.

Implementation of the proposed GPU, along with other existing, planned, proposed, approved, and reasonably foreseeable development in areas served by PG&E, Southern California Gas Company, Brighthouse Networks, Verizon, and various wireless providers would result in a cumulative increase in demand for electrical, natural gas, and telecommunications services and associated infrastructure and could result in increased infrastructure extensions to serve future development. As discussed under **Impact 4.14.8.1** above, the environmental effects of specific infrastructure projects needed to accommodate future growth would be evaluated in further detail for each specific energy-related project. Implementation of the proposed GPU's contribution to cumulative environmental impacts resulting from the construction of such facilities have been considered in the technical analyses of this EIR as part of overall development of the Planning Area.

In addition, subsequent development under the proposed GPU, as well as future development in the service areas of the each service provider, would be required to comply with energy efficiency standards in Title 24 of the California Code intended to minimize impacts to peak energy usage periods and to reduce impacts on overall state energy needs.

Therefore, the project's contributions to the continued provision of electrical, natural gas, and telecommunications services and infrastructure in the cumulative setting would be considered **less than cumulatively considerable.**

Proposed General Plan Policies and Action Items that Provide Mitigation

The proposed General Plan update contains several goals, policies, and actions that would assist in reducing this cumulative electric, natural gas and telephone service impact. Since these policies have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy numbers.

Public Facilities and Services Element

Policy PF-2; Policy PF-3; Action PF-3a; Action PF-3b; Policy PF-4; Policy PF-9; Action PF-9a

The proposed General Plan policies identified under Impact 4.13.8.1 above would assist in addressing cumulative effects related to the provision of electric, natural gas, and cable/television services in the Planning Area.

Mitigation Measures

None required.

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5.0
CUMULATIVE IMPACTS SUMMARY

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") summarizes the cumulative impacts associated with the proposed project that are identified in environmental issue areas in Section 4.0. Cumulative impacts are the result of combining the potential effects of the projects with other planned developments, as well as foreseeable development projects. The following discussion considers the cumulative impacts of the relevant environmental issue areas.

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) contain an assessment of the cumulative impacts that could be associated with the proposed project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

…the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

Either:

a. A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,

b. A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

5.2 CUMULATIVE SETTING

A general description of the cumulative setting is provided in Section 4.0 (Introduction to the Environmental Analysis and Assumptions Used) as well as **Table 4.0-1**. In addition, each environmental issue area evaluated in the DEIR identifies its own cumulative setting.

5.3 CUMULATIVE IMPACTS ANALYSIS

Identified below is a compilation of the cumulative impacts that would result from the implementation of the project and future development in the vicinity. As described above, cumulative impacts are two or more effects that, when combined, are considerable or compound other environmental effects. Each cumulative impact is determined to have one of the following levels of significance: less than significant, significant, or significant and unavoidable. The specific cumulative impacts for each environmental issue area are identified in the technical sections of Section 4.0.

SECTION 4.1 LAND USE

Cumulative Land Use Impacts

Impact 4.1.5 When considered with existing, proposed, approved and planned development in the region, implementation of the proposed Taft General Plan Update has the potential to contribute to cumulative land use conditions in the region that result in significant impacts to the physical environment. This is considered a **cumulatively considerable** impact.

SECTION 4.2 AGRICULTURAL RESOURCES

Cumulative Impacts to Agricultural Resources

Impact 4.2.4 Implementation of the proposed project, along with other proposed development in Kern County, would contribute to the cumulative conversion of Important Farmlands to other uses and may increase agriculture/urban interface conflicts. This is a **cumulatively considerable** impact.

SECTION 4.3 POPULATION AND HOUSING

Cumulative Population and Housing Increases

Impact 4.3.3 Subsequent land use activities associated with implementation of the proposed General Plan Update, in addition to existing, approved, proposed, and reasonable foreseeable projects, could result in a cumulative increase in population and housing growth in the City of Taft as well as in the surrounding Cities and unincorporated areas of the County, along with associated environmental impacts. This is considered a **cumulatively considerable** and **significant and unavoidable** impact.

SECTION 4.4 TRAFFIC AND CIRCULATION

Cumulative Traffic Impacts on Local Roadways and State Highways

Impact 4.4.5 When considered with existing, proposed, approved and planned development in the region, implementation of the proposed project has the potential to contribute to an increase in traffic volumes that would result in deficient level of service conditions under cumulative conditions (including buildout of the Planning Area) resulting in significant impacts to the physical environment. This is considered a **cumulatively considerable** impact.

Cumulative Impacts to Bicycle and Pedestrian System

Impact 4.4.6 Implementation of the proposed project would contribute to cumulative demands for pedestrian and bicycle infrastructure. The General Plan's contribution is considered **less than cumulatively considerable**.

Cumulative Impacts to Transit System

Impact 4.4.7 Implementation of the proposed General Plan Update would contribute to the cumulative demand for public transit service (e.g., bus and demand-responsive transit services). The proposed project's contribution is considered **less than cumulatively considerable**.

Cumulative Impacts to Aviation System

Impact 4.4.8 When considered with existing, proposed, planned and approved development in the region, implementation of the proposed General Plan Update would result in an increase in the demand for airport use in the area. This is considered a **cumulatively considerable** impact.

SECTION 4.5 AIR QUALITY AND CLIMATE CHANGE

Cumulative Air Quality Impacts on Attainment Plans

Impact 4.5.8 Implementation of the proposed General Plan Update, in combination with cumulative development in the San Joaquin Valley Air Basin, would contribute to a cumulative air quality impacts and could conflict with ozone and particulate matter attainment efforts. This is considered a **cumulatively considerable** impact.

Conflict or Obstruct with Implementation of Greenhouse Gas Reduction Measures

Impact 4.5.9 Implementation of the proposed project would substantially increase emissions of CO_2e in 2035 over existing (2008) conditions. This increase in GHG emissions would be inconsistent with state efforts to reduce greenhouse gas emissions. This impact is considered to be **cumulatively considerable.**

Climate Change Environmental Effects on the City

Impact 4.5.10 Implementation of the proposed project could substantially increase emissions of greenhouse gas emissions over existing conditions that could result in environmental effects to the City. This impact is considered to be **less than cumulatively considerable**.

Conflict or Obstruct with Implementation of AB 32

Impact 4.5.11 Implementation of the proposed General Plan Update would increase emissions of CO_2e in 2030 over existing (2008) conditions. This increase in GHG emissions is inconsistent with AB 32's goal of reducing 2020 greenhouse gas emissions to 1990 levels. This impact is considered **cumulatively considerable** and **significant and unavoidable**.

SECTION 4.6 NOISE

Noise Impacts Associated with Increased Traffic Resulting from Buildout of the Proposed General Plan

Impact 4.6.7 Implementation of the proposed General Plan along with potential development of the Planning Area could result in increased noise conflicts. This is considered a **cumulatively considerable** impact.

SECTION 4.7 HAZARDS AND HUMAN HEALTH

Cumulative Hazards and Health Risks

Impact 4.7.5 Implementation of the proposed General Plan Update could contribute to the cumulative exposure of persons to contaminated soil or groundwater during development of previously contaminated sites or sites undergoing remediation. This impact is considered **less than cumulatively considerable**.

SECTION 4.8 GEOLOGY AND SOILS

Cumulative Geologic and Soils Impacts

Impact 4.8.7 Implementation of the proposed General Plan Update, in combination with existing, planned, proposed, and reasonably foreseeable development, would not contribute to cumulative geologic and soil impacts, as the impacts would be site-specific and not additive in character. Thus, the General Plan's contribution would be **less than cumulatively considerable**.

SECTION 4.9 CULTURAL RESOURCES

Cumulative Impacts to Prehistoric Resources, Historic Resources, and Human Remains

Impact 4.9.4 Adoption of the General Plan Update, its associated subsequent projects and specific plans within the Planning Area, in combination with all other foreseeable development projects within Kern County and surrounding areas within the San Joaquin Valley, has the potential to disturb cultural resources (i.e., prehistoric sites, historic sites, historic buildings, and isolated artifacts and features) and human remains. This would be a **cumulatively considerable** impact.

Cumulative Impacts to Paleontological Resources

Impact 4.9.5 Adoption of the General Plan Update, its associated subsequent projects and specific plans within the Planning Area, in combination with all other foreseeable development projects within Kern County and surrounding areas within the San Joaquin Valley, has the potential to disturb paleontological resources (i.e., fossils and fossil formations). This would be a potentially **cumulatively considerable** impact.

SECTION 4.10 BIOLOGICAL RESOURCES

Cumulative Impacts to Special-Status Species

Impact 4.10.5 The proposed project, in combination with other reasonably foreseeable projects, would result in direct mortality and loss of habitat for special-status

species, and waters of the U.S., including wetlands. This would be a **cumulatively considerable** impact.

SECTION 4.11 HYDROLOGY AND WATER QUALITY

Cumulative Water Quality Impacts

Impact 4.11.6 Implementation of the proposed General Plan Update, in combination with existing, proposed, approved, and reasonably foreseeable development activities within the watershed, would contribute to a cumulative degradation of water quality from construction activities and increased urban runoff. This is considered a **less than cumulatively considerable** impact.

Cumulative Flooding Impacts

Impact 4.11.7 Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the watershed, would increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions along the Kern River, Sandy Creek, and/or other local waterways. In addition, the proposed General Plan Update may allow for development within existing flood hazard zones, including the inundation area of Isabella Dam. This is considered a **potentially cumulatively considerable** impact.

Cumulative Groundwater Supply Depletion

Impact 4.11.8 Implementation of the proposed General Plan Update, in combination with existing, approved, proposed, and other reasonably foreseeable development activities in the Kern County Groundwater Subbasin, would contribute to an increased demand for municipal water supply, requiring increased groundwater pumping and potentially contributing to groundwater level declines and overdraft of the aquifer. This is considered a **less than cumulatively considerable** impact.

SECTION 4.12 VISUAL RESOURCES

Cumulative Visual Resources Impacts

Impact 4.12.5 Implementation of the proposed project, in combination with other reasonably foreseeable projects within Kern County and the San Joaquin Valley, would contribute to cumulative impacts to visual resources in the region. The project's contribution is considered **cumulatively considerable**.

SECTION 4.13 PUBLIC SERVICES AND UTILITIES

Cumulative Demand for Fire Protection and Emergency Medical Services

Impact 4.13.1.2 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the KCFD and HAS service areas, would increase the demand for fire protection and emergency medical services and could therefore require additional staffing, equipment, and related facilities. The project's contribution to the need for expanded fire protection and emergency medical services is considered less than cumulatively considerable.

Cumulative Demand for Law Enforcement Services

Impact 4.13.2.2 Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the TPD service area, would increase the demand for law enforcement services which could result in the need for additional staffing, equipment, and related facilities under cumulative conditions. The project's contribution to the need for expanded law enforcement services is considered less than cumulatively considerable.

Cumulative Public School Impacts

Impact 4.13.3.3 Population growth associated with implementation of the proposed General Plan update, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the cumulative setting, would result in a cumulative increase in student enrollment and require additional schools and related facilities to accommodate the growth. This is a **less than cumulatively considerable** impact.

Cumulative Park and Recreation Demands

Impact 4.13.4.2 Implementation of the proposed project along with other existing, planned, proposed, approved, and reasonably foreseeable development within the service areas of WSRPD and Kern County Parks and Recreation Department, would result in cumulative park and recreation impacts. This impact is considered to be **less than cumulatively considerable**.

Cumulative Water Service Impacts

Impact 4.13.5.3 Implementation of the proposed project would contribute to the cumulative demand for water supply in the WKWD's service area. This is considered a **cumulatively considerable** impact.

Cumulative Wastewater Service Impacts

Impact 4.13.6.3 Implementation of the proposed General Plan update, as well as existing, planned, proposed, approved, and reasonably foreseeable development within the City's wastewater service area, would substantially increase wastewater flows and require additional infrastructure and treatment capacity to accommodate anticipated demands. However, implementation of proposed General Plan policies would require that wastewater treatment and infrastructure capacity be available in time to meet the demand created by new development. Therefore, this impact is considered to be **less than cumulatively considerable**.

Cumulative Demand for Solid Waste Services

Impact 4.13.7.2 Implementation of the proposed General Plan update, along with other existing, planned, proposed, approved, and reasonably foreseeable development within the WKWMD service area, would result in increased demand for solid waste services. This impact is **less than cumulatively considerable**.

Cumulative Demand for Electrical, Natural Gas, and Telecommunications Services

Impact 4.13.8.2 Implementation of the proposed General Plan update, along with other existing, planned, proposed, approved, and reasonably foreseeable development, would contribute to the cumulative demand for electrical, natural gas, and telecommunications services and associated infrastructure. This is considered a **less than cumulatively considerable** impact.

6.0
PROJECT ALTERNATIVES

6.1 INTRODUCTION

GENERAL CEQA REQUIREMENTS

The purpose of the EIR alternatives analysis is to describe a range of reasonable alternatives to the proposed project that could feasibly attain most of the basic objectives of the project, and to evaluate the comparative merits of the alternatives (State CEQA Guidelines, Section 15126.6[a]). An EIR need not consider every conceivable alternative to a project; nor is it required to consider alternatives that are infeasible. The discussion is required to be focused on those alternatives that are capable of avoiding or substantially lessening any significant effects of the project, even if they impede the attainment of the project objectives to some degree or would be more costly (CEQA Guidelines Section 15126.6[b]).

CEQA requires an EIR to identify project alternatives and to indicate the manner in which a project's significant effects may be mitigated or avoided. However, it does not mandate that the EIR itself contain an analysis of the feasibility of the various project alternatives or mitigation measures that it identifies (Public Resources Code, Sections 21002.1, subd (a): 21100 and subd (b)4, 2004). As the lead agency, the City of Taft bears the responsibility for the decisions that have to be made before the project can go forward. These decisions include but are not limited to the determinations of feasibility and whether the benefits of the project outweigh its significant effects on the environment (Public Resources Code Sections 21002.1, subd (b) and (c); Section 21082).

According to the State CEQA Guidelines, an EIR need only examine in detail those alternatives that could feasibly meet most of the basic objectives of the project. When addressing feasibility, CEQA states that "among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to alternative sites" (State CEQA Guidelines Section 15126.6). The State CEQA Guidelines also specify that the alternatives discussion should not be remote and speculative; however, they need not be presented in the same level of detail as the assessment of the proposed project.

State CEQA Guidelines indicate that several factors need to be considered in determining the range of alternatives to be analyzed in an EIR and the level of analytical detail that should be provided for each alternative. These factors include: (1) the nature of the significant impacts of the proposed project; (2) ability of alternatives to avoid or lessen the significant impacts associated with the project; (3) the ability of the alternatives to meet the objectives of the project; and, (4) the feasibility of the alternatives. These factors should be unique for each project.

The significant environmental impacts of the proposed project that the alternatives will seek to eliminate or reduce were determined and based upon the findings contained within each technical section evaluated in Sections 4.1 through 4.13 of this DEIR.

PROJECT OBJECTIVES

The City of Taft has identified the following objectives or goals to be met through completion of the General Plan Update and associated EIR:

- Promote economic growth and new commercial and industrial development in the community that results in increased household income, higher wages, new jobs, and reductions in chronic unemployment;
- Enhance and increase the price-diversity of housing to attract and retain professionals and managers;
- Enhance existing and expand retail and commercial development opportunities;
- Enhance and improve the visual quality of the community through improvement of public facilities, increased landscaping standards, and gateway improvements;
- Manage plan area growth, including locations in Kern County, to preserve the economic integrity and visual quality of the non-urbanized community;
- Preserve natural resources in the community, including support for the continued use of agriculture;
- Incorporate "green" and sustainable practices into City policies and development practices; and
- Promote a housing-jobs balance to address the current daily in-commute of some 1,800 vehicles, which would also address clean air and energy savings goals.

6.2 ALTERNATIVES UNDER CONSIDERATION

PROJECT ALTERNATIVES CONSIDERED

In accordance with the provisions of State CEQA Guidelines Section 15126.6, the following alternatives to the proposed project were evaluated. These alternatives were compared to the proposed project and its significant environmental impacts identified in Sections 4.1 through 4.13.

- Alternative 1 – No Project Alternative
- Alternative 2 – Reduced Sphere of Influence Alternative
- Alternative 3 – Northeast High Density Mixed Use Cluster Alternative
- Alternative 4 – Southeast High Density Mixed Use Cluster Alternative

These alternatives constitute an adequate range of reasonable alternatives as required under State CEQA Guidelines Section 15126.6. The environmental effects of each of these alternatives were identified and compared with the significant environmental impacts resulting from the proposed project that were identified in environmental issue areas in Section 4.0. Table 6.0-7 at the end of

this section provides a comparison of the environmental benefits and detriments of each alternative.

ALTERNATIVES CONSIDERED BUT NOT SELECTED FOR ANALYSIS

Off-Site Alternative

Off-site alternatives are generally evaluated in an environmental document to avoid, lessen, or eliminate the significant impacts of a project by considering the proposed development in an entirely different location. To be feasible, development of off-site locations must be able to fulfill the project purpose and meet most of the project's basic objectives. Given the nature of the proposed project (updating the City's existing General Plan), it would not be pertinent or possible to consider an off-site alternative as it includes a long-range plans for an existing City that cannot be relocated, and since the City boundaries have been established through incorporation. Further, this alternative would not meet the basic project objectives because consideration of another location would not address issues pertinent to the establishment of land use designations and policies to regulate the orderly development of the City. For this reason, an off-site alternative is considered infeasible pursuant to State CEQA guidelines 15126.6(c) and is being rejected as a feasible project alternative.

6.3 ALTERNATIVE 1 – NO PROJECT ALTERNATIVE

CHARACTERISTICS

CEQA, through case law and statutory language, requires that the "no project" alternatives be evaluated; under Section 15126.6(e)(2), "the No Project Alternative shall discuss the existing conditions at the time the notice of preparation is published…as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services."

The purpose of the No Project alternative is to allow the Lead Agency to compare the impacts of the proposed project with the impacts of not approving it.

According to Section 15126.6(e)(3)(A), "[w]hen the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. In the case of this alternative, the proposed General Plan Update would not be approved and the existing 1986 City of Taft General Plan, as amended, would continue as the primary guiding document for growth and development within the City.

The existing General Plan Planning Area includes a total of 23,667 acres (9,629 acres within the City limits + 14,038 acres within the existing Sphere of Influence (SOI)). Buildout of the existing General Plan would result in approximately 16,337 housing units, a population of 44,125, and a total of 30,406 jobs within the Planning Area under General Plan buildout, expected to occur by year 2050. The existing General Plan proposes primarily Natural Resource, Open Space, and Low Density Residential land uses in the areas outside the City limit (**Figure 6.0-1**).

COMPARATIVE ANALYSIS

Land Use and Planning

Cumulative Land Use Impacts (Impact 4.1.5)

Implementation of the proposed project would substantially contribute to the conversion of vacant/undeveloped land in the region resulting in significant effects to the environment. In addition, future development under the proposed GPU could bring development closer to the City of Bakersfield, which could contribute to cumulative land use conflicts in the region.

Under the No Project Alternative, land use within the Planning Area would continue to be guided by the existing City and County General Plans. As such, the City's SOI would not be expanded and no additional development beyond that identified in the existing General Plans would be planned. Although the proposed project includes policy provisions regarding land use compatibility that would not be implemented under the No Project Alternative, the proposed project would allow greater intensification of urban development on undeveloped land than the No Project Alternative (8,847 more housing units and 61,928 more jobs) and, thus, greater potential for land use conflicts. In addition, the City's SOI would not allow development closer to Bakersfield under the No Project Alternative and would, therefore, lessen the potential for cumulative land use conflicts in the region in comparison to the proposed project in those areas controlled by the City. The No Project Alternative does not, however, address any changes that have occurred and are expected to continue because of the actions of the jurisdiction retaining land use control of those areas. Therefore, cumulative land use impacts would be better, with respect to the City, under the No Project Alternative than under the proposed project.

Agricultural Resources

Loss and Conversion of Important Farmland (Impact 4.2.1)

Implementation of the proposed project designates areas of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Grazing Land within the Expansion Area for Commercial, Natural Resource, Public Facility, and Industrial uses. To be exact, the proposed General Plan Update would result in 2,827 acres of Prime Farmland, 2,670 acres of Farmland of Statewide Importance, 7,466 acres of Unique Farmland, and 24,117 acres of Grazing Land, or a total of 37,080 acres (2,827+2,670+7,466+24,117 = 37,080) of Important Farmland (approximately 30 percent of Important Farmland inventoried in the Planning Area) being designated for uses other than agriculture. In addition, buildout of the existing City limits is anticipated to occur by about 2035 and would result in the conversion of the entire 4,532 acres of Grazing Land to urban uses.

Implementation of the No Project Alternative would designate only 10,136 acres of Grazing Land for land uses other than agriculture. Therefore, impacts associated with the loss and conversion of farmland under the No Project Alternative would be slightly better than under the proposed project.

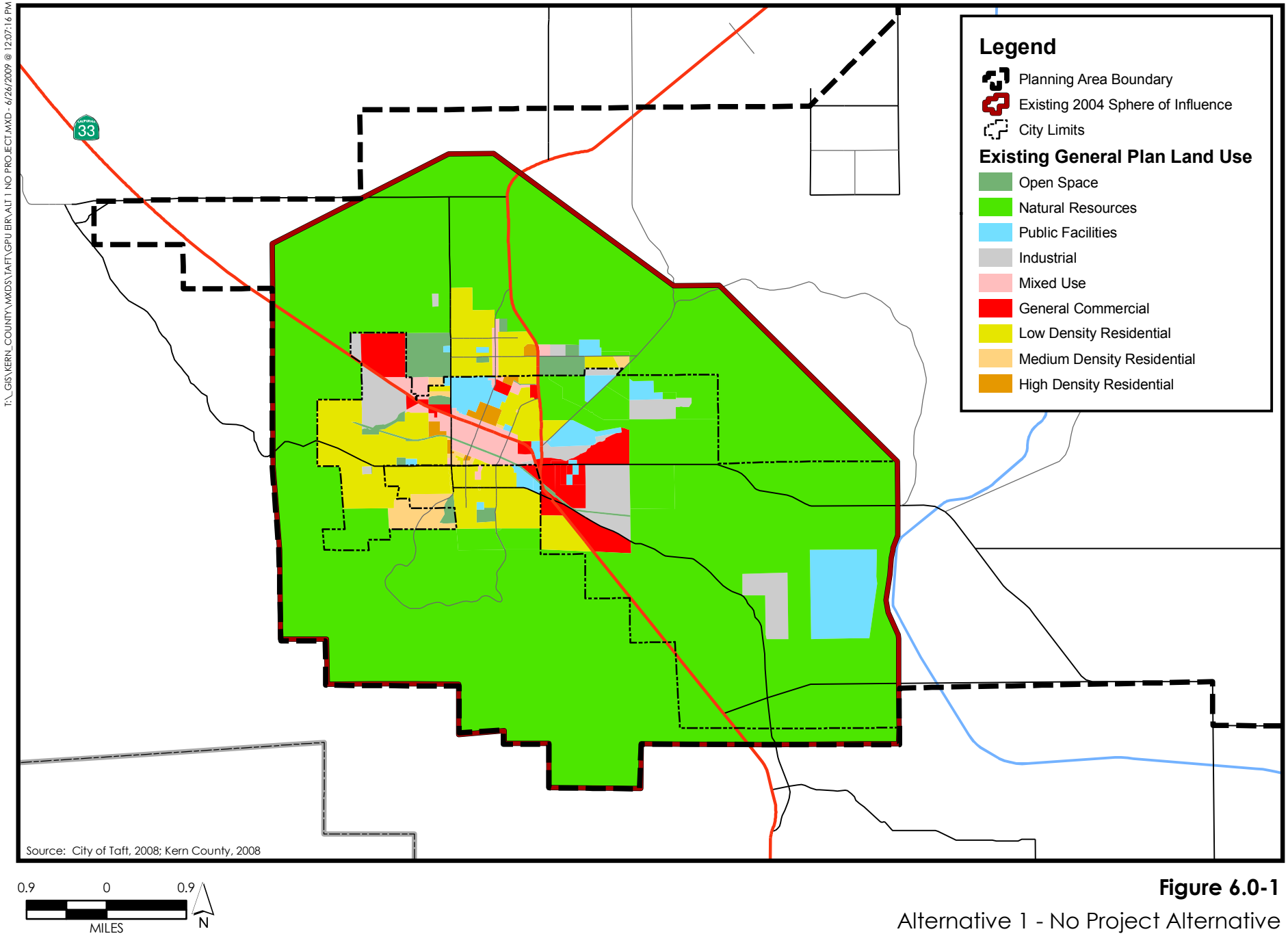

Figure 6.0-1

Alternative 1 - No Project Alternative

PMC

It should be noted that, under the No Project Alternative, land uses within the proposed project's Planning Area would continue to be guided by the County General Plan, which designates a total of 29,975.9 acres of Important Farmland (2,609.5 acres of Prime Farmland, 2,086.5 acres of Farmland of Statewide Importance, 7,241.4 acres of Unique Farmland, and 18,038.4 acres of Grazing Land) for uses other than agriculture. While the City would not have jurisdiction over land use decisions for County lands and analysis of environmental impacts of County land use decisions is not within the scope of this Draft EIR, it is likely that the No Project Alternative would result in the conversion of 29,975.9 acres of Important Farmland under County jurisdiction (see **Figure 3.0-6** and **Figure 4.2-4**). This is slightly less than the 37,080 acres that would be converted under the proposed project.

Agricultural/Urban Interface Conflicts (Impact 4.2.2)

Subsequent land use activities associated with implementation of the proposed project may involve the placement of residential and other non-agricultural land uses adjacent to agricultural uses that could result in agricultural/urban interface. Land use interface conflicts can individually or cumulatively decrease the efficiency of farming operations which can cause production costs to rise and make farming operation less appealing. The increase in production cost can eventually force the farmer into a land use conversion.

Implementation of the No Project Alternative would not allow urban uses adjacent to agricultural lands in areas of the Planning Area outside of the City limits. Lands adjacent to County farmlands would be designated for Natural Resources. Therefore, impacts associated with agricultural/urban interface conflicts would be better under the No Project Alternative than under the proposed project.

Conflicts with Williamson Act and FSZ Contracts (Impact 4.2.3)

The proposed project would result in 8,908 acres of land currently under Williamson Act contracts and 5,569 acres of land under FSZ contracts being designated for uses other than agriculture, which could lead to the removal of this land (a total of 14,477 acres) from active contracts. The California Government Code prohibits annexation of Williamson Act and FSZ contracted land unless specific criteria are met but does not preclude annexation entirely. Therefore, lands within the Expansion Area could be annexed and developed consistent with the proposed project, providing those criteria were met.

Implementation of the No Project Alternative would designate 636 acres of non-prime Williamson Act lands for Natural Resource uses within the Taft Planning Area, which is significantly less than the 14,477 acres that would be converted under the proposed project. Therefore, impacts associated with the loss and conversion of Williamson Act lands and FSZ contracts under the No Project Alternative would be better than under the proposed project.

It should be noted that, under the No Project Alternative, land uses within the proposed project's Planning Area would continue to be guided by the County General Plan, which designates a total of 13,822.6 acres of Williamson Act lands and FSZ contracts for uses other than agriculture. While the City would not have jurisdiction over land use decisions for County

lands and analysis of environmental impacts of County land use decisions is not within the scope of this Draft EIR, it is likely that the No Project Alternative would result in the conversion of 13,822.6 acres of Williamson Act lands and FSZ contracts. This is slightly less than the 14,477 acres that would be converted under the proposed project.

Cumulative Impacts to Agricultural Resources (Impact 4.2.4)

Implementation of the proposed project, along with other proposed development in Kern County, would contribute to the cumulative conversion of Important Farmlands to other uses. While the acreage converted would represent only a small percentage of Important Farmland in Kern County, this would be in addition to important farmland conversions associated with development anticipated under the applicable land use plans of Kern County and the incorporated cities of Bakersfield, Arvin, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Tehachapi, Wasco and Taft. Thus, the proposed project would contribute to a potentially significant amount of Important Farmland in Kern County being removed from agricultural uses.

As discussed above, the No Project Alternative would result in less conversion of agricultural lands than the proposed project. Therefore, the No Project Alternative's contribution to cumulative agricultural resource impacts would be better than the proposed project.

Population and Housing

Project and Cumulative Population, Housing, and Employment Increases (Impact 4.3.1 and Impact 4.3.3)

At buildout the proposed project would accommodate a population of 68,018 persons, 25,184 housing units and 48,420 jobs within the Planning Area by the buildout year of 2050. This represents a 276% increase over current population levels. This substantial growth would have a significant physical effect on the environment. In addition, the proposed project and all existing, approved, proposed, and reasonable foreseeable in the surrounding cities and unincorporated areas of the County could result in a cumulative increase in population and housing growth and associated environmental impacts.

The No Project Alternative would result in reduced buildout population and urban development in comparison to the proposed project (23,887 fewer persons, 8,847 fewer housing units, and 61,928 fewer jobs). Therefore, both project and cumulative impacts under the No Project Alternative would be better than under the proposed project.

Transportation and Circulation

Deficient LOS Conditions on Study Roadway Segments (Impact 4.4.1)

Implementation of the proposed project would result in an increase in traffic volumes that would result in deficient level of service conditions in year 2035 and would conflict with Caltrans standards for level of service. Specifically, the proposed project would result in a decline of

service for two segments of SR 119, from LOS B to LOS F for SR 119 between Tupman Road to SR 43, and from Los A to LOS F for SR 119 between SR 43 to I-5, respectively. This decline in LOS for these two segments of SR 119 would also conflict with Caltrans' TCR for state routes in the study area that establishes a minimum of LOS C for SR 119, and LOS D for SR 43.

SR 119 between Tupman Road to SR 43, and SR 119 between SR 43 to I-5 currently operate as two-lane roads in largely undeveloped areas currently designated by the County General Plan for mining and petroleum uses, agricultural uses, and as resource management areas. Under the No Project Alternative, these roads would not be widened to six-lane facilities and no intensification of commercial uses along these roadway segments would occur. Therefore, under the No Project Alternative, LOS conditions would not be expected to deteriorate and the roadway segments would remain consistent with Caltrans' TCR for state routes. Impacts would be better than under the proposed project.

Project and Cumulative Aviation System Impacts (Impact 4.4.4 and Impact 4.4.8)

Implementation of the proposed project would increase demand for service at the Taft-Kern-County Airport which currently operates with one runway and has been deemed an unsatisfactory facility for the area. In addition, the proposed project would contribute to increases in cumulative demands for aviation services in the region.

The No Project Alternative would reduce projected buildout population of the Planning Area by 23,893 persons in comparison to the proposed project. Therefore, the No Project Alternative would result in less of an increase demand for aviation services at the Taft-Kern-County Airport. Aviation system impacts would be better under the No Project Alternative than under the proposed project.

Cumulative Traffic Impacts on Local Roadways and State Highways (Impact 4.4.5)

The proposed project would add substantial traffic volumes on local roadways and state highway facilities that would result in significant traffic impacts within the Planning Area as well as in adjoining jurisdictions. As discussed above, implementation of the proposed project would result in some service levels exceeding proposed standards and policies of Caltrans and the County by resulting in declining levels of service on roadway segments within the General Plan planning horizon. This would be true under cumulative conditions as well.

Under the No Project Alternative, LOS conditions on SR 119 between Tupman Road to SR 43 and SR 119 between SR 43 to I-5 would not be expected to deteriorate and the roadway segments would remain consistent with Caltrans' TCR for state routes. Furthermore, the No Project Alternative would result in 23,893 fewer persons and 61,928 fewer jobs at buildout than the proposed project. Reduced population and employment opportunities would also reduce traffic volumes on local roadways and state highway facilities. Therefore, cumulative traffic impacts would be better under the No Project Alternative than under the proposed project.

Air Quality

Conflict with or Obstruct Implementation of Applicable Air Quality Plans or Contribute Substantially to an Existing Air Quality Violation (Impact 4.5.1)

Implementation of the proposed project would allow for population growth that would exceed projections assumed in SJVAPCD's 2007 Ozone Plan. This inconsistency could hinder SJVAPCD's ozone attainment strategy.

The No Project Alternative would result in a buildout population of 44,125, which is a reduction of 23,893 persons in comparison to the proposed project. Therefore, the No Project Alternative would have less of an impact on the SJVAPCD's ozone attainment strategy than the proposed project.

Expose Sensitive Receptors to Toxic Air Contaminants (Impact 4.5.4)

Implementation of the proposed project could locate sensitive receptors near potential existing and future sources of TACs, particularly in the Expansion Area, which is currently governed by the Kern County General Plan and planned for agricultural, mineral, petroleum production, residential, commercial, industrial, and public uses. Land use changes in the Expansion Area resulting from the proposed project could introduce land use conflicts that expose persons to TACs from industrial or commercial land uses. For example, industrial land uses can produce diesel truck traffic that can generate diesel-based particulate matter that has been designated a TAC by the State. It should be noted that implementation of General Plan policies included in the proposed project would ensure adequate buffers between land uses that could expose sensitive receptors to unhealthful levels of TACs or odors.

Under the No Project Alternative, land use within the Expansion Area would continue to be guided by the County General Plan. As such, the City's SOI would not be expanded and no additional development beyond that identified in the existing General Plan would be planned. Although the proposed project includes policy provisions regarding buffers that would not be implemented under the No Project Alternative, the proposed project would allow greater intensification of urban development than the No Project Alternative (8,847 more housing units and 61,928 more jobs) and thus greater potential for development to expose sensitive receptors to unhealthful levels of TACs or odors, particularly in the Expansion Area. Therefore, TAC impacts would be better under the No Project Alternative than under the proposed project.

Cumulative Air Quality Impacts on Attainment Plans (Impact 4.5.8)

Implementation of the proposed General Plan Update, in combination with cumulative development in the San Joaquin Valley Air Basin, would contribute to a cumulative air quality impacts and could conflict with ozone and particulate matter attainment efforts.

The No Project Alternative would result in reduced buildout population and urban development in comparison to the proposed project (23,887 fewer persons, 8,847 fewer housing units, and 61,928 fewer jobs) and would thus result in fewer air quality impacts that could conflict with

ozone and particulate matter attainment efforts. Therefore, impacts under the No Project Alternative would be better than those under the proposed project.

Conflict or Obstruct with Implementation of Greenhouse Gas Reduction Measures (Impact 4.5.9) and Conflict or Obstruct with Implementation of AB 32 (Impact 4.5.11)

Under the proposed project, CO_2e emissions associated within the Planning Area are projected to increase, primarily from increases in housing associated with the City's projected population growth. In addition to the CO_2e increases, there would also be increases in electricity use, water use, and waste associated with the growth accommodated by the proposed project, which would further increase CO_2e emissions and increase the carbon footprint of the City. Even with proposed General Plan policies that would help reduce GHG emissions from motor vehicles and energy use associated with growth, the net increase in emissions would contribute to climate change. As a result, the proposed General Plan Update is inconsistent with AB 32's goal of reducing GHG emissions by 2020 to 1990 levels.

The No Project Alternative would result in 8,847 fewer housing units than the proposed project. Since CO_2e emissions associated within the Planning Area are projected to increase primarily from increases in housing associated with the City's population growth, CO_2e emissions generated under the No Project Alternative would be less than those generated under the proposed project. Therefore, impacts associated with CO_2e emissions and reduction of those emissions would be better under the No Project Alternative than under the proposed project.

Noise

Exposure to Construction Noise (Impact 4.6.1)

Activities associated with construction of land uses allowed under the proposed project could result in elevated noise levels at noise-sensitive land uses. Increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption.

Under the No Project Alternative, construction-related noise would be reduced since the proposed project would allow greater intensification of urban development (23,887 more persons, 8,847 more housing units and 61,928 more jobs) and, thus, greater potential for exposure to construction noise. It should be noted, however, that the proposed project includes policies intended to reduce construction-related noise impacts. These policies would not be implemented under the No Project Alternative. Even so, impacts would still be better in comparison to the proposed project due to the reduction in potential construction activities under the No Project Alternative.

Exposure to Roadway Traffic Noise (Impact 4.6.2) and Noise Impacts Associated with Increased Traffic Resulting from Buildout of the Proposed General Plan (Impact 4.6.7)

The proposed project includes noise-sensitive land use designations along roadways anticipated to experience substantial increases in traffic noise. Development of noise-sensitive land uses

could also occur within the projected 60 dBA CNEL noise contours of area roadways. Buildout of the proposed project would result in increased exposure of existing and future noise-sensitive land uses to traffic noise levels that could exceed the City's land use compatibility noise standards.

The No Project Alternative would result in 23,893 fewer persons and 61,928 fewer jobs at buildout than the proposed project. Reduced population and employment opportunities would reduce traffic volumes and thus traffic noise. In addition, the No Project Alternative would result in fewer potential noise-sensitive land uses that could occur within the projected 60 dBA CNEL noise contours of area roadways as the proposed project would result in 8,847 fewer housing units at buildout. Therefore, project and cumulative traffic noise impacts would be better under the No Project Alternative than under the proposed project.

Exposure to Aircraft Noise (Impact 4.6.3)

The proposed project includes land uses that are consistent with the noise policies and recommended land uses identified within the Kern County Airport Land Use Compatibility Plan. However, it is conceivable that future development within the City, as well as future expansion of airport activities and associated noise contours, could occur in future years, which may result in increased exposure to aircraft noise levels at some nearby noise-sensitive land uses. It should be noted that policies and standards contained in the proposed project would ensure that future development near Taft-Kern County Airport would meet applicable noise criteria for land use compatibility and/or include noise attenuation features to meet applicable noise standards. Accordingly, future development projects under the proposed project located within air traffic patterns, corridors, and airport influence zones would be reviewed to ensure continued consistency with the Kern County Airport Land Use Compatibility Plan.

The No Project Alternative would result in reduced buildout population and urban development in comparison to the proposed project (23,887 fewer persons, 8,847 fewer housing units, and 61,928 fewer jobs) and thus less potential for exposure to aircraft noise. Therefore, impacts under the No Project Alternative would be better in comparison to the proposed project.

Exposure to Stationary Non-Transportation Noise (Impact 4.6.4)

Implementation of the proposed project could result in the future development of land uses that generate noise levels in excess of applicable City noise standards. Such land uses may include commercial, industrial, and recreational uses and could expose noise-sensitive land uses to excessive noise levels. In addition, new noise-sensitive land uses could be located in areas of existing stationary noise sources. Increased exposure to non-transportation source noise levels could result in increased levels of annoyance, activity interference, and potential sleep disruption for occupants of nearby land uses.

The No Project Alternative would result in reduced buildout population and urban development in comparison to the proposed project (23,887 fewer persons, 8,847 fewer housing units, and 61,928 fewer jobs) and thus less potential for development of land uses that generate noise levels

in excess of applicable City noise standards. Therefore, impacts under the No Project Alternative would be better in comparison to the proposed project.

Exposure to Groundborne Vibration (Impact 4.6.6)

The proposed project would result in additional development throughout the Planning Area, thus resulting in the potential for noise-sensitive land uses to be exposed to construction-generated sources of groundborne vibration. Groundborne vibration sources that could potentially affect future development would be primarily associated with short-term construction activities. It should be noted that implementation of proposed General Plan policies would mitigate groundborne vibration impacts by restricting noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to the daytime hours of operation.

The No Project Alternative would result in 23,887 fewer persons, 8,847 fewer housing units and 61,928 fewer jobs than the proposed project and thus less potential for exposure to construction-generated sources of groundborne vibration. Although the proposed project includes policies that would mitigate groundborne vibration impacts and these policies would not be implemented under the No Project Alternative, impacts would still be better in comparison to the proposed project due to the reduction in potential construction activities and thus the reduction in potential construction-generated sources of groundborne vibration under the No Project Alternative.

Geology and Soils

Loss of Mineral Resources (Impact 4.8.6)

Hundreds of MRZ-2-classified sites exist within the Planning Area. The proposed project would allow urban development (e.g., residential, office, and commercial areas and associated infrastructure) at various locations throughout the Planning Area. If located on MRZ-2 classified lands, this future development could potentially preclude the exploration for and extraction of mineral resources, particularly in areas with mineral resources.

The No Project Alternative would reduce the proposed Planning Area by 133,903 acres and reduce intensification of urban development on undeveloped land in comparison to the proposed project (8,847 fewer housing units and 61,928 fewer jobs). Therefore, the No Project Alternative would be likely to leave more MRZ-2 sites available for the exploration for and extraction of mineral resources. Therefore, impacts under the No Project Alternative would be better in comparison to the proposed project.

Cultural and Paleontological Resources

Potential Direct Destruction or Damage to Known and Undiscovered Historical Resources (Impact 4.9.1)

Future development allowed under the proposed project could result in the destruction of historic buildings and inappropriate alterations resulting in the loss of historic character-defining features of buildings. The City's Preservation Plan does not provide for the protection of historic resources, as compliance to the plan is voluntary, and the historic designation criteria are not consistent with those of CEQA. It should be noted that policies contained in the proposed project would minimize impacts to historical resources by requiring an evaluation of any proposed demolition or modification to historic or architectural resources that are either listed in or determined eligible for inclusion in the National Registry of Historical Places (NHRP), the California Registry of Historic Resources (CRHR), or the local historical registry to determine whether the project proposal would result in an adverse impact on the historic resource.

The No Project Alternative would result in reduced buildout population and urban development in comparison to the proposed project (23,887 fewer persons, 8,847 fewer housing units, and 61,928 fewer jobs) and thus less potential for development of land uses that could impact historic buildings. However, the No Project Alternative would not implement General Plan policies included in the proposed project and current policies and plans do not provide for the protection of historic resources. Therefore, destruction of historic buildings and inappropriate alterations resulting in the loss of historic character-defining features of buildings would be more likely to occur under the No Project Alternative than under the proposed project and impacts under the No Project Alternative would be worse in comparison to the proposed project.

Potential Destruction or Damage to Known and Undiscovered Prehistoric Resources and Human Remains (Impact 4.9.2) and Potential Destruction or Damage to Known and Undiscovered Paleontological Resources (Impact 4.9.3)

Future development under the proposed project could result in the potential disturbance of cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features), human remains, and/or paleontological resources (i.e., fossils and fossil formations) within the Planning Area, particularly previously undiscovered or unknown cultural and paleontological resources. It should be noted that implementation of policies and action items included in the proposed project would assist in reducing impacts to known and undiscovered cultural and paleontological resources and human remains by conditioning future development projects to notify the Planning Department if any prehistoric, archaeological, or fossil artifact or resources are uncovered during construction and to stop construction if human remains are found.

The No Project Alternative would reduce the proposed Planning Area by 133,903 acres and reduce intensification of urban development on undeveloped land in comparison to the proposed project (8,847 fewer housing units and 61,928 fewer jobs). Therefore, the No Project Alternative would result in significantly less ground disturbance than the proposed project and thus less potential to uncover and disturb previously undiscovered cultural resources, human

remains, and/or paleontological resources within the Planning Area. Therefore, impacts under the No Project Alternative would be better in comparison to the proposed project.

Prehistoric Resources, Historic Resources, and Human Remains (Impact 4.9.4)

Archaeological and historical investigations have identified cultural resources in the Planning Area, Kern County, and the San Joaquin Valley. However, archaeological and historical investigations have not been conducted within all areas encompassed by the Planning Area. Based on the results of previous archaeological and historical investigations within the Planning Area, it is likely that development in these areas would discover previously unidentified cultural resources and human remains. Consequently, development under the General Plan Update and development in Kern County and the San Joaquin Valley could impact known and undiscovered cultural resources and human remains and contribute to the cumulative loss of cultural resources. The contribution of development under the General Plan Update could be considerable, when combined with other past, present, and foreseeable development in Kern County and the San Joaquin Valley.

As previously discussed, the No Project Alternative would reduce the proposed Planning Area by 133,903 acres and reduce intensification of urban development on undeveloped land in comparison to the proposed project (8,847 fewer housing units and 61,928 fewer jobs). Therefore, the No Project Alternative would result in significantly less ground disturbance than the proposed project and thus less cumulative impacts to prehistoric resources, historic resources, and human remains. Therefore, impacts under the No Project Alternative would be better in comparison to the proposed project.

Biological Resources

Project and Cumulative Impacts to Special-Status Plant and Wildlife Species (Impact 4.10.1 and Impact 4.10.5)

Land use and development consistent with the proposed project could result in adverse impacts on special-status species or essential habitat for special-status species in the Planning Area. These impacts, when combined with other habitat impacts occurring from development within surrounding areas, would also result in significant cumulative impacts. Any development within areas that are currently undeveloped could result in impacts to habitat resources that may support special-status species and construction of future projects could result in direct "take" of habitat and loss of individuals of these species. Where there are direct impacts to special-status species, indirect impacts could occur as well, including increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to development of previously undeveloped areas. It should be noted that implementation of the General Plan policies included in the proposed project would help to reduce and minimize both project and cumulative impacts to special-status species and loss of sensitive habitats supporting these species from future development.

The No Project Alternative would reduce the proposed Planning Area by 133,903 acres and reduce intensification of urban development on undeveloped land in comparison to the

proposed project (8,847 fewer housing units and 61,928 fewer jobs). Therefore, the No Project Alternative would develop less vacant land and would result in less direct and indirect impacts to special-status species within the Planning Area. Although the proposed project includes policies that would mitigate impacts to special-status species and these policies would not be implemented under the No Project Alternative, impacts would still be better in comparison to the proposed project due to the reduction in development potential and, thus, the reduction in development of vacant land under the No Project Alternative. Therefore, impacts under the No Project Alternative would be better in comparison to the proposed project.

Impacts to Sensitive Natural Communities Including Waters of the US (Impacts 4.10.2)

Implementation of the proposed project could result in disturbance, degradation, and removal of valley foothill riparian and wetland habitats, which are found primarily outside City boundaries. These habitats are considered to be sensitive natural communities by CDFG. It should be noted that implementation of General Plan policies included in the proposed project would help to reduce and minimize impacts to sensitive natural communities from future development.

The No Project Alternative would reduce the proposed Planning Area by 133,903 acres and reduce intensification of urban development on undeveloped land in comparison to the proposed project (8,847 fewer housing units and 61,928 fewer jobs). The reduction in the Planning Area under the No Project Alternative results from less land included in the Expansion Area outside of the City boundaries. Therefore, the No Project Alternative would develop less vacant land outside the City limits and, since riparian and wetland habitats are found primarily outside City boundaries, the No Project Alternative would likely result in less disturbance, degradation, and removal of valley foothill riparian and wetland habitats. Although the proposed project includes policies that would mitigate impacts to sensitive natural communities and these policies would not be implemented under the No Project Alternative, impacts would still be better in comparison to the proposed project due to the reduction in development potential outside of the City boundaries. Therefore, impacts under the No Project Alternative would be better in comparison to the proposed project.

Wildlife Corridors (Impact 4.10.3)

Implementation of the proposed project could result in disturbance, degradation, and removal of important corridors for the movement of common and special-status wildlife species due to additional traffic, increased human presence, and degradation of the water quality. Open space, including agricultural lands, chaparral, woodlands, and annual grasslands, provides an opportunity for dispersal and migration of wildlife species and large-scale development of the Planning Area could isolate these areas from one another and adversely impact these areas and movement corridors. Additionally, construction of roadways and improvement of existing roadways could sever connections between habitats and vegetation types in the Planning Area and could negatively impact ephemeral drainages and jurisdictional waters of the U.S. It should be noted that implementation of mitigation measures and General Plan policies included in the proposed project would mitigate impacts to wildlife movement corridors.

The No Project Alternative would result in reduced buildout population and urban development in comparison to the proposed project (23,887 fewer persons, 8,847 fewer housing units, and 61,928 fewer jobs). Therefore, the No Project Alternative would result in less traffic, human presence, and degradation of the water quality and thus less disturbance, degradation, and removal of important wildlife corridors. Although the proposed project includes policies to mitigate impacts to wildlife movement corridors and these policies would not be implemented under the No Project Alternative, impacts would still be better in comparison to the proposed project due to the reduction in population and development potential and thus the reduction in traffic, human presence, and degradation of the water quality under the No Project Alternative. Therefore, impacts under the No Project Alternative would be better in comparison to the proposed project.

Hydrology and Water Quality

Increase Storm Runoff and Flooding Potential (Impact 4.11.4)

New development associated with implementation of the proposed project would increase flow rates and volumes of runoff by introducing streets, residential structures, commercial and industrial buildings, other buildings, parking areas, and other impervious surfaces and by providing improved facilities for drainage conveyance. In addition, Planning Area soils are highly erodable and there are segments of Sandy Creek and its tributaries that have already been experiencing significant headcutting and erosion. These processes will be exacerbated if the frequency, rates and volumes of runoff are increased by the introduction of impervious surfaces with new development. New development in the Planning Area will also increase peak rates of runoff conveyed in Sandy Creek and tributaries during major storms (such as a 100-year storm event). It should be noted that implementation of General Plan policies included in the proposed project would serve to offset the impacts of new development on stormwater flows and volumes by addressing both frequent storm events and the rarer, high-magnitude storm events.

The No Project Alternative would reduce the proposed Planning Area by 133,903 acres and reduce intensification of urban development on undeveloped land in comparison to the proposed project (8,847 fewer housing units and 61,928 fewer jobs). Under existing conditions, undeveloped lands in the Planning Area do not produce runoff during smaller storms due to the presence of soils having a very high capacity for infiltration. These conditions would remain largely unchanged under the No Project Alternative. Therefore, flow rates and volumes of runoff would be substantially less and runoff and flooding impacts would be better under the No Project Alternative than under the proposed project.

Flooding Hazards (Impact 4.11.5)

Implementation of the proposed project would allow for new development to occur without regard to availability of access to buildings during a flood event. It should be noted that General Plan policies included in the project would help reduce potential flooding hazards included in the proposed project would ensure that future development is designed and constructed in a manner that will provide adequate site access during flood events and thus minimize the risk of loss, injury, or death involving flooding.

The No Project Alternative would result in reduced buildout population and urban development in comparison to the proposed project (23,887 fewer persons, 8,847 fewer housing units, and 61,928 fewer jobs). Therefore, the No Project Alternative would result in less potential development within areas subject to flooding. However, the proposed project contains policies to ensure that future development is designed and constructed in a manner that will provide adequate site access during flood events and thus minimize the risk of loss, injury, or death involving flooding. Any future development occurring under the No Project Alternative would not be subject to these policies and would thus be more susceptible to flooding hazards. Therefore, flooding hazard impacts under the No Project Alternative would be worse than under the proposed project.

Cumulative Flooding Impacts (Impact 4.11.7)

Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the watershed, would increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions along the Kern River, Sandy Creek, and/or other local waterways. In addition, the proposed project may allow for development within existing flood hazard zones, including the inundation area of Isabella Dam.

As discussed above, the No Project Alternative would reduce the proposed Planning Area by 133,903 acres and reduce intensification of urban development on undeveloped land in comparison to the proposed project (8,847 fewer housing units and 61,928 fewer jobs). Therefore, the project's contribution to cumulative flow rates and volumes of runoff would be substantially less and flooding impacts would be better under the No Project Alternative than under the proposed project.

Cumulative Groundwater Supply Depletion (Impact 4.11.8)

Implementation of the proposed General Plan Update, in combination with existing, approved, proposed, and other reasonably foreseeable development activities in the Kern County Groundwater Subbasin, would contribute to an increased demand for municipal water supply, requiring increased groundwater pumping and potentially contributing to groundwater level declines and overdraft of the aquifer.

As discussed above, the No Project Alternative would reduce the proposed Planning Area by 133,903 acres and reduce intensification of urban development on undeveloped land in comparison to the proposed project (8,847 fewer housing units and 61,928 fewer jobs). Therefore, the No Project Alternative would increase demand for groundwater to a lesser degree than the proposed project and impacts would be better then under the proposed project.

Visual Resources

Alteration of Visual Character (Impact 4.12.3)

Implementation of the proposed General Plan Update would change the visual character of the Planning Area through intensification of urban uses within the existing City limits and the introduction of urban uses outside the City limits. It should be noted that General Plan policies included in the project would assist in reducing impacts associated with land use changes that have the potential to change the overall visual character of the Planning Area.

Currently, much of the existing development within the City limits is aging and in aesthetic decline. Under the proposed project, redevelopment and infill within and near existing urban areas are encouraged and the proposed project contains numerous policies that encourage infill development to be aesthetically pleasing and compatible with existing development. These policies also encourage the preservation of the historic features and nature of the City, particularly in the downtown area. Therefore, implementation of the proposed project would likely result in improved aesthetic conditions in the downtown area, as well as in existing residential and commercial areas suffering from blight and deterioration. Proposed General Plan policies would not be implemented under the No Project Alternative and therefore aesthetic conditions within City limits would not be improved as discussed above. Visual resource impacts within the City limits would be worse under the No Project Alternative than under the proposed project.

However, there are portions of the Planning Area where the proposed project would allow residential, commercial, industrial, and mixed-use development on land that is currently characterized by active agricultural operations and open space. The proposed project therefore has the potential to interrupt views of existing agricultural resources and convert agricultural and open space lands to urban development, thereby changing the aesthetic value of these resources. This impact would be reduced under the No Project Alternative as the proposed Planning Area would be reduced by 133,903 acres and intensification of urban development on undeveloped land would be reduced.

Since both the No Project Alternative and the proposed project would have adverse and positive impacts related to visual resources, impacts under the No Project Alternative would be similar.

Daytime Glare and Nighttime Lighting (Impact 4.12.4)

The proposed project includes land uses and policies that would result in new development and redevelopment in the Planning Area. Such development could introduce new light and glare sources into the Planning Area, particularly in the rural and undeveloped portions of the Planning Area. In addition, implementation of the proposed General Plan Update would result in intensified nighttime lighting levels associated with increased traffic levels and further residential and commercial development. It should be noted that General Plan policies included in the project would assist in reducing daytime glare nighttime light and illumination impacts.

The No Project Alternative would reduce the proposed Planning Area by 133,903 acres and reduce intensification of urban development on undeveloped land in comparison to the proposed project (8,847 fewer housing units and 61,928 fewer jobs). Therefore, the No Project Alternative would result in fewer new sources of daytime light and glare and nighttime light than the proposed project. Impacts would be better under the No Project Alternative than under the proposed project.

Cumulative Visual Resources Impacts (Impact 4.12.5)

Implementation of the proposed project, in combination with other reasonably foreseeable projects within Kern County and the San Joaquin Valley, would contribute to cumulatively considerable changes in the visual character of the area. The land uses allowed under the proposed project would contribute to this alteration of the visual character of the area by converting rural uses to urban development. Furthermore, cumulative development would introduce new sources of daytime glare and would substantially change nighttime lighting and illumination levels in the region, including increasing "sky glow" conditions in the region that would reduce visibility of the nighttime sky.

The No Project Alternative would contribute to regional urbanization to a lesser degree than the proposed project as it would reduce the proposed Planning Area by 133,903 acres and result in 8,847 fewer housing units and 61,928 fewer jobs than the proposed project. Therefore, cumulative visual resource impacts under the No Project Alternative would be better than those under the proposed project.

Public Services and Utilities

Increased Demand for Water Supply and Cumulative Water Service Impacts (Impacts 4.13.5.1 and 4.13.5.3)

The *Water Supply Evaluation* prepared for the General Plan Update (Tulley and Young, 2009) found that future development consistent with land uses proposed by the General Plan Update would increase potable water demands within WKWD's service area by 9,788 af/y at buildout of the Planning Area. Addition of these increased demands to WKWD's projections indicate that WKWD would still have a surplus of over 17,000 af/y at build out of the Planning Area (27,254 af/y surplus at buildout of WKWD service area – 9,788 af/y in additional demands from buildout of GPU = 17,466 af/y remaining surplus). However, WKWD water supplies may not be reliable since SWP supplies relied upon by WKWD are based on receiving a higher percentage of normal year entitlements than what DWR currently recommends and WKWD's 2025 supplies as projected by its 2005 UWMP rely on supplies that are not supported by firm contractual entitlements. If WKWD cannot adequately document water supplies from the Kern River Alluvial Fan (or other sources) as required for any future SB 610 analysis, projected demand would exceed supply by 16,923 af/y at buildout of the General Plan Update. Other existing, planned, proposed, approved, and reasonably foreseeable development within the WKWD service area would place further demands on WKWD's supplies and could result in greater cumulative shortages.

As discussed above, the No Project Alternative would reduce intensification of urban development on undeveloped land in comparison to the proposed project (8,847 fewer housing units and 61,928 fewer jobs). Therefore, the No Project Alternative would increase demand for groundwater supplies to a lesser degree than the proposed project and impacts would be better then under the proposed project.

Increased Demand for Wastewater Service/Conveyance and Treatment Facilities (Impact 4.13.6.1)

Implementation of the proposed GPU is expected to result in a total of 25,184 housing units and a population of 68,018 at buildout. This increased population and development would substantially increase wastewater flows and would result in increased demand for wastewater services. The project average wastewater flow at buildout of the GPU is 6.33 million gallons per day (mgd). Meeting increased demand would require the extension of new wastewater collection system infrastructure including collectors, trunks, and interceptor sewer lines and appurtenances. Increased treatment and disposal capacity would also be required to ensure adequate treatment of the City's wastewater flows.

Buildout of the No Project Alternative would result in a population of 44,125, which would increase the City's average wastewater flow to approximately 4.10 mgd (see **Table 6.0-1** below). The Taft Wastewater Treatment Plant (TWWTP) currently has a total permitted capacity of 1.5 mgd. Therefore, the existing capacity of the TWWTP is not adequate to accommodate the anticipated wastewater flows at buildout of the No Project Alternative. In addition, both the proposed project and the No Project Alternative would require treatment and disposal capacity, as well as additional wastewater conveyance capacity, to be increased in order to accommodate wastewater flows. However, the No Project Alternative would increase demand to a lesser degree than the proposed project and wastewater service impacts would be better then under the proposed project.

TABLE 6.0-1
PROJECTED WASTEWATER FLOW AT BUILDOUT OF THE EXISTING GENERAL PLAN (NO PROJECT ALTERNATIVE)

	Population at Buildout	Flow Factor	Projected Wastewater Flows (mgd)
Average Flow Projection	44,125	93 gallons per person per day	4.10 mgd

Source: Flow Factor based on personal communication (letter) from Amando Garza, Carollo Engineers to the City of Taft on June 6, 2008.

6.4 ALTERNATIVE 2 – REDUCED PLANNING AREA ALTERNATIVE

CHARACTERISTICS

Under Alternative 2, the Planning Area would be reduced to exclude approximately 60,163 acres of largely undeveloped, agricultural and mineral extraction land located east of the current City limits as shown in **Figure 6.0-2**. The Planning Area would still extend out to I-5 both north and south of the excluded area, leaving a large area of County land in between the two "arms" of land included in the Planning Area. This alternative would therefore exclude the South Kern Industrial Center Specific Plan Area, which would remain under Kern County jurisdiction and would not be proposed for annexation or subsequent development by the City.

Under this alternative, the Planning Area would encompass 97,407 acres (9,629 acres within the City limits + 87,778 acres within the Expansion Area). Buildout of Alternative 2 would result in approximately 25,180 housing units, a population of 68,012, and a total of 63,438 jobs within the Planning Area by the buildout year of 2050. Land use designations outside the City limits would consist primarily of Agriculture, Natural Resources, Commercial, Low Density Residential, and Special Planning Area.

COMPARATIVE ANALYSIS

Land Use and Planning

Cumulative Land Use Impacts (Impact 4.1.5)

Implementation of the proposed project would substantially contribute to the conversion of vacant/undeveloped land in the region resulting in significant effects to the environment. In addition, future development under the proposed GPU could bring development closer to the City of Bakersfield, which could contribute to cumulative land use conflicts in the region.

Under Alternative 2, the Planning Area would still bring development closer to the City of Bakersfield as the Planning Area would still extend out to I-5 both north and south of the excluded area. However, the Planning Area would be reduced by 60,163 acres under Alternative 2, which would lessen the potential for cumulative land use conflicts in the region in comparison to the proposed project. Therefore, cumulative land use impacts would be better under Alternative 2 than under the proposed project.

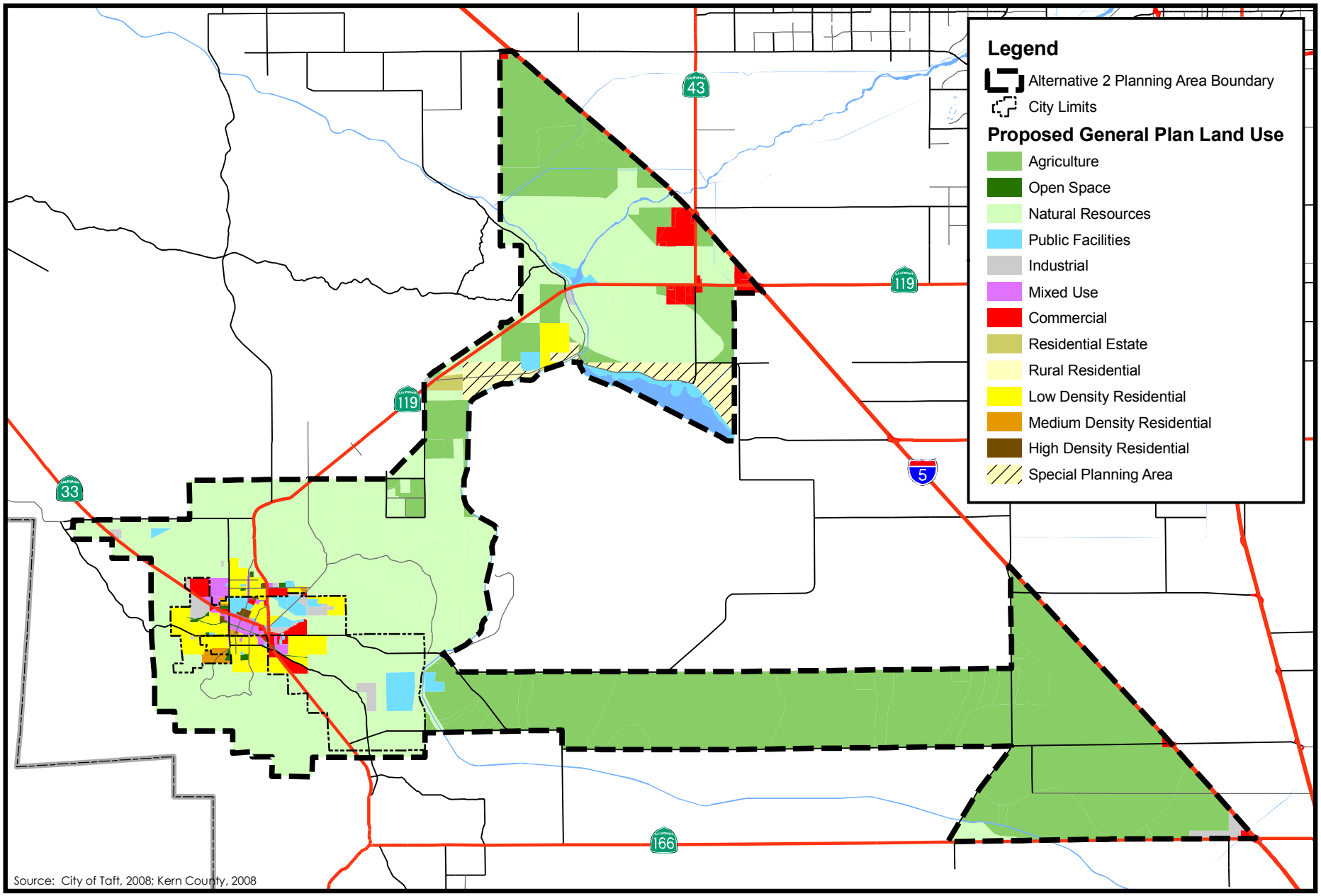

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Figure 6.0-2

Alternative 2 - Reduced Sphere of Influence Alternative

PMC®

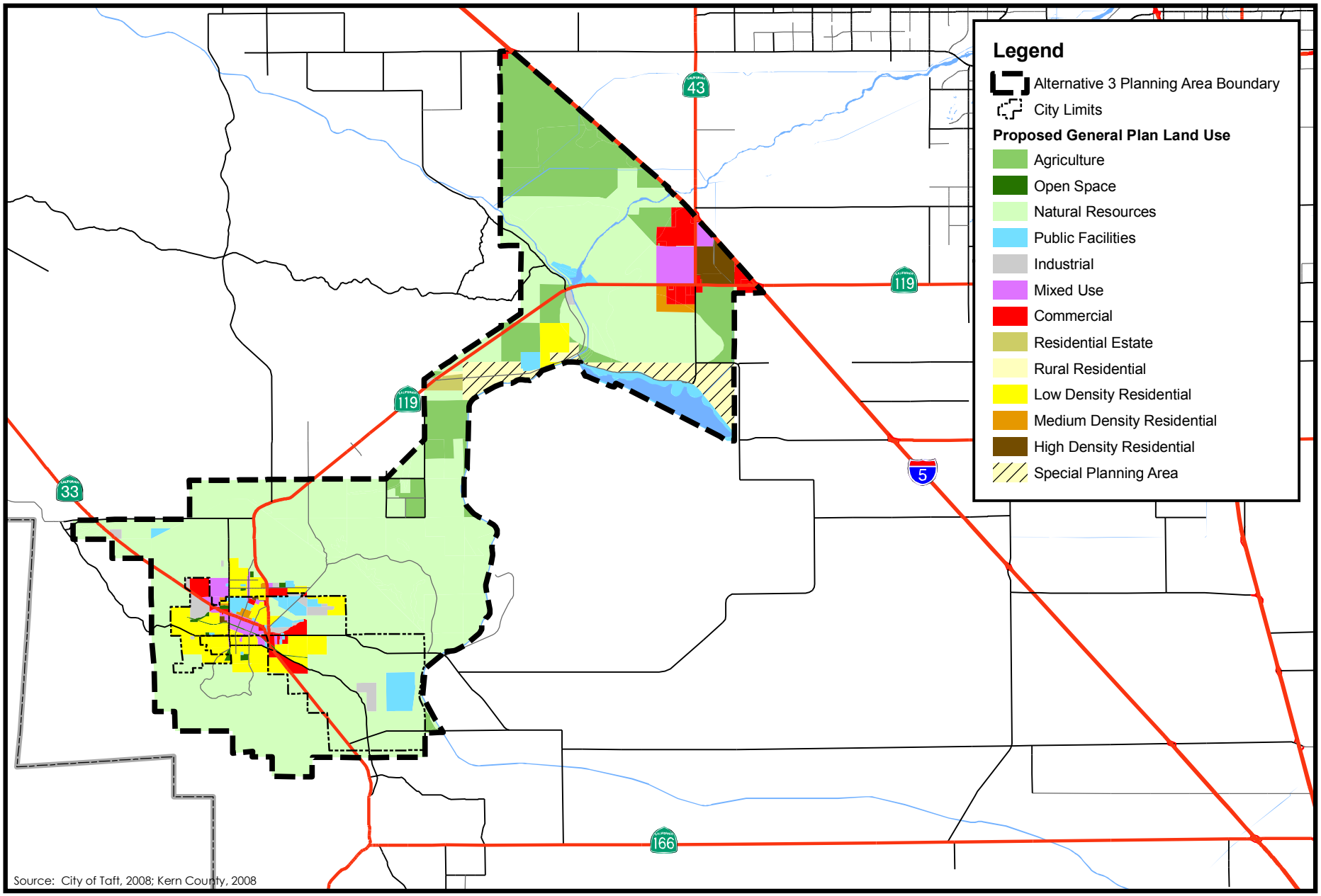

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Figure 6.0-3

Alternative 3 - Northeast High Density Mixed Use Cluster Alternative

PMC®

Agricultural Resources

Loss and Conversion of Important Farmland (Impact 4.2.1)

Implementation of the proposed project designates areas of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Grazing Land within the Expansion Area for Commercial, Natural Resource, Public Facility, and Industrial uses. To be exact, the proposed General Plan Update would result in 2,827 acres of Prime Farmland, 2,670 acres of Farmland of Statewide Importance, 7,466 acres of Unique Farmland, and 24,117 acres of Grazing Land, or a total of 37,080 acres (2,827+2,670+7,466+24,117 = 37,080) of Important Farmland (approximately 30 percent of Important Farmland inventoried in the Planning Area) being designated for uses other than agriculture. In addition, buildout of the existing City limits is anticipated to occur by about 2035 and would result in the conversion of the entire 4,532 acres of Grazing Land to urban uses.

Implementation of Alternative 2 would designate 29,218.9 acres of Important Farmland (589.23 acres of Prime Farmland, 1,150.3 acres of Farmland of Statewide Importance, 428.77 acres of Unique Farmland, and 27,050.6 acres of Grazing Land) for land uses other than agriculture. Since Alternative 2 would result in the 7,861.1 fewer acres of Important Farmland conversion than the proposed project, impacts under the Alternative 2 would be better than under the proposed project.

It should be noted that, under Alternative 2, land uses within the excluded area would continue to be guided by the County General Plan, which designates Important Farmland for uses other than agriculture. While the City would not have jurisdiction over land use decisions for County lands and analysis of environmental impacts of County land use decisions is not within the scope of this Draft EIR, it is likely that Alternative 2 would result in the conversion of Important Farmland under County jurisdiction.

Agricultural/Urban Interface Conflicts (Impact 4.2.2)

Subsequent land use activities associated with implementation of the proposed project may involve the placement of residential and other non-agricultural land uses adjacent to agricultural uses that could result in agricultural/urban interface. Land use interface conflicts can individually or cumulatively decrease the efficiency of farming operations which can cause production costs to rise and make farming operation less appealing. The increase in production cost can eventually force the farmer into a land use conversion.

Implementation of the Alternative 2 would also allow for urban uses adjacent to agricultural lands in areas of the Planning Area outside of the City limits. However, as discussed above, Alternative 2 would result in significantly less farmland conversion than the proposed project. Therefore, impacts associated with agricultural/urban interface conflicts would be better under the Alternative 2 than under the proposed project.

Conflicts with Williamson Act and FSZ Contracts (Impact 4.2.3)

The proposed project would result in 8,908 acres of land currently under Williamson Act contracts and 5,569 acres of land under FSZ contracts being designated for uses other than agriculture, which could lead to the removal of this land (a total of 14,477 acres) from active contracts. The California Government Code prohibits annexation of Williamson Act and FSZ contracted land unless specific criteria are met but does not preclude annexation entirely. Therefore, lands within the Expansion Area could be annexed and developed consistent with the proposed project, providing those criteria were met.

Alternative 2 would designate 6,054.04 acres of Williamson Act lands and lands under FSZ contracts for Natural Resource and Public Facilities uses and could result in the conversion of these lands to non-agricultural uses. This is significantly less than the 14,447 acres of Williamson Act lands and FSZ contracts that have the potential to be converted under the proposed project. Therefore, impacts associated with the loss and conversion of Williamson Act lands and FSZ contracts under Alternative 2 would be better than under the proposed project.

It should be noted that, under Alternative 2, land uses within the excluded area would continue to be guided by the County General Plan, which designates Williamson Act lands and lands under FSZ contracts for uses other than agriculture. While the City would not have jurisdiction over land use decisions for County lands and analysis of environmental impacts of County land use decisions is not within the scope of this Draft EIR, it is likely that Alternative 2 would result in the conversion of Williamson Act lands and lands under FSZ contracts within County jurisdiction.

Cumulative Impacts to Agricultural Resources (Impact 4.2.4)

Implementation of the proposed project, along with other proposed development in Kern County, would contribute to the cumulative conversion of Important Farmlands to other uses. While the acreage converted would represent only a small percentage of Important Farmland in Kern County, this would be in addition to important farmland conversions associated with development anticipated under the applicable land use plans of Kern County and the incorporated cities of Bakersfield, Arvin, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Tehachapi, Wasco and Taft. Thus, the proposed project would contribute to a potentially significant amount of Important Farmland in Kern County being removed from agricultural uses.

As discussed above, Alternative 2 would result in significantly less conversion of agricultural lands than the proposed project. Therefore, Alternative 2's contribution to cumulative agricultural resource impacts would be better than the proposed project.

Population and Housing

Project and Cumulative Population, Housing, and Employment Increases (Impact 4.3.1 and Impact 4.3.3)

At buildout the proposed project would accommodate a population of 68,018 persons, 25,184 housing units and 48,420 jobs within the Planning Area by the buildout year of 2050. This represents a 276% increase over current population levels. This substantial growth would have a significant physical effect on the environment. In addition, the proposed project and all existing, approved, proposed, and reasonable foreseeable in the surrounding cities and unincorporated areas of the County could result in a cumulative increase in population and housing growth and associated environmental impacts.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. However, Alternative 2 would generate 28,896 fewer jobs within the Expansion Area, which would mean fewer vehicles would be added to Planning Area roadways. Fewer vehicles would result in less air quality and traffic impacts. Therefore, impacts under Alternative 2 would be better than under the proposed project.

Transportation and Circulation

Deficient LOS Conditions on Study Roadway Segments (Impact 4.4.1)

Implementation of the proposed project would result in an increase in traffic volumes that would result in deficient level of service conditions in year 2035 and would conflict with Caltrans standards for level of service. Specifically, the proposed project would result in a decline of service for two segments of SR 119, from LOS B to LOS F for SR 119 between Tupman Road to SR 43, and from Los A to LOS F for SR 119 between SR 43 to I-5, respectively. This decline in LOS for these two segments of SR 119 would also conflict with Caltrans' TCR for state routes in the study area that establishes a minimum of LOS C for SR 119, and LOS D for SR 43.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. However, Alternative 2 would generate 28,896 fewer jobs within the Expansion Area. Therefore, traffic volumes within the Planning Area under Alternative 2 would be reduced in comparison to the proposed project. Even so, it is anticipated that SR 119 between Tupman Road to SR 43, and SR 119 between SR 43 to I-5 would still experience a decline in LOS as a result of Alternative 2. Therefore, impacts under the proposed project and Alternative 2 would be similar.

Project and Cumulative Aviation System Impacts (Impact 4.4.4 and Impact 4.4.8)

Implementation of the proposed project would increase demand for service at the Taft-Kern-County Airport which currently operates with one runway and has been deemed an unsatisfactory facility for the area. In addition, the proposed project would contribute to increases in cumulative demands for aviation services in the region.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. Therefore, Alternative 2 would result in a similar increase in demand for aviation services at the Taft-Kern-County Airport and aviation system impacts would be similar under the proposed project.

Cumulative Traffic Impacts on Local Roadways and State Highways (Impact 4.4.5)

The proposed project would add substantial traffic volumes on local roadways and state highway facilities that would result in significant traffic impacts within the Planning Area as well as in adjoining jurisdictions. As discussed above, implementation of the proposed project would result in some service levels exceeding proposed standards and policies of Caltrans and the County by resulting in declining levels of service on roadway segments within the General Plan planning horizon. This would be true under cumulative conditions as well.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. However, Alternative 2 would generate 28,896 fewer jobs within the Expansion Area. Therefore, traffic volumes within the Planning Area under Alternative 2 would be reduced in comparison to the proposed project. Even so, it is anticipated that Alternative 2 would still result in some service levels exceeding proposed standards and policies of Caltrans and the County by resulting in declining levels of service on roadway segments. Therefore, impacts under the proposed project and Alternative 2 would be similar.

Air Quality

Conflict with or Obstruct Implementation of Applicable Air Quality Plans or Contribute Substantially to an Existing Air Quality Violation (Impact 4.5.1)

Implementation of the proposed project would allow for population growth that would exceed projections assumed in SJVAPCD's 2007 Ozone Plan. This inconsistency could hinder SJVAPCD's ozone attainment strategy.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. Alternative 2 would generate 28,896 fewer jobs within the Expansion Area and traffic volumes and related vehicle emissions within the Planning Area would thus be reduced in comparison to the proposed project. Ultimately, however, cumulative impacts on regional air quality are determined by comparing proposed population growth accommodated by a project with the growth that was assumed in attainment plans prepared by the SJVAPCD. Therefore, since Alternative 2 and the proposed project would result in the same population at buildout, impacts associated with obstruction of the ozone attainment strategy would be similar.

Expose Sensitive Receptors to Toxic Air Contaminants (Impact 4.5.4)

Implementation of the proposed project could locate sensitive receptors near potential existing and future sources of TACs, particularly in the Expansion Area, which is currently governed by the Kern County General Plan and planned for agricultural, mineral, petroleum production,

residential, commercial, industrial, and public uses. Land use changes in the Expansion Area resulting from the proposed project could introduce land use conflicts that expose persons to TACs from industrial or commercial land uses. For example, industrial land uses can produce diesel truck traffic that can generate diesel-based particulate matter that has been designated a TAC by the State. It should be noted that implementation of General Plan policies included in the proposed project would ensure adequate buffers between land uses that could expose sensitive receptors to unhealthful levels of TACs or odors.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. Therefore, Alternative 2 could locate sensitive receptors near potential existing and future sources of TACs and impacts would be similar to the proposed project.

Cumulative Air Quality Impacts on Attainment Plans (Impact 4.5.8)

Implementation of the proposed General Plan Update, in combination with cumulative development in the San Joaquin Valley Air Basin, would contribute to a cumulative air quality impacts and could conflict with ozone and particulate matter attainment efforts.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. However, Alternative 2 would generate 28,896 fewer jobs within the Expansion Area and traffic volumes within the Planning Area would be reduced in comparison to the proposed project. Therefore, Alternative 2 would result in fewer air quality impacts that could conflict with ozone and particulate matter attainment efforts and impacts under Alternative 2 would be better than those under the proposed project.

Conflict or Obstruct with Implementation of Greenhouse Gas Reduction Measures (Impact 4.5.9) and Conflict or Obstruct with Implementation of AB 32 (Impact 4.5.11)

Under the proposed project, CO_2e emissions associated within the Planning Area are projected to increase, primarily from increases in housing associated with the City's projected population growth. In addition to the CO_2e increases, there would also be increases in electricity use, water use, and waste associated with the growth accommodated by the proposed project, which would further increase CO_2e emissions and increase the carbon footprint of the City. Even with proposed General Plan policies that would help reduce GHG emissions from motor vehicles and energy use associated with growth, the net increase in emissions would contribute to climate change. As a result, the proposed General Plan Update is inconsistent with AB 32's goal of reducing GHG emissions by 2020 to 1990 levels.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. Since CO_2e emissions associated within the Planning Area are projected to increase primarily from increases in housing associated with the City's population growth, CO_2e emissions generated under Alternative 2 would be similar to those generated under the proposed project. Therefore, impacts associated with CO_2e emissions would be similar for Alternative 2 and the proposed project.

Noise

Exposure to Construction Noise (Impact 4.6.1)

Activities associated with construction of land uses allowed under the proposed project could result in elevated noise levels at noise-sensitive land uses. Increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. Therefore, exposure to construction noise under Alternative 2 would be similar to the proposed project.

Exposure to Roadway Traffic Noise (Impact 4.6.2) and Noise Impacts Associated with Increased Traffic Resulting from Buildout of the Proposed General Plan (Impact 4.6.7)

The proposed project includes noise-sensitive land use designations along roadways anticipated to experience substantial increases in traffic noise. Development of noise-sensitive land uses could also occur within the projected 60 dBA CNEL noise contours of area roadways. Buildout of the proposed project would result in increased exposure of existing and future noise-sensitive land uses to traffic noise levels that could exceed the City's land use compatibility noise standards.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. Alternative 2 would generate 28,896 fewer jobs within the Expansion Area in comparison to the proposed project. Reduced employment opportunities would reduce traffic volumes and thus traffic noise. However, Alternative 2 would result in the same amount of potential noise-sensitive land uses that could occur within the projected 60 dBA CNEL noise contours of area roadways as it would result in the same number of housing units at buildout as the proposed project. Therefore, project and cumulative traffic noise impacts would be similar under Alternative 2 and the proposed project.

Exposure to Aircraft Noise (Impact 4.6.3)

The proposed project includes land uses that are consistent with the noise policies and recommended land uses identified within the Kern County Airport Land Use Compatibility Plan. However, it is conceivable that future development within the City, as well as future expansion of airport activities and associated noise contours, could occur in future years, which may result in increased exposure to aircraft noise levels at some nearby noise-sensitive land uses. It should be noted that policies and standards contained in the proposed project would ensure that future development near Taft-Kern County Airport would meet applicable noise criteria for land use compatibility and/or include noise attenuation features to meet applicable noise standards. Accordingly, future development projects under the proposed project located within air traffic patterns, corridors, and airport influence zones would be reviewed to ensure continued consistency with the Kern County Airport Land Use Compatibility Plan.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. Therefore, Alternative 2 would expose the same number of persons and homes to potential aircraft noise and impacts would be similar to the proposed project.

Exposure to Stationary Non-Transportation Noise (Impact 4.6.4)

Implementation of the proposed project could result in the future development of land uses that generate noise levels in excess of applicable City noise standards. Such land uses may include commercial, industrial, and recreational uses and could expose noise-sensitive land uses to excessive noise levels. In addition, new noise-sensitive land uses could be located in areas of existing stationary noise sources. Increased exposure to non-transportation source noise levels could result in increased levels of annoyance, activity interference, and potential sleep disruption for occupants of nearby land uses.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. However, Alternative 2 contains only 1,582 acres of land designated for General Commercial and Industrial uses in the Expansion Area, as opposed to 3,475 acres for those uses in the Expansion Area under the proposed project. Therefore, Alternative 2 would result in fewer commercial and industrial uses that could generate noise levels in excess of applicable City noise standards and impacts would be better in comparison to the proposed project.

Exposure to Groundborne Vibration (Impact 4.6.6)

The proposed project would result in additional development throughout the Planning Area, thus resulting in the potential for noise-sensitive land uses to be exposed to construction-generated sources of groundborne vibration. Groundborne vibration sources that could potentially affect future development would be primarily associated with short-term construction activities. It should be noted that implementation of proposed General Plan policies would mitigate groundborne vibration impacts by restricting noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to the daytime hours of operation.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project and thus similar potential for exposure to construction-generated sources of groundborne vibration as the proposed project.

Geology and Soils

Loss of Mineral Resources (Impact 4.8.6)

Hundreds of MRZ-2-classified sites exist within the Planning Area. The proposed project would allow urban development (e.g., residential, office, and commercial areas and associated infrastructure) at various locations throughout the Planning Area. If located on MRZ-2 classified

lands, this future development could potentially preclude the exploration for and extraction of mineral resources, particularly in areas with mineral resources.

Alternative 2 would reduce the proposed Planning Area by 60,130 acres. Although Alternative 2 would result in the same number of housing units and the same population as the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 2 would be likely to leave more MRZ-2 sites available for the exploration for and extraction of mineral resources and impacts would be better in comparison to the proposed project.

Cultural and Paleontological Resources

Potential Direct Destruction or Damage to Known and Undiscovered Historical Resources (Impact 4.9.1)

Future development allowed under the proposed project could result in the destruction of historic buildings and inappropriate alterations resulting in the loss of historic character-defining features of buildings. The City's Preservation Plan does not provide for the protection of historic resources, as compliance to the plan is voluntary and the historic designation criteria are not consistent with those of CEQA. It should be noted that policies contained in the proposed project would minimize impacts to historical resources by requiring an evaluation of any proposed demolition or modification to historic or architectural resources that are either listed in or determined eligible for inclusion in the National Registry of Historical Places (NHRP), the California Registry of Historic Resources (CRHR), or the local historical registry to determine whether the project proposal would result in an adverse impact on the historic resource.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project and a similar potential for development of land uses that could impact historic buildings.

Potential Destruction or Damage to Known and Undiscovered Prehistoric Resources and Human Remains (Impact 4.9.2) and Potential Destruction or Damage to Known and Undiscovered Paleontological Resources (Impact 4.9.3)

Future development under the proposed project could result in the potential disturbance of cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features), human remains, and/or paleontological resources (i.e., fossils and fossil formations) within the Planning Area, particularly previously undiscovered or unknown cultural and paleontological resources. It should be noted that implementation of policies and action items included in the proposed project would assist in reducing impacts to known and undiscovered cultural and paleontological resources and human remains by conditioning future development projects to notify the Planning Department if any prehistoric, archaeological, or fossil artifact or resources are uncovered during construction and to stop construction if human remains are found.

Alternative 2 would reduce the proposed Planning Area by 60,130 acres. Although Alternative 2 would result in the same number of housing units and the same population as the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 2 would result in significantly less ground disturbance than the proposed project and thus less potential to uncover and disturb previously undiscovered cultural resources, human remains, and/or paleontological resources within the Planning Area. Impacts under Alternative 2 would be better in comparison to the proposed project.

Prehistoric Resources, Historic Resources, and Human Remains (Impact 4.9.4)

Archaeological and historical investigations have identified cultural resources in the Planning Area, Kern County, and the San Joaquin Valley. However, archaeological and historical investigations have not been conducted within all areas encompassed by the Planning Area. Based on the results of previous archaeological and historical investigations within the Planning Area, it is likely that development in these areas would discover previously unidentified cultural resources and human remains. Consequently, development under the General Plan Update and development in Kern County and the San Joaquin Valley could impact known and undiscovered cultural resources and human remains and contribute to the cumulative loss of cultural resources. The contribution of development under the General Plan Update could be considerable, when combined with other past, present, and foreseeable development in Kern County and the San Joaquin Valley.

Alternative 2 would reduce the proposed Planning Area by 60,130 acres. Although Alternative 2 would result in the same number of housing units and the same population as the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 2 would result in significantly less ground disturbance than the proposed project and thus less cumulative impacts to prehistoric resources, historic resources, and human remains. Impacts under Alternative 2 would be better in comparison to the proposed project.

Biological Resources

Project and Cumulative Impacts to Special-Status Plant and Wildlife Species (Impact 4.10.1 and Impact 4.10.5)

Land use and development consistent with the proposed project could result in adverse impacts on special-status species or essential habitat for special-status species in the Planning Area. These impacts, when combined with other habitat impacts occurring from development within surrounding areas, would also result in significant cumulative impacts. Any development within areas that are currently undeveloped could result in impacts to habitat resources that may support special-status species and construction of future projects could result in direct "take" of habitat and loss of individuals of these species. Where there are direct impacts to special-status species, indirect impacts could occur as well, including increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to development of previously undeveloped areas. It should be noted that implementation of the General Plan policies included in the proposed project would help to

reduce and minimize both project and cumulative impacts to special-status species and loss of sensitive habitats supporting these species from future development.

Alternative 2 would reduce the proposed Planning Area by 60,130 acres. Although Alternative 2 would result in the same number of housing units and the same population as the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 2 would result in significantly less ground disturbance than the proposed project and thus less potential to result in direct and indirect impacts to special-status species within the Planning Area. Therefore, impacts under Alternative 2 would be better in comparison to the proposed project.

Impacts to Sensitive Natural Communities Including Waters of the US (Impacts 4.10.2)

Implementation of the proposed project could result in disturbance, degradation, and removal of valley foothill riparian and wetland habitats, which are found primarily outside City boundaries. These habitats are considered to be sensitive natural communities by CDFG. It should be noted that implementation of mitigation measures and General Plan policies included in the proposed project would help to reduce and minimize impacts to sensitive natural communities from future development.

Alternative 2 would reduce the proposed Planning Area by 60,130 acres. Although Alternative 2 would result in the same number of housing units and the same population as the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 2 would develop less vacant land outside the City limits and, since riparian and wetland habitats are found primarily outside City boundaries, Alternative 2 would likely result in less disturbance, degradation, and removal of valley foothill riparian and wetland habitats. Therefore, impacts under Alternative 2 would be better in comparison to the proposed project.

Wildlife Corridors (Impact 4.10.3)

Implementation of the proposed project could result in disturbance, degradation, and removal of important corridors for the movement of common and special-status wildlife species due to additional traffic, increased human presence, and degradation of the water quality. Open space, including agricultural lands, chaparral, woodlands, and annual grasslands, provides an opportunity for dispersal and migration of wildlife species and large-scale development of the Planning Area could isolate these areas from one another and adversely impact these areas and movement corridors. Additionally, construction of roadways and improvement of existing roadways could sever connections between habitats and vegetation types in the Planning Area and could negatively impact ephemeral drainages and jurisdictional waters of the U.S. It should be noted that implementation of mitigation measures and General Plan policies included in the proposed project would mitigate impacts to wildlife movement corridors.

Alternative 2 would reduce the proposed Planning Area by 60,130 acres. Although Alternative 2 would result in the same number of housing units and the same population as the proposed project, population and housing growth would be concentrated in higher densities on less land.

Therefore, Alternative 2 would result in less disturbance, degradation, and removal of important wildlife corridors. Impacts under Alternative 2 would be better in comparison to the proposed project.

Hydrology and Water Quality

Increase Storm Runoff and Flooding Potential (Impact 4.11.4)

New development associated with implementation of the proposed project would increase flow rates and volumes of runoff by introducing streets, residential structures, commercial and industrial buildings, other buildings, parking areas, and other impervious surfaces and by providing improved facilities for drainage conveyance. In addition, Planning Area soils are highly erodable and there are segments of Sandy Creek and its tributaries that have already been experiencing significant headcutting and erosion. These processes will be exacerbated if the frequency, rates and volumes of runoff are increased by the introduction of impervious surfaces with new development. New development in the Planning Area will also increase peak rates of runoff conveyed in Sandy Creek and tributaries during major storms (such as a 100-year storm event). It should be noted that implementation of General Plan policies included in the proposed project would serve to offset the impacts of new development on stormwater flows and volumes by addressing both frequent storm events and the rarer, high-magnitude storm events.

Alternative 2 would reduce the proposed Planning Area by 60,130 acres. Although Alternative 2 would result in the same number of housing units and the same population as the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 2 would result in significantly less ground disturbance than the proposed project and flow rates and volumes of runoff would be substantially less than under the proposed project. Runoff and flooding impacts would be better than under the proposed project.

Flooding Hazards (Impact 4.11.5)

Implementation of the proposed project would allow for new development to occur without regard to availability of access to buildings during a flood event. It should be noted that General Plan policies included in the project would help reduce potential flooding hazards included in the proposed project would ensure that future development is designed and constructed in a manner that will provide adequate site access during flood events and thus minimize the risk of loss, injury, or death involving flooding.

Alternative 2 would result in the same number of housing units and the same population as the proposed project. Therefore, Alternative 2 would allow for new development to occur without regard to availability of access to buildings during a flood event. Similar to the proposed project, any future development occurring under Alternative 2 would be subject General Plan policies intended to ensure that future development is designed and constructed in a manner that will provide adequate site access during flood events and, thus, minimize the risk of loss, injury, or death involving flooding. Therefore, flooding hazard impacts under Alternative 2 would be similar to those under the proposed project.

Cumulative Flooding Impacts (Impact 4.11.7)

Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the watershed, would increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions along the Kern River, Sandy Creek, and/or other local waterways. In addition, the proposed project may allow for development within existing flood hazard zones, including the inundation area of Isabella Dam.

As discussed above, Alternative 2 would reduce the proposed Planning Area by 60,130 acres. Although Alternative 2 would result in the same number of housing units and the same population as the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, the project's contribution to cumulative flow rates and volumes of runoff would be less and flooding impacts would be better under Alternative 2 than under the proposed project.

Cumulative Groundwater Supply Depletion (Impact 4.11.8)

Implementation of the proposed General Plan Update, in combination with existing, approved, proposed, and other reasonably foreseeable development activities in the Kern County Groundwater Subbasin, would contribute to an increased demand for municipal water supply, requiring increased groundwater pumping and potentially contributing to groundwater level declines and overdraft of the aquifer.

As discussed above, Alternative 2 would result in the same number of housing units and the same population as the proposed project. Therefore, Alternative 2 would increase demand for groundwater to the same degree as the proposed project and cumulative groundwater depletion impacts would be similar to those under the proposed project.

Visual Resources

Alteration of Visual Character (Impact 4.12.3)

Implementation of the proposed General Plan Update would change the visual character of the Planning Area through intensification of urban uses within the existing City limits and the introduction of urban uses outside the City limits. It should be noted that General Plan policies included in the project would assist in reducing impacts associated with land use changes that have the potential to change the overall visual character of the Planning Area.

Alternative 2 would reduce the proposed Planning Area by 60,130 acres. Although Alternative 2 would result in the same number of housing units and the same population as the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 2 would allow less development on land in the Expansion Area that is currently characterized by active agricultural operations and open space and would result in fewer impacts to the aesthetic value of these resources. Furthermore, proposed General Plan policies would be implemented under Alternative 2 and aesthetic conditions within City limits

would be improved as discussed above. Impacts under Alternative 2 would be better than those under the proposed project.

Daytime Glare and Nighttime Lighting (Impact 4.12.4)

The proposed project includes land uses and policies that would result in new development and redevelopment in the Planning Area. Such development could introduce new light and glare sources into the Planning Area, particularly in the rural and undeveloped portions of the Planning Area. In addition, implementation of the proposed General Plan Update would result in intensified nighttime lighting levels associated with increased traffic levels and further residential and commercial development. It should be noted that General Plan policies included in the project would assist in reducing daytime glare nighttime light and illumination impacts.

Alternative 2 would result in the same population and the same number of housing units at buildout as the proposed project. However, Alternative 2 contains only 1,582 acres of land designated for General Commercial and Industrial uses in the Expansion Area, as opposed to 3,475 acres for those uses in the Expansion Area under the proposed project. In addition, traffic volumes within the Planning Area under Alternative 2 would be reduced in comparison to the proposed project since Alternative 2 would result in a smaller amount of jobs. Therefore, Alternative 2 would result in fewer new sources of daytime light and glare and nighttime light than the proposed project and impacts would be better under Alternative 2 than under the proposed project.

Cumulative Visual Resources Impacts (Impact 4.12.5)

Implementation of the proposed project, in combination with other reasonably foreseeable projects within Kern County and the San Joaquin Valley, would contribute to cumulatively considerable changes in the visual character of the area. The land uses allowed under the proposed project would contribute to this alteration of the visual character of the area by converting rural uses to urban development. Furthermore, cumulative development would introduce new sources of daytime glare and would substantially change nighttime lighting and illumination levels in the region, including increasing "sky glow" conditions in the region that would reduce visibility of the nighttime sky.

Alternative 2 would reduce the proposed Planning Area by 60,130 acres. Although Alternative 2 would result in the same number of housing units and the same population as the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 2 would allow less development on land that is currently characterized by active agricultural operations and open space and would result in fewer impacts to the aesthetic value of these resources. Therefore, cumulative visual resources impacts under Alternative 2 would be better than those under the proposed project.

Public Services and Utilities

Increased Demand for Water Supply and Cumulative Water Service Impacts (Impacts 4.13.5.1 and 4.13.5.3)

The *Water Supply Evaluation* prepared for the General Plan Update (Tulley and Young, 2009) found that future development consistent with land uses proposed by the General Plan Update would increase potable water demands within WKWD's service area by 9,788 af/y at buildout of the Planning Area. Addition of these increased demands to WKWD's projections indicate that WKWD would still have a surplus of over 17,000 af/y at build out of the Planning Area (27,254 af/y surplus at buildout of WKWD service area – 9,788 af/y in additional demands from buildout of GPU = 17,466 af/y remaining surplus). However, WKWD water supplies may not be reliable since SWP supplies relied upon by WKWD are based on receiving a higher percentage of normal year entitlements than what DWR currently recommends and WKWD's 2025 supplies as projected by its 2005 UWMP rely on supplies that are not supported by firm contractual entitlements. If WKWD cannot adequately document water supplies from the Kern River Alluvial Fan (or other sources) as required for any future SB 610 analysis, projected demand would exceed supply by 16,923 af/y at buildout of the General Plan Update. Other existing, planned, proposed, approved, and reasonably foreseeable development within the WKWD service area would place further demands on WKWD's supplies and could result in greater cumulative shortages.

As discussed above, Alternative 2 would result in the same number of housing units and the same population as the proposed project. Therefore, Alternative 2 would increase demand for groundwater supplies to the same degree as the proposed project and impacts would be similar to those under the proposed project.

Increased Demand for Wastewater Service/Conveyance and Treatment Facilities (Impact 4.13.6.1)

Implementation of the proposed GPU is expected to result in a total of 25,184 housing units and a population of 68,018 at buildout. This increased population and development would substantially increase wastewater flows and would result in increased demand for wastewater services. The project average wastewater flow at buildout of the GPU is 6.33 million gallons per day (mgd). Meeting increased demand would require the extension of new wastewater collection system infrastructure including collectors, trunks, and interceptor sewer lines and appurtenances. Increased treatment and disposal capacity would also be required to ensure adequate treatment of the City's wastewater flows.

Buildout of the Alternative 2 would result in the same number of housing units and the same population as the proposed project, and thus the same demand for wastewater services. Therefore, impacts would be similar under both the proposed project and Alternative 2.

6.5 ALTERNATIVE 3 – NORTHEAST HIGH DENSITY MIXED USE CLUSTER

CHARACTERISTICS

Under Alternative 3, the Planning Area would be reduced to exclude approximately 94,003 acres of largely undeveloped, agricultural and mineral extraction land located east of the current City limits as shown in **Figure 6.0-3**. The Planning Area would extend out to I-5 to the northeast of the current City limits, but would not include the southernmost "arm" of land in the Planning Area that is included in Alternative 2. This alternative would, therefore, exclude the South Kern Industrial Center Specific Plan Area, which would remain under Kern County jurisdiction and would not be proposed for annexation or subsequent development within the City.

In addition, proposed land use designations within the existing City limits would be less intense, thereby allowing the City to remain a generally low density, rural community (see **Figure 6.0-4**). To compensate, higher density land use designations (Commercial, High Density Residential, Mixed Use) would be clustered northeast of the City near the intersections of SR 33, SR 119 and I-5 surrounding the proposed Commercial designations at these intersections. The result would be a cluster of mixed uses at higher densities along the heavily traveled I-5 corridor at the entry point to the City of Taft.

Under this alternative, the Planning Area would encompass a reduced Planning Area of 63,567 acres (9,629 acres within the City limits + 53,938 acres within the Expansion Area). Due to the increased densities associated with this Alternative, buildout of this Alternative would result in approximately 46,812 housing units, a population of 126,440, and a total of 65,104 jobs within the Planning Area by the buildout year of 2050. Land use designations outside the City limits would consist primarily of Agriculture, Natural Resources, Commercial, Industrial, High Density Residential, Low Density Residential, and Special Planning Area.

COMPARATIVE ANALYSIS

Land Use and Planning

<u>Cumulative Land Use Impacts (Impact 4.1.5)</u>

Implementation of the proposed project would substantially contribute to the conversion of vacant/undeveloped land in the region resulting in significant effects to the environment. In addition, future development under the proposed GPU could bring development closer to the City of Bakersfield, which could contribute to cumulative land use conflicts in the region.

Under Alternative 3, the Planning Area would still bring development closer to the City of Bakersfield as the Planning Area would still extend out to I-5 north of the excluded area. However, the Planning Area would be reduced by 94,003 acres under Alternative 3, which would lessen the potential for cumulative land use conflicts in the region in comparison to the proposed project. Therefore, cumulative land use impacts would be better under Alternative 3 than under the proposed project.

Agricultural Resources

Loss and Conversion of Important Farmland (Impact 4.2.1)

Implementation of the proposed project designates areas of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Grazing Land within the Expansion Area for Commercial, Natural Resource, Public Facility, and Industrial uses. To be exact, the proposed General Plan Update would result in 2,827 acres of Prime Farmland, 2,670 acres of Farmland of Statewide Importance, 7,466 acres of Unique Farmland, and 24,117 acres of Grazing Land, or a total of 37,080 acres (2,827+2,670+7,466+24,117 = 37,080) of Important Farmland (approximately 30 percent of Important Farmland inventoried in the Planning Area) being designated for uses other than agriculture. In addition, buildout of the existing City limits is anticipated to occur by about 2035 and would result in the conversion of the entire 4,532 acres of Grazing Land to urban uses.

Implementation of Alternative 3 would designate 28,722.7 acres of Important Farmland (19.79 acres of Prime Farmland, 1,118.7 acres of Farmland of Statewide Importance, 425.07 acres of Unique Farmland, and 27,159) for land uses other than agriculture. Since Alternative 3 would result in 8,357.3 fewer acres of Important Farmland conversion than the proposed project, impacts under the Alternative 3 would be better than under the proposed project.

It should be noted that, under Alternative 3, land uses within the excluded area would continue to be guided by the County General Plan, which designates Important Farmland for uses other than agriculture. While the City would not have jurisdiction over land use decisions for County lands and analysis of environmental impacts of County land use decisions is not within the scope of this Draft EIR, it is likely that Alternative 3 would result in the conversion of Important Farmland under County jurisdiction.

Agricultural/Urban Interface Conflicts (Impact 4.2.2)

Subsequent land use activities associated with implementation of the proposed project may involve the placement of residential and other non-agricultural land uses adjacent to agricultural uses that could result in agricultural/urban interface. Land use interface conflicts can individually or cumulatively decrease the efficiency of farming operations which can cause production costs to rise and make farming operation less appealing. The increase in production cost can eventually force the farmer into a land use conversion.

Implementation of the Alternative 3 would also allow for urban uses adjacent to agricultural lands in areas of the Planning Area outside of the City limits. However, as discussed above, Alternative 3 would result in significantly less farmland conversion than the proposed project. Therefore, impacts associated with agricultural/urban interface conflicts would be better under the Alternative 3 than under the proposed project.

Conflicts with Williamson Act and FSZ Contracts (Impact 4.2.3)

The proposed project would result in 8,908 acres of land currently under Williamson Act contracts and 5,569 acres of land under FSZ contracts being designated for uses other than agriculture, which could lead to the removal of this land (a total of 14,477 acres) from active contracts. The California Government Code prohibits annexation of Williamson Act and FSZ contracted land unless specific criteria are met but does not preclude annexation entirely. Therefore, lands within the Expansion Area could be annexed and developed consistent with the proposed project, providing those criteria were met.

Alternative 3 would designate 5,754.29 acres of Williamson Act lands and lands under FSZ contracts for Natural Resource, Specific Plan, and Public Facilities uses and could result in the conversion of these lands to non-agricultural uses. This is significantly less than the 14,447 acres of Williamson Act lands and FSZ contracts that have the potential to be converted under the proposed project. Therefore, impacts associated with the loss and conversion of Williamson Act lands and FSZ contracts under Alternative 3 would be better than under the proposed project.

It should be noted that, under Alternative 3, land uses within the excluded area would continue to be guided by the County General Plan, which designates Williamson Act lands and lands under FSZ contracts for uses other than agriculture. While the City would not have jurisdiction over land use decisions for County lands and analysis of environmental impacts of County land use decisions is not within the scope of this Draft EIR, it is likely that Alternative 3 would result in the conversion of Williamson Act lands and lands under FSZ contracts within County jurisdiction.

Cumulative Impacts to Agricultural Resources (Impact 4.2.4)

Implementation of the proposed project, along with other proposed development in Kern County, would contribute to the cumulative conversion of Important Farmlands to other uses. While the acreage converted would represent only a small percentage of Important Farmland in Kern County, this would be in addition to important farmland conversions associated with development anticipated under the applicable land use plans of Kern County and the incorporated cities of Bakersfield, Arvin, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Tehachapi, Wasco and Taft. Thus, the proposed project would contribute to a potentially significant amount of Important Farmland in Kern County being removed from agricultural uses.

As discussed above, Alternative 3 would result in significantly less conversion of agricultural lands than the proposed project. Therefore, Alternative 3's contribution to cumulative agricultural resource impacts would be better than the proposed project.

Population and Housing

Project and Cumulative Population, Housing, and Employment Increases (Impact 4.3.1 and Impact 4.3.3)

At buildout the proposed project would accommodate a population of 68,018 persons, 25,184 housing units and 48,420 jobs within the Planning Area by the buildout year of 2050. This represents a 276% increase over current population levels. This substantial growth would have a significant physical effect on the environment. In addition, the proposed project and all existing, approved, proposed, and reasonable foreseeable in the surrounding cities and unincorporated areas of the County could result in a cumulative increase in population and housing growth and associated environmental impacts.

Alternative 3 would accommodate 58,422 more persons and 21,628 more housing units than the proposed project. Even though Alternative 3 would generate 27,230 fewer jobs within the Expansion Area, impacts would still be worse under this Alternative due to the significant increase in population and housing.

Transportation and Circulation

Deficient LOS Conditions on Study Roadway Segments (Impact 4.4.1)

Implementation of the proposed project would result in an increase in traffic volumes that would result in deficient level of service conditions in year 2035 and would conflict with Caltrans standards for level of service. Specifically, the proposed project would result in a decline of service for two segments of SR 119, from LOS B to LOS F for SR 119 between Tupman Road to SR 43, and from Los A to LOS F for SR 119 between SR 43 to I-5, respectively. This decline in LOS for these two segments of SR 119 would also conflict with Caltrans' TCR for state routes in the study area that establishes a minimum of LOS C for SR 119, and LOS D for SR 43.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units). Even though Alternative 3 would generate 27,230 fewer jobs within the Expansion Area, traffic volumes within the Planning Area would still be increased in comparison to the proposed project due to the significant increase in population and housing. Therefore, it is anticipated that SR 119 between Tupman Road to SR 43, and SR 119 between SR 43 to I-5 would still experience a decline in LOS as a result of Alternative 3. Impacts would be worse under Alternative 3 than under the proposed project.

Project and Cumulative Aviation System Impacts (Impact 4.4.4 and Impact 4.4.8)

Implementation of the proposed project would increase demand for service at the Taft-Kern-County Airport which currently operates with one runway and has been deemed an unsatisfactory facility for the area. In addition, the proposed project would contribute to increases in cumulative demands for aviation services in the region.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units). Therefore, Alternative 3 would result in a more significant increase in demand for aviation services at the Taft-Kern-County Airport and aviation system impacts would be worse than under the proposed project.

Cumulative Traffic Impacts on Local Roadways and State Highways (Impact 4.4.5)

The proposed project would add substantial traffic volumes on local roadways and state highway facilities that would result in significant traffic impacts within the Planning Area as well as in adjoining jurisdictions. As discussed above, implementation of the proposed project would result in some service levels exceeding proposed standards and policies of Caltrans and the County by resulting in declining levels of service on roadway segments within the General Plan planning horizon. This would be true under cumulative conditions as well.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units). Even though Alternative 3 would generate 27,230 fewer jobs within the Expansion Area, traffic volumes within the Planning Area would still be increased in comparison to the proposed project due to the significant increase in population and housing. Therefore, it is anticipated that Alternative 3 would contribute to cumulative traffic impacts to a greater degree than the proposed project. Therefore, impacts under Alternative 3 would be worse than under the proposed project.

Air Quality

Conflict with or Obstruct Implementation of Applicable Air Quality Plans or Contribute Substantially to an Existing Air Quality Violation (Impact 4.5.1)

Implementation of the proposed project would allow for population growth that would exceed projections assumed in SJVAPCD's 2007 Ozone Plan. This inconsistency could hinder SJVAPCD's ozone attainment strategy.

Alternative 3 would result in a buildout population of 126,440 persons, an increase of 58,422 in comparison to the proposed project. Since cumulative impacts on regional air quality are determined by comparing proposed population growth accommodated by a project with the growth that was assumed in attainment plans prepared by the SJVAPCD, Alternative 3 would result in worse impacts associated with obstruction of the ozone attainment strategy.

Expose Sensitive Receptors to Toxic Air Contaminants (Impact 4.5.4)

Implementation of the proposed project could locate sensitive receptors near potential existing and future sources of TACs, particularly in the Expansion Area, which is currently governed by the Kern County General Plan and planned for agricultural, mineral, petroleum production, residential, commercial, industrial, and public uses. Land use changes in the Expansion Area resulting from the proposed project could introduce land use conflicts that expose persons to TACs from industrial or commercial land uses. For example, industrial land uses can produce

diesel truck traffic that can generate diesel-based particulate matter that has been designated a TAC by the State. It should be noted that implementation of General Plan policies included in the proposed project would ensure adequate buffers between land uses that could expose sensitive receptors to unhealthful levels of TACs or odors.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units). Therefore, Alternative 3 could locate more sensitive receptors near potential existing and future sources of TACs and impacts would be worse the proposed project.

Cumulative Air Quality Impacts on Attainment Plans (Impact 4.5.8)

Implementation of the proposed General Plan Update, in combination with cumulative development in the San Joaquin Valley Air Basin, would contribute to a cumulative air quality impacts and could conflict with ozone and particulate matter attainment efforts.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units). Even though Alternative 3 would generate 27,230 fewer jobs within the Expansion Area, traffic volumes within the Planning Area would still be increased in comparison to the proposed project due to the significant increase in population and housing. Therefore, Alternative 3 would result in more air quality impacts that could conflict with ozone and particulate matter attainment efforts and impacts under Alternative 3 would be worse than those under the proposed project.

Conflict or Obstruct with Implementation of Greenhouse Gas Reduction Measures (Impact 4.5.9) and Conflict or Obstruct with Implementation of AB 32 (Impact 4.5.11)

Under the proposed project, CO_2e emissions associated within the Planning Area are projected to increase, primarily from increases in housing associated with the City's projected population growth. In addition to the CO_2e increases, there would also be increases in electricity use, water use, and waste associated with the growth accommodated by the proposed project, which would further increase CO_2e emissions and increase the carbon footprint of the City. Even with proposed General Plan policies that would help reduce GHG emissions from motor vehicles and energy use associated with growth, the net increase in emissions would contribute to climate change. As a result, the proposed General Plan Update is inconsistent with AB 32's goal of reducing GHG emissions by 2020 to 1990 levels.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units). Since CO_2e emissions associated within the Planning Area are projected to increase primarily from increases in housing associated with the City's population growth, Alternative 3 would generate significantly more CO_2e emissions than generated under the proposed project. Therefore, impacts associated with CO_2e emissions would be worse under Alternative 3 than under the proposed project.

Noise

Exposure to Construction Noise (Impact 4.6.1)

Activities associated with construction of land uses allowed under the proposed project could result in elevated noise levels at noise-sensitive land uses. Increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units). Therefore, exposure to construction noise under Alternative 3 would be worse than under the proposed project.

Exposure to Roadway Traffic Noise (Impact 4.6.2) and Noise Impacts Associated with Increased Traffic Resulting from Buildout of the Proposed General Plan (Impact 4.6.7)

The proposed project includes noise-sensitive land use designations along roadways anticipated to experience substantial increases in traffic noise. Development of noise-sensitive land uses could also occur within the projected 60 dBA CNEL noise contours of area roadways. Buildout of the proposed project would result in increased exposure of existing and future noise-sensitive land uses to traffic noise levels that could exceed the City's land use compatibility noise standards.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units). Even though Alternative 3 would generate 27,230 fewer jobs within the Expansion Area, traffic volumes within the Planning Area would still be increased in comparison to the proposed project due to the significant increase in population and housing. Therefore, Alternative 3 would result in a greater amount of potential noise-sensitive land uses that could occur within the projected 60 dBA CNEL noise contours of area roadways and the generation of more traffic noise that could affect those noise-sensitive land uses. Therefore, impacts under Alternative 3 would be worse than those under the proposed project.

Exposure to Aircraft Noise (Impact 4.6.3)

The proposed project includes land uses that are consistent with the noise policies and recommended land uses identified within the Kern County Airport Land Use Compatibility Plan. However, it is conceivable that future development within the City, as well as future expansion of airport activities and associated noise contours, could occur in future years, which may result in increased exposure to aircraft noise levels at some nearby noise-sensitive land uses. It should be noted that policies and standards contained in the proposed project would ensure that future development near Taft-Kern County Airport would meet applicable noise criteria for land use compatibility and/or include noise attenuation features to meet applicable noise standards. Accordingly, future development projects under the proposed project located within air traffic

patterns, corridors, and airport influence zones would be reviewed to ensure continued consistency with the Kern County Airport Land Use Compatibility Plan.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units). Therefore, Alternative 3 would expose more persons and homes to potential aircraft noise and impacts would be worse than under the proposed project.

Exposure to Stationary Non-Transportation Noise (Impact 4.6.4)

Implementation of the proposed project could result in the future development of land uses that generate noise levels in excess of applicable City noise standards. Such land uses may include commercial, industrial, and recreational uses and could expose noise-sensitive land uses to excessive noise levels. In addition, new noise-sensitive land uses could be located in areas of existing stationary noise sources. Increased exposure to non-transportation source noise levels could result in increased levels of annoyance, activity interference, and potential sleep disruption for occupants of nearby land uses.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units). However, Alternative 3 contains only 1,253.69 acres of land designated for General Commercial and Industrial uses in the Expansion Area, as opposed to 3,475 acres for those uses in the Expansion Area under the proposed project. Therefore, Alternative 3 would result in fewer commercial and industrial uses that could generate noise levels in excess of applicable City noise standards and impacts would be better in comparison to the proposed project.

Exposure to Groundborne Vibration (Impact 4.6.6)

The proposed project would result in additional development throughout the Planning Area, thus resulting in the potential for noise-sensitive land uses to be exposed to construction-generated sources of groundborne vibration. Groundborne vibration sources that could potentially affect future development would be primarily associated with short-term construction activities. It should be noted that implementation of proposed General Plan policies would mitigate groundborne vibration impacts by restricting noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to the daytime hours of operation.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units) and thus greater potential for exposure to construction-generated sources of groundborne vibration. Impacts under Alternative 3 would be worse than under the proposed project.

Geology and Soils

Loss of Mineral Resources (Impact 4.8.6)

Hundreds of MRZ-2-classified sites exist within the Planning Area. The proposed project would allow urban development (e.g., residential, office, and commercial areas and associated infrastructure) at various locations throughout the Planning Area. If located on MRZ-2 classified lands, this future development could potentially preclude the exploration for and extraction of mineral resources, particularly in areas with mineral resources.

Alternative 3 would reduce the proposed Planning Area by 94,003 acres. Although Alternative 3 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 3 would be likely to leave more MRZ-2 sites available for the exploration for and extraction of mineral resources and impacts would be better in comparison to the proposed project.

Cultural and Paleontological Resources

Potential Direct Destruction or Damage to Known and Undiscovered Historical Resources (Impact 4.9.1)

Future development allowed under the proposed project could result in the destruction of historic buildings and inappropriate alterations resulting in the loss of historic character-defining features of buildings. The City's Preservation Plan does not provide for the protection of historic resources, as compliance to the plan is voluntary and the historic designation criteria are not consistent with those of CEQA. It should be noted that policies contained in the proposed project would minimize impacts to historical resources by requiring an evaluation of any proposed demolition or modification to historic or architectural resources that are either listed in or determined eligible for inclusion in the National Registry of Historical Places (NHRP), the California Registry of Historic Resources (CRHR), or the local historical registry, to determine whether the project proposal would result in an adverse impact on the historic resource.

Alternative 3 would allow greater population growth and intensification of urban development than the proposed project (58,422 more persons and 21,628 more housing units). Therefore, Alternative 3 would result in a greater potential for development and redevelopment that could impact historic buildings and impacts would be worse in comparison to the proposed project.

Potential Destruction or Damage to Known and Undiscovered Prehistoric Resources and Human Remains (Impact 4.9.2) and Potential Destruction or Damage to Known and Undiscovered Paleontological Resources (Impact 4.9.3)

Future development under the proposed project could result in the potential disturbance of cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features), human remains, and/or paleontological resources (i.e., fossils and fossil formations) within the Planning Area, particularly previously undiscovered or unknown cultural

and paleontological resources. It should be noted that implementation of policies and action items included in the proposed project would assist in reducing impacts to known and undiscovered cultural and paleontological resources and human remains by conditioning future development projects to notify the Planning Department if any prehistoric, archaeological, or fossil artifact or resources are uncovered during construction and to stop construction if human remains are found.

Alternative 3 would reduce the proposed Planning Area by 94,003 acres. Although Alternative 3 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 3 would result in significantly less ground disturbance than the proposed project and thus less potential to uncover and disturb previously undiscovered cultural resources, human remains, and/or paleontological resources within the Planning Area. Impacts under Alternative 3 would be better in comparison to the proposed project.

Prehistoric Resources, Historic Resources, and Human Remains (Impact 4.9.4)

Archaeological and historical investigations have identified cultural resources in the Planning Area, Kern County, and the San Joaquin Valley. However, archaeological and historical investigations have not been conducted within all areas encompassed by the Planning Area. Based on the results of previous archaeological and historical investigations within the Planning Area, it is likely that development in these areas would discover previously unidentified cultural resources and human remains. Consequently, development under the General Plan Update and development in Kern County and the San Joaquin Valley could impact known and undiscovered cultural resources and human remains and contribute to the cumulative loss of cultural resources. The contribution of development under the General Plan Update could be considerable, when combined with other past, present, and foreseeable development in Kern County and the San Joaquin Valley.

Alternative 3 would reduce the proposed Planning Area by 94,003 acres. Although Alternative 3 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 3 would result in significantly less ground disturbance than the proposed project and thus less cumulative impacts to prehistoric resources, historic resources, and human remains. Impacts under Alternative 3 would be better in comparison to the proposed project.

Biological Resources

Project and Cumulative Impacts to Special-Status Plant and Wildlife Species (Impact 4.10.1 and Impact 4.10.5)

Land use and development consistent with the proposed project could result in adverse impacts on special-status species or essential habitat for special-status species in the Planning Area. These impacts, when combined with other habitat impacts occurring from development within surrounding areas, would also result in significant cumulative impacts. Any development within areas that are currently undeveloped could result in impacts to habitat resources that may

support special-status species and construction of future projects could result in direct "take" of habitat and loss of individuals of these species. Where there are direct impacts to special-status species, indirect impacts could occur as well, including increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to development of previously undeveloped areas. It should be noted that implementation of the General Plan policies included in the proposed project would help to reduce and minimize both project and cumulative impacts to special-status species and loss of sensitive habitats supporting these species from future development.

Alternative 3 would reduce the proposed Planning Area by 94,003 acres. Although Alternative 3 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 3 would result in significantly less ground disturbance than the proposed project and thus less potential to result in direct and indirect impacts to special-status species within the Planning Area. Therefore, impacts under Alternative 3 would be better in comparison to the proposed project.

Impacts to Sensitive Natural Communities Including Waters of the US (Impacts 4.10.2)

Implementation of the proposed project could result in disturbance, degradation, and removal of valley foothill riparian and wetland habitats, which are found primarily outside City boundaries. These habitats are considered to be sensitive natural communities by CDFG. It should be noted that implementation of mitigation measures and General Plan policies included in the proposed project would help to reduce and minimize impacts to sensitive natural communities from future development.

Alternative 3 would reduce the proposed Planning Area by 94,003 acres. Although Alternative 3 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 3 would develop less vacant land outside the City limits and, since riparian and wetland habitats are found primarily outside City boundaries, Alternative 3 would likely result in less disturbance, degradation, and removal of valley foothill riparian and wetland habitats. Therefore, impacts under Alternative 3 would be better in comparison to the proposed project.

Wildlife Corridors (Impact 4.10.3)

Implementation of the proposed project could result in disturbance, degradation, and removal of important corridors for the movement of common and special-status wildlife species due to additional traffic, increased human presence, and degradation of the water quality. Open space, including agricultural lands, chaparral, woodlands, and annual grasslands, provides an opportunity for dispersal and migration of wildlife species and large-scale development of the Planning Area could isolate these areas from one another and adversely impact these areas and movement corridors. Additionally, construction of roadways and improvement of existing roadways could sever connections between habitats and vegetation types in the Planning Area and could negatively impact ephemeral drainages and jurisdictional waters of the U.S. It should

be noted that implementation of mitigation measures and General Plan policies included in the proposed project would mitigate impacts to wildlife movement corridors.

Alternative 3 would reduce the proposed Planning Area by 94,003 acres. Although Alternative 3 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 3 would result in less disturbance, degradation, and removal of important wildlife corridors. Impacts under Alternative 3 would be better in comparison to the proposed project.

Hydrology and Water Quality

Increase Storm Runoff and Flooding Potential (Impact 4.11.4)

New development associated with implementation of the proposed project would increase flow rates and volumes of runoff by introducing streets, residential structures, commercial and industrial buildings, other buildings, parking areas, and other impervious surfaces and by providing improved facilities for drainage conveyance. In addition, Planning Area soils are highly erodable and there are segments of Sandy Creek and its tributaries that have already been experiencing significant headcutting and erosion. These processes will be exacerbated if the frequency, rates and volumes of runoff are increased by the introduction of impervious surfaces with new development. New development in the Planning Area will also increase peak rates of runoff conveyed in Sandy Creek and tributaries during major storms (such as a 100-year storm event). It should be noted that implementation of General Plan policies included in the proposed project would serve to offset the impacts of new development on stormwater flows and volumes by addressing both frequent storm events and the rarer, high-magnitude storm events.

Alternative 3 would reduce the proposed Planning Area by 94,003 acres. Although Alternative 3 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 3 would result in significantly less ground disturbance than the proposed project and thus flow rates and volumes of runoff would be substantially less than under the proposed project. Runoff and flooding impacts would be better under Alternative 3 than under the proposed project.

Flooding Hazards (Impact 4.11.5)

Implementation of the proposed project would allow for new development to occur without regard to availability of access to buildings during a flood event. It should be noted that General Plan policies included in the project would help reduce potential flooding hazards included in the proposed project would ensure that future development is designed and constructed in a manner that will provide adequate site access during flood events and thus minimize the risk of loss, injury, or death involving flooding.

Alternative 3 would result in 21,628 more housing units at buildout than the proposed project. Therefore, Alternative 3 would have greater potential for development to occur without regard

to availability of access to buildings during a flood event. Therefore, flooding hazard impacts under Alternative 3 would be worse than under the proposed project.

Cumulative Flooding Impacts (Impact 4.11.7)

Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the watershed, would increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions along the Kern River, Sandy Creek, and/or other local waterways. In addition, the proposed project may allow for development within existing flood hazard zones, including the inundation area of Isabella Dam.

As discussed above, Alternative 3 would reduce the proposed Planning Area by 94,003 acres. Although Alternative 3 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, the project's contribution to cumulative flow rates and volumes of runoff would be less and flooding impacts would be better under Alternative 3 than under the proposed project.

Cumulative Groundwater Supply Depletion (Impact 4.11.8)

Implementation of the proposed General Plan Update, in combination with existing, approved, proposed, and other reasonably foreseeable development activities in the Kern County Groundwater Subbasin, would contribute to an increased demand for municipal water supply, requiring increased groundwater pumping and potentially contributing to groundwater level declines and overdraft of the aquifer.

As discussed above, Alternative 3 would result in more housing units and a larger population than the proposed project. Therefore, Alternative 3 would increase demand for groundwater to a greater degree than the proposed project and cumulative groundwater depletion impacts would be worse than those under the proposed project.

Visual Resources

Alteration of Visual Character (Impact 4.12.3)

Implementation of the proposed General Plan Update would change the visual character of the Planning Area through intensification of urban uses within the existing City limits and the introduction of urban uses outside the City limits. It should be noted that General Plan policies included in the project would assist in reducing impacts associated with land use changes that have the potential to change the overall visual character of the Planning Area.

Alternative 3 would reduce the proposed Planning Area by 94,003 acres. Although Alternative 3 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 3 would allow less development on land in the Expansion Area that is

currently characterized by active agricultural operations and open space and would result in fewer impacts to the aesthetic value of these resources. Furthermore, proposed General Plan policies would be implemented under Alternative 3 and aesthetic conditions within City limits would be improved as discussed above. Impacts under Alternative 3 would be better than those under the proposed project.

Daytime Glare and Nighttime Lighting (Impact 4.12.4)

The proposed project includes land uses and policies that would result in new development and redevelopment in the Planning Area. Such development could introduce new light and glare sources into the Planning Area, particularly in the rural and undeveloped portions of the Planning Area. In addition, implementation of the proposed General Plan Update would result in intensified nighttime lighting levels associated with increased traffic levels and further residential and commercial development. It should be noted that General Plan policies included in the project would assist in reducing daytime glare nighttime light and illumination impacts.

Alternative 3 would result in 58,422 more persons and 21,628 more housing units at buildout than the proposed project. In addition, traffic volumes within the Planning Area would be increased in comparison to the proposed project due to the significant increase in population and housing. Even though Alternative 3 contains less land designated for General Commercial and Industrial uses in the Expansion Area, it would still result in more sources of daytime light and glare and nighttime light than the proposed project due to increased housing and traffic. Impacts would be worse under Alternative 3 than under the proposed project.

Cumulative Visual Resources Impacts (Impact 4.12.5)

Implementation of the proposed project, in combination with other reasonably foreseeable projects within Kern County and the San Joaquin Valley, would contribute to cumulatively considerable changes in the visual character of the area. The land uses allowed under the proposed project would contribute to this alteration of the visual character of the area by converting rural uses to urban development. Furthermore, cumulative development would introduce new sources of daytime glare and would substantially change nighttime lighting and illumination levels in the region, including increasing "sky glow" conditions in the region that would reduce visibility of the nighttime sky.

Alternative 3 would reduce the proposed Planning Area by 94,003 acres. Although Alternative 3 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 3 would allow less development on land in the Expansion Area that is currently characterized by active agricultural operations and open space and would result in fewer impacts to the aesthetic value of these resources. Therefore, cumulative visual resource impacts under Alternative 3 would be better than those under the proposed project.

Public Services and Utilities

Increased Demand for Water Supply and Cumulative Water Service Impacts (Impacts 4.13.5.1 and 4.13.5.3)

The *Water Supply Evaluation* prepared for the General Plan Update (Tulley and Young, 2009) found that future development consistent with land uses proposed by the General Plan Update would increase potable water demands within WKWD's service area by 9,788 af/y at buildout of the Planning Area. Addition of these increased demands to WKWD's projections indicate that WKWD would still have a surplus of over 17,000 af/y at build out of the Planning Area (27,254 af/y surplus at buildout of WKWD service area – 9,788 af/y in additional demands from buildout of GPU = 17,466 af/y remaining surplus). However, WKWD water supplies may not be reliable since SWP supplies relied upon by WKWD are based on receiving a higher percentage of normal year entitlements than what DWR currently recommends and WKWD's 2025 supplies as projected by its 2005 UWMP rely on supplies that are not supported by firm contractual entitlements. If WKWD cannot adequately document water supplies from the Kern River Alluvial Fan (or other sources) as required for any future SB 610 analysis, projected demand would exceed supply by 16,923 af/y at buildout of the General Plan Update. Other existing, planned, proposed, approved, and reasonably foreseeable development within the WKWD service area would place further demands on WKWD's supplies and could result in greater cumulative shortages.

As discussed above, Alternative 3 would result in more housing units and a larger population than the proposed project. Therefore, Alternative 3 would increase demand for groundwater supplies and service to a greater degree than the proposed project and impacts would be worse than those under the proposed project.

Increased Demand for Wastewater Service/Conveyance and Treatment Facilities (Impact 4.13.6.1)

Implementation of the proposed GPU is expected to result in a total of 25,184 housing units and a population of 68,018 at buildout. This increased population and development would substantially increase wastewater flows and would result in increased demand for wastewater services. The project average wastewater flow at buildout of the GPU is 6.33 million gallons per day (mgd). Meeting increased demand would require the extension of new wastewater collection system infrastructure including collectors, trunks, and interceptor sewer lines and appurtenances. Increased treatment and disposal capacity would also be required to ensure adequate treatment of the City's wastewater flows.

Buildout of Alternative 3 would result in a population of 126,440, which would increase the City's average wastewater flow to approximately 11.76 mgd (see **Table 6.0-2** below). The Taft Wastewater Treatment Plant (TWWTP) currently has a total permitted capacity of 1.5 mgd. Therefore, the existing capacity of the TWWTP is not adequate to accommodate the anticipated wastewater flows at buildout of Alternative 3. Alternative 3 would require treatment and disposal capacity, as well as additional wastewater conveyance capacity, to be increased to a greater degree

than under the proposed project. Therefore, impacts would be worse under Alternative 3 than under the proposed project.

TABLE 6.0-2
PROJECTED WASTEWATER FLOW AT BUILDOUT OF THE EXISTING GENERAL PLAN (NO PROJECT ALTERNATIVE)

	Population at Buildout	Flow Factor	Projected Wastewater Flows (mgd)
Average Flow Projection	126,440	93 gallons per person per day	11.76 mgd

Source: Flow Factor based on personal communication (letter) from Amando Garza, Carollo Engineers to the City of Taft on June 6, 2008.

6.6 ALTERNATIVE 4 – SOUTHEAST HIGH DENSITY MIXED USE CLUSTER

CHARACTERISTICS

Under Alternative 4, the Planning Area would be reduced to exclude approximately 64,158 acres of land located east and northeast of the current City limits (**Figure 6.0-5**). These areas are largely undeveloped agricultural and mineral extraction land as well as land proposed for Commercial designation under the proposed project. This alternative would, therefore, exclude the South Kern Industrial Center, Buena Vista Hills, and Dustin Acres Specific Plan Areas. These areas would remain under Kern County jurisdiction and would not be proposed for annexation or subsequent development by the City.

In addition, proposed land use designations within the existing City limits would be less intense, thereby allowing the City to remain a generally low density, rural community (see **Figure 6.0-4**). To compensate, higher density land use designations (Commercial, High Density Residential, Mixed Use) would be clustered east of the City near the planned Copus Road/Interstate 5 interchange. The result would be a cluster of mixed uses at higher densities along the heavily traveled I-5 corridor at one of the entry points to the City of Taft.

Under this alternative, the Planning Area would encompass 93,412 acres (9,629 acres within the City limits + 83,783 acres within the Expansion Area). Due to the increased densities associated with this Alternative, buildout of this Alternative would result in approximately 31,320 housing units, a population of 84,595, and a total of 68,654 jobs within the Planning Area by the buildout year of 2050. Land use designations outside the City limits would consist primarily of Agriculture, Natural Resources, Commercial, High Density Residential, Medium Density Residential, Industrial, Low Density Residential, and Special Planning Area.

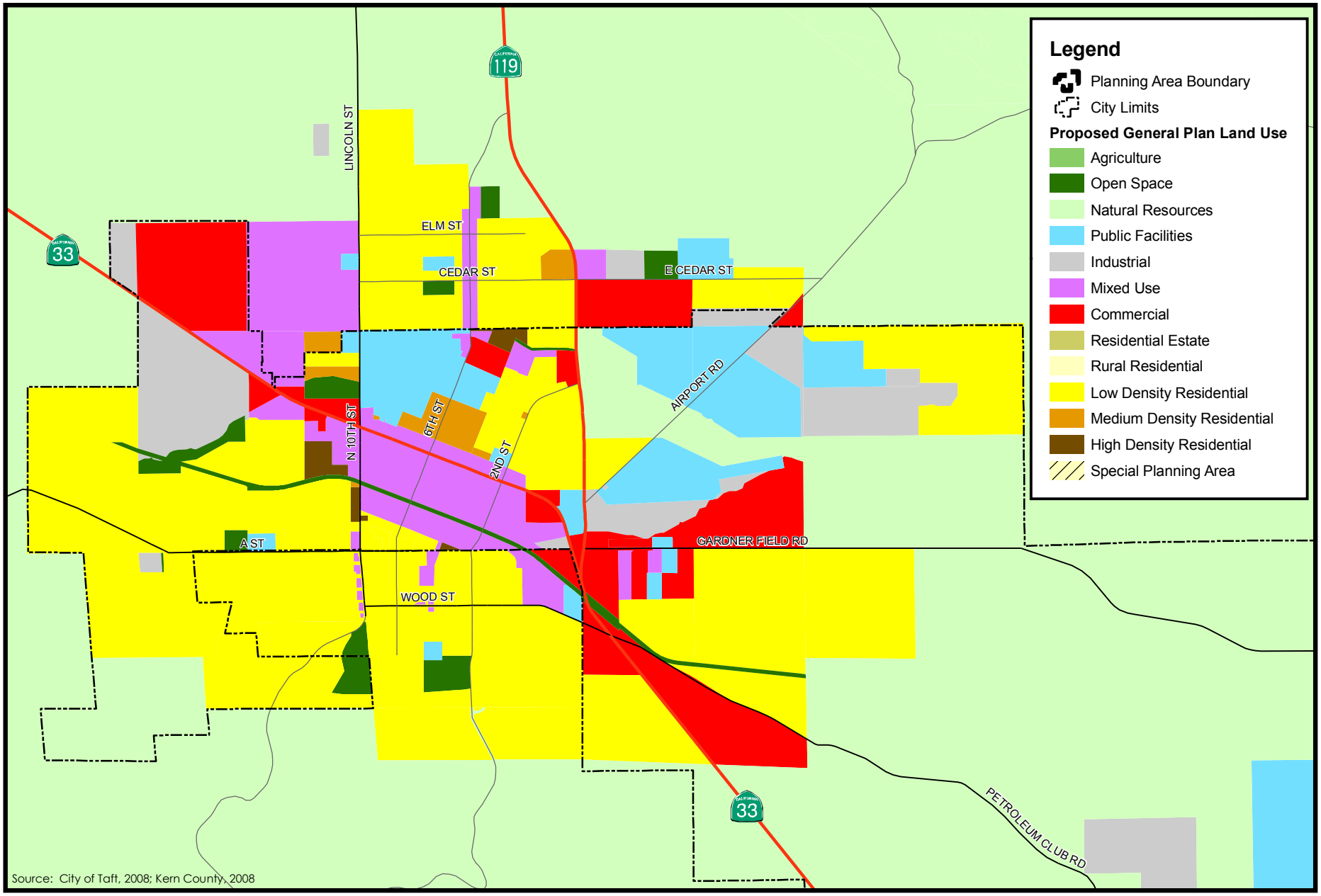

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Figure 6.0-4

Alternative 3 & 4 Greater Taft Area

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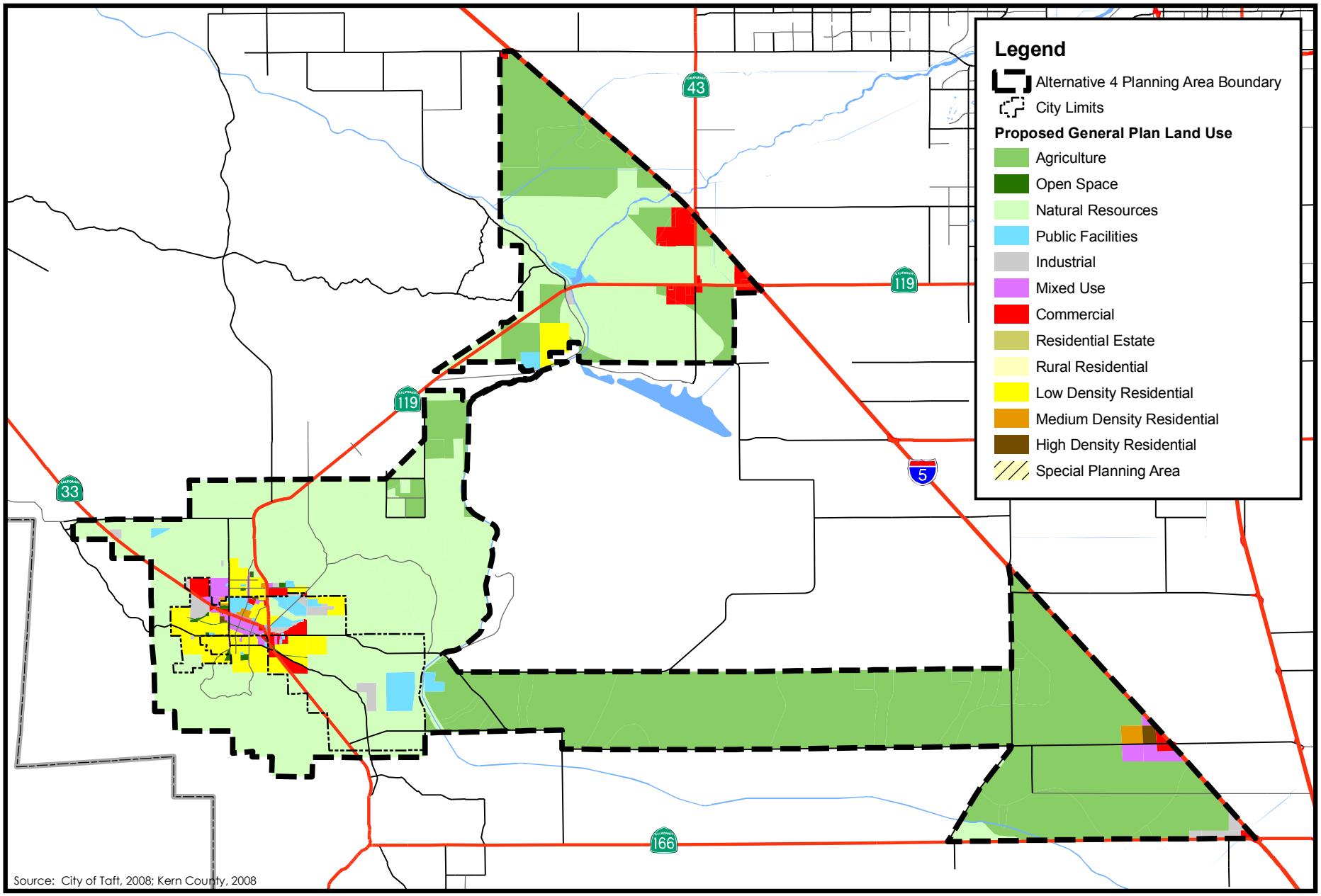

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Figure 6.0-5

Alternative 4 - Southeast High Density Mixed Use Cluster Alternative

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COMPARATIVE ANALYSIS

Land Use and Planning

Cumulative Land Use Impacts (Impact 4.1.5)

Implementation of the proposed project would substantially contribute to the conversion of vacant/undeveloped land in the region resulting in significant effects to the environment. In addition, future development under the proposed GPU could bring development closer to the City of Bakersfield, which could contribute to cumulative land use conflicts in the region.

Under Alternative 4, the Planning Area would still bring development closer to the City of Bakersfield as the Planning Area would still extend out to I-5 both north and south of the excluded area. However, the Planning Area would be reduced by 64,158 acres under Alternative 4, which would lessen the potential for cumulative land use conflicts in the region in comparison to the proposed project. Therefore, cumulative land use impacts would be better under Alternative 4 than under the proposed project.

Agricultural Resources

Loss and Conversion of Important Farmland (Impact 4.2.1)

Implementation of the proposed project designates areas of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Grazing Land within the Expansion Area for Commercial, Natural Resource, Public Facility, and Industrial uses. To be exact, the proposed General Plan Update would result in 2,827 acres of Prime Farmland, 2,670 acres of Farmland of Statewide Importance, 7,466 acres of Unique Farmland, and 24,117 acres of Grazing Land, or a total of 37,080 acres (2,827+2,670+7,466+24,117 = 37,080) of Important Farmland (approximately 30 percent of Important Farmland inventoried in the Planning Area) being designated for uses other than agriculture. In addition, buildout of the existing City limits is anticipated to occur by about 2035 and would result in the conversion of the entire 4,532 acres of Grazing Land to urban uses.

Implementation of Alternative 4 would designate 27,983.96 acres of Important Farmland (745.5 acres of Prime Farmland, 970.49 acres of Farmland of Statewide Importance, 137.2 acres of Unique Farmland, and 26,130.77 acres of Grazing Land) for land uses other than agriculture. Since Alternative 4 would result in 9,096.04 fewer acres of Important Farmland conversion than the proposed project, impacts under the Alternative 4 would be better than under the proposed project.

It should be noted that, under Alternative 4, land uses within the excluded area would continue to be guided by the County General Plan, which designates Important Farmland for uses other than agriculture. While the City would not have jurisdiction over land use decisions for County lands and analysis of environmental impacts of County land use decisions is not within the scope of this Draft EIR, it is likely that Alternative 4 would result in the conversion of Important Farmland under County jurisdiction.

Agricultural/Urban Interface Conflicts (Impact 4.2.2)

Subsequent land use activities associated with implementation of the proposed project may involve the placement of residential and other non-agricultural land uses adjacent to agricultural uses that could result in agricultural/urban interface. Land use interface conflicts can individually or cumulatively decrease the efficiency of farming operations which can cause production costs to rise and make farming operation less appealing. The increase in production cost can eventually force the farmer into a land use conversion.

Implementation of the Alternative 4 would also allow for urban uses adjacent to agricultural lands in areas of the Planning Area outside of the City limits. However, as discussed above, Alternative 4 would result in significantly less farmland conversion than the proposed project. Therefore, impacts associated with agricultural/urban interface conflicts would be better under the Alternative 4 than under the proposed project.

Conflicts with Williamson Act and FSZ Contracts (Impact 4.2.3)

The proposed project would result in 8,908 acres of land currently under Williamson Act contracts and 5,569 acres of land under FSZ contracts being designated for uses other than agriculture, which could lead to the removal of this land (a total of 14,477 acres) from active contracts. The California Government Code prohibits annexation of Williamson Act and FSZ contracted land unless specific criteria are met but does not preclude annexation entirely. Therefore, lands within the Expansion Area could be annexed and developed consistent with the proposed project, providing those criteria were met.

Alternative 4 would designate 6,148.3 acres of Williamson Act lands and lands under FSZ contracts for Natural Resource, Mixed Use, and Public Facilities uses and could result in the conversion of these lands to non-agricultural uses. This is significantly less than the 14,447 acres of Williamson Act lands and FSZ contracts that have the potential to be converted under the proposed project. Therefore, impacts associated with the loss and conversion of Williamson Act lands and FSZ contracts under Alternative 4 would be better than under the proposed project.

It should be noted that, under Alternative 4, land uses within the excluded area would continue to be guided by the County General Plan, which designates Williamson Act lands and lands under FSZ contracts for uses other than agriculture. While the City would not have jurisdiction over land use decisions for County lands and analysis of environmental impacts of County land use decisions is not within the scope of this Draft EIR, it is likely that Alternative 4 would result in the conversion of Williamson Act lands and lands under FSZ contracts within County jurisdiction.

Cumulative Impacts to Agricultural Resources (Impact 4.2.4)

Implementation of the proposed project, along with other proposed development in Kern County, would contribute to the cumulative conversion of Important Farmlands to other uses. While the acreage converted would represent only a small percentage of Important Farmland in Kern County, this would be in addition to important farmland conversions associated with

development anticipated under the applicable land use plans of Kern County and the incorporated cities of Bakersfield, Arvin, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Tehachapi, Wasco and Taft. Thus, the proposed project would contribute to a potentially significant amount of Important Farmland in Kern County being removed from agricultural uses.

As discussed above, Alternative 4 would result in significantly less conversion of agricultural lands than the proposed project. Therefore, Alternative 4's contribution to cumulative agricultural resource impacts would be better than the proposed project.

Population and Housing

Project and Cumulative Population, Housing, and Employment Increases (Impact 4.3.1 and Impact 4.3.3)

At buildout the proposed project would accommodate a population of 68,018 persons, 25,184 housing units and 48,420 jobs within the Planning Area by the buildout year of 2050. This represents a 276% increase over current population levels. This substantial growth would have a significant physical effect on the environment. In addition, the proposed project and all existing, approved, proposed, and reasonable foreseeable in the surrounding cities and unincorporated areas of the County could result in a cumulative increase in population and housing growth and associated environmental impacts.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Even though Alternative 4 would generate 23,680 fewer jobs within the Expansion Area, impacts would still be worse under this Alternative due to the significant increase in population and housing.

Transportation and Circulation

Deficient LOS Conditions on Study Roadway Segments (Impact 4.4.1)

Implementation of the proposed project would result in an increase in traffic volumes that would result in deficient level of service conditions in year 2035 and would conflict with Caltrans standards for level of service. Specifically, the proposed project would result in a decline of service for two segments of SR 119, from LOS B to LOS F for SR 119 between Tupman Road to SR 43, and from Los A to LOS F for SR 119 between SR 43 to I-5, respectively. This decline in LOS for these two segments of SR 119 would also conflict with Caltrans' TCR for state routes in the study area that establishes a minimum of LOS C for SR 119, and LOS D for SR 43.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Even though Alternative 4 would generate 23,680 fewer jobs within the Expansion Area, traffic volumes within the Planning Area would still be increased in comparison to the proposed project due to the increase in population and housing. Therefore, it is anticipated that SR 119 between Tupman Road to SR 43, and SR 119 between SR 43 to I-5

would still experience a decline in LOS as a result of Alternative 4 Impacts would be worse under Alternative 4 than under the proposed project.

Project and Cumulative Aviation System Impacts (Impact 4.4.4 and Impact 4.4.8)

Implementation of the proposed project would increase demand for service at the Taft-Kern-County Airport which currently operates with one runway and has been deemed an unsatisfactory facility for the area. In addition, the proposed project would contribute to increases in cumulative demands for aviation services in the region.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Therefore, Alternative 4 would result in a more significant increase in demand for aviation services at the Taft-Kern-County Airport and aviation system impacts would be worse than under the proposed project.

Cumulative Traffic Impacts on Local Roadways and State Highways (Impact 4.4.5)

The proposed project would add substantial traffic volumes on local roadways and state highway facilities that would result in significant traffic impacts within the Planning Area as well as in adjoining jurisdictions. As discussed above, implementation of the proposed project would result in some service levels exceeding proposed standards and policies of Caltrans and the County by resulting in declining levels of service on roadway segments within the General Plan planning horizon. This would be true under cumulative conditions as well.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Even though Alternative 4 would generate 23,680 fewer jobs within the Expansion Area, traffic volumes within the Planning Area would still be increased in comparison to the proposed project due to the increase in population and housing. Therefore, it is anticipated that Alternative 4 would contribute to cumulative traffic impacts to a greater degree than the proposed project. Therefore, impacts under Alternative 4 would be worse than under the proposed project.

Air Quality

Conflict with or Obstruct Implementation of Applicable Air Quality Plans or Contribute Substantially to an Existing Air Quality Violation (Impact 4.5.1)

Implementation of the proposed project would allow for population growth that would exceed projections assumed in SJVAPCD's 2007 Ozone Plan. This inconsistency could hinder SJVAPCD's ozone attainment strategy.

Alternative 4 would result in a buildout population of 84,595 persons, an increase of 16,577 in comparison to the proposed project. Since cumulative impacts on regional air quality are determined by comparing proposed population growth accommodated by a project with the growth that was assumed in attainment plans prepared by the SJVAPCD, Alternative 4 would result in worse impacts associated with obstruction of the ozone attainment strategy.

Expose Sensitive Receptors to Toxic Air Contaminants (Impact 4.5.4)

Implementation of the proposed project could locate sensitive receptors near potential existing and future sources of TACs, particularly in the Expansion Area, which is currently governed by the Kern County General Plan and planned for agricultural, mineral, petroleum production, residential, commercial, industrial, and public uses. Land use changes in the Expansion Area resulting from the proposed project could introduce land use conflicts that expose persons to TACs from industrial or commercial land uses. For example, industrial land uses can produce diesel truck traffic that can generate diesel-based particulate matter that has been designated a TAC by the State. It should be noted that implementation of General Plan policies included in the proposed project would ensure adequate buffers between land uses that could expose sensitive receptors to unhealthful levels of TACs or odors.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Therefore, Alternative 4 could locate more sensitive receptors near potential existing and future sources of TACs and impacts would be worse the proposed project.

Cumulative Air Quality Impacts on Attainment Plans (Impact 4.5.8)

Implementation of the proposed General Plan Update, in combination with cumulative development in the San Joaquin Valley Air Basin, would contribute to a cumulative air quality impacts and could conflict with ozone and particulate matter attainment efforts.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Even though Alternative 3 would generate 23,680 fewer jobs within the Expansion Area, traffic volumes within the Planning Area would still be increased in comparison to the proposed project due to the increase in population and housing. Therefore, Alternative 4 would result in more air quality impacts that could conflict with ozone and particulate matter attainment efforts and impacts would be worse than those under the proposed project.

Conflict or Obstruct with Implementation of Greenhouse Gas Reduction Measures (Impact 4.5.9) and Conflict or Obstruct with Implementation of AB 32 (Impact 4.5.11)

Under the proposed project, CO_2e emissions associated within the Planning Area are projected to increase, primarily from increases in housing associated with the City's projected population growth. In addition to the CO_2e increases, there would also be increases in electricity use, water use, and waste associated with the growth accommodated by the proposed project, which would further increase CO_2e emissions and increase the carbon footprint of the City. Even with proposed General Plan policies that would help reduce GHG emissions from motor vehicles and energy use associated with growth, the net increase in emissions would contribute to climate change. As a result, the proposed General Plan Update is inconsistent with AB 32's goal of reducing GHG emissions by 2020 to 1990 levels.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Since CO_2e emissions associated within the Planning Area are projected to increase primarily from increases in housing associated with the City's population growth,

Alternative 4 would generate more CO_2e emissions than the proposed project. Therefore, impacts associated with CO_2e emissions would be worse under Alternative 4 than under the proposed project.

Noise

Exposure to Construction Noise (Impact 4.6.1)

Activities associated with construction of land uses allowed under the proposed project could result in elevated noise levels at noise-sensitive land uses. Increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Therefore, exposure to construction noise under Alternative 4 would be worse than under the proposed project.

Exposure to Roadway Traffic Noise (Impact 4.6.2) and Noise Impacts Associated with Increased Traffic Resulting from Buildout of the Proposed General Plan (Impact 4.6.7)

The proposed project includes noise-sensitive land use designations along roadways anticipated to experience substantial increases in traffic noise. Development of noise-sensitive land uses could also occur within the projected 60 dBA CNEL noise contours of area roadways. Buildout of the proposed project would result in increased exposure of existing and future noise-sensitive land uses to traffic noise levels that could exceed the City's land use compatibility noise standards.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Even though Alternative 4 would generate 23,680 fewer jobs within the Expansion Area, traffic volumes within the Planning Area would still be increased in comparison to the proposed project due to the increase in population and housing. Therefore, Alternative 4 would result in a greater amount of potential noise-sensitive land uses that could occur within the projected 60 dBA CNEL noise contours of area roadways and the generation of more traffic noise that could affect those noise-sensitive land uses. Therefore, impacts under Alternative 4 would be worse than those under the proposed project.

Exposure to Aircraft Noise (Impact 4.6.3)

The proposed project includes land uses that are consistent with the noise policies and recommended land uses identified within the Kern County Airport Land Use Compatibility Plan. However, it is conceivable that future development within the City, as well as future expansion of airport activities and associated noise contours, could occur in future years, which may result in increased exposure to aircraft noise levels at some nearby noise-sensitive land uses. It should be noted that policies and standards contained in the proposed project would ensure that future development near Taft-Kern County Airport would meet applicable noise criteria for land use compatibility and/or include noise attenuation features to meet applicable noise standards.

Accordingly, future development projects under the proposed project located within air traffic patterns, corridors, and airport influence zones would be reviewed to ensure continued consistency with the Kern County Airport Land Use Compatibility Plan.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Therefore, Alternative 4 would expose more persons and homes to potential aircraft noise and impacts would be worse than under the proposed project.

Exposure to Stationary Non-Transportation Noise (Impact 4.6.4)

Implementation of the proposed project could result in the future development of land uses that generate noise levels in excess of applicable City noise standards. Such land uses may include commercial, industrial, and recreational uses and could expose noise-sensitive land uses to excessive noise levels. In addition, new noise-sensitive land uses could be located in areas of existing stationary noise sources. Increased exposure to non-transportation source noise levels could result in increased levels of annoyance, activity interference, and potential sleep disruption for occupants of nearby land uses.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. However, Alternative 4 contains only 1,641.72 acres of land designated for General Commercial and Industrial uses in the Expansion Area, as opposed to 3,475 acres for those uses in the Expansion Area under the proposed project. Therefore, Alternative 4 would result in fewer commercial and industrial uses that could generate noise levels in excess of applicable City noise standards and impacts would be better in comparison to the proposed project.

Exposure to Groundborne Vibration (Impact 4.6.6)

The proposed project would result in additional development throughout the Planning Area, thus resulting in the potential for noise-sensitive land uses to be exposed to construction-generated sources of groundborne vibration. Groundborne vibration sources that could potentially affect future development would be primarily associated with short-term construction activities. It should be noted that implementation of proposed General Plan policies would mitigate groundborne vibration impacts by restricting noise-generating construction activities that would result in increased levels of annoyance to nearby noise-sensitive land uses to the daytime hours of operation.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Therefore, Alternative 4 would result in greater potential for exposure to construction-generated sources of groundborne vibration. Impacts under Alternative 4 would be worse than under the proposed project.

Geology and Soils

Loss of Mineral Resources (Impact 4.8.6)

Hundreds of MRZ-2-classified sites exist within the Planning Area. The proposed project would allow urban development (e.g., residential, office, and commercial areas and associated infrastructure) at various locations throughout the Planning Area. If located on MRZ-2 classified lands, this future development could potentially preclude the exploration for and extraction of mineral resources, particularly in areas with mineral resources.

Alternative 4 would reduce the proposed Planning Area by 64,158 acres. Although Alternative 4 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 4 would be likely to leave more MRZ-2 sites available for the exploration for and extraction of mineral resources and impacts would be better in comparison to the proposed project.

Cultural and Paleontological Resources

Potential Direct Destruction or Damage to Known and Undiscovered Historical Resources (Impact 4.9.1)

Future development allowed under the proposed project could result in the destruction of historic buildings and inappropriate alterations resulting in the loss of historic character-defining features of buildings. The City's Preservation Plan does not provide for the protection of historic resources, as compliance to the plan is voluntary and the historic designation criteria are not consistent with those of CEQA. It should be noted that policies contained in the proposed project would minimize impacts to historical resources by requiring an evaluation of any proposed demolition or modification to historic or architectural resources that are either listed in or determined eligible for inclusion in the National Registry of Historical Places (NHRP), the California Registry of Historic Resources (CRHR), or the local historical registry to determine whether the project proposal would result in an adverse impact on the historic resource.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. Therefore, Alternative 4 would result in a greater potential for development and redevelopment that could impact historic buildings and impacts would be worse in comparison to the proposed project.

Potential Destruction or Damage to Known and Undiscovered Prehistoric Resources and Human Remains (Impact 4.9.2) and Potential Destruction or Damage to Known and Undiscovered Paleontological Resources (Impact 4.9.3)

Future development under the proposed project could result in the potential disturbance of cultural resources (i.e., prehistoric archaeological sites, historical archaeological sites, and isolated artifacts and features), human remains, and/or paleontological resources (i.e., fossils and fossil formations) within the Planning Area, particularly previously undiscovered or unknown cultural

and paleontological resources. It should be noted that implementation of policies and action items included in the proposed project would assist in reducing impacts to known and undiscovered cultural and paleontological resources and human remains by conditioning future development projects to notify the Planning Department if any prehistoric, archaeological, or fossil artifact or resources are uncovered during construction and to stop construction if human remains are found.

Alternative 4 would reduce the proposed Planning Area by 64,158 acres. Although Alternative 4 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 4 would result in significantly less ground disturbance than the proposed project and thus less potential to uncover and disturb previously undiscovered cultural resources, human remains, and/or paleontological resources within the Planning Area. Impacts under Alternative 4 would be better in comparison to the proposed project.

Prehistoric Resources, Historic Resources, and Human Remains (Impact 4.9.4)

Archaeological and historical investigations have identified cultural resources in the Planning Area, Kern County, and the San Joaquin Valley. However, archaeological and historical investigations have not been conducted within all areas encompassed by the Planning Area. Based on the results of previous archaeological and historical investigations within the Planning Area, it is likely that development in these areas would discover previously unidentified cultural resources and human remains. Consequently, development under the General Plan Update and development in Kern County and the San Joaquin Valley could impact known and undiscovered cultural resources and human remains and contribute to the cumulative loss of cultural resources. The contribution of development under the General Plan Update could be considerable, when combined with other past, present, and foreseeable development in Kern County and the San Joaquin Valley.

As previously discussed, Alternative 4 would reduce the proposed Planning Area by 64,158 acres. Although Alternative 4 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 4 would result in significantly less ground disturbance than the proposed project and thus less cumulative impacts to prehistoric resources, historic resources, and human remains. Impacts under Alternative 4 would be better in comparison to the proposed project.

Biological Resources

Project and Cumulative Impacts to Special-Status Plant and Wildlife Species (Impact 4.10.1 and Impact 4.10.5)

Land use and development consistent with the proposed project could result in adverse impacts on special-status species or essential habitat for special-status species in the Planning Area. These impacts, when combined with other habitat impacts occurring from development within surrounding areas, would also result in significant cumulative impacts. Any development within

areas that are currently undeveloped could result in impacts to habitat resources that may support special-status species and construction of future projects could result in direct "take" of habitat and loss of individuals of these species. Where there are direct impacts to special-status species, indirect impacts could occur as well, including increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to development of previously undeveloped areas. It should be noted that implementation of the General Plan policies included in the proposed project would help to reduce and minimize both project and cumulative impacts to special-status species and loss of sensitive habitats supporting these species from future development.

Alternative 4 would reduce the proposed Planning Area by 64,158 acres. Although Alternative 4 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 4 would result in significantly less ground disturbance than the proposed project and thus less potential to result in direct and indirect impacts to special-status species within the Planning Area. Therefore, impacts under Alternative 4 would be better in comparison to the proposed project.

Impacts to Sensitive Natural Communities Including Waters of the US (Impacts 4.10.2)

Implementation of the proposed project could result in disturbance, degradation, and removal of valley foothill riparian and wetland habitats, which are found primarily outside City boundaries. These habitats are considered to be sensitive natural communities by CDFG. It should be noted that implementation of mitigation measures and General Plan policies included in the proposed project would help to reduce and minimize impacts to sensitive natural communities from future development.

Alternative 4 would reduce the proposed Planning Area by 64,158 acres. Although Alternative 4 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 4 would develop less vacant land outside the City limits and, since riparian and wetland habitats are found primarily outside City boundaries, Alternative 4 would likely result in less disturbance, degradation, and removal of valley foothill riparian and wetland habitats. Therefore, impacts under Alternative 4 would be better in comparison to the proposed project.

Wildlife Corridors (Impact 4.10.3)

Implementation of the proposed project could result in disturbance, degradation, and removal of important corridors for the movement of common and special-status wildlife species due to additional traffic, increased human presence, and degradation of the water quality. Open space, including agricultural lands, chaparral, woodlands, and annual grasslands, provides an opportunity for dispersal and migration of wildlife species and large-scale development of the Planning Area could isolate these areas from one another and adversely impact these areas and movement corridors. Additionally, construction of roadways and improvement of existing roadways could sever connections between habitats and vegetation types in the Planning Area

and could negatively impact ephemeral drainages and jurisdictional waters of the U.S. It should be noted that implementation of mitigation measures and General Plan policies included in the proposed project would mitigate impacts to wildlife movement corridors.

Alternative 4 would reduce the proposed Planning Area by 64,158 acres. Although Alternative 4 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 4 would result in less disturbance, degradation, and removal of important wildlife corridors. Impacts under Alternative 4 would be better in comparison to the proposed project.

Hydrology and Water Quality

Increase Storm Runoff and Flooding Potential (Impact 4.11.4)

New development associated with implementation of the proposed project would increase flow rates and volumes of runoff by introducing streets, residential structures, commercial and industrial buildings, other buildings, parking areas, and other impervious surfaces and by providing improved facilities for drainage conveyance. In addition, Planning Area soils are highly erodable and there are segments of Sandy Creek and its tributaries that have already been experiencing significant headcutting and erosion. These processes will be exacerbated if the frequency, rates and volumes of runoff are increased by the introduction of impervious surfaces with new development. New development in the Planning Area will also increase peak rates of runoff conveyed in Sandy Creek and tributaries during major storms (such as a 100-year storm event). It should be noted that implementation of General Plan policies included in the proposed project would serve to offset the impacts of new development on stormwater flows and volumes by addressing both frequent storm events and the rarer, high-magnitude storm events.

Alternative 4 would reduce the proposed Planning Area by 64,158 acres. Although Alternative 4 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 4 would result in significantly less ground disturbance than the proposed project and thus flow rates and volumes of runoff would be substantially less than under the proposed project. Runoff and flooding impacts would be better under Alternative 4 than under the proposed project.

Flooding Hazards (Impact 4.11.5)

Implementation of the proposed project would allow for new development to occur without regard to availability of access to buildings during a flood event. It should be noted that General Plan policies included in the project would help reduce potential flooding hazards included in the proposed project would ensure that future development is designed and constructed in a manner that will provide adequate site access during flood events and thus minimize the risk of loss, injury, or death involving flooding.

Alternative 4 would result in 6,136 more housing units at buildout than the proposed project. Therefore, Alternative 4 would have greater potential for development to occur without regard to availability of access to buildings during a flood event. Therefore, flooding hazard impacts under Alternative 4 would be worse than under the proposed project.

Cumulative Flooding Impacts (Impact 4.11.7)

Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development in the watershed, would increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions along the Kern River, Sandy Creek, and/or other local waterways. In addition, the proposed project may allow for development within existing flood hazard zones, including the inundation area of Isabella Dam.

As discussed above, Alternative 4 would reduce the proposed Planning Area by 64,158 acres. Although Alternative 4 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, the project's contribution to cumulative flow rates and volumes of runoff would be less and flooding impacts would be better under Alternative 4 than under the proposed project.

Cumulative Groundwater Supply Depletion (Impact 4.11.8)

Implementation of the proposed General Plan Update, in combination with existing, approved, proposed, and other reasonably foreseeable development activities in the Kern County Groundwater Subbasin, would contribute to an increased demand for municipal water supply, requiring increased groundwater pumping and potentially contributing to groundwater level declines and overdraft of the aquifer.

As discussed above, Alternative 4 would result in more housing units and a larger population than the proposed project. Therefore, Alternative 4 would increase demand for groundwater to a greater degree than the proposed project and cumulative groundwater depletion impacts would be worse than those under the proposed project.

Visual Resources

Alteration of Visual Character (Impact 4.12.3)

Implementation of the proposed General Plan Update would change the visual character of the Planning Area through intensification of urban uses within the existing City limits and the introduction of urban uses outside the City limits. It should be noted that General Plan policies included in the project would assist in reducing impacts associated with land use changes that have the potential to change the overall visual character of the Planning Area.

Alternative 4 would reduce the proposed Planning Area by 64,158 acres. Although Alternative 4 would result in more housing units and a larger population than the proposed project,

population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 4 would allow less development on land in the Expansion Area that is currently characterized by active agricultural operations and open space and would result in fewer impacts to the aesthetic value of these resources. Furthermore, proposed General Plan policies would be implemented under Alternative 4 and aesthetic conditions within City limits would be improved as discussed above. Impacts under Alternative 4 would be better than those under the proposed project.

Daytime Glare and Nighttime Lighting (Impact 4.12.4)

The proposed project includes land uses and policies that would result in new development and redevelopment in the Planning Area. Such development could introduce new light and glare sources into the Planning Area, particularly in the rural and undeveloped portions of the Planning Area. In addition, implementation of the proposed General Plan Update would result in intensified nighttime lighting levels associated with increased traffic levels and further residential and commercial development. It should be noted that General Plan policies included in the project would assist in reducing daytime glare nighttime light and illumination impacts.

Alternative 4 would result in 16,577 more persons and 6,136 more housing units at buildout than the proposed project. In addition, traffic volumes within the Planning Area would be increased in comparison to the proposed project due to the increase in population and housing. Even though Alternative 4 contains less land designated for General Commercial and Industrial uses in the Expansion Area, it would still result in more sources of daytime light and glare and nighttime light than the proposed project due to increased housing and traffic. Impacts would be worse under Alternative 4 than under the proposed project.

Cumulative Visual Resources Impacts (Impact 4.12.5)

Implementation of the proposed project, in combination with other reasonably foreseeable projects within Kern County and the San Joaquin Valley, would contribute to cumulatively considerable changes in the visual character of the area. The land uses allowed under the proposed project would contribute to this alteration of the visual character of the area by converting rural uses to urban development. Furthermore, cumulative development would introduce new sources of daytime glare and would substantially change nighttime lighting and illumination levels in the region, including increasing "sky glow" conditions in the region that would reduce visibility of the nighttime sky.

Alternative 4 would reduce the proposed Planning Area by 64,158 acres. Although Alternative 4 would result in more housing units and a larger population than the proposed project, population and housing growth would be concentrated in higher densities on less land. Therefore, Alternative 4 would allow less development on land in the Expansion Area that is currently characterized by active agricultural operations and open space and would result in fewer impacts to the aesthetic value of these resources. Therefore, cumulative visual resource impacts under Alternative 4 would be better than those under the proposed project.

Public Services and Utilities

Increased Demand for Water Supply and Cumulative Water Service Impacts (Impacts 4.13.5.1 and 4.13.5.3)

The *Water Supply Evaluation* prepared for the General Plan Update (Tulley and Young, 2009) found that future development consistent with land uses proposed by the General Plan Update would increase potable water demands within WKWD's service area by 9,788 af/y at buildout of the Planning Area. Addition of these increased demands to WKWD's projections indicate that WKWD would still have a surplus of over 17,000 af/y at build out of the Planning Area (27,254 af/y surplus at buildout of WKWD service area – 9,788 af/y in additional demands from buildout of GPU = 17,466 af/y remaining surplus). However, WKWD water supplies may not be reliable since SWP supplies relied upon by WKWD are based on receiving a higher percentage of normal year entitlements than what DWR currently recommends and WKWD's 2025 supplies as projected by its 2005 UWMP rely on supplies that are not supported by firm contractual entitlements. If WKWD cannot adequately document water supplies from the Kern River Alluvial Fan (or other sources) as required for any future SB 610 analysis, projected demand would exceed supply by 16,923 af/y at buildout of the General Plan Update. Other existing, planned, proposed, approved, and reasonably foreseeable development within the WKWD service area would place further demands on WKWD's supplies and could result in greater cumulative shortages.

As discussed above, Alternative 4 would result in more housing units and a larger population than the proposed project. Therefore, Alternative 4 would increase demand for groundwater supplies and service to a greater degree than the proposed project and impacts would be worse than those under the proposed project.

Increased Demand for Wastewater Service/Conveyance and Treatment Facilities (Impact 4.13.6.1)

Implementation of the proposed GPU is expected to result in a total of 25,184 housing units and a population of 68,018 at buildout. This increased population and development would substantially increase wastewater flows and would result in increased demand for wastewater services. The project average wastewater flow at buildout of the GPU is 6.33 million gallons per day (mgd). Meeting increased demand would require the extension of new wastewater collection system infrastructure including collectors, trunks, and interceptor sewer lines and appurtenances. Increased treatment and disposal capacity would also be required to ensure adequate treatment of the City's wastewater flows.

Buildout of Alternative 4 would result in a population of 84,595, which would increase the City's average wastewater flow to approximately 7.87 mgd (see **Table 6.0-3** below). The Taft Wastewater Treatment Plant (TWWTP) currently has a total permitted capacity of 1.5 mgd. Therefore, the existing capacity of the TWWTP is not adequate to accommodate the anticipated wastewater flows at buildout of Alternative 4. Alternative 4 would require treatment and disposal capacity, as well as additional wastewater conveyance capacity, to be increased to a greater degree

than under the proposed project. Therefore, impacts would be worse under Alternative 4 than under the proposed project.

TABLE 6.0-3
PROJECTED WASTEWATER FLOW AT BUILDOUT OF THE EXISTING GENERAL PLAN (NO PROJECT ALTERNATIVE)

	Population at Buildout	Flow Factor	Projected Wastewater Flows (mgd)
Average Flow Projection	84,595	93 gallons per person per day	7.87 mgd

Source: Flow Factor based on personal communication (letter) from Amando Garza, Carollo Engineers to the City of Taft on June 6, 2008.

6.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. State CEQA Guidelines Section 15126(d)(2) states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives.

Table 6.0-4 provides a summary of the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the proposed project. The ranking of the impact as compared to the proposed project is shown for each impact. A "B" ranking means that the alternative would either avoid or lessen the identified environmental impacts of the proposed project, while a "W" ranking means the alternative would result in a greater impact. The "S" ranking identifies where the alternative has a similar impact as the proposed project. Based upon the evaluation described in this section, Alternative 1 would be the environmentally superior alternative. As stated above, if the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives. After the No Project Alternative (Alternative 1), Alternative 2 would be the environmentally superior alternative.

TABLE 6.0-4
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

Environmental Impacts of the Proposed Project	Alternative 1 No Project Alternative	Alternative 2 Reduced Sphere of Influence	Alternative 3 Northeast High Density Mixed Use Cluster	Alternative 4 Southeast High Density Mixed Use Cluster
Cumulative Land Use Impacts (Impact 4.1.5)	B	B	B	B
Loss and Conversion of Important Farmland (Impact 4.2.1)	B	B	B	B
Agricultural/Urban Interface Conflicts (Impact 4.2.2)	B	B	B	B
Conflicts with Williamson Act and FSZ Contracts (Impact 4.2.3)	B	B	B	B
Cumulative Impacts to Agricultural Resources (Impact 4.2.4)	B	B	B	B
Project and Cumulative Population, Housing, and Employment Increases (Impact 4.3.1 and Impact 4.3.3)	B	B	W	W
Deficient LOS Conditions on Study Roadway Segments (Impact 4.4.1)	B	S	W	W
Project and Cumulative Aviation System Impacts (Impact 4.4.4 and Impact 4.4.8)	B	S	W	W
Cumulative Traffic Impacts on Local Roadways and State Highways (Impact 4.4.5)	B	S	W	W
Conflict with or Obstruct Implementation of Applicable Air Quality Plans or Contribute Substantially to an Existing Air Quality Violation (Impact 4.5.1)	B	S	W	W
Expose Sensitive Receptors to Toxic Air Contaminants (Impact 4.5.4)	B	S	W	W
Cumulative Air Quality Impacts on Attainment Plans (Impact 4.5.8)	B	B	W	W
Conflict or Obstruct with Implementation of Greenhouse Gas Reduction Measures (Impact 4.5.9) and Conflict or Obstruct with Implementation of AB 32 (Impact 4.5.11)	B	S	W	W
Exposure to Construction Noise (Impact 4.6.1)	B	S	W	W
Exposure to Roadway Traffic Noise (Impact 4.6.2) and Noise Impacts Associated with Increased Traffic Resulting from Buildout of the Proposed General Plan (Impact 4.6.7)	B	S	W	W
Exposure to Aircraft Noise (Impact 4.6.3)	B	S	W	W

Environmental Impacts of the Proposed Project	Alternative 1 No Project Alternative	Alternative 2 Reduced Sphere of Influence	Alternative 3 Northeast High Density Mixed Use Cluster	Alternative 4 Southeast High Density Mixed Use Cluster
Exposure to Stationary Non-Transportation Noise (Impact 4.6.4)	B	B	B	B
Exposure to Groundborne Vibration (Impact 4.6.6)	B	S	W	W
Loss of Mineral Resources (Impact 4.8.6)	B	S	B	B
Potential Direct Destruction or Damage to Known and Undiscovered Historical Resources (Impact 4.9.1)	W	S	W	W
Potential Destruction or Damage to Known and Undiscovered Prehistoric Resources and Human Remains (Impact 4.9.2) and Potential Destruction or Damage to Known and Undiscovered Paleontological Resources (Impact 4.9.3)	B	B	B	B
Prehistoric Resources, Historic Resources, and Human Remains (Impact 4.9.4)	B	B	B	B
Project and Cumulative Impacts to Special-Status Plant and Wildlife Species (Impact 4.10.1 and Impact 4.10.5)	B	B	B	B
Impacts to Sensitive Natural Communities Including Waters of the US (Impacts 4.10.2)	B	B	B	B
Wildlife Corridors (Impact 4.10.3)	B	B	B	B
Increase Storm Runoff and Flooding Potential (Impact 4.11.4)	B	B	B	B
Flooding Hazards (Impact 4.11.5)	W	S	W	W
Cumulative Flooding Impacts (Impact 4.11.7)	B	S	B	B
Cumulative Groundwater Supply Depletion (Impact 4.11.8)	B	S	W	W
Alteration of Visual Character (Impact 4.12.3)	S	B	B	B
Daytime Glare and Nighttime Lighting (Impact 4.12.4)	B	B	W	W
Cumulative Visual Resources Impacts (Impact 4.12.5)	B	B	B	B
Increased Demand for Water Supply and Cumulative Water Service Impacts (Impacts 4.13.5.1 and 4.13.5.3)	B	S	W	W
Increased Demand for Wastewater Service/Conveyance and Treatment Facilities (Impact 4.13.6.1)	B	S	W	W
Overall Impact Comparison	**B**	**B**	**W**	**W**

Notes: B = Better, S = Similar, W = Worse

7.0
LONG-TERM IMPLICATIONS

This section discusses the additional topics statutorily required by CEQA. The topics discussed include significant irreversible environmental changes/irretrievable commitment of resources, significant and unavoidable environmental impacts, and growth-inducing impacts.

7.1 GROWTH-INDUCING IMPACTS

INTRODUCTION

The California Environmental Quality Act (CEQA) Guidelines Section 15126.2(d) requires that an Environmental Impact Report (EIR) evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

> *The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which could remove obstacles to population growth…It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.*

A project can have direct and/or indirect growth inducement potential. Direct growth inducement could result if a project, for example, involved construction of new housing. A project could have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it could involve a construction effort with substantial short-term employment opportunities that could indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project could indirectly induce growth if it could remove an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth inducing.

The CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

COMPONENTS OF GROWTH

The timing, magnitude, and location of land development and population growth in a community or region are based on various interrelated land use and economic variables. Key

variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type and intensity of growth, it is the primary means of regulating development and growth in California.

GROWTH EFFECTS OF THE PROJECT

Based on Government Code Section 65300, the proposed City of Taft General Plan Update and other project components (proposed project) is intended to serve as the overall plan for the physical development of the City of Taft (City). While the proposed project does not specifically propose any development projects, it does regulate future population and economic growth of the city that could result in indirect growth-inducing effects.

Implementation of the proposed project could refine existing land use designations in the City and establish new policies, actions and design guidelines to direct and manage future development and land uses in the city. This management could also include policy direction on roadway facility improvements, public service improvements, and the extension and expansion of utilities.

The proposed project could induce further population growth and job expansion in the City as well as potentially induce growth outside of the existing City limits. The proposed project could indirectly induce growth if it were to remove an obstacle to additional growth and development, such as removing a constraint on a required public service, such as sewer service. Proposed roadway improvements would support such growth within the City and the proposed General Plan Planning Area (Planning Area). The General Plan Update would also encourage the development of infrastructure, including extension of infrastructure into currently unserved areas, to support the projected development.

For the year 2008, population for the city was estimated at 9,228 persons and housing units were estimated to be around 2,534 units. The proposed project could result in approximately 25,184 residential units, 48,420 jobs, and a population of approximately 68,018 for the city by 2065. The reader is referred to Section 4.3, Population and Housing, for a discussion of impacts associated with increases in population and housing under the General Plan Update.

The City's existing General Plan allows for LOS C on the roadways identified under the General Plan. The proposed project includes proposed roadway improvements that have been designed to support the General Plan Land Use Policy Map and maintain the city's proposed Level of Service (LOS) standard of LOS D, where feasible and appropriate. The proposed project does not include any provisions requiring the oversizing of infrastructure facilities to serve growth not anticipated in the General Plan Land Use Policy Map. The physical environmental effects of the proposed roadway improvements within the Planning Area and any off-site impacts that could result from the proposed roadway improvements, where the roads continue into other jurisdictions, have been disclosed in Section 4.4, Traffic and Circulation, of this Draft EIR (DEIR).

Infrastructure improvements proposed under the proposed project would incorporate existing sewer trunk lines that currently exist in urban areas within the city limits. Though these areas are proposed to be developed mainly with single-family residential uses, it is feasible that the availability of portions of infrastructure lines in place could promote the development of these areas before development in other single-family residential areas identified within the Planning Area. The reader is referred to Section 4.13, Public Services and Utilities, for a discussion of impacts associated with increased utility infrastructure needs under the proposed project.

The specific environmental effects resulting from the proposed land use patterns and associated extension of public services are discussed in the environmental issue areas in Sections 4.1 through 4.13, and the project's cumulative impacts (Section 5.0, Cumulative Impacts) could be in addition to the following additional environmental effects of growth in the region:

Agricultural Resources – Continued loss of farmland to urban uses as well as increased conflicts with agricultural operations and urban uses.

Air Quality – Increases in air pollutant emissions potentially conflicting with air quality attainment efforts under state and federal Clean Air Acts and increased potential for the exposure to toxic air contaminants.

Biological Resources – Loss of special-status plant and animal species habitats, degradation of habitats, and loss of special-status species.

Cultural and Paleontological Resources – Impacts to known and unknown archaeological and historic resources in the region.

Geology and Soils – Loss of access to known valuable mineral resources.

Hydrology and Water Quality – Additional sources of point and non-point sources of surface water quality pollutants to region waterways. Further demand on groundwater resources and potential overdraft issues.

Noise – Increased transportation noise levels from increased traffic volumes.

Public Services and Utilities – Increased demand for the development and expansion of public services and facilities and associated environmental issues.

Transportation and Circulation – Increased traffic volumes on the region's highways and regional roadways resulting in deficient levels of service of operation.

Visual Resources – Further conversion of rural, agricultural, and natural open space landscape characteristics to urban conditions.

It is anticipated that agricultural areas to the east, west, and south of the existing city limits may be pressured to develop if adjacent lands are developed and infrastructure extended under the proposed project. While the General Plan designates lands within the city limits for urbanization, the intensity of development and identification of urbanization of the areas outside the City

limits (which are currently under Kern County jurisdiction) could exceed the existing and proposed development potential set forth by the City's existing General Plan and the Kern County (County) General Plan. This DEIR provides an evaluation of environmental effects of project growth.

Annexation of land beyond the City's current borders could add growth pressures to areas within and surrounding the City's proposed Planning Area. In addition, the extension of infrastructure and could place growth pressure on adjoining land areas. Ultimately, the City would continue to control land use and growth within the city through its General Plan and zoning provisions while the County would also continue to control land use and growth through its General Plan and zoning provisions.

SECONDARY EFFECTS OF GROWTH

Based on Government Code Section 65300, the proposed project is intended to serve as the overall plan for the physical development of the City of Taft. While the General Plan does not specifically propose any development projects, it does regulate future population and economic growth of the Planning Area that could result in indirect growth-inducing effects.

This EIR discusses the environmental effects associated with the implementation of the project. Environmental effects of growth on adjacent properties resulting in conversion of existing land uses especially on lands beyond the City's proposed Planning Area could be similar to those associated with the proposed project evaluated in Sections 4.1 through 4.13, which include impacts associated with traffic, noise, air quality, hydrology and water quality, hazards, public services and utilities, cultural resources, geological resources, biological resources, land use, agricultural resources, and visual resources. However, this growth could further contribute to these local and regional environmental impacts beyond the effects of the project.

7.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

CEQA Sections 21100(b)(2) and 21100.1(a) require that EIRs prepared for the adoption of plan, policy, or ordinance of a public agency must include a discussion of significant irreversible environmental changes of project implementation. In addition, CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes as:

> *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. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Implementation of the proposed City of Taft General Plan Update and associated project components could result in the conversion of undeveloped open space land areas to residential, commercial, industrial, office, public and recreational uses. Development of the Planning Area

could constitute a long-term commitment to residential land uses. It is unlikely that circumstances would arise that would justify the return of the land to its original condition.

Development of the Planning Area could irretrievably commit building materials and energy to the construction and maintenance of buildings and infrastructure proposed. Renewable, nonrenewable, and limited resources that could be consumed as part of the development of the proposed project would include, but are not limited to: oil, gasoline, lumber, sand and gravel, asphalt, water, steel, and similar materials. In addition, development of the project could result in an increased demand on public services and utilities (see Section 4.13 Public Facilities and Utilities).

7.3 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. In addition, Section 15093(a) of the CEQA Guidelines allows the decision-making agency to determine the benefits of a proposed project outweigh the unavoidable adverse environmental impacts of implementing the project. The City can approve a project with unavoidable adverse impacts if it prepares a "Statement of Overriding Considerations" setting forth the specific reasons for making such a judgment.

The following significant and unavoidable impacts are specifically identified in Sections 4.1 through 4.13 of this EIR. The reader is referred to these sections for further details and analysis of the significant and unavoidable impacts identified below.

SECTION 4.1 LAND USE AND PLANNING

Cumulative Land Use Impacts

Impact 4.1.5 When considered with existing, proposed, approved and planned development in the region, implementation of the proposed Taft General Plan Update has the potential to contribute to cumulative land use conditions in the region that result in significant impacts to the physical environment. This is considered a cumulatively considerable impact.

SECTION 4.2 AGRICULTURAL RESOURCES

Loss and Conversion of Important Farmland

Impact 4.2.1 Implementation of the proposed General Plan Update would result in the loss of Important Farmlands (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance) as designated under the Farmland Mapping and Monitoring Program. This is considered a significant impact.

Agricultural/Urban Interface Conflicts

Impact 4.2.2 Implementation of the proposed General Plan Update could result in indirect farmland conversion due to agricultural/urban interface conflicts. This is considered a **significant** impact.

Conflicts with Williamson Act and FSZ Contracts

Impact 4.2.3 Implementation of the proposed General Plan Update could result in conflicts with existing Williamson Act and FSZ contracts. This is considered a significant impact.

Cumulative Impacts to Agricultural Resources

Impact 4.2.4 Implementation of the proposed project, along with other proposed development in Kern County, would contribute to the cumulative conversion of Important Farmlands to other uses and may increase agriculture/urban interface conflicts. This is a **cumulatively considerable** impact.

SECTION 4.3 POPULATION AND HOUSING

Population, Housing, and Employment Increases

Impact 4.3.1 Implementation of the proposed General Plan Land Use Map would include land uses that promote the increase in population, housing, and employment in the Planning Area, and thus induce substantial growth. This is a potentially significant impact.

Cumulative Population and Housing Increases

Impact 4.3.3 Subsequent land use activities associated with implementation of the proposed General Plan Update, in addition to existing, approved, proposed, and reasonable foreseeable projects, could result in a cumulative increase in population and housing growth in the City of Taft as well as in the surrounding Cities and unincorporated areas of the County, along with associated environmental impacts. This is considered a **cumulatively considerable** and **significant and unavoidable** impact.

SECTION 4.4 TRAFFIC AND CIRCULATION

Deficient LOS Conditions on Study Roadway Segments

Impact 4.4.1 Implementation of the proposed project would result in an increase in traffic volumes beyond traffic volumes associated with the existing General Plan that would result in deficient level of service conditions in year 2035 and

would conflict with Caltrans standards for level of service. This is a **significant** impact.

Aviation System Impacts

Impact 4.4.4 Implementation of the proposed General Plan Update would result in an increase in the demand for airport use in the area. This is considered a **potentially significant** impact.

Cumulative Traffic Impacts on Local Roadways and State Highways

Impact 4.4.5 When considered with existing, proposed, approved and planned development in the region, implementation of the proposed project has the potential to contribute to an increase in traffic volumes that would result in deficient level of service conditions under cumulative conditions (including buildout of the Planning Area) resulting in significant impacts to the physical environment. This is considered a **cumulatively considerable** impact.

Cumulative Aviation System Impacts

Impact 4.4.8 When considered with existing, proposed, planned and approved development in the region, implementation of the proposed General Plan Update would result in an increase in the demand for airport use in the area. This is considered a **cumulatively considerable** impact.

SECTION 4.5 AIR QUALITY AND CLIMATE CHANGE

Conflict with or Obstruct Implementation of Applicable Air Quality Plans or Contribute Substantially to an Existing Air Quality Violation

Impact 4.5.1 Implementation of the General Plan Update would allow for population growth that would exceed projections assumed in SJVAPCD's 2007 Ozone Plan. This inconsistency could hinder SJVAPCD's ozone attainment strategy. However, proposed General Plan policies would address this inconsistency and ensure that the region's attainment plans incorporate the City's updated growth forecast for the Planning Area. This impact is considered to be **potentially significant**.

Cumulative Air Quality Impacts on Attainment Plans

Impact 4.5.8 Implementation of the proposed General Plan Update, in combination with cumulative development in the San Joaquin Valley Air Basin, would contribute to a cumulative air quality impacts and could conflict with ozone and particulate matter attainment efforts. This is considered a **cumulatively considerable** impact.

Conflict or Obstruct with Implementation of Greenhouse Gas Reduction Measures

Impact 4.5.9 Implementation of the proposed project would substantially increase emissions of CO_2e in 2035 over existing (2008) conditions. This increase in GHG emissions would be inconsistent with state efforts to reduce greenhouse gas emissions. This impact is considered to be **cumulatively considerable.**

Conflict or Obstruct with Implementation of AB 32

Impact 4.5.11 Implementation of the proposed General Plan Update would increase emissions of CO_2e in 2030 over existing (2008) conditions. This increase in GHG emissions is inconsistent with AB 32's goal of reducing 2020 greenhouse gas emissions to 1990 levels. This impact is considered **cumulatively considerable** and **significant and unavoidable**.

SECTION 4.6 NOISE

Exposure to Construction Noise

Impact 4.6.1 Activities associated with construction of land uses allowed under the proposed General Plan Update could result in elevated noise levels at noise-sensitive land uses. Increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption. This impact would be considered **potentially significant**.

Exposure to Roadway Traffic Noise

Impact 4.6.2 Buildout of land uses proposed by the General Plan Update would result in increased traffic noise levels that could adversely affect existing and future noise-sensitive land uses. In addition, future noise-sensitive land uses could be exposed to roadway noise levels in excess of the City's noise standards. This impact would be considered significant.

Exposure to Stationary Non-Transportation Noise

Impact 4.6.4 As additional development occurs throughout the City, the potential exists for new noise-sensitive land uses to encroach upon existing or proposed stationary noise sources. As a result, this impact is considered significant.

Cumulative Noise Impacts Associated with Increased Traffic Resulting from Buildout of the Proposed General Plan

Impact 4.6.7 Implementation of the proposed General Plan along with potential development of the Planning Area could result in increased noise conflicts. This is considered a **cumulatively considerable** impact.

SECTION 4.7 HAZARDS AND HUMAN HEALTH

No significant and unavoidable impacts were identified related to hazards and human health.

SECTION 4.8 GEOLOGY AND SOILS

Loss of Mineral Resources

Impact 4.8.6 Implementation of the proposed project could result in the loss of availability of a potentially valuable mineral resource. This impact is considered **significant.**

SECTION 4.9 CULTURAL RESOURCES

Cumulative Impacts to Prehistoric Resources, Historic Resources, and Human Remains

Impact 4.9.4 Adoption of the General Plan Update, its associated subsequent projects and specific plans within the Planning Area, in combination with all other foreseeable development projects within Kern County and surrounding areas within the San Joaquin Valley, has the potential to disturb cultural resources (i.e., prehistoric sites, historic sites, historic buildings, and isolated artifacts and features) and human remains. This would be a **cumulatively considerable** impact.

Cumulative Impacts to Paleontological Resources

Impact 4.9.5 Adoption of the General Plan Update, its associated subsequent projects and specific plans within the Planning Area, in combination with all other foreseeable development projects within Kern County and surrounding areas within the San Joaquin Valley, has the potential to disturb paleontological resources (i.e., fossils and fossil formations). This would be a potentially **cumulatively considerable** impact.

SECTION 4.10 BIOLOGICAL RESOURCES

Cumulative Impacts to Special-Status Species

Impact 4.10.5 The proposed project, in combination with other reasonably foreseeable projects, would result in direct mortality and loss of habitat for special-status species, and waters of the U.S., including wetlands. This would be a **cumulatively considerable** impact.

SECTION 4.11 HYDROLOGY AND WATER QUALITY

Deplete Groundwater Supplies

Impact 4.11.3 Implementation of the proposed General Plan Update would increase demand for water supply to the City, requiring increased groundwater production and potentially depleting groundwater supplies. This is considered a **significant and unavoidable** impact.

SECTION 4.12 VISUAL RESOURCES

Alteration of Visual Character

Cumulative Visual Resources Impacts

Impact 4.12.5 Implementation of the proposed project, in combination with other reasonably foreseeable projects within Kern County and the San Joaquin Valley, would contribute to cumulative impacts to visual resources in the region. The project's contribution is considered **cumulatively considerable**.

SECTION 4.13 PUBLIC SERVICES AND UTILITIES

Increased Demand for Water Supply

Impact 4.13.5.1 Implementation of the proposed project would increase demand for water supply. This additional water supply demand would result in significant effects on the physical environment. This is considered a **significant** impact.

Cumulative Water Service Impacts

Impact 4.13.5.3 Implementation of the proposed project would contribute to the cumulative demand for water supply in the WKWD's service area. This is considered a **cumulatively considerable** impact.

8.0
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8.1 PREPARERS OF THE ENVIRONMENTAL IMPACT REPORT

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