

DRAFT
ENVIRONMENTAL IMPACT REPORT

FOR THE
LATHROP GATEWAY BUSINESS PARK SPECIFIC PLAN
Lathrop, CA

Specific Plan File No: 09-012
General Plan and Map Amendment File No: 09-013
Zoning Text and Map Amendment File No: 09-014
Bicycle Transportation Plan Amendment File No: 09-015
Utility Master Plan Amendment File No: 09-016
Clearinghouse No: SCH 2009062106

June 8, 2010

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- B. *Biological Assessment*
- C. *Cultural Resources Record Search, Historical Study*
- D. *URBEMIS Model Results*
- E. *Noise Study*
- F. *Traffic Study (The Appendix to the Traffic Study has been submitted to the Community Development Department under separate cover.)*
- G. *Geotechnical Studies (Due to their Voluminous Nature, These Documents are on a CD located at the Back Cover of This Document)*
- H. *Phase I Environmental Site Assessment (Due to the Voluminous Nature, These Documents are on a CD located at the Back Cover of This Document)*
- I. *Water Supply Assessment*

1.0 INTRODUCTION

1.1 PROJECT OVERVIEW

The proposed project involves the adoption and implementation of the proposed Lathrop Gateway Business Park Specific Plan. The specific plan area (Plan Area) is located in San Joaquin County, within the City of Lathrop's Sphere of Influence (Figures 1-1 and 1-2).

The Plan Area encompasses approximately 384 gross acres bordered by Vierra Court and West Yosemite Avenue to the north, State Route (SR) 120 to the south, and two sets of Union Pacific Railroad tracks to the east and to the west of the Plan Area. Access to the Plan Area is provided by Yosemite Avenue to the east; D'Arcy Parkway and McKinley Avenue to the north; and McKinley Avenue and the Guthmiller/Yosemite Avenue and SR 120 interchange to the south.

The area currently includes a variety of existing land uses: agricultural interspersed with rural residential, service, public facilities, office, church and industrial uses (Figures 1-3 and 1-4). Agricultural uses are located in the southern and central Plan Area. Rural homes sites are distributed along McKinley Avenue. Other residential and mixed light industrial uses are located in the northern portion of the Plan Area along Vierra Road and Yosemite Avenue. The industrial uses are located in the western boundary of the Plan Area, both north and south of Guthmiller and Yosemite Avenue. No parcels within the Plan Area are under Williamson Act contracts.

The proposed project envisions development of a combination of new office commercial, limited industrial and service commercial uses. Proposed development envisioned in the Plan Area would require City approval of the specific plan as well as several other approvals including annexation of the Plan Area into the City of Lathrop, amendments to the City of Lathrop's General Plan, rezoning of the Plan Area, development agreements and tentative maps, among others. The project would also require approvals from the Local Agency Formation Commission (LAFCO) and state and federal agencies with jurisdiction over the San Joaquin River and its resources.

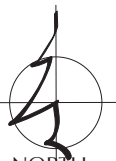
Approval of the project would result in the development of up to 56.7 net acres of commercial office uses in the western sub-area, 167.6 net acres of limited industrial uses primarily in the central sub-area, and 83.0 net acres of service commercial uses in the eastern sub-area. The Plan Area also includes 1.6 acres of open space, 2.9 acres divided between three well sites, and 15.6 net acres of detention area.

1.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT REQUIREMENTS AND PROCESSING

This Draft Environmental Impact Report (EIR) has been prepared in conformance with the California Environmental Quality Act (CEQA) of 1970 (as amended) to evaluate the environmental impacts associated with the Lathrop Gateway Business Park project.

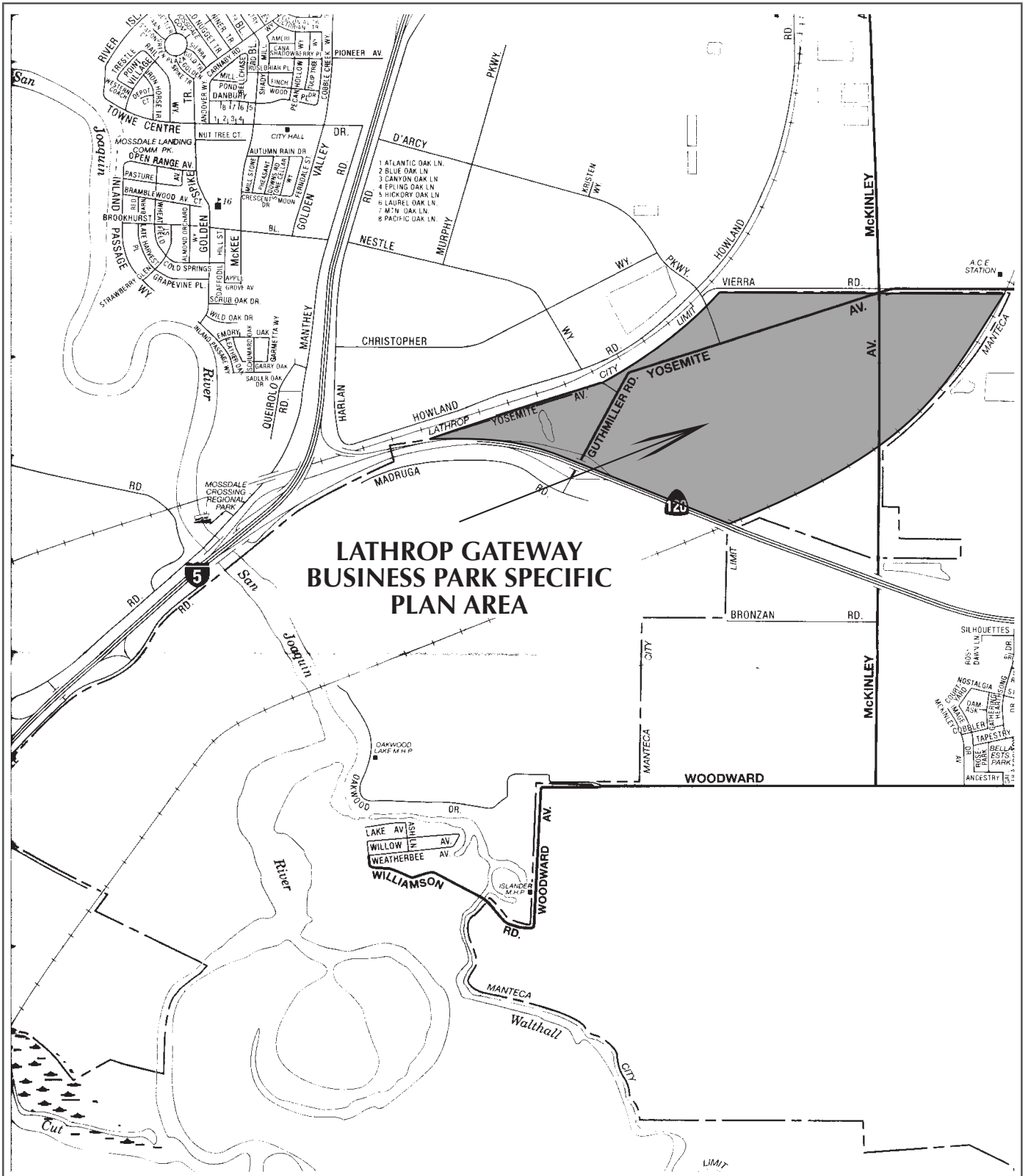


PROJECT LOCATION



NORTH

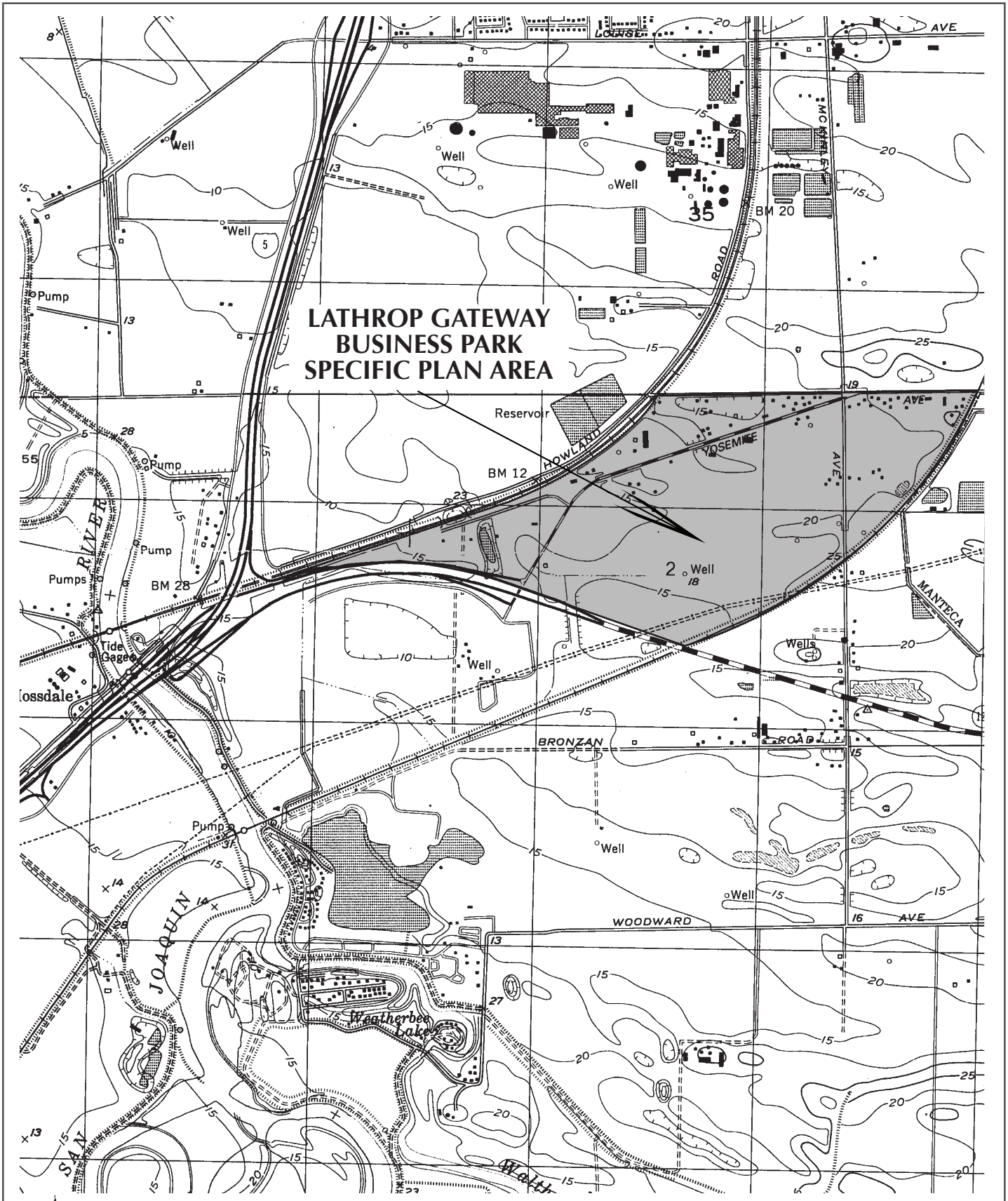
Source: INSITE ENVIRONMENTAL, INC.



**LATHROP GATEWAY
BUSINESS PARK SPECIFIC
PLAN AREA**

SOURCE: AAA, MANTECA, LATHROP, RIPON
INSITE ENVIRONMENTAL, INC.

Figure 1-2
VICINITY MAP



SOURCE: US GEOLOGICAL SURVEY
LATHROP QUADRANGLE

INSITE ENVIRONMENTAL, INC.

Figure 1-3
USGS MAP



NORTH

SOURCE: GOOGLE EARTH

INSITE ENVIRONMENTAL, INC.

Figure 1-4
AERIAL PHOTO

CEQA requires the preparation of an EIR when there is substantial evidence that a project could have a significant effect on the environment. The purpose of an EIR is to provide decision makers, public agencies, and the general public with an objective and informational document that fully discloses the potential environmental effects of a proposed project. The term “proposed project,” as used in this EIR, refers to the Lathrop Gateway Business Park Specific Plan project (SCH# 2009062106). The EIR process is specifically designed to describe the objective evaluation of potentially significant direct, indirect, and cumulative impacts of the proposed project; to identify alternatives that reduce or eliminate the project’s significant effects; and to identify feasible measures that mitigate significant effects of the project. In addition, CEQA requires that an EIR identify those adverse impacts determined to remain significant after mitigation.

The City of Lathrop is the lead agency under CEQA for the preparation of this EIR. In accordance with CEQA regulations, a Notice of Preparation (NOP) including an Initial Study was released on July 1, 2009, for agency and public review. The comment period closed on July 31, 2009 in adherence with CEQA Guidelines. The NOP was distributed to responsible agencies, interested parties, private organizations and individuals that stated an interest in the project, and all addresses on file with the City utility department. The purpose of the NOP was to provide notification that an EIR for the project was being prepared and to solicit guidance on the scope and content of the document. Responses to the NOP were received from agencies and individuals. A copy of the NOP and Initial Study are included in Appendix A and responses to the NOP are included in Appendix B in accordance with CEQA.

The Draft EIR is being circulated for public review and comment for a period of 45 days in accordance with CEQA. During this period, comments on the Draft EIR’s accuracy and completeness may be submitted to the lead agency from the general public, as well as organizations and agencies. The 45-day public review period will be from June 10, 2010 through July 26, 2010.

Upon completion of the public review period, a Final EIR will be prepared that will include written comments on the Draft EIR received during the public review period and responses to those comments. The Final EIR will also include a Mitigation Monitoring Program (MMP). The Final EIR will address any revisions to the Draft EIR made in response to public comments. The Draft EIR and Final EIR together will comprise the EIR for the proposed project.

Before the lead agency can approve the project, the agency must first certify that the EIR has been completed in compliance with CEQA, that the decision-making body has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency.

The proposed project is subject to review and approval of the City of Lathrop’s Planning Commission and City Council. Project approval would also entail the adoption of Findings of Fact and a Statement of Overriding Considerations by the Planning Commission and City Council.

Use of This EIR

This EIR is a “Project EIR,” pursuant to Section 15161 of the CEQA Guidelines. A Project EIR examines the environmental impacts of a specific project. This type of EIR focuses on the changes in the environment that would result from implementation of the project, including construction and operation.

Scope Of This EIR

The City of Lathrop, as lead agency, identified in the NOP and Initial Study for this EIR potentially significant impacts that could result from implementation of the proposed project. Based on the analysis, the City determined that this EIR focuses on the following potentially significant environmental resource areas:

- Aesthetics
- Agriculture Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Global Climate Change
- Hazards and Human Health
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Transportation/Circulation
- Utilities and Energy

For a complete discussion of the environmental issues evaluated in this EIR, please see the Initial Study in Appendix A.

Lead and Responsible Agencies

The City of Lathrop is the lead agency for preparation of the LGBPSP environmental analysis. In conformance with Sections 15050 and 15367 of the State CEQA Guidelines, the City of Lathrop has been designed as the “lead agency” which is defined as the “public agency which has the principal responsibility for carrying out or disapproving a project.” A responsible agency refers to a public agency, other than the lead agency that has discretionary approval over some aspect of the project. Responsible agencies include, but are not necessarily limited to:

- San Joaquin Local Agency Formation Commission (SJLAFCo);
- U.S. Army Corps of Engineers (Corps);
- U.S. Fish and Wildlife Service (USFWS);
- National Oceanic and Atmospheric Administration – National Marine Fisheries Service (NMFS);
- California Department of Transportation (Caltrans) District 10;
- California Department of Water Resources (State Reclamation Board);
- California State Lands Commission;
- California Department of Fish and Game (CDFG);
- California Department of Health Services (DHS);
- California Public Utilities Commission (PUC);
- San Joaquin Council of Governments (SJCOG);
- Regional Water Quality Control Board – Central Valley Region 5 (CVRWQCB); and
- Reclamation District 17.

Lead Agency

The City of Lathrop would be required to certify that the EIR adequately identifies the significant environmental effects of the proposed project, pursuant to the State CEQA Guidelines. Chapter 3, Project Description, describes the required discretionary actions. Correspondence regarding this project and CEQA documentation can be directed to the following individual:

City of Lathrop
Charlie Mullen, Principal Planner
390 Towne Centre Drive
Lathrop, CA 95330
(209) 941-7200

How To Use This Report

This report includes this Introduction; Project Description, Summary of Impacts and Mitigation Measures, Environmental Analysis (Setting, Impacts, and Mitigation Measures), CEQA Considerations, Alternatives Analysis, References, Report Preparation, and Appendices. The following summaries are the content of each of these chapters:

- Chapter 2 - Summary Overview of the project description, location as well as requested project entitlements and/or approvals. Summary of Impacts and Mitigation Measures presents an overview of the results and conclusions of the environmental evaluation. This section identifies impacts of the proposed project and available mitigation measures and presents the level of significance of identified impacts before and after implementation of mitigation measures.
- Chapter 3 - Project Description, describes the location of the project, project background, existing conditions on the project site, the nature and location of specific elements of the proposed project, and describes the required discretionary actions.
- Chapters 4 through 18 - Environmental Analysis, includes a topic-by-topic analysis of impacts that would or could result from implementation of the proposed project or alternatives. Topics discussed are those identified in the Initial Study checklist as requiring further analysis (Appendix A). The analysis is organized into 15 topical sections. Each analysis is organized into four major sections: Introduction, Regulatory Setting, Environmental Setting, Impacts and Mitigation Measures. In this environmental document, those entities or persons responsible for the project application and/or its ultimate construction and operation are known as the "owners, developers, and/or successors-in-interest." This is abbreviated as the "ODS" in the discussion of impacts, mitigation measures, and the related implementation monitoring requirements described in Chapters 2.0 and 3.0 through 19.0
- Chapter 19 - Cumulative Impacts, discusses the project and the cumulative impacts associated with other potential projects in the vicinity of the Lathrop Gateway Business Park Project. The cumulative analysis is broken down into the same 15 topical sections discussed in Chapters 4 through 18.

- Chapter 20 – Alternatives, includes a description of the proposed alternatives to the proposed project. The impacts of the alternatives are qualitatively compared to those of the proposed project. This chapter also identifies the environmentally superior alternative.
- Chapter 21 - Growth-Inducing Impacts of the proposed project are analyzed and documented.
- Chapter 22 - Irreversible Environmental Changes are summarized.
- Chapter 23 – Sources, summarizes references cited in the Draft EIR and includes a list of persons consulted and the preparers of the Draft EIR.
- The Appendices contain a number of reference items providing support and documentation of the analyses performed for this report.

1.3 RELATED PROJECTS

The proposed project involves an offsite component associated with its plan to treat and dispose of wastewater from the Plan Area. Recycled water not utilized for onsite irrigation will be piped offsite to be held in storage basins (also referred to as ponds) and/or used for land application disposal. Parcels within the northwest part of Lathrop have been identified for disposal purposes. These parcels were previously identified in the City's Report of Waste Discharge (RWD) and Waste Discharge Requirements (WDR) issued by the Regional Water Quality Control Board (RWQCB).

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other provisions of CEQA, environmental effects may be considered adequately analyzed in an earlier EIR or Negative Declaration.

The potential environmental effects of the Water Recycling Plant No. 1 (WRP-1) project were addressed in an EIR certified by the City of Lathrop in 2003 and an addendum prepared in 2006; this EIR also incorporated the environmental analysis from the City's Water, Wastewater and Recycled Water Master Plan EIR. Additional analysis was provided by an addendum to the Master Plan EIR and the City's EIR on the Central Lathrop Specific Plan. This analysis finds that the previous EIRs did encompass and address all of the potential environmental effects of the proposed project. The construction and operational impacts of these disposal fields and storage basins have been evaluated in several CEQA documents that have been certified by the City of Lathrop (see list below).

City of Lathrop. 2003. The City of Lathrop Findings Required Under the California Environmental Quality Act. January 27, 2003.

EDAW. 2001a. Draft Environmental Impact Report for the Lathrop Water, Wastewater, and Recycled Water Master Plan. SCH# 98082050. March 2001.

EDAW. 2001b. Final Environmental Impact Report for the Lathrop Water, Wastewater, and Recycled Water Master Plan. SCH# 98082050. June 2001.

EDAW. 2002. Draft Environmental Impact Report for the Lathrop Water Recycling Plant No. 1 Phase 1 Expansion Project. SCH# 2001122108. December 31, 2002.

EDAW. 2003. Final Environmental Impact Report for the Lathrop Water Recycling Plant No. 1 Phase 1 Expansion Project. SCH# 2001122108. March 13, 2003.

EDAW. 2004a. Draft Environmental Impact Report for the Central Lathrop Specific Plan. SCH #2003072132. Volume I: Draft EIR Text. July 2004.

EDAW. 2004b. Final Environmental Impact Report for the Central Lathrop Specific Plan. SCH #2003072132. Volume I: Draft EIR Text. November 2004.

EDAW. 2005. Addendum to the City of Lathrop Water, Wastewater, and Recycled Water Master Plan Environmental Impact Report. December 14, 2005.

InSite. 2006. Addendum to the Environmental Impact Report for City of Lathrop Wastewater Recycling Plant No. 1 (SCH #2001122108) Relative to the Frewert Road Recycled Water Storage Pond. May 5, 2006.

SUMMARY OF PREVIOUS CEQA REVIEW AND APPROVALS FOR THE CITY'S WASTEWATER TREATMENT SYSTEM

The City adopted its Water Master Plan (WMP) in July 2001. The WMP provides a comprehensive plan for the expansion and development of City infrastructure to serve planned urban development as envisioned in the Lathrop General Plan. The WMP accounts for the range of water utility development needed to support planned urban development including planned water supply, storage and distribution facilities; wastewater collection and wastewater treatment facilities; and recycled water distribution and disposal facilities. In total, the WMP encompasses some 605,000 linear feet of pipeline and 15 separate water, wastewater and recycled water facilities occupying a total of approximately 226 acres within the City of Lathrop. The WMP included consideration of recycled water storage; however, storage facilities were described as tanks to be located on the WRP sites identified in the plan.

The WMP contemplates the phased expansion of WRP-1 from 0.75 million gallons per day (mgd) to an ultimate capacity of 6.0 mgd average daily wastewater flow (ADWF), along with the development of associated facilities for wastewater collection and distribution of recycled water (i.e., tertiary-treated effluent) to areas in Lathrop. The WMP also identifies eventual construction and operation of WRP-2 (2.8–3.2 mgd capacity) and WRP-3 (up to 4.5 mgd capacity) as the city expands, for a total capacity of 11.5 mgd at buildout (2030). The ultimate goal of the WMP is to obtain approval from the Central Valley Regional Water Quality Control Board to use river discharge in addition to land irrigation for disposal of recycled water. The WMP evaluated recycled water demand of 1,900 acre-feet per year in the near term (estimated as 2000–2004) with expansion to 4,700 acre-feet per year at buildout (approximately 2030). The WMP also set forth the City's policy to maximize the use of recycled water for land application purposes (such as landscape irrigation).

In 2001, the City certified a Final Environmental Impact Report (EIR) that evaluated the environmental impacts of the Water Master Plan (WMP) at a programmatic level. The wastewater treatment and disposal activities included in the Five-Year Wastewater Capacity Project generally are contemplated by the WMP, but they differ in certain elements. Other CEQA analyses previously

prepared by the City, in conjunction with the WMP EIR, generally address the differences between the WMP and the five-year wastewater capacity project.

ADDITIONAL PREVIOUSLY APPROVED PROJECTS WITH WASTEWATER COMPONENTS RELATED TO THE PROPOSED PROJECT

Since the WMP was approved in 2001, the City has approved several large urban development projects that have increased demand for wastewater treatment and recycled water disposal. These projects generally have been developed consistent with the capacity assumptions and findings of the WMP and WMP EIR, and the related EIRs have addressed differences in the details of the WMP as the WMP pertains to individual projects and site-specific aspects of the wastewater conveyance and disposal systems for those specific projects. In several areas, the need for increased disposal field area identified in the Five-Year Wastewater Capacity Project is attributable to the recognition by the City that groundwater quality concerns relating to total dissolved solids (TDS) may limit the use of identified disposal areas.

The following discussion identifies the various projects that address wastewater treatment and recycled water disposal in the City. The status and extent of environmental analysis already performed for these projects are also described.

WRP-1 Phase 1 Expansion

The WRP-1 Phase 1 Expansion project, approved by the City in 2003, addressed the expansion of capacity at WRP-1 to 3.0 mgd ADWF at a project level and up to 6.1 mgd ADWF at a program level, through a series of 0.75-mgd expansion phases. An EIR (EDAW 2003) was prepared for the expansion project that evaluated environmental impacts of the expansion at a project/program level and identified the need for 727 acres (2,910 acre-feet per year) of recycled water disposal areas and 187 acres (1,684 acre-feet per year) of storage sites to account for all recycled water that would be generated by the project. The EIR identified general locations of approximately 800 acres of recycled water disposal areas and approximately 200 acres of storage sites and evaluated the environmental impacts of using these sites for the specified purposes. The WRP-1 Phase 1 Expansion project addresses river discharge as a disposal option at a program level, continuing to identify the City's future intent to use river discharge as a long-term disposal strategy (as covered by the WMP and WMP EIR at a programmatic level).

West Lathrop Specific Plan

The West Lathrop Specific Plan (WLSP) project was a mixed-use urban development project with theme park use approved by the City for the Stewart Tract/Paradise Cut property located between Interstate 5 (I-5) and the San Joaquin River. The West Lathrop Specific Plan included both the Stewart Tract and Mossdale Village. Mossdale Village is planned to contain 3,200 residential units at buildout. The City prepared and certified a final EIR (Grunwald & Associates 1995) for this project, and approved a general plan amendment, the West Lathrop Specific Plan, and pre-zoning and annexation for the project in 1996. In conjunction with the West Lathrop Specific Plan, the final EIR also evaluated the potential use of the Pishos property to the south of I-5 for a wastewater treatment plant. Subsequent litigation resulted in the de-annexation of the Pishos property and the City's decision to forego the construction of a wastewater treatment plant at this site. However, by January 2008, the City had annexed the property for municipal purposes to accommodate storage

ponds and recycled water disposal areas.

River Islands at Lathrop

The River Islands at Lathrop project, which was approved by the City in 2003, established a mixed-use urban development pattern for the West Lathrop Specific Plan area of the city, including Paradise Cut and Stewart Tract. Full expansion of WRP-1 to 6.1 mgd, or construction and operation of WRP-2 and WRP-3, was approved to serve the project at buildout. The development plan anticipates extensive use of recycled water, first in existing agricultural areas (that were approved for ultimate development on the site) and then in public landscaped areas (e.g., golf courses, parks, and landscaped road medians as they are developed). Several entitlements were evaluated as part of the environmental review process for the River Islands project, including approval of an amendment to the WLSP and the City of Lathrop zoning code.

As evaluated in the supplemental EIR for the project (EDAW 2003), Phase 1 requires approximately 444 acres of recycled water disposal areas and 40 acres of storage ponds; the area necessary to dispose of an estimated 3.65 mgd of recycled water at buildout was not calculated but was assumed to include 450 acres in Paradise Cut and public landscaped areas in the River Islands development area. Ultimate river discharge is identified as a long-term goal. The Five-Year Wastewater Capacity Project will require the use of ponds and recycled water disposal areas for areas ultimately planned and approved by the City for urban use. It is possible that some of this capacity could be provided by the Pishos property, which was analyzed for urban development in the 1995 WLSP EIR (Grunwald & Associates 1995).

For the 5- to 10-year period anticipated for this project, growth within River Islands will use a total of approximately 1.9 mgd at WRP-1, including the construction of one additional 0.75-mgd stage and one 1.25-mgd stage. Under the "2003 Consortium Agreement," River Islands has rights to at least 80% of the treatment capacity in the next seven stages (0.75 mgd each) in WRP-1 and rights to 100% of each stage if there is no other source of funding for the remaining 20%. By designing and constructing three of these stages for the next 5–10 years of development, the minimum 1.9 mgd of capacity necessary for River Islands' projected growth during the 5- to 10-year period can be accommodated. River Islands estimates that approximately 6,200 equivalent capacity units (ECUs) will be built over this period, including residential, office, and retail development. Ultimately, River Islands will need 3.65 mgd to 4.4 mgd for buildout.

Disposal for the anticipated wastewater generation for development of River Islands through buildout will be provided both on-site (in the River Islands development area) and off-site (on the Pishos property). In total, River Islands proposes more than 850 acres of interim agricultural fields and nearly 100 acres of permanent urban open space for land disposal. Additionally, 80–320 acres of ponds can be provided for winter storage. The range of acreage reflects the final disposition of the Pishos property, which may be used for ponds, permanent agricultural disposal areas, or a combination of both.

Use of the agricultural fields is considered an interim condition. The highest and best use of these properties is the urbanized uses approved by the City of Lathrop and specified in the 2003 WLSP and EIR. River Islands intends to either relocate these recycled water disposal areas and ponds off-site or have them eliminated with the ultimate issuance of a National Pollutant Discharge Elimination System (NPDES) permit for surface water discharge.

Mossdale Landing

Mossdale Landing was approved by the City in 2003 as a mixed-use urban development identified as part of the Mossdale Village development in the north-central portion of the West Lathrop Specific Plan area. Recycled water disposal for interim conditions (late 2007) was identified in the EIR for the project (EDAW 2003) as approximately 83 acres of recycled water disposal areas (on agricultural lands and public landscaping areas) and 19.7 acres of storage ponds located in the southeast corner of the development area, which were identified as ultimately being converted to residential and commercial uses when replacement pond area was identified off-site; the replacement area was not identified. An additional 52.1 acres of public landscaping area would be used for disposal at buildout (2010).

Additional environmental analysis was conducted for the Mossdale Landing East and Mossdale Landing South projects, which are additional parts of the Mossdale Village development area. Each of these developments included residential, commercial, and open space uses. EIRs for both projects (InSite Environmental 2004a, 2004b) identified recycled water disposal areas and storage ponds to be constructed as part of the City's wastewater and recycled water system.

Central Lathrop Specific Plan

The Central Lathrop Specific Plan area, located in the northern portion of the formerly identified West Lathrop Specific Plan area, was approved for urban development in 2004. Six areas were identified as locations for recycled water disposal, either as recycled water disposal areas or storage ponds, along with four possible locations for construction of WRP-2. The EIR for the project (EDAW 2004) identified the need for 98 acres of storage and 560 acres of recycled water disposal areas, including 340 acres of public landscaping areas on-site and 220 acres off-site; a total of 700 acres of off-site agricultural property were evaluated in the EIR that would be eligible for use as recycled water disposal areas or storage ponds.

Reiter Property Recycled Water Disposal Field

The City prepared an Initial Study (IS)/Mitigated Negative Declaration (MND) (Impact Sciences 2004) to amend the Utilities Master Plan to locate disposal fields on the 18-acre Reiter property. The property, located in East Lathrop, was previously used for outdoor storage of goods and equipment; the anticipated use was for agricultural production of a high-uptake field crop, such as alfalfa, to be irrigated with tertiary-treated wastewater from WRP-1. Under the proposed Five-Year Wastewater Capacity Project, the property would be used for storage ponds rather than disposal fields.

TCN Properties

TCN Properties controls 11 parcels covering approximately 253 acres north of Manila Road and south of Frewert Road, west of Interstate 5 and east of the San Joaquin River. An Addendum to the City of Lathrop Water, Wastewater, and Recycled Water Master Plan EIR in 2005 addressed the use of these parcels as disposal fields.

In 2006 an Addendum to the EIR for City Lathrop WRP-1 Relative to the Frewert Road Recycled Water Storage Pond was prepared and certified by the City of Lathrop. The proposed project in the 2006 Addendum involved a proposal to construct and operate an approximately 59-acre recycled water storage pond on a parcel previously evaluated as a future disposal field. The pond would be constructed using on-site materials. Proposed berms would not exceed 15 feet in height, and neither berm height nor storage requirements would exceed state Division of Dam Safety permit thresholds. Recycled water would be transmitted to and from the 59-acre parcel via a proposed extension of the City's approved recycled water system to be located in Frewert Road. The proposed storage ponds would be operated in conjunction with the City's existing wastewater treatment and recycled water distribution, storage and disposal system.

2.0 SUMMARY

2.1 SUMMARY – PROJECT DESCRIPTION

The proposed project involves the adoption and implementation of the proposed Lathrop Gateway Business Park Specific Plan. The specific plan area (Plan Area) is located in San Joaquin County, within the City of Lathrop’s Sphere of Influence.

The Plan Area encompasses approximately 384 gross acres bordered by Vierra Court and West Yosemite Avenue to the north, State Route (SR) 120 to the south, and two sets of Union Pacific Railroad tracks to the east and to the west of the Plan Area. Access to the Plan Area is provided by Yosemite Avenue to the east; D’Arcy Parkway and McKinley Avenue to the north; and McKinley Avenue and the Guthmiller/Yosemite Avenue and SR 120 interchange to the south.

The area currently includes a variety of existing land uses: agricultural interspersed with rural residential, service, public facilities, office, church and industrial uses (Figures 1-3 and 1-4). Agricultural uses are located in the southern and central Plan Area. Rural residential units are distributed along McKinley Avenue. Other residential and mixed light industrial uses are located in the northern portion of the Plan Area along Vierra Road and Yosemite Avenue. The industrial uses are located in the western boundary of the Plan Area, both north and south of Guthmiller and Yosemite Avenue. No parcels within the Plan Area are under Williamson Act contracts.

The proposed project envisions development of a combination of new office commercial, limited industrial and service commercial uses. Proposed development envisioned in the Plan Area would require City approval of the specific plan as well as several other approvals including annexation of the Plan Area into the City of Lathrop, amendments to the City of Lathrop’s General Plan, rezoning of the Plan Area, development agreements and tentative maps, among others. The project would also require approvals from the Local Agency Formation Commission (LAFCO) and state and federal agencies with jurisdiction over the San Joaquin River and its resources.

Approval of the project would result in the development of up to 56.7 net acres of new office commercial uses in the western sub-area, 167.6 net acres of limited industrial uses in the central sub-area, and 83.0 net acres of service commercial uses in the eastern sub-area. The primary Plan Area also includes 1.6 acres of open space, and 2.9 acres divided between three well sites and 15.6 net acres of detention area.

2.2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

The potentially significant impacts of the proposed project and mitigation measures proposed to minimize these effects are listed in Table 2-1 at the end of this chapter. The table also identifies the level to which the proposed mitigation measures would reduce impacts. Significant unavoidable impacts are those for which the significance remains “significant” or “potentially significant” after mitigation measures are applied.

2.3 SUMMARY OF ALTERNATIVES

Chapter 20.0 identifies and discusses a range of reasonable alternatives to the proposed project. The alternatives addressed include:

- No Lathrop Gateway Business Park Project Alternative
- Site Development Under San Joaquin County Jurisdiction with Low Intensity Use Under Agricultural-Urban Reserve Designation Alternative
- No Development East of McKinley Avenue Alternative

The No Lathrop Gateway Business Park Project Alternative is defined as the continuation of existing conditions and trends in the project area. This alternative would involve no action on the part of the City of Lathrop, LAFCO or other agencies to approve the proposed specific plan, annexation, general plan amendment, pre-zoning, future tentative maps, development agreement or other approvals required for development of the Lathrop Gateway Business Park. Under the No Lathrop Gateway Business Park Project Alternative development of the proposed industrial, office and service commercial uses, as well as planned infrastructure and other improvements, would not occur.

Urban development, and proposals for additional development, along the urban fringe are continuing. If the Lathrop Gateway Business Park Specific Plan is not approved by the City of Lathrop, it is probable that other proposals for urban development of the Plan Area or portions of the Plan Area would be brought forward for approval. Alternative urban development projects proposed for the Plan Area would involve a range of potential environmental effects that could result in lesser or greater environmental effects than the proposed Lathrop Gateway Business Park Specific Plan. As a result, avoidance of the significant environmental effects associated with the primary alternative analysis scenario may be temporary rather than permanent.

The Site Development Under San Joaquin County Jurisdiction with Low Intensity Use Under Agricultural-Urban Reserve Designation Alternative would involve an urban development proposal or proposals for the Plan Area that would be guided by the land uses identified under the San Joaquin County General Plan. The County General Plan identifies General Commercial (C/G) north of Yosemite Avenue and Limited Industrial (I/L) on the western half of the Plan Area. The eastern half of the Plan Area is designated Agricultural-Urban Reserve (A/UR). This designation is applicable in areas expected to become urban, but most likely beyond the planning period of the General Plan. Under this alternative, low intensity land uses would be proposed on the A/UR designation. The significant environmental effects of the Lathrop Gateway Business Park Specific Plan would not necessarily be avoided or substantially lessened by this alternative. Effects on open space, agricultural land, noise, air quality and potential biological habitat would not be significantly reduced.

The No Development East of McKinley Avenue Alternative would involve maintaining the approximate proposed development intensity/density but doing so within a reduced overall geographic area. The area east of McKinley Avenue would be removed from the overall Specific Plan for the Lathrop Gateway Business Park. This would equate to a 13% or 49-acre reduction in the overall Lathrop Gateway Business Park Specific Plan footprint. The rationale to remove this area

from the overall Specific Plan is based on location and presence of a known biological resource (i.e., wetland area and potential CTS breeding habitat). The location of the 49 acres has logical boundaries, McKinley Avenue to the west, Yosemite Avenue to the north and the UP Railroad tracks to the southeast.

The No Development East of McKinley Avenue Alternative would involve some lessening of the direct physical effects of the Lathrop Gateway Business Park Specific Plan. The reduction in the land area under this alternative would result in proportional reductions in its effects on loss of open space, conversion of agricultural land, increase in noise levels and biological resources. Also, reduction of the footprint and corresponding reductions in the development yield of the Lathrop Gateway Business Park Specific Plan would result in minor reductions in the traffic and air pollution effects of the proposed project. Although this alternative is considered feasible, it falls short of avoiding or reducing significant environmental effects.

The No Lathrop Gateway Business Park Project Alternative would involve the least environmental effects of the alternatives considered in detail. This would be considered the “Environmentally Superior Alternative”. This alternative does not meet any of the principal objectives of the Lathrop Gateway Business Park Specific Plan project. The No Development East of McKinley Avenue Alternative would be the Environmentally Superior “Build” Alternative.

2.4 SIGNIFICANT UNAVOIDABLE IMPACTS

This EIR identifies the significant environmental effects of the proposed project and the mitigation measures that are proposed to minimize these effects. Proposed mitigation would be effective in reducing potentially significant environmental effects to a less than significant level in most cases. However, the project’s potential impacts on conversion of agricultural land; ozone precursor emissions; and traffic noise at existing noise-sensitive land uses would not be reduced to less than significant by proposed mitigation measures, and these impacts would remain significant and unavoidable.

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
4.0. AESTHETICS			
Effects on Scenic Routes, Vistas and Off-Site Lands	LS	None required.	
Effects on Existing Visual Characteristics of the Site	LS	None required.	
Effects of Offsite Stormwater Pipeline and Outfall Structure on Surrounding Areas	LS	None required.	
Effects of Light and Glare	LS	None required.	
5.0. AGRICULTURE			
Conversion of Agricultural Land	S	5-1. The Project Proponents/City would participate in the SJMSCP. Fees would be paid by the project applicant to the SJCOG on a per-acre basis for lost agricultural land during development of the proposed Lathrop Gateway Business Park. The SJCOG will use these funds to purchase conservation easements on agricultural and habitat lands in the project vicinity. The preservation in perpetuity of agricultural land throughout the SJMSCP, a portion of which would consist of Important Farmland, would ensure the continued protection of farmland in the project vicinity, partially offsetting project impacts. Written proof of such an agreement between the project proponent and SJCOG shall be provided to the City prior to the issuance of grading or other construction permits.	SU
Conflicts with Current Zoning	LS	None required.	
Impacts of the Project to Existing Land Uses	LS	None required.	
Impact of Project on Existing Agricultural Lands and Adjacent Land Uses	LS	None required.	
6.0. AIR			
Impacts of Project Construction on Air Quality	PS	6-1 For construction projects in the Plan Area exceeding 40 acres in size or involving more 2,500 cubic yards per day of excavation, the owners, developers and/or successors-in-interest (ODS) shall prepare and submit a Dust Control Plan that meets all of the applicable requirements of APCD Rule 8021, Section 6.3, for the review and approval of the APCD Air Pollution Control Officer prior to start of construction activities.	LS
		6-2 Visible Dust Emissions (VDE) from construction, demolition, excavation or other earthmoving activities related to the project shall be limited to 20% opacity or less, as defined in Rule 8011, Appendix A. The dust control measures specified in mitigations 3 through 9 shall be applied as required to maintain the VDE standard.	

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
	6-3	<p>During construction activities in the Plan Area, the ODS shall implement the following dust control practices identified in Tables 6-2 and 6-3 of the GAMAQI (San Joaquin Valley APCD, 2002):</p> <ol style="list-style-type: none"> a. All disturbed areas, including storage piles, which are not being actively utilized or construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover. b. All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant. c. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall control fugitive dust emissions by application of water or by presoaking. d. When materials are transported off-site, stabilize and cover all materials to be transported and maintain six inches of freeboard space from the top of the container. e. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden. f. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant. g. Limit traffic speeds on unpaved roads to 15 mph; and h. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent. 	
	6-4	<p>Architectural coatings applied to all structures in the Plan Area shall meet or exceed volatile organic compound (VOC) standards set in APCD Rule 4601. The ODS shall submit to the APCD a list of architectural coatings to be used and shall indicate how the coatings meet or exceed VOC standards. If the APCD determines that any architectural coatings do not meet VOC standards, the ODS shall replace the identified coatings with those that meet standards</p>	
	S	6-5	<p>The ODS shall make application to the APCD for a permit under APCD Rule 9510, Indirect Source Rule (ISR) prior to issuance of the first building permit for construction in the Specific Plan area, if required. The ODS shall incorporate mitigation measures into project construction and/or pay ISR fees as required to comply with Rule 9510 emission</p>

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation	
Effects of Project Operations on Criteria Pollutant Emissions, Including Ozone Precursors	S	6-6	<p>reduction requirements for construction NOx and PM emissions.</p> <p>The ODS shall use emission-controlled construction equipment during demolition and construction activities in the Plan Area. The developers shall select construction contractors based in part on the age, condition and emission control status of their construction equipment fleets, recognizing that ISR permit fees will be reduced for project elements that can be constructed with cleaner equipment fleets.</p>	SU
		6-7	<p>The ODS shall receive a permit under APCD Rule 9510, Indirect Source Rule (ISR) prior to issuance of the first building permit for construction in the Plan Area. The ODS shall incorporate mitigation measures into the project and/or pay the required ISR fees to the APCD as required to comply with Rule 9510 emission reduction requirements for NOx and PM emissions associated with project operations.</p>	
		6-8	<p>The ODS of development projects in the Plan Area shall prepare improvement plans that incorporate the following features, consistent with adopted City improvement standards and to be installed by the developer:</p> <ul style="list-style-type: none"> • Bus turnouts and transit improvements where requested by the San Joaquin RTD. • Continuous public sidewalks adjacent to all proposed public streets. • Pavement and striping for bike lanes/paths. • Street lighting. • Pedestrian signalization, signage and safety designs at signalized intersections. • Shade trees to shade sidewalks in street-side landscaping areas. 	
		6-9	<p>The ODS of development projects in the Plan Area shall prepare and implement a transportation demand management (TDM) plan that incorporates the measures listed below, though the TDM plan shall not be limited to those measures. The plan shall be subject to City review and approval prior to issuance of the first building permit for construction in the Plan Area.</p> <ul style="list-style-type: none"> • Provide secure bicycle parking in conjunction with commercial and office development. • Provide designated vanpool parking spaces close to the employment center entry locations. • Provide preferential carpool parking spaces close to the employment center entry locations. • Provide on-site amenities that encourage alternative transportation modes such as locker, shower, and secure bike storage facilities. • Provide on-site services such as personal mail boxes and day care that reduce mid-day trip generation. • Provide telecommuting options. • Provide transit vouchers. • Provide information to employees on carpooling, ride sharing and other 	

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures		Mitigation Measures	Significance After Mitigation
			available programs.	
Project Impacts on Carbon Monoxide Hot Spots	PS		Refer to Chapter 18.0, Transportation	LS
Generation of or Exposure to Toxic Air Contaminants (TACs)	PS	6-10	<p>ODSA health risk assessment shall be conducted for the following future development projects that meet the following criteria:</p> <ul style="list-style-type: none"> • A distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week, placed within 1,000 feet of a residence in or adjacent to the Plan Area. • A dry cleaning operation placed within 300 feet of a residence in or adjacent to the Plan Area. • A gas station placed within 50 feet of a residence in or adjacent to the Plan Area. <p>If the health risk assessment identifies a significant risk as defined by GAMAQI, the assessment shall identify measures to reduce the health risk to levels that are less than significant, which the project shall incorporate in its design and construction.</p>	LS
Odor Impacts	LS		None required.	
7.0. BIOLOGICAL RESOURCES				
Impacts on Specific Special-Status Plant and Wildlife Species	LS		None required.	
Impacts on Wildlife Corridors	LS		None required.	
Impacts on Federally Protected Wetlands	PS	7-1	<p>The ODS shall, where feasible, preserve the maximum amount of the seasonal pond, the fire suppression pond and the seasonal wetlands along the storm drain alignment and establish minimum 25 to 50 foot buffers around all sides of these areas. In addition, the final project design shall not cause significant changes to the pre-project hydrology, water quality or water quantity in any wetland that is to be retained on site.</p> <p>Where avoidance of existing wetlands and drainages is not feasible, and fill material is to be placed within the ponds and wetlands, then the ODS shall prepare a wetland delineation with the assistance of a qualified wetland specialist, and submit the delineation to ACOE for verification. If any of the ponds and wetlands are deemed jurisdictional wetland by ACOE, then the ODS shall acquire all appropriate wetland permits prior to the issuance of grading permits by the City. These permits may include, but are not limited to, a Section 404 Wetlands Fill Permit from the U.S. Army Corps of Engineers and a Section 401 Water Quality Certification from the Regional Water Quality Control Board. The ODS shall comply with all conditions and mitigation requirements attached to the granted wetland permits.</p>	LS

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures		Mitigation Measures	Significance After Mitigation
Project Consistency with Applicable Plans	LS		None required.	
8.0. CULTURAL RESOURCES				
Potential Impacts on Prehistoric Cultural Resources	PS	8-1	If any subsurface cultural resources, including either prehistoric or historic resources, are encountered during construction, all construction activities in the vicinity of the encounter shall be halted until a qualified archaeologist can examine these materials and make a determination of their significance. The City of Lathrop Community Development Department shall be notified, and the ODS shall be responsible for mitigation and associated costs of any significant cultural resources pursuant to the CEQA Guidelines.	LS
		8-2	If human remains are encountered at any time during the development of the project, all work in the vicinity of the find shall halt and the County Coroner and the Community Development Department shall be notified immediately. If it is determined that the remains are those of a Native American, the Coroner must contact the Native American Heritage Commission. At the same time, a qualified archaeologist must be contacted to evaluate the archaeological implications of the finds. The CEQA Guidelines detail steps to be taken when human remains are found to be of Native American origin. The ODS shall be responsible for all mitigation costs.	
Impact of Project on Historical Resources	PS	8-3	<p>Prior to the initiation of demolition activities within a development phase, any buildings and/or structures within that phase shall be evaluated by an individual who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History to determine if any of the buildings or structures qualify as historical resources as defined in §21083.2 of CEQA and §15064.5 of the State CEQA Guidelines. The City of Lathrop Community Development Department shall be notified of the findings, and the ODS shall be responsible for all mitigation costs. The following procedures shall be followed unless specified differently by the qualified individual:</p> <p>a. <u>Documentation and Recordation of Significant Historical Resources</u> – For any buildings or structures that qualify as historical resources under CEQA, written and photograph documentation shall be prepared to record the property. The written documentation for the property shall be prepared based on the National Park Services' (NPS) Historic American Building Survey (HABS) Historical Report Guidelines. Photograph documentation standards shall meet the intent of the NPS – Advisory Council on Historic Preservation (ACHP) revised policy for developing alternate forms of documentation for properties meeting a criterion of less than nationally significant. The alternative documentation shall not be reviewed by the NPS or transmitted to the Library of Congress and therefore will not be a full-definition HABS dataset. This type of documentation is based on a combination of both HABS standards (Levels II</p>	LS

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
Impact of Project on Paleontological Resources	PS	<p>and III) and NPS new policy for NR-NHL photographic documentation as outlined in the National Register of Historic Places and National Historic Landmarks Survey Photo Policy Expansion (March 2005).</p> <p>Either HABS standard large format or digital photography may be used. If digital photography is used, the ink and paper combinations for printing photographs must be in compliance with NR-NHL photo expansion policy and have a permanency rating of approximately 115 years. Digital photographs will be taken as uncompressed .TIF file format. The size of each image will be 1600x1200 pixels at 300 ppi (pixels per inch) or larger, color format, and printed in black and white. The file name for each electronic image will correspond with the Index to Photographs and photograph label.</p> <p>b. <u>Dissemination of Documentation</u> –The written and photograph documentation of historical resources shall be disseminated on archival quality paper to appropriate repositories and interested parties. The distribution of the documentation shall include the State Historic Preservation Officer in the California Office of Historic Preservation; the California Historical Resources Information System Central California Information Center at California State University, Stanislaus; the San Joaquin County Historical Society & Museum; and other local repositories identified by the City of Lathrop Community Development Department.</p> <p>Should paleontological or unique geological resources be identified at any project construction sites during any phase of construction, the project manager shall cease operation at the site of the discovery and immediately notify the City of Lathrop Community Development Department. The project applicant shall retain a qualified paleontologist to provide an evaluation of the find and the significance of the materials and mitigation measures if needed, and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the consulting paleontologist, the City of Lathrop Community Development Department shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, specific plan policies and land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for paleontological resources is carried out.</p>	LS

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures		Mitigation Measures	Significance After Mitigation
9.0. GEOLOGY AND SOILS				
Impacts of Groundshaking on Plan Area	LS		None required.	
Impacts of Liquefaction on Plan Area	PS	9-1	A site-specific, design-level geotechnical study shall be completed for each project development component in the Specific Plan area (i.e., light industrial areas, commercial areas, office areas, and infrastructure) before a grading permit is issued. The studies shall include an evaluation of liquefaction potential in the development area and identify appropriate means to minimize or avoid damage from liquefaction. Geotechnical design recommendations included in each study shall be implemented during project design and construction. Potential recommendations include over-excavating and recompacting the area with engineered fill or in-place soil densification. In-place densification measures may include deep dynamic compaction, compaction grouting, vibro-compaction, and the use of non-liquefiable caps. Special design features may need to be utilized for foundations. Other foundation types may be considered if further geotechnical study shows the liquefaction potential to be less than significant or if the effects of liquefaction-induced settlement can be mitigated with earthwork.	LS
Impacts of Other Potential Seismic Events on Plan Area	LS		None required.	
Impacts of Project Resulting in Soil Erosion or Loss of Topsoil	LS		None required.	
Impacts of Expansive Soils on Project	PS	9-2	A site-specific, design-level geotechnical study shall be completed for the stormwater drainage pipeline from the Specific Plan area to the San Joaquin River before appropriate construction permits are issued. The studies shall include an evaluation of shrink-swell potential in the pipeline construction area and identify appropriate means to minimize or avoid damage from expansive soils. Geotechnical design recommendations included in the study shall be implemented during project design and construction. Potential recommendations may include, but are not limited to, removing expansive soils and replacing them with engineered fill.	LS
10.0 GLOBAL CLIMATE CHANGE				
Generation of Project-Related Greenhouse Gas Emissions	PS	10-1	Applicant(s) shall employ green building techniques in the design of proposed buildings within the Lathrop Gateway Business Park Plan Area. Specifically, projects shall conform at a minimum to the California Green Building Code or equivalent green building standards.	SU
		10-2	The ODS shall implement a Transportation Demand Management program applicable to businesses with 25 or more employees to reduce potential vehicle trips. The Transportation Demand Management program shall contain at least five of the following components, although other components not listed may be included:	

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> • Free transit passes. • Telecommuting. • Secure bicycle parking (at least one space per 20 vehicle parking spaces). • Showers/changing facilities. • Car-sharing services. • Information on transportation alternatives, such as bus schedules and bike maps. • Dedicated employee transportation coordinator. • Carpool matching programs. • Preferential carpool/vanpool parking. <p>The ODS shall provide a funding mechanism to maintain the Transportation Demand Management program, which may include but is not limited to creation of a special assessment district. The Transportation Demand Management program shall be submitted to the Community Development Department for its review and approval.</p>	
		<p>10-3 The following mitigation measures shall be implemented during future development in the Plan Area:</p> <ul style="list-style-type: none"> • Parking in the Specific Plan area shall be provided at the minimum level required by the Lathrop Municipal Code. Shared parking shall be implemented when determined to be feasible. • Parking lot designs shall include clearly marked and shaded pedestrian pathways between transit facilities and building entrances, for projects adjacent to or containing transit facilities. • Buildings shall use Energy Star roofs, or equivalent, and shall be designed so that their orientation to take advantage of the winter sun and to shade building from the summer sun. 	
Project Consistency with Applicable GHG Reduction Plans	LS	None required.	
Impact of Climate Change on Project	LS	None required.	
11.0. HAZARDS AND HAZARDOUS MATERIALS			
Exposure of Construction Workers, Employees and Others to Existing Hazardous Materials	PS	<p>11-1 The SJCEHD shall be notified by the ODS if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during excavation and dewatering activities. Any contaminated areas shall be remediated by the ODS in accordance with recommendations made by SJCEHD; RWQCB; DTSC; or other appropriate federal, state, or local regulatory agencies.</p>	LS

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
		11-2 Before demolition of any onsite buildings built prior to 1980, the ODS shall hire a qualified consultant to investigate whether any of these buildings contain asbestos-containing materials and lead that could become friable or mobile during demolition activities. If found, the asbestos-containing materials and lead shall be removed by an accredited inspector in accordance with EPA and California Occupational Safety and Health Administration (Cal/OSHA) standards. In addition, all activities (construction or demolition) in the vicinity of these materials shall comply with Cal/OSHA asbestos and lead worker construction standards. The asbestos-containing materials and lead shall be disposed of properly at an appropriate offsite disposal facility.	
Use of Hazardous Materials in Construction and Operation	LS	None required.	
Potential Public Health Impacts Associated with Recycled Water	LS	None required.	
Potential Hazard Associated with Railroad Adjacent to Plan Area	LS	None required.	
High-Voltage Power Lines	LS	None required.	
12.0 LAND USE			
Consistency with San Joaquin County LAFCO	LS	None required.	
Consistency with City of Lathrop General Plan	LS	None required.	
Consistency with the Land Use and Resource Management Plan	LS	None required.	
Consistency with Existing Zoning	LS	None required.	
Conflict Between Existing Agricultural Lands and Future Non-Agricultural Proposed Land Uses Within the Plan Area	LS	None required.	
13.0 HYDROLOGY AND WATER QUALITY			
Direct Effects on Surface Water Features	PS	13-1 Any proposed improvements within the San Joaquin River floodway shall be subject to the approval of the City Engineer and the Community Development Director as well as federal, state and local permit agencies with jurisdiction, including the US Army Corps of Engineers, the Central Valley Flood Protection, the Regional Water Quality Control Board, the San Joaquin County Flood Control and Water Conservation District, and the California Department of Fish and Game.	LS

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures		Mitigation Measures	Significance After Mitigation
Changes in Volume or Flow in Surface Water Resources	LS		None required.	
Exposure of Proposed Development to Flooding Hazards	LS		None required.	
Project Construction Effects on Surface Water Quality	PS	13-2 13-3	The ODS shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for Lathrop Gateway Business Park construction activities and file a Notice of Intent (NOI) with the State Water Resources Control Board prior to commencement of construction activity. The SWPPPs shall be available on the construction site at all times. Site development (i.e. construction) plans shall incorporate all applicable provisions of the SWPPP. The SWPPP shall be submitted to Public Works Department for approval.	LS
Effects of Project Operation on Surface Water Quality	LS		None required.	
Effects of Recycled Water Use on Surface and Groundwater Quality	LS		None required.	
14.0. NOISE				
Traffic Noise Exposure at Existing Noise-Sensitive Land Uses	S	14-1	Rubberized asphalt shall be installed on the segments of Yosemite Avenue (between Swanson Road and Airport Way) and McKinley Avenue (between the south border of the Plan Area and just south of Bronzan Road). Because these segments are located within the jurisdiction of the City of Manteca, the City of Lathrop shall prepare and negotiate an inter-agency agreement on the apportionment of costs and responsibilities related to the installation of the rubberized asphalt. The ODS shall be responsible for all costs related to the agreement and installation of material.	SU
Transportation-Related Noise Exposure in the Plan Area	S	14-2	Acoustically rated exterior doors and windows shall be installed at facades with line-of-sight to State Route 120. These upgraded windows and doors shall provide a minimum STC performance of 35.	LS
Construction Noise Impacts	PS	14-3 14-4	Contractors performing grading and construction work in the Plan Area shall fit all internal combustion engines with factory-specified mufflers. Contractors performing grading and construction work in the Plan Area shall not place construction staging and heavy equipment storage areas within 500 feet of residential receivers to the south-southeast of the Plan Area.	LS
15.0. POPULATION AND HOUSING				
Project Effects on Population Growth	LS		None required.	
Project Impacts on Employment	LS		None required.	

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures		Significance After Mitigation
Project Impacts on Housing	LS	None required.		
16.0. PUBLIC SERVICES/FACILITIES				
Impacts on Police Protection Services	PS	16-1	The ODS shall pay, prior to issuance of building permits, the appropriate City of Lathrop Capital Facility Fees for police and fire protection services. Also, prior to issuance of the first building permit for a project in the Specific Plan area, the ODS shall form a special assessment district that covers the Plan Area and provides adequate funding for the annual cost to provide City services specific to and directly benefiting the Plan Area. The City and the ODS shall determine the level of funding the special assessment district shall provide.	LS
		16-2	The ODS shall incorporate access, water supply and other fire suppression and emergency access/response needs in the proposed project designs. Said designs shall be developed in consultation with the Fire, Police and Public Works Departments, and shall address such items as the mapping and measures deemed necessary to permit access of emergency vehicles and firefighting equipment, minimize response times and provide adequate evacuation routes.	
		16-3	The ODS shall fence and monitor contractors' storage yards during the construction phases of the project to prevent theft and vandalism, and to reduce calls for assistance from the Police Department.	
Impact of Project on Fire Protection Services	PS	16-4	As development proceeds within the Plan Area, the City shall authorize occupancy of new structures only if confirmation of three to four-minute average emergency response times to the structures can be provided using Fire District methodologies. . If the required response time cannot be satisfied, the ODS shall coordinate with the Fire District to identify temporary fire prevention measures to allow development to proceed to the satisfaction of the Fire District. In addition, the ODS shall coordinate with the Fire District and identify potential alternative locations along Yosemite Avenue near D'Arcy Parkway, within the Plan Area, for a possible new fire station site.	LS
		16-5	The ODS shall pay all applicable fire service fees and assessments required to fund its fair share of fire district facilities and services required to serve the Plan Area.	
		16-6	The ODS shall install fire hydrants and water distribution facilities that will provide fire flows that are adequate to support the City's existing ISO rating and that conform to adopted Building Code Fire Safety Standards for all of the uses proposed within the Plan Area.	
		16-7	The City shall not approve any structures in the Plan Area greater than 50 feet in height until the Fire District possesses appropriate equipment that can serve such heights. If site plans includes structures greater than 50 feet, the ODS shall pay fees toward its fair share of this equipment.	
Impacts of Project on Solid Waste Generation	LS	None required.		

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures		Mitigation Measures	Significance After Mitigation
Impacts of Project on Schools	LS		None required.	
Impacts of Project on Parks and Recreation	LS		None required.	
Impacts of Project on Animal Control Services	PS	16-8	As identified in Mitigation Measure 16-1, prior to issuance of the first building permit for a project in the Specific Plan area, the ODS shall form a special assessment district that covers the Plan Area and provides adequate funding for the annual cost to provide City services specific to and directly benefiting the Plan Area. Animal Control Services shall be included in this community facilities district or an equivalent funding mechanism. The City and the ODS shall determine the level of funding the special assessment district shall provide.	LS
		16-9	The ODS shall pay capital facilities fees to defray capital facility costs associated with an animal control facility.	
17.0 PUBLIC UTILITIES				
Project Impacts on Water Supplies	LS		None required.	
Project Impacts on Water Supply Infrastructure, Including City Wells and Treatment Facilities	LS		None required.	
Project Impact on Wastewater Treatment Facilities	S	17-1	No element of the proposed project shall be occupied until both adequate treatment capacity at WRP-1, WRP-2, Lathrop-Manteca WQCF or another comparable wastewater treatment facility is available and wastewater infrastructure (e.g., pipelines) is in place to serve that portion of the Plan Area.	LS
Project Impact on Wastewater Conveyance Systems	PS	17-2	The ODS shall remove existing septic systems prior to development of the parcel in which the septic system is located. Removal shall be in accordance with the rules and regulations of the San Joaquin County Environmental Health Department.	LS
Project Impact from Recycled Water Generation	LS		None required.	
Project Impact on Electrical Service	LS		None required.	
Project Impact on Natural Gas Supplies	LS		None required.	
18.0. TRANSPORTATION/CIRCULATION				
Existing Plus Project (Year 2012/Phase 1) Intersection Operations Impacts	S	18-1	The ODS of properties within the Plan Area shall pay their “fair share” costs of the improvements identified below, or the costs of the following improvements shall be subject to reimbursement in conjunction with other development projects that contribute vehicle trips. <ul style="list-style-type: none"> • Install a traffic signal at the I-5 SB Ramps/Lathrop Road intersection under existing conditions and in coordination with ramp signalization at the NB ramps intersection. <i>Projected LOS with mitigation: “C” or better.</i> 	SU

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> • Install a traffic signal at the I-5 NB Ramps/Lathrop Road intersection under existing conditions. <i>Projected LOS with mitigation: "C" or better.</i> • Provide exclusive right-turn lanes/pockets for the eastbound and westbound approaches at the McKinley Avenue/Lathrop Road intersection under Existing Plus Project conditions. <i>Projected LOS with mitigation: "D" or better.</i> • Install a traffic signal at the McKinley Avenue/Yosemite Avenue intersection under Existing Plus Project conditions. <i>Projected LOS with mitigation: "D" or better.</i> 	
		<p>18-2 The ODS shall pay their fair share towards the City of Manteca's traffic impact fee program to cover project responsibilities towards the following improvement:</p> <ul style="list-style-type: none"> • Provide exclusive right-turn lanes/pockets for the eastbound and westbound approaches at the Main Street/Louise Avenue intersection. <i>Projected LOS with mitigation: "D" or better</i> 	
Existing Plus Project Roadway Segment Operations Impacts	S	<p>18-3 The City of Lathrop shall ensure that the ODS pay their applicable Transportation Impact Fees for their "fair share" costs for the following freeway improvements.</p> <ul style="list-style-type: none"> • Add northbound lanes on Interstate 5 from I-205 to the SR 120 interchange, and widen Interstate 5 from the SR 120 interchange to the Lathrop Road interchange, as identified in the San Joaquin Regional Transportation Plan 2007. Project contribution towards regional traffic impact fees covers project responsibility for this freeway segment. • Widen the segment of SR 120 from I-5 to Yosemite Avenue from four to six lanes, as identified in the San Joaquin Regional Transportation Plan 2007. Project contribution towards regional traffic impact fees covers project responsibility for this freeway segment. • Widen the segment of SR 99 from SR 120 to Arch Road from four to six lanes along with interchange modifications, as identified in the San Joaquin Regional Transportation Plan 2007. Project contribution towards regional traffic impact fees covers project responsibility for this freeway segment. 	SU
Traffic Safety Impacts	LS	None required.	
Public Transit Impacts	PS	<p>18-4 In coordination with the SJRTD, the ODS shall provide for the extension of a bus route to the project site, either the existing Route 95 or another route, and shall provide at least one on-site bus stop for this route.</p>	LS
Impacts on Bicycle and Pedestrian Facilities	LS	None required.	

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
19.0 CUMULATIVE			
Aesthetics	CC	None available.	CC
Agriculture	CC	None available.	CC
Air Quality	CC	None available.	CC
Biological Resources	LC	None required.	
Cultural Resources	LC	None required.	
Geology and Soils	LC	None required.	
Global Climate Change	CC	None available.	CC
Hazards and Human Health	LC	None required.	
Hydrology and Water Quality	LC	None required.	
Land Use and Planning	LC	None required.	
Noise	LC	None required.	
Population and Housing	LC	None required.	
Public Services	CC	None available.	CC
Public Utilities: Water, Wastewater, and Recycled Water	CC	None available.	CC
Public Utilities: Stormwater Conveyance:	LC	None required.	
Transportation/Circulation: Intersection Operations	CC	<p>19-1 If the necessary intersection improvements identified under the Cumulative Base (Current Project Site Condition) scenario have not been constructed by the time construction in the Specific Plan area begins, the ODS of properties within the Plan Area shall pay their “fair share” costs of these improvements once the City has identified and programmed them in the appropriate funding plan.</p> <p>19-2 The ODS shall construct the following intersection improvements: <u>Install a traffic signal at the Gutmiller Road/Project Access 1 intersection and construct the intersection</u> with the following lane geometrics: <u>Northbound Approach</u> – One left-turn lane, two through lanes, and one shared</p>	LC

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
		<p>through-right lane.</p> <p><u>Southbound Approach</u> – One left-turn lane, two through lanes, and one shared through-right lane.</p> <p><u>Eastbound Approach</u> – One left-turn lane, on through lane, and one right lane</p> <p><u>Westbound Approach</u> – Two left turn lanes, and one shared through-right lane.</p> <p>Due to this intersection's close proximity to the Yosemite Avenue/SR 120 interchange ramp intersections, appropriate signal interconnect/coordination between the two intersections shall be implemented. <i>Projected LOS after mitigation: "D" or better.</i></p> <p><u>Install a traffic signal at the Yosemite Avenue/Project Access 2 intersection and construct the intersection with the following lane geometrics:</u></p> <p><u>Northbound Approach</u> – One left-turn lanes, and one shared through-right lane.</p> <p><u>Southbound Approach</u> – One left-turn lanes, and one shared through-right lane.</p> <p><u>Eastbound Approach</u> – One left-turn lane, two through lanes, and one shared through-right lane.</p> <p><u>Westbound Approach</u> – One left-turn lane, two through lanes, and one shared through-right lane.</p> <p><i>Projected LOS after mitigation: "D" or better.</i></p> <p><u>Install a traffic signal at the McKinley Avenue/Project Access 3 intersection and construct the intersection with the following lane geometrics:</u></p> <p><u>Northbound Approach</u> – One left-turn lane, two through lanes and one right lane.</p> <p><u>Southbound Approach</u> – One left-turn lane, two through lanes and one right lane.</p> <p><u>Eastbound Approach</u> – One left-turn lane, and one shared through-right lane.</p> <p><u>Westbound Approach</u> – One left-turn lane, and one shared through-right lane.</p> <p><i>Projected LOS after mitigation: "C" or better.</i></p> <p><u>Install a traffic signal at the Yosemite Avenue/Project Access 4 intersection and construct the intersection with the following lane geometrics:</u></p> <p><u>Northbound Approach</u> – One left-turn lane, and one right-turn lane.</p> <p><u>Eastbound Approach</u> – One left-turn lane, two through lanes, and one shared through-right lane.</p> <p><u>Westbound Approach</u> – One left-turn lane, and three through lanes.</p> <p><i>Projected LOS after mitigation: "C" or better.</i></p> <p>Construct the D'Arcy Parkway/Yosemite Avenue/Project Access 5 intersection with the following lane geometrics:</p>	

**TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation
		<p><u>Northbound Approach</u> – One left-turn lane, one through lane, and one right-turn lane.</p> <p><u>Southbound Approach</u> – Two left-turn lanes, and one shared through-right lane.</p> <p><u>Eastbound Approach</u> – Two left-turn lanes, two through lanes, and one shared through-right lane.</p> <p><u>Westbound Approach</u> – One left-turn lane, three through lanes, and one right-turn lane.</p> <p><i>Projected LOS after mitigation: “D” or better</i></p> <p>Install a traffic signal at the McKinley Avenue/Yosemite Avenue intersection and construct the intersection with these additions to the geometrics required under Cumulative Base conditions:</p> <p><u>Northbound Approach</u> – Add one left-turn lane and one right-turn lane.</p> <p><u>Southbound Approach</u> – Add one right-turn lane.</p> <p><u>Eastbound Approach</u> – Add one through lane and one right-turn lane.</p> <p><u>Westbound Approach</u> – Add one through lane and one right-turn lane.</p> <p><i>Projected LOS after mitigation: “D” or better</i></p>	
Cumulative Impacts on Roadway Segment Operations	CC	<p>19-3 The ODS shall widen Guthmiller Road/Yosemite Avenue from two to six lanes from the SR 120 interchange to the eastern boundary of the Specific Plan area, prior to cumulative full buildout (year 2030).</p> <p>19-4 The ODS shall pay “fair share” costs towards the reconstruction of the SR 120/Yosemite Avenue-Guthmiller Road interchange.</p> <p>19-5 The ODS shall pay towards the City of Manteca’s traffic impact fee to cover project responsibilities towards the following improvement: The Main Street/Yosemite Avenue intersection shall have the following lane geometrics: <u>Northbound Approach</u> – Two left-turn lanes, and one shared through-right lane. <u>Southbound Approach</u> – One left-turn lane, one through lane, and one shared through-right lane. <u>Eastbound Approach</u> – One left-turn lane, two through lanes, and one right-turn lane. <u>Westbound Approach</u> – One left-turn lane, one through lane, and one shared through-right lane.</p>	SU
Cumulative Impacts on Public Transit, Bicycle and Pedestrian Transportation	LC	None required.	
<p><i>Mitigation Measure Key Code: ODS=Owners, developers and/or successors-in-interest; S=Significant; CC=Cumulatively Considerable; PS=Potentially Significant; LS=Less than Significant; LC=Less than Considerable; SOC Adopted=Statement of Overriding Considerations previously adopted</i></p>			

3.0 PROJECT DESCRIPTION

3.1 PROJECT OVERVIEW

This Environmental Impact Report (EIR) describes the potential environmental effects that would result from City of Lathrop approval and subsequent development of the Lathrop Gateway Business Park Specific Plan project. The Specific Plan provides for the planned urban industrial and commercial development of approximately 384 gross acres to create a comprehensively planned development that provides a balance of land uses and systematically constructed infrastructure and services to adequately and responsibly support development. Land uses include commercial office, limited industrial, and service commercial divided into 3 distinct Districts (west, central and east). The specific plan process provides a planning mechanism by which all of the planning, engineering, environmental and fiscal issues are explored and policies and standards can be created to guide the build-out of the Plan Area.

The Lathrop Gateway Business Park Plan Area (Plan Area) is located in an unincorporated area of San Joaquin County, adjacent to and north of State Route (SR) 120 at Yosemite Avenue. The area currently includes a variety of existing land uses: agricultural interspersed with rural residential, service, office, church, public facilities and industrial uses. Agricultural uses are located in the southern and central Plan Area. Rural homes sites are distributed along McKinley Avenue. Other residential and mixed light industrial uses are located in the northern portion of the Plan Area along Vierra Road and Yosemite Avenue. The industrial uses are located in the western boundary of the Plan Area, both north and south of Guthmiller and Yosemite Avenue. No parcels within the Plan Area are under Williamson Act contracts.

Proposed development envisioned in the Plan Area would require City approval of the specific plan as well as several other approvals including annexation of the Plan Area into the City of Lathrop, amendments to the City of Lathrop's General Plan, rezoning of the Plan Area, development agreements and tentative maps, among others. The project would also require approvals from the Local Agency Formation Commission (LAFCO) and state and federal agencies with jurisdiction over the San Joaquin River and its resources.

Approval of the project would result in the development of up to 56.7 net acres of commercial office uses in the western sub-area, 167.6 net acres of limited industrial uses primarily in the central sub-area, and 83.0 net acres of service commercial uses in the eastern sub-area. The Plan Area also includes 1.6 acres of open space, 2.9 acres divided between three well sites, and 15.6 net acres of storm water detention area.

3.2 PROJECT LOCATION AND SETTING

Location

The Lathrop Gateway Business Park Specific Plan encompasses approximately 384± gross acres located in an unincorporated area of San Joaquin County, adjacent to the City of Lathrop (Figures 1-1 through 1-4). The east and west boundaries of the Plan Area are defined by two tracks of the Union Pacific Railroad; the southern boundary is State Highway Route (SR) 120 and northern boundary is defined by Vierra Road and Yosemite Avenue. Although the Plan Area currently falls under the jurisdiction of San Joaquin County, it is within the City of Lathrop's Sphere of Influence and is included in the City of Lathrop General Plan.

Plan Area Setting

The current uses in the Plan Area and adjacent lands are predominantly a mix of agricultural activities and industrial uses with some residential uses. The Plan Area is within the City of Lathrop Sphere of Influence, but outside of the city limits. The land is designated in the San Joaquin County General Plan as Limited Industrial (I/L), Agricultural-Urban Reserve (A/UR), and zoned in the San Joaquin County Zoning Ordinance as Warehouse Industrial (I-W), Agriculture-Urban Reserve (AU-20), and General Commercial (C-G).

The Plan Area is one of the last pockets of unincorporated San Joaquin County within the vicinity, as the project area is surrounded by built or approved projects that are within the Cities of Lathrop and Manteca. The General Plans of the County and the City of Manteca illustrate significant and extensive urban development occurring along the I-5 and SR 120 routes. Lands to the south and east, within the County of San Joaquin and the City of Manteca, are undergoing transition from primarily agricultural activities to residential and commercial development, with many neighborhoods built, under construction, or in the planning stages.

Existing local vehicular access to and through the Plan Area is from McKinley Boulevard, Yosemite Avenue, Guthmiller Road, and D'Arcy Road. Regional access is currently provided by the Yosemite/Guthmiller and SR 120 interchange. A future interchange will be constructed where McKinley Boulevard meets SR 120; a Project Study Report (PSR) has recently been approved for this interchange.

The Plan Area has relatively flat terrain, with elevated rail lines along the western and eastern boundaries, and an elevated SR 120 roadway extending along the southern boundary of the Plan Area. The Plan Area is situated at an elevation of between 10 and 25 feet above sea level. SR 120 is approximately 38 feet above sea level.

High voltage power lines (115 and 60 Kilovolts), within Pacific Gas & Electric (PG&E) powerline easements, traverse through portions of the Plan Area running east/west along the southern portion of the Plan Area and north/south to Vierra Road heading east, then terminating less than a half mile along the northern Plan Area boundary at an electrical substation.

The Plan Area is surrounded by a variety of existing land uses. To the north, within the City of Lathrop, are industrial uses, the City's Wastewater Treatment Plant, a PG&E electrical substation,

agricultural and vacant land, and the existing Lathrop-Manteca Altamont Commuter Express (ACE) train station. Directly south of the Plan Area, across SR 120, is vacant farmland within the City of Lathrop's Sphere of Influence. Farther south and southeast, within San Joaquin County and the City of Manteca, are developing lands: residential, commercial, business, and public uses. Proposed and approved projects for the area include Southwest Manteca Employment Center, an area of approximately 1,408 acres, a high-tech business industrial park, and the Oakwood Lakes Subdivision. To the east, in Manteca, new commercial development is approved for Manteca Big League Dreams Sports Park, a 30-acre City-owned recreational sports complex, with an adjacent regional commercial center; various phases are currently built or under construction. The City of Manteca Wastewater Treatment Plant is also east of the Plan Area. To the west are other industrial uses and Interstate 5.

3.3 PROJECT OBJECTIVES

The principal objective of the proposed project is the approval and subsequent implementation of the Lathrop Gateway Business Park Specific Plan. Implementation would involve the development of potential uses under the land use designations of commercial office, limited industrial, and service commercial (Figure 3-1).

The quantifiable objectives of the proposed project include the development of up to 56.7 net acres of commercial office uses, 167.6 net acres of limited industrial uses and 83.0 net acres of service commercial uses at ultimate buildout, with a projected potential of approximately 5,434,894 square feet of employment-generating development.

The Lathrop Gateway Business Park Specific Plan sets forth the overall objectives for the Plan Area. The objectives are summarized as follows:

- A New Vision for South Lathrop – Establish a new vision for South Lathrop supporting the development of industrial/commercial/office uses that capitalize on the Plan Area's location attributes, and take advantage of market opportunities.
- Commercial Office Core – Establish a core of regional and local serving business and commercial uses that capitalize upon the visibility and access provided by SR 120, and augment City sales tax revenues.
- Employment Opportunities – Provide for local and regional employment opportunities in a business park setting that take advantage of the Plan Area's high level of accessibility, allow for expansion of the City's economic base, and reduce the need to commute to more distant services and jobs.
- Transportation Choices – Provide an efficient circulation system that satisfies public safety access standards and maximizes alternatives to the car including walking, biking, and public transit.



Legend

- LI Limited Industrial
- W Well Site
- CO Commercial Office
- OS Open Space
- SC Service Commercial
- Potential Future Right-of-Way
- D Detention (Approximate Location)*
- Project Boundary

*Basin locations and size shown are conceptual and subject to additional land planning and engineering. Basins may be relocated and reconfigured within each drainage area.

Figure 3.1: Land Use Plan		Date: April 2010
Lathrop Gateway Business Park Specific Plan Lathrop, California	NOT TO SCALE	 <small>DEVELOPING INNOVATIVE DESIGN SOLUTIONS</small>

- Public Facilities and Services – Provide infrastructure and services that meet City standards, integrate with existing and planned facilities and connections, and do not diminish services to existing residents of the City.
- Phasing – Establish a logical phasing plan designed to ensure that each phase of development would include all necessary public improvements required to meet City standards.
- Environmental Mitigation – Create a “self mitigating” plan that, to the extent practical, incorporates environmental mitigation measures into project design.
- Economic Contribution – Strengthen the City’s economic base through Lathrop Gateway Business Park job creation; development related investment; disposable income from future employees; and increased property, sales, and transient occupancy taxes.

3.4 ENTITLEMENTS

Lathrop Gateway Business Park Specific Plan

The primary element of the proposed project is a request for City approval of the Lathrop Gateway Business Park Specific Plan. Adoption of the proposed specific plan will involve a series of related actions, including a general plan amendment, pre-zoning, annexation, Bicycle Transportation Plan Amendment, Utility Master Plan Amendment and Development Agreement. In addition, as development projects within the Plan Area are initiated, site plans and other site specific approvals will be requested. The proposed specific plan and general plan amendment would be required in order to maintain consistency between planned development and the City of Lathrop’s land use planning documents and implementing ordinances as well as with applicable state regulations. Other entitlements would be processed within and be required to conform to this overall planning framework. These actions are described in subsequent sections.

The Lathrop Gateway Business Park Specific Plan itself would provide the planning framework for and regulatory tool governing the future urban development of the Plan Area. Authority for the preparation of specific plans is found in California Government Code Sections 65450-65457; the Lathrop Gateway Business Park Specific Plan has been drafted to conform to these requirements.

The Lathrop Gateway Business Park Specific Plan is organized into eight chapters plus the appendices that contain the following information:

- | | |
|-----------|--|
| Chapter 1 | An Executive Summary that provides a brief description of the specific plan content. |
| Chapter 2 | The specific plan context and overall setting. |
| Chapter 3 | A detailed description of the Land Use Plan and lists policies and development standards for each proposed land use. |

Chapter 4	A detailed overview of the existing and proposed transportation system.
Chapter 5	Design guidelines provides the site planning, including landscape and open space, and architectural standards for each land use.
Chapter 6	Summarizes the proposed infrastructure (i.e., “backbone”) for sewer, water and drainage within and serving the Plan Area.
Chapter 7	The project’s financing plan summarizes the phasing of backbone infrastructure and roadways; the construction costs of major facilities; fee structures and funding programs.
Chapter 8	Procedures and provisions for implementation of the specific plan, including the handling of subsequent entitlements and amendments of the plan as well as financing of required improvements.
Appendix	Several supporting documents are included in the specific plan including the General Plan Consistency Analysis and supplemental development regulations.

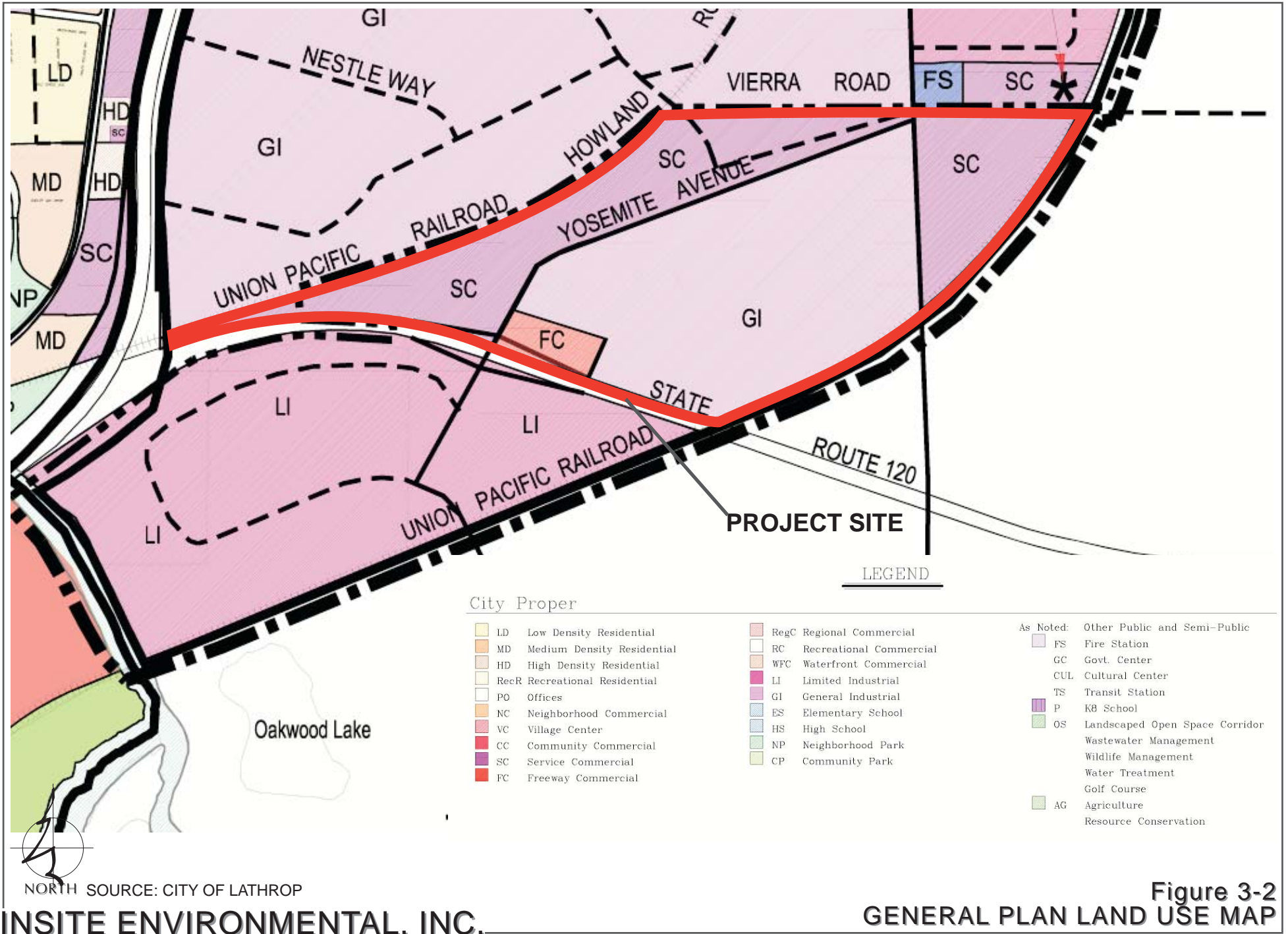
The relevant contents of each of these sections are described in Section 3.5 Development Details.

The various land use designations, improvement plans, guidelines and standards and other provisions of the plan will provide the primary basis for City evaluation of future development within the Plan Area, including review and approval of site plans and building designs for the potential commercial office, limited industrial and service commercial uses. It is anticipated that the specific plan will be adopted by City ordinance.

The Lathrop Gateway Business Park Specific Plan is being reviewed under the California Environmental Quality Act (CEQA) in this Environmental Impact Report (EIR) and is considered a “project” for CEQA purposes (Section 15161 of the State CEQA Guidelines). The City’s intention in preparing a project EIR is that no further environmental analysis will be required for additional regulatory approvals following adoption of the specific plan absent grounds for further environmental review in a Negative Declaration, Subsequent EIR, a Supplemental EIR, or an Addendum EIR (Sections 15162-15164 of the State CEQA Guidelines). This possible need for additional environmental documentation will be based on City review of individual site plan applications for their consistency with the specific plan at the time of their submittal.

Annexation

The proposed project would involve annexation of a total of approximately 384 acres into the City of Lathrop. The proposed annexation area is contiguous to the existing City boundary along most of the north and western boundaries of the Plan Area. The annexation area consists of approximately 215 acres of lands controlled by the applicant. Approximately 169 acres of lands to be annexed, predominately located in the western portion and along the northern boundary of the Plan Area are not controlled by the applicant. Annexation of these lands would be City-initiated.



NORTH SOURCE: CITY OF LATHROP

General Plan Amendments

City adoption of the Lathrop Gateway Business Park Specific Plan would involve amendments to the existing land use designations of the Lathrop General Plan (Figure 3-2). The City's general plan designates the majority of the central portion of the Plan Area as General Industrial; and another smaller general plan designation along SR 120 and Yosemite Avenue within the Plan Area as Freeway Commercial. Approval of the specific plan would change Freeway Commercial to Commercial Office and General Industrial to Limited Industrial. The land use designation of Service Commercial would remain but would be reconfigured under the specific plan. The area designated Service Commercial east of D'Arcy Parkway and north of Yosemite Avenue would remain as Service Commercial, as well as the area east of McKinley Road. However, a portion of the area west of D'Arcy Parkway and north of Yosemite Avenue would remain as Service Commercial but change from Service Commercial to Commercial Office and Limited Industrial west of Guthmiller Road/Yosemite Avenue, south of Yosemite Court.

Prezoning

The Plan Area is currently in the planning jurisdiction of, and zoned by, the County of San Joaquin. The San Joaquin County Local Agency Formation Commission will require that the Plan Area be pre-zoned by the City in conjunction with the proposed annexation. Project applications include a request for City pre-zoning of the entire Plan Area consistent with the land use designations and policy requirements of the Lathrop Gateway Business Park Specific Plan and Lathrop General Plan. Pre-zoning, once approved by the City, would take effect upon annexation of the Plan Area into the City of Lathrop.

Prezoning for the Lathrop Gateway Business Park Specific Plan will follow the basic General Plan Land Use Designation. Similar to other Lathrop specific plans, the Zoning Districts will be called out and an abbreviation for the Gateway Business Park Specific Plan, such as "GW" for Gateway, would be added on to reference this particular area (i.e., the zoning for Limited Industrial would be LI-GW).

Development Agreements

The proposed project includes a request for approval of one or more Development Agreements (DAs) governing the relationship between the City and the Lathrop Gateway Business Park Specific Plan applicants. A primary purpose of DAs may be to regulate development density and intensity. The DA(s) may also be used to establish other City/applicant agreements related to the project. Such agreements may include commitments to project entitlements and development standards as well as any other administrative and/or financial relationships that may be defined during the review of the specific plan. These relationships have not been defined at present and would be developed during the review of the Lathrop Gateway Business Park Specific Plan and incorporated into the DA(s) prior to project approval.

3.5 DEVELOPMENT DETAILS

The Land Plan

The Land Use Plan (Figure 3-1) illustrates the distribution of land uses within the Plan Area. Table 3.1 provides a summary of these land uses. The number of acres and therefore square footage of developable area may vary slightly depending on more accurate survey information and the final alignment of roadways; however, the total acreages and building square footage projections establish an approximate carrying capacity for the Plan Area.

The Plan Area is laid out as three interdependent sub-areas or districts. Each of the three districts is defined by its land use, location, size, character and function. The Land Use Plan proposes 56.7 net acres of new commercial office uses in the western sub-area, 167.6 net acres of limited industrial uses primarily in the central sub-area, and 83.0 net acres of service commercial uses in the eastern sub-area. The Plan also includes 1.6 net acres of open space, 2.9 acres divided between three well sites and 15.6 net acres to storm water detention areas. The following table provides a summary of the Land Uses including a proposed Floor Area Ratio (FAR) Average that was used to generate a maximum square footage of buildable area in each sub-area or district:

The Western Area-Commercial Office and Limited Industrial

Commercial Office (CO) use in the western area have been directed toward the State Route 120 and Yosemite Avenue corridors to capitalize on the vehicular access, visibility, and the logical “capture” market for these uses along these corridors. The sections of the Lathrop Gateway Business Park around the SR-120/Guthmiller Road interchange form the hub or core of the commercial component, with opportunity for supporting office uses on the northeast and northwest quadrants of the interchange. Office and Commercial uses provide regional as well as local serving business/professional workspace. Specific users for this district might characteristically include a full range of large or small commercial operations, professional and administrative support services, administrative offices, financial institutions, recreational facilities, eating establishments, hotels/motels, incubator/research and development space, and the like.

Table 3.3 in the Specific Plan provides a chart showing permitted uses under this land use category. The CO land use area comprises 56.7 net acres and can accommodate an estimated maximum of 740,956 square feet of gross leasable space. An area designated Limited Industrial is located near the western terminus of Yosemite Court. Refer to the discussion below entitled “The Central Area-Limited Industrial” for a brief description of Limited Industrial uses permitted under the Lathrop Gateway Business Park Specific Plan.

TABLE 3-1

LAND USE SUMMARY

Land Use		Acreage [Net]	Total Sq. Ft. Per Area of Land Use	FAR Range	FAR Average	Max. Sq. Ft. of Building Space
Commercial Office	CO	56.7	2,469,852	.20 to .60	0.30	740,956
Limited Industrial	LI	167.6	7,300,656	.15 to .65	0.43	3,139,282
Service Commercial	SC	83.0	3,615,916	.15 to .66	0.43	1,554,656
Well Site	W	2.9				
Detention	D	15.6				
Open Space	OS	1.6				
Subtotal		327.4				
Major & Existing Roads		56.5				
TOTAL		383.9				5,434,894

The Central Area—Limited Industrial

Located primarily in the central portion of the Plan Area with immediate access from both Yosemite and McKinley Avenues, the Central Area is comprised of Limited Industrial uses (LI), south of Yosemite Avenue, stretching southward to SR 99 and the Union Pacific Railroad line at the Plan Area boundary. A smaller area of LI is located at the western tip of the Plan Area. Envisioned as an important employment-generating land use, this LI district would allow for a broad range of use types including industrial, manufacturing, warehousing/distribution, office, retail sales, retail services, trailer and recreational vehicle sales, research and development, equipment and machinery repair, sales, rental, and other such uses and services necessary to support them. Because it is anticipated that a substantial portion of this district's users will be "high cube" warehousing and the like, this area does not depend as heavily on visibility from major transportation corridors as the CO designation and therefore is located along only a limited portion of the SR-120 highway corridor. However, for the purposes of truck transport of goods and services, easy access to the highway from McKinley and Yosemite Avenues is essential. Table 3.3 in the Specific Plan provides a chart showing the full range of permitted uses under this land use category. The LI district comprises 167.6 net acres and can accommodate up to an estimated maximum of approximately 3,139,282 square feet of gross leasable space.

The Eastern Area—Service Commercial

The Service Commercial District is envisioned for uses not as vitally dependent on highway visibility as Commercial Office but nevertheless is afforded immediate arterial road access to and from McKinley and Yosemite Avenues in the eastern sector of the Plan Area. This land use is envisioned to be characterized by such specific users such as professional and administrative support services, automotive, boat, and other vehicle sales and services, rentals, eating establishments, wineries and wine cellars, other retail sales and services, equipment and machinery repair, research and development/laboratory services, general, light, and technology-based industrial users, warehousing

and distribution, and the like. Table 3.3 provides a chart showing permitted uses under this land use category. The SC District comprises 83.0 net acres and can accommodate up to approximately 1,554,656 square feet of gross leasable space.

Circulation Plan and Transit Services

The Lathrop Gateway Business Park Specific Plan proposes a network of streets and pathways to serve the Plan Area. Regional streets located within the Plan Area are Yosemite Avenue/Guthmiller Road and McKinley Boulevard. The SR 120/Yosemite-Guthmiller interchange provides regional access to the Plan Area. The Specific Plan specifies a hierarchy of roadways and also encourages walking, biking and public transit alternatives to single occupancy vehicles.

Arterial streets (which includes six-lane and four-lane roads) serve to convey significant “cross-town” traffic. These streets will provide for efficient access through the City of Lathrop, and connections to major commercial uses, employment centers, and amenities. Four arterial streets exist in the Plan Area: Yosemite Avenue, Guthmiller Road, D’Arcy Parkway and McKinley Avenue. These arterials may need improvements or upgrades due to the Specific Plan effort. These streets have been excluded from the calculations of developable acres in the Land Use Plan.

Collector streets provide connections into the development, linking to commercial office, limited industrial and service commercial uses. These streets have also been excluded from the calculations of developable acres in the Land Use Plan.

The Lathrop-Manteca ACE station is currently located at the northwest intersection of Yosemite Avenue and the UPRR tracks, just to the north of the project site. This station location, in addition to the provision for a system of walkways, bikeway, and vehicular connections to the station provides a functional multi-modal transportation network accommodating automobiles, bicycles, pedestrians, and transit. Service Commercial (SC), Commercial Office (CO), and Limited Industrial (LI) land uses are located such that transit/pedestrian and transit/bicycle trips for future employees and visitors are convenient and highly accessible.

Within the Plan Area, and in accordance with the Citywide Lathrop Bicycle Transportation Plan, a combination Class I (10-ft. bikeway separated from roadway) is planned to traverse the Plan Area from the southwest corner along the south side of the existing UPRR alignment and along Yosemite Avenue to the site’s eastern boundary and beyond. This bikeway system will provide access to all main roads on the site, as well as to the Lathrop-Manteca ACE Transit station to the northeast of the Plan Area.

Backbone Infrastructure

Backbone Infrastructure refers to onsite and offsite infrastructure improvements that will be required to accommodate development proposed by the Lathrop Gateway Business Park Specific Plan. Major infrastructure items, not including future roadway improvements that are discussed in detail in the specific plan and this section of the EIR include potable water, wastewater, recycled water, drainage and flood control. Other public services and utilities, such as police, fire, energy, communications and solid waste are discussed in the Utilities and Services section of this EIR.

Water

The City of Lathrop will be responsible for providing water service to the Plan Area once infrastructure is extended to the area by future users and accepted by the City of Lathrop. The sources of water shall be groundwater from existing wells and/or an expansion of the City's well field, and from the surface water sources from Phase 1/Phase 2 expansion of the South County Surface Water Supply Program (SCSWSP) by the South San Joaquin Irrigation District (SSJID). Surface water will be treated off-site at a central facility outside of the City of Lathrop. Groundwater may be treated at the existing Well #21 site within the Plan Area or possibly at the new wells. It is also possible that arsenic treatment of groundwater could occur at an offsite central facility.

Each of the major roadways in the Plan Area includes a water main. These proposed mains form a looped infrastructure water system into which individual industrial and commercial parcels will subsequently be connected. The exact size of the water mains will be determined through a water model analysis that considers the rest of the City's water system and pressures necessary to meet fire flow requirements.

The City's Water Master Plan calls for a million-gallon storage reservoir and booster pump facility to serve the Lathrop Gateway Business Park Specific Plan area. The timing of the water storage reservoir construction will be determined as part of a future water system analysis. The water tank could potentially be located anywhere within the Plan Area. The exact location of the water tank will be determined when more detailed development proposals are submitted.

Wastewater

The proposed Plan Area will be served by the City of Lathrop. At project build-out, the entire Plan Area will be served by a combination gravity sewer system, sewage lift stations and force mains that will be utilized to direct flows to a treatment facility. There are two treatment facility options: 1) the City of Lathrop's Water Recycling Plant (WRP) #1 and/or #2, or 2) the City of Manteca's treatment plant to the east under agreement between the two cities. As shown on Figure 3-3, generated wastewater can be collected and pumped to the north along D'Arcy Parkway to WRP #1 and/or #2; or it could be moved to the east to the City of Manteca's treatment plant.

If the wastewater treatment occurs at WRP #1 or #2, the treated recycled water would be disposed of through land application. The Lathrop Gateway Business Park Specific Plan proposes to make recycled water available for public irrigation uses within the Plan Area (refer to Figure 3-4). Recycled water not utilized for onsite irrigation will be piped offsite to be held in ponds and /or used for land application disposal. Parcels within the northwest part of Lathrop have been identified for disposal purposes. The parcels were previously identified in the City's Report of Waste Discharge (RWD) and Waste Discharge Requirements (WDR) issued by the Regional Water Quality Control Board (RWQCB). As discussed under Chapter 1.0, *Introduction*, the construction and operational impacts of these offsite disposal basins, fields and conveyance system were evaluated in several related CEQA documents.

An estimate indicates that the minimum overall off-site pond area to serve full build-out of the Lathrop Gateway Business Park Specific Plan is approximately 22 acres, assuming an average pond depth of 14 feet with an additional two feet of freeboard (berms to be 12 feet above ground and pond bottom four feet below ground) and assuming 95 acres of off-site irrigated disposal fields. Sites

that are under consideration to be used for ponds and/or disposal fields are shown on Figure 3-5.

Land application will consist of lined storage basins to hold recycled water during non-irrigation periods and agricultural fields to dispose of the water during irrigation periods. Flood irrigation and perimeter berms around the fields will be utilized avoid any offsite runoff. A portion of the pipeline system between the Plan Area and the disposal field in north Lathrop has already been constructed.

Storm Drainage

The Plan Area is essentially flat, with surface flows moving roughly in a westerly direction. Site development will necessitate the need for the Plan Area to construct six detention basins, pump stations, force mains and an outfall structure into the San Joaquin River. An offsite pipeline will need to be constructed between the project site and the San Joaquin River.

As shown on Figure 3-6, land is allotted within the Plan Area for detention and/or retention facilities for the purpose of managing stormwater runoff and preventing flooding within the site and surrounding communities. The total peak discharge rate from the Lathrop Gateway Business Park Specific Plan area will be limited to 30 cubic feet per second (cfs), which is less than 10% of the peak 100-year flow rate. As demonstrated in Figure 3-6, the Plan Area consists of six drainage sheds, sheds A through F. Each shed contains a detention basin to limit the overall discharge from the Plan Area to the San Joaquin River. Shed A contains a pump station in addition to the detention basin. The pump station is sized to accommodate the entire Plan Area. Sheds B through F will all discharge a limited amount of runoff into the collection system that connects to the Shed A basin and pump station. The Land Use Plan has allotted 15.6 net acres for detention/retention basins.

Phasing

The Lathrop Gateway Business Park Specific Plan land uses, and the backbone infrastructure required to serve these uses will be designed and developed in six phases. The approximate boundaries of each proposed phase is reflected on Figure 3-7. Each phase is designed to be able to provide adequate access and utilities for the development of large parcels. In general, the Specific Plan phasing program has been structured to ensure that the improvements in each phase can support associated development, and that development in each phase can support the costs of required improvements. For a more detailed discussion of the phasing program for the Plan Area refer to Section 6.3, Phasing Program, of the Lathrop Gateway Business Park Specific Plan.

3.6 PERMITS AND APPROVALS

CEQA requires than an EIR identify the principal discretionary actions under consideration in the EIR as well as any other agency permits and approvals that may require consideration under CEQA. The principal discretionary permits and approvals required for the Lathrop Gateway Business Park project would be granted by the City of Lathrop and the San Joaquin County LAFCO. Permits and approvals from other agencies may also be necessary in the course of implementing land uses identified in the Specific Plan. Anticipated and potential permits and approvals are identified in Table 3-2.

TABLE 3-2
APPROVALS AND PERMITS

Agency	Permit/Approval
City of Lathrop	Specific Plan Approval; General Plan Amendment; Pre-zoning; Bicycle Transportation Plan Amendment; Utility Master Plan Amendment; Environmental Impact Report Certification; Annexation Approval and Development Agreement Approval
San Joaquin County Local Agency Formation Commission	Annexation Approval
San Joaquin Valley Unified Air Pollution Control District	Indirect Source Rule Permit, Authority to Construct, Permit to Operate for stationary sources of air pollution (auxiliary power, storm drainage pump station)
San Joaquin County Council of Governments	Collection of fees and implementation of required standards and procedures under the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.
California State Reclamation Board	Encroachment permit for work on or adjacent to levees, including storm drainage outfall
California Department of Fish and Game	Stream alteration permit for storm drainage outfall
California Water Resources Control Board	Section 401 Water Quality Certification, in conjunction with US Army Corps of Engineers Section 404 Permit
US Army Corps of Engineers	Section 404 permits for discharge of fill to Waters of the U.S. and wetlands, including development of any jurisdictional irrigation canals and construction of storm drainage outfall. This permit will involve consultations with federal fish and wildlife protection agencies.

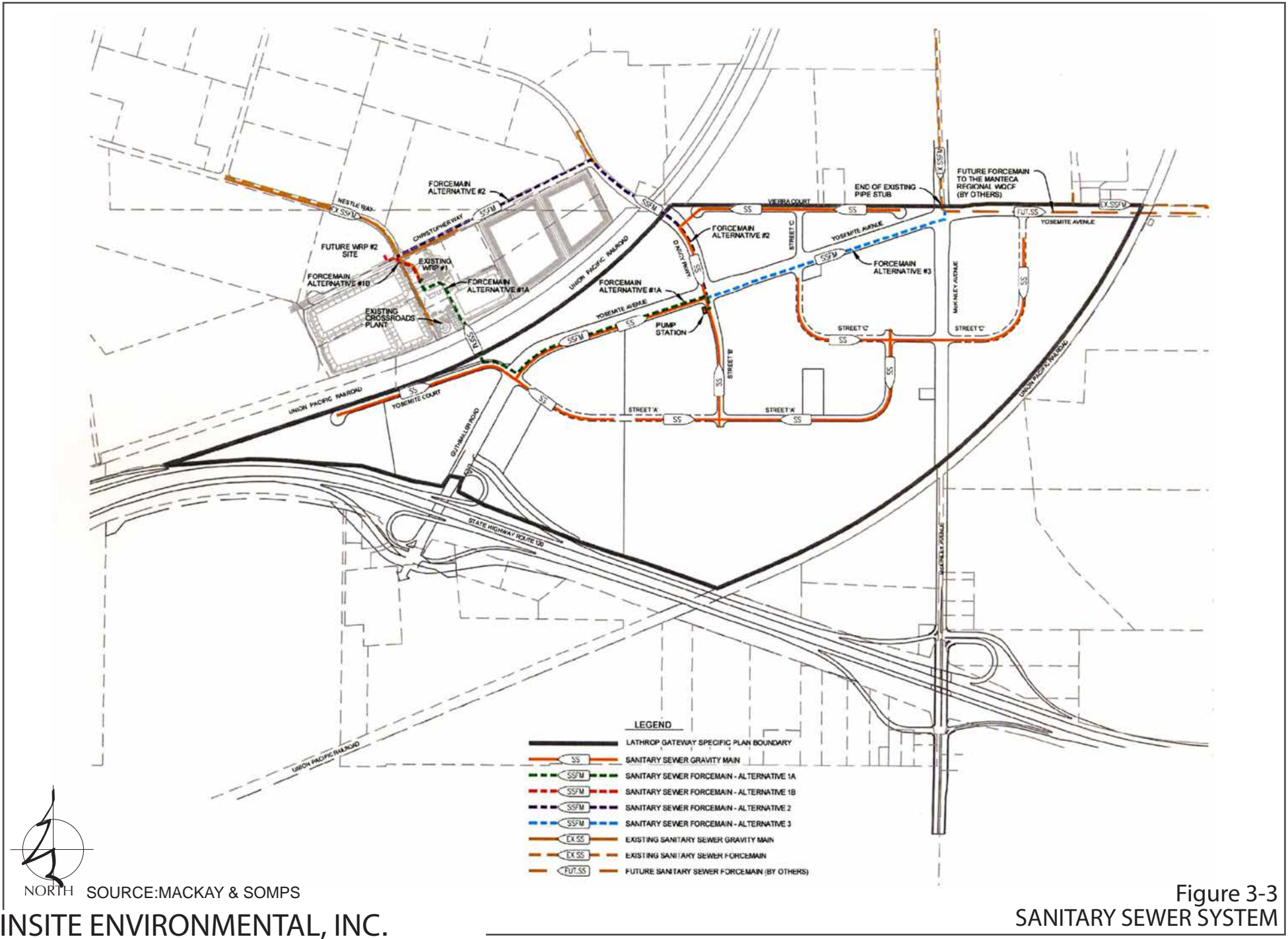
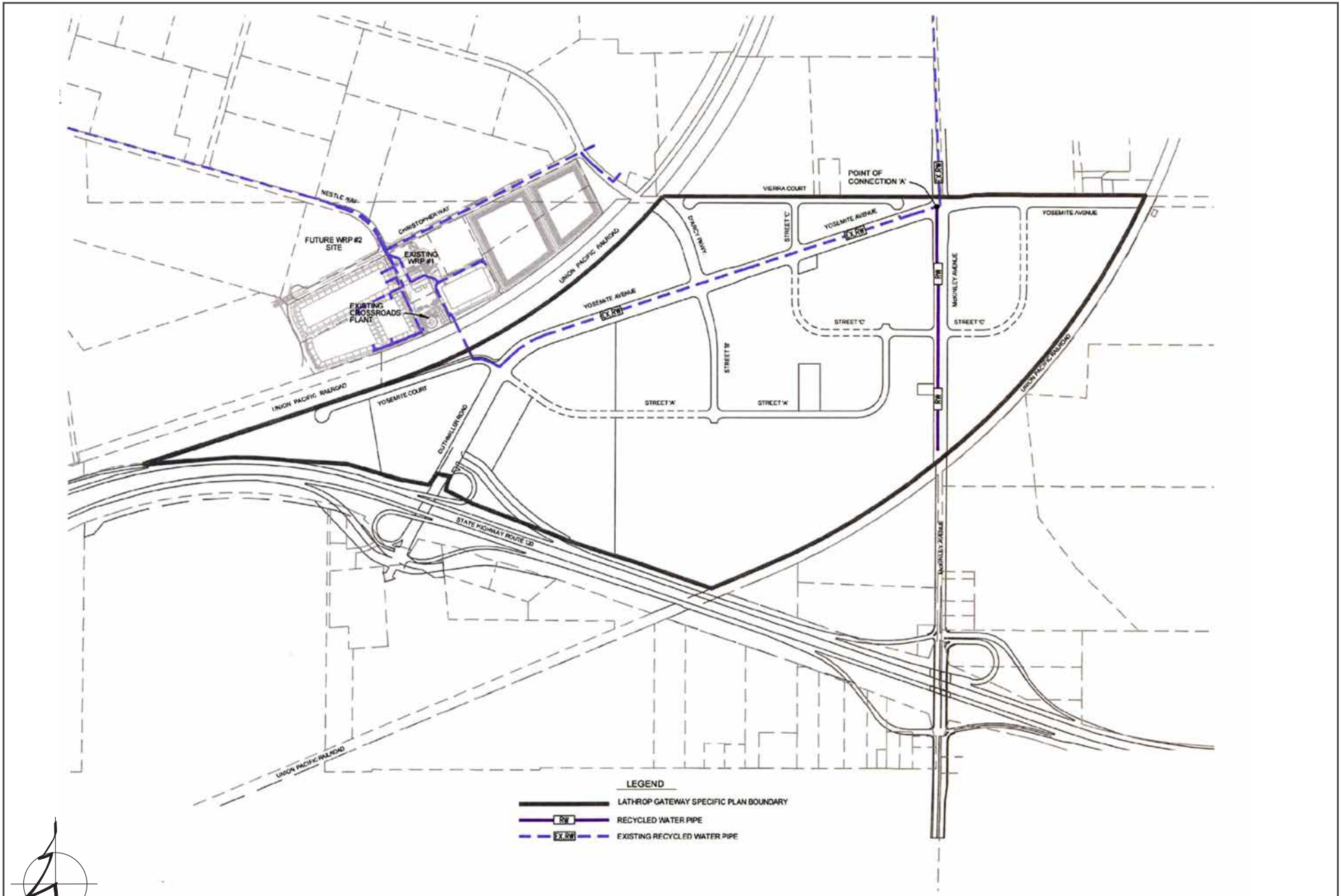
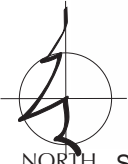


Figure 3-3
SANITARY SEWER SYSTEM



LEGEND

-  LATHROP GATEWAY SPECIFIC PLAN BOUNDARY
-  RECYCLED WATER PIPE
-  EXISTING RECYCLED WATER PIPE



NORTH SOURCE:MACKAY & SOMPS

INSITE ENVIRONMENTAL, INC.

Figure 3-4
RECYCLED WATER SYSTEM

NOTES:
 1. FACILITY LOCATIONS SHOWN ARE CONCEPTUAL
 2. FACILITIES SHOWN ARE NOT TO SCALE

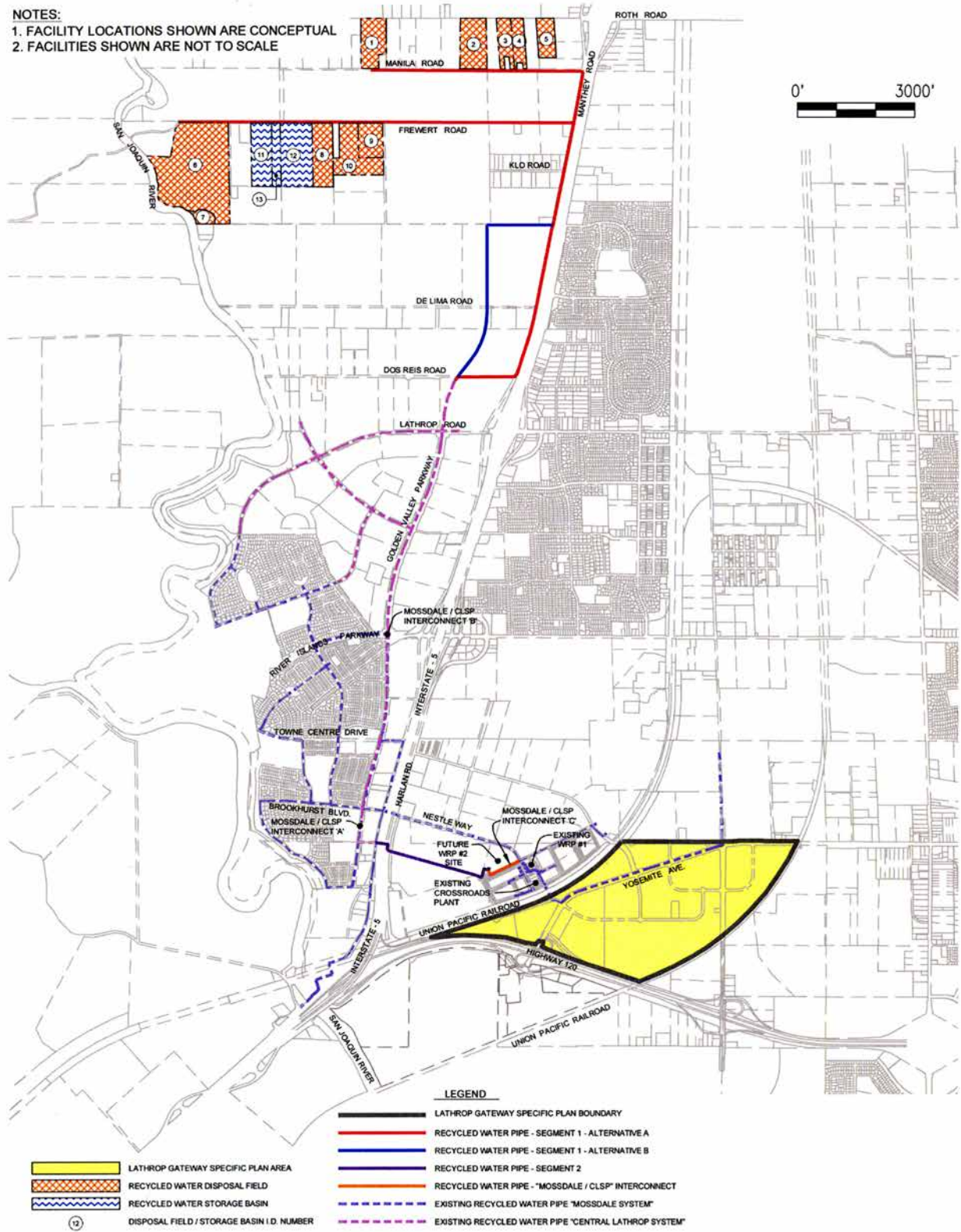
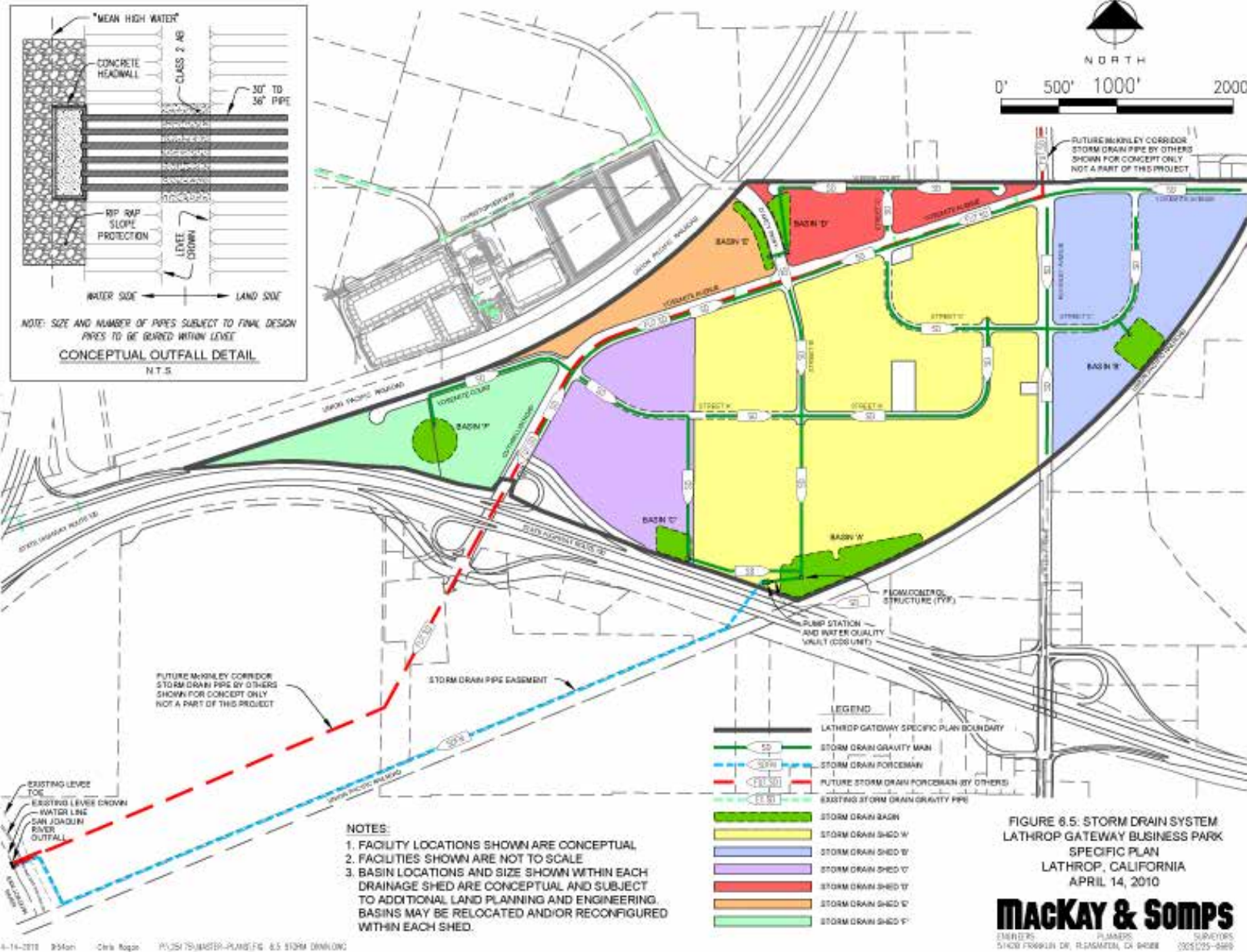
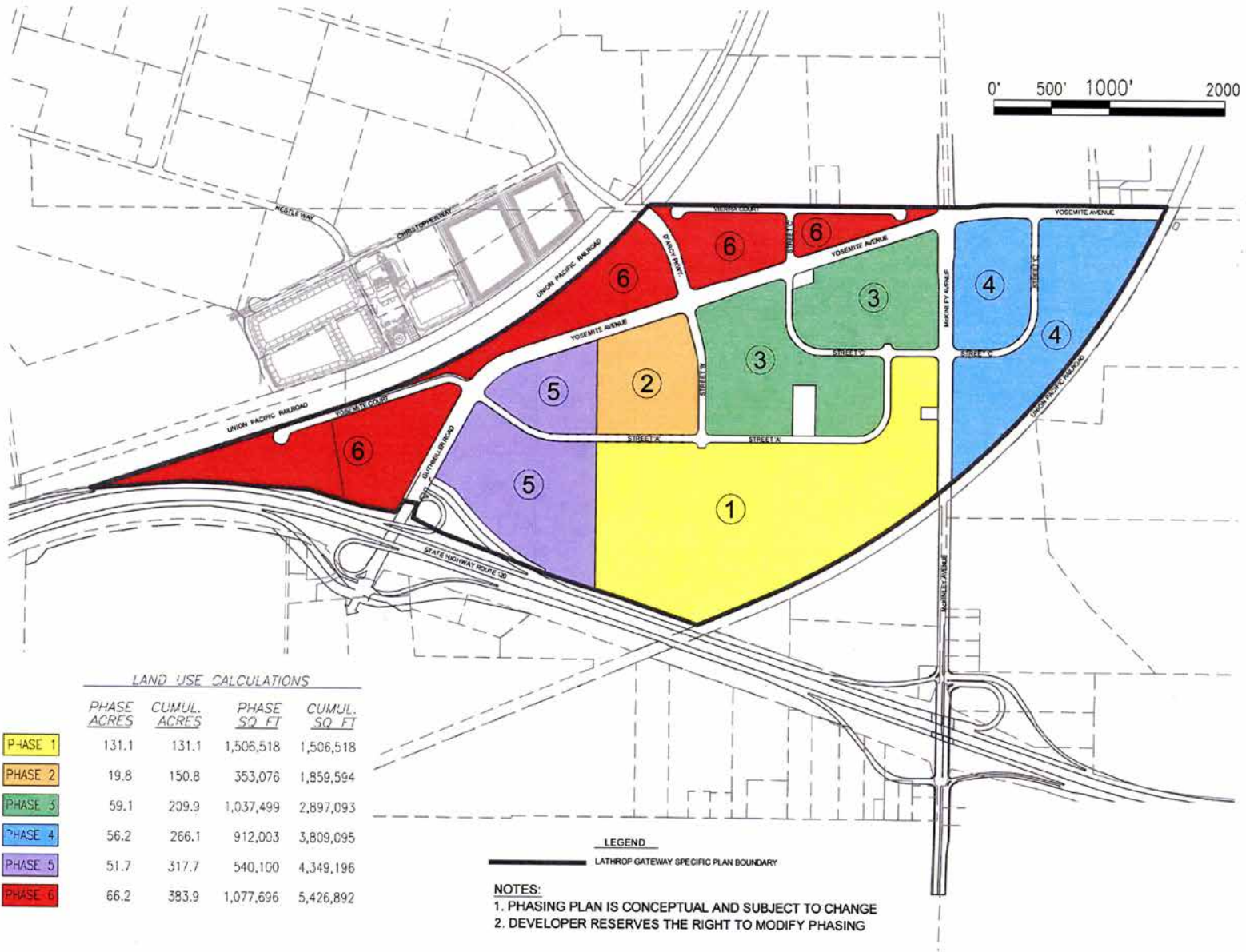


Figure 3-5
 RECYCLED WATER DISPOSAL (OFF-SITE)



SOURCE: MCKAY & SOMPS
INSITE ENVIRONMENTAL, INC.

Figure 3-6
STORM DRAIN SYSTEM



LAND USE CALCULATIONS

	PHASE ACRES	CUMUL. ACRES	PHASE SQ FT	CUMUL. SQ FT
PHASE 1	131.1	131.1	1,506,518	1,506,518
PHASE 2	19.8	150.8	353,076	1,859,594
PHASE 3	59.1	209.9	1,037,499	2,897,093
PHASE 4	56.2	266.1	912,003	3,809,095
PHASE 5	51.7	317.7	540,100	4,349,196
PHASE 6	66.2	383.9	1,077,696	5,426,892

LEGEND

— LATHROP GATEWAY SPECIFIC PLAN BOUNDARY

NOTES:

1. PHASING PLAN IS CONCEPTUAL AND SUBJECT TO CHANGE
2. DEVELOPER RESERVES THE RIGHT TO MODIFY PHASING



NORTH SOURCE: MACKAY & SOMPS

Figure 3-7
PHASE I & II BOUNDARIES

4.0 AESTHETICS

INTRODUCTION

This section of the EIR describes the visual character of the area potentially affected by proposed land uses identified in the Lathrop Gateway Business Park Specific Plan. Existing characteristics of the Plan Area and surrounding properties are described, and potential impacts on the visual character of the Plan Area are evaluated. Key aesthetic issues to be considered include views to and from the Lathrop Gateway Business Park Specific Plan area (Plan Area), especially "public" views from SR 120, and the creation of new light and glare from the proposed land uses.

One comment was received during the NOP comment period that pertained partially to Aesthetics and Visual Resources. An owner within the Plan Area, Mr. Michael Brown, discussed his desire that the Plan Area continue to allow outdoor advertising signs as a permitted use; and objected to a large open space buffer between the Plan Area and SR 120. The sign issue will be discussed in detail in Chapter 12, Land Use and Planning, as the comment pertains more to zoning versus aesthetics. The open space buffer area referenced by Mr. Brown was shown in error. It is not shown on the current Land Use Plan for the area; therefore, no additional discussion is necessary.

REGULATORY SETTING

There are no federal or state regulations regarding aesthetics and visual resources that pertain to the proposed project. Locally, the San Joaquin County General Plan includes objectives and policies relevant to aesthetic resources in the project vicinity. The City of Lathrop General Plan identifies visual and scenic resources within the city and recommends measures to protect these resources. If approved, the Plan Area will be annexed into the City of Lathrop; as a result only the City of Lathrop General Plan would be applicable to the Plan Area.

City of Lathrop General Plan

The City General Plan identifies the following scenic resources in the Lathrop area; a) views of agricultural lands to the west and south; and b) views of the Coast Ranges to the west. The City General Plan recognizes that views of the San Joaquin River also could be considered a scenic resource. However, views of the river are obscured by the surrounding levee system. Thus, the San Joaquin River can be viewed only from the tops of levees, inside the levees at water level and bridge crossings. In addition to these scenic resources, the City General Plan suggests that the current "degree of darkness" in the City, especially in residential neighborhoods, is an important visual resource. The current degree of darkness allows clear views of the nighttime sky (stars, constellations) as weather permits.

The following City General Plan policies in the Resource Management Element for achieving visual and scenic quality in new developments apply to the proposed project if not addressed in the Specific Plan:

- An architectural design review shall be required of all planned developments and of all multifamily, office, commercial, institutional, and industrial uses.
- All outdoor storage areas shall be visually screened with ornamental fencing or walls and with landscaping.
- All gas, electrical, telephone, and cable distribution lines should be placed underground; if overhead transmission line rights-of-way are required, they should be incorporated into open space corridors so as to minimize their visual impacts on the urban environment.

City of Lathrop Zoning Ordinance

Chapter 17.92, Landscaping and Screening Standards, of the City Zoning Ordinance contains several sections that regulate aesthetic or visual standards for development in the City. These include standards for landscaping of commercial and industrial developments; requirements for the contents of landscape plans; street, road, and parkway landscaping standards; requirements for a tree and shrub schedule; and planting and maintenance standards. Some of these standards would be applicable to the proposed project, including the following:

- A landscape plan is required for all new residential, commercial, and industrial developments. These plans would include landscape materials, trees, shrubs, groundcover, turf, etc.
- Parking lots located on the proposed project site shall include a landscape strip buffer installed continuously along the property line.
- All outside storage areas shall be screened so as not to be visible from adjacent properties and public rights-of-way. Screening shall be a minimum of six feet in height, and consist of a solid material. Outside storage is not permitted in front or street side yards, or in front of structures.
- Roof mounted mechanical equipment, tanks, ventilating fans and similar equipment shall be screened from the view of adjacent properties and public rights-of-way at grade. The required screens shall be architecturally compatible with the building or structure on which they are used.

All streets, roads, and parkways within the City shall meet the following standards:

- In residential, commercial and industrial zones, trees shall be planted in accordance with the landscape and screening standards. In addition, the following requirements shall apply:
 - Trees shall be planted between four feet and ten feet from a public right-of-way. Trees should also be a minimum of ten feet from any driveway.
 - Trees planted on street frontages where noise attenuation is required shall be planted in a minimum five-foot landscape strip or in tree wells. Each tree shall be spaced no farther than 20 feet apart.

ENVIRONMENTAL SETTING

The 384 gross acres that make up the Plan Area is situated south of Vierra Road and Yosemite Avenue, between the two Union Pacific Railroad (UPRR) tracks that define the western and eastern boundaries, and is located north of SR 120, which is elevated 20 plus feet above the Plan Area. The majority of the Plan Area consists of agricultural uses. McKinley Boulevard, Yosemite Avenue, and Guthmiller Road run through the area. Rural residential homes are scattered along McKinley Boulevard and are intermingled with agricultural uses. McKinley Boulevard intersects the eastern UPRR tracks as an at-grade crossing.

Additional residences are located along Yosemite Avenue east of McKinley Boulevard. These residences are typical detached one- and two-story homes with varying setbacks from the road and minimal landscaping. A few commercial and residential buildings are located west of McKinley along both Yosemite Avenue and Vierra Court. A trucking facility and other industrial buildings line Yosemite Avenue.

The UPRR tracks border the Plan Area's western and eastern boundaries. The tracks are elevated on an earthen berm. SR 120 is elevated to the south of the Plan Area. Vierra Court and Yosemite Avenue border the site to the north. Beyond these roads are a variety of visual landscapes from row crops to large warehouse type buildings. A Pacific Gas and Electric (PG&E) substation is also located to the north of the Plan Area and contains all of the equipment and structures needed to run the facility; this substation is visible from the Plan Area. The ACE Station is also visible to the north of the Plan Area and consists of the UPRR tracks, a few covered benches, and nighttime lighting. Figures 4-1 through 4-2 are representative images taken on August 12, 2009 of some on-site and off-site photographs taken of the project site area.

Agricultural uses and three trucking-type facilities are located south of SR 120 and are bounded by the UPRR tracks and the San Joaquin River, which is contained within a man-made levee. The levee obstructs any views of the San Joaquin River. Agricultural uses can be found along the entire length of the UPRR tracks between the San Joaquin River and SR 120.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Threshold

According to the CEQA Guidelines, a project will ordinarily have a significant effect on the environment if it would have a substantial, demonstrable negative aesthetic effect. Further, a project may have significant aesthetic effects if it would a) have a substantial adverse effect on a scenic vista, b) substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway, c) substantially degrade the existing visual character or quality of the site and its surrounds, or d) create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Effects on Scenic Routes, Vistas and Off-Site Lands

A site visit was performed on August 12, 2009 at which time the site and surrounding area were observed and photographed from all public roads, including SR 120, as well as areas that were accessible, including the San Joaquin River. Aerial maps were also used as a tool in describing the visual characteristics of the Plan Area and surrounding area. This qualitative analysis compares the existing built environment to the future built environment. Key view corridors were examined, and existing views to and from the site were compared to those that would be expected to occur in the future.

The Plan Area is located south of the City of Lathrop adjacent to SR 120. A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. Scenic vistas that have been identified in the General Plan that could potentially be impacted by proposed development within the Plan Area include views of agricultural lands, views of the Coast Ranges to the west, and views of the San Joaquin River to the south. SR 120 is elevated and blocks views between the site and the land to the south of SR 120. Views to and from the San Joaquin River are obstructed by the earthen berm/levee. This would eliminate the possibility that buildings proposed by the project would be visible from the river.

Approximately one-half of the Plan Area is agriculture and there is a limited amount of agricultural land that surrounds the site. These agricultural lands do not provide scenery of remarkable character and views of the Plan Area are not unique in the region. The conversion of the agricultural land within the Plan Area to developed industrial and commercial uses would not constitute the loss of a scenic vista.

Level of Significance: Less than significant.

Mitigation Measure: None required.

Effects on Existing Visual Characteristics of the Site

The Plan Area currently consists primarily of agricultural uses with some rural residential, commercial, and industrial uses. The majority of the site is agricultural and open fields. The conversion from these existing uses to urban development would result in a substantial alteration of the visual character of the Plan Area.

The entire Plan Area is visible from SR 120, scattered rural residences to the east, and the Lathrop Industrial Park (LIP) to the north. Upon build out of the Lathrop Gateway Business Park the Plan Area would resemble similar types of development in the region as seen from I-5 and SR 120. Views of the Plan Area from SR 120 would be substantially altered as agricultural land and other similar uses are replaced by industrial, office and service commercial development. However, implementation of development standards and design guidelines would ensure that the general visual quality and character of the development is consistent and results in less than significant impacts.



← Looking south along D'Arcy Parkway toward Yosemite Avenue Intersection



Looking west from center of the Plan Area toward SR 120. →



← Looking south along McKinley Avenue from Yosemite Avenue.

Looking west along Yosemite Avenue from McKinley Avenue. →





← Look south-west along UPRR right-of-way toward San Joaquin River.

Looking northeast from McKinley and Yosemite Avenue intersection toward nearby Business Park and ACE Station.



← Looking northeast along UPRR right-of-way toward City of Manteca.

Under the Specific Plan, general principles guide the overall Lathrop Gateway Business Park development and lay the foundation for standards and guidelines to be developed, including provisions for landscaping and sustainability efforts applicable to development within the Plan Area. There are both standards and guidelines provided for the entire Plan Area, and others that apply to each land use designation. All standards and guidelines are organized into two sections: a) site design and b) architecture. Within each section, subcategories further define and illustrate design objectives. Proposed landscaping, which would include tree lined streets, will add to the aesthetic qualities of the proposed Plan Area.

Although the Plan Area would be significantly altered, the guidelines and standards within the Specific Plan would ensure consistent development that is in line with the City's vision for the Community's identity, which would reduce this potential impact to a less-than-significant level.

Level of Significance: Less than significant.

Mitigation Measure: None required.

Effects of Offsite Stormwater Pipeline and Outfall Structure on Surrounding Areas

Construction of the proposed offsite stormwater pipeline south of the Plan Area to the San Joaquin River and outfall structure would involve localized and temporary disturbance along the proposed alignment; due to the anticipated rate of construction, disturbance at any point along the alignment would be limited to a maximum of a few days, with proposed bore-and-jack operations requiring a few weeks near the SR 120. Anticipated disturbance would result in short-term adverse aesthetic effects in the immediate vicinity of the segments under construction. Construction disturbance would be located primarily within existing unpaved dirt access roads, on top of the San Joaquin River east levee and undeveloped agricultural lands.

Land uses potentially affected by construction period aesthetic impacts would include existing agricultural uses along the Union Pacific Railroad rights-of-way and industrial uses located near SR 120 and Guthmiller Road/Yosemite Avenue interchange. The existing agricultural and industrial uses are not aesthetically sensitive. Impacts to existing industrial users would be temporary and construction disturbance would be of relatively short duration; as a result potential construction aesthetic effects would be less than significant.

The construction period in the vicinity of the proposed bore-and-jack crossings of SR 120 and the Union Pacific Railroad may be extended to a few weeks. Disturbance in these areas would be confined to the jacking and receiving pits outside the right-of-way in agricultural lands. The scale of disturbance would be relatively small and limited to daytime hours, and would not require excessively large machinery or equipment. Uses adjacent and in the project vicinity, industrial uses and agricultural lands would not be subject to significant aesthetic impacts.

The construction period in the vicinity of the proposed outfall structure along the levee of the San Joaquin River may be extended to a few weeks. The disturbance area will be limited to the pipeline crossing the levee and construction of an outfall structure on the river's side of the levee. Some ground cover will be removed to construct the outfall structure. The scale of disturbance would be

relatively small and limited to daytime hours. In addition, views of the outfall structure will be limited due to the presence of the levee system. The agricultural lands adjacent to the levee would not be subject to significant aesthetic impacts.

The offsite stormwater component of the project would involve less than significant short-term aesthetic effects and would have no significant long-term aesthetic effect as the majority of the facility will be located underground or shielded by the San Joaquin levee system.

Level of Significance: Less than significant

Mitigation Measures: None required

Effects of Light and Glare

Approximately one-half of the Plan Area is in agricultural use and the Plan Area has a limited amount of artificial lighting. Existing artificial lighting is focused along Yosemite Avenue and Vierra Court, where the majority of the existing industrial and commercial development is located. Rural residences throughout the site contribute small amounts of artificial lighting to the site. Development of the Lathrop Gateway Business Park would require lighting of roadways and other facilities not currently present on the 384-acre site. An increase in the amount of nighttime lighting would result obscuring views of the nighttime sky. The increase in paved surfaces and building materials would also increase the amount of glare coming from the site.

Development within the Plan Area would include commercial and industrial type users adjacent to Yosemite Avenue, D'Arcy Parkway and McKinley Road. Potential lighting as part of these uses would include lighting of parking areas, internal circulation and building perimeters, as well as standalone and on-building signage. It is noted that these land uses are not located in a visually-sensitive area and are considered compatible with surrounding uses. However, there are a few residential uses located on McKinley Road, south of the UPRR tracks. Potential light and glare impacts on these rural residents would be reduced to less than significant through the implementation of lighting guidelines included in the Lathrop Gateway Business Park Specific Plan.

Offsite improvements including the stormwater pipeline, outfall structure and recycled water disposal fields and storage basins would contain a negligible amount of new artificial lighting due to the nature of the improvements. Impacts from light and glare created by the offsite improvements are considered to be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

5.0 AGRICULTURAL RESOURCES

ENVIRONMENTAL SETTING

Agriculture has been and continues to be an important part of the economy in San Joaquin County. An estimated 4,000 farms are located within the county and cover an estimated land area of 1,400 square miles. The general trend in agriculture has been toward less acreage harvested, but higher product values.

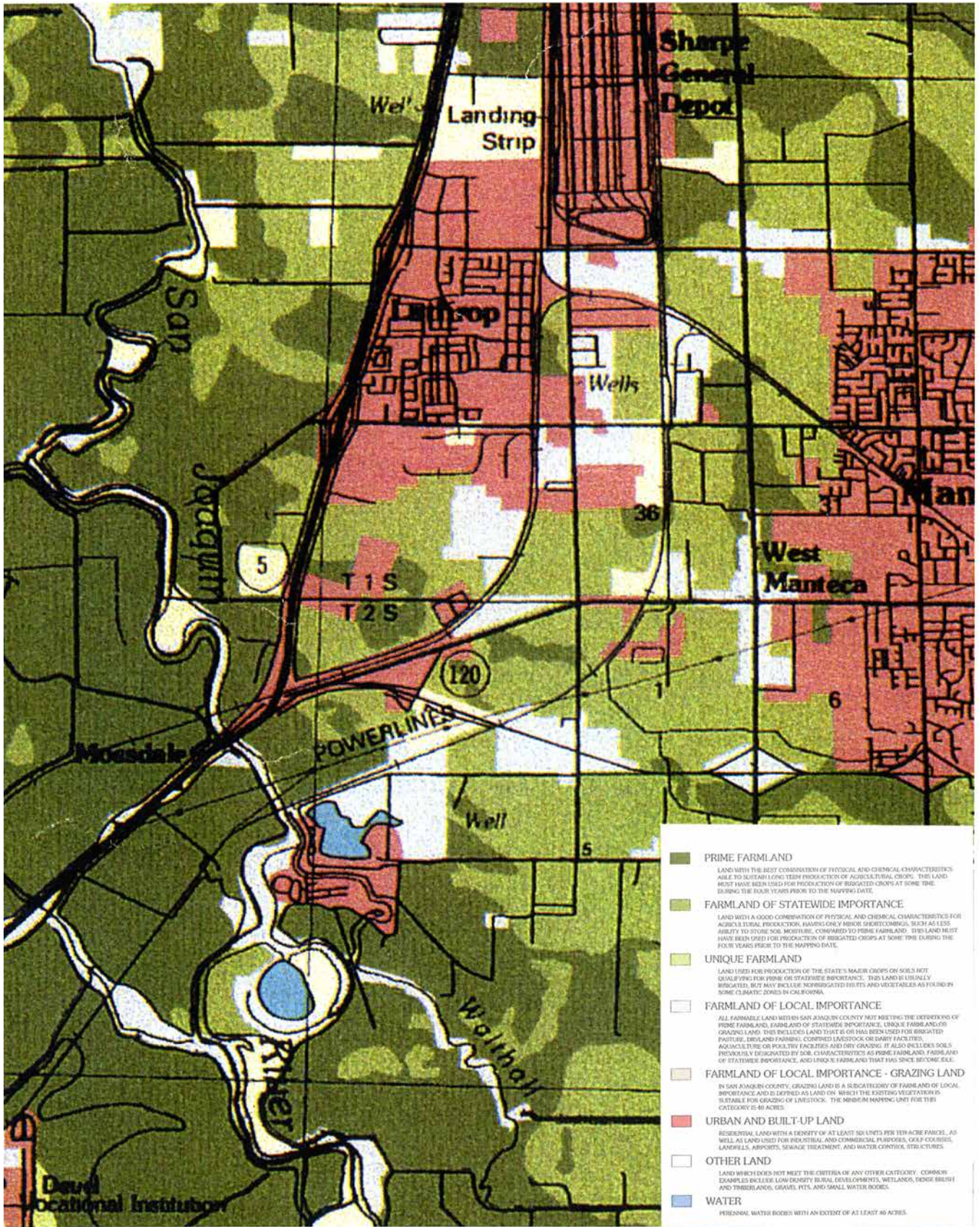
The 384-acre Plan Area is situated south of Vierra Road and Yosemite Avenue, between the two Union Pacific Railroad (UPRR) tracks that pass through southern Lathrop, and north of SR 120. Approximately one-half of the Plan Area is agricultural. Orchards recently dominated the agricultural uses, but are now converted over to disked fields and row crops. There are portions of undeveloped or fallow land. The alignment of the off-site storm drain pipeline crosses agricultural uses between SR 120 and the San Joaquin River, just north of the UPRR tracks.

The State Important Farmland Maps (California Department of Conservation) designate the agricultural portions of the Plan Area as Prime Farmland, Farmland of Statewide Importance and Urban or Built Up Land, Farmland of Local Importance (Figure 5-1). "Prime Farmland" is land with the best combination of physical and chemical features for the production of agricultural crops. This requires that the land has good soil quality and climate conditions. It must be irrigated, permeable to water, have acceptable acidity or alkalinity levels, and acceptable salt and sodium content, with few or no rocks, and can economically produce sustained high yields when treated and managed according to modern farming methods.

Two irregular shaped areas within the central portion of the Plan Area are identified as Prime Farmland. A portion of the westernmost area has been taken out of agricultural production. Combined, the two areas of Prime Farmland cover approximately 15% of the total Plan Area.

"Farmland of Statewide Importance" is land other than Prime Farmland that has a good combination of physical and chemical characteristics for the production of crops that has been used for production of irrigated crops during the two update cycles prior to mapping date. The majority of the central and eastern portion of the Plan Area contains Farmland of Statewide Importance. This designation makes up approximately 35% of the total Plan Area. "Urban Land" is land that does not fall within an agricultural category and is developed with at least one structure to one and one-half acres. The western portion of the Plan Area, on both the west and east sides of Yosemite Avenue are designated Urban. These areas contain parking for agricultural equipment and other industrial-type uses. A second area designed Urban is located east of McKinley Avenue along Yosemite Avenue. This area contains residential uses.

"Farmland of Local Importance" is either currently producing crops, has the capability of production or is used for the production of confined livestock and is other than Prime Farmland, Farmland of Statewide Importance or Unique Farmland. The land may be important to the local economy due to



- PRIME FARMLAND**
 LAND WITH THE BEST COMBINATION OF PHYSICAL AND CHEMICAL CHARACTERISTICS ABLE TO SUSTAIN LONG TERM PRODUCTION OF AGRICULTURAL CROPS. THIS LAND MUST HAVE BEEN USED FOR PRODUCTION OF IRRIGATED CROPS AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.
- FARMLAND OF STATEWIDE IMPORTANCE**
 LAND WITH A GOOD COMBINATION OF PHYSICAL AND CHEMICAL CHARACTERISTICS FOR AGRICULTURAL PRODUCTION. HAVING ONLY MINOR DEFICIENCIES, SUCH AS LESS ABILITY TO STORE SOIL MOISTURE, COMPARED TO PRIME FARMLAND. THIS LAND MUST HAVE BEEN USED FOR PRODUCTION OF IRRIGATED CROPS AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.
- UNIQUE FARMLAND**
 LAND USED FOR PRODUCTION OF THE STATE'S MAJOR CROPS OR SOILS NOT QUALIFYING FOR PRIME OR STATEWIDE IMPORTANCE. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED FRUITS AND VEGETABLES AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA.
- FARMLAND OF LOCAL IMPORTANCE**
 ALL FARMABLE LAND WITHIN SAN JOAQUIN COUNTY NOT MEETING THE CRITERIA OF PRIME FARMLAND, FARMLAND OF STATEWIDE IMPORTANCE, UNIQUE FARMLAND, OR GRAZING LAND. THIS INCLUDES LAND THAT IS OR HAS BEEN USED FOR IRRIGATED PASTURE, DRYLAND FARMING, CONTROLLED LIVESTOCK OR DAIRY FACILITIES, AQUACULTURE OR POULTRY FACILITIES AND FRY GRADING. IT ALSO INCLUDES SOILS PHYSICALLY DEGRADATED BY SOIL CHARACTERISTICS AS PRIME FARMLAND, FARMLAND OF STATEWIDE IMPORTANCE, AND UNIQUE FARMLAND THAT HAS SINCE BECOME ERODED.
- FARMLAND OF LOCAL IMPORTANCE - GRAZING LAND**
 IN SAN JOAQUIN COUNTY, GRAZING LAND IS A SUBCATEGORY OF FARMLAND OF LOCAL IMPORTANCE AND IS DEFINED AS LAND ON WHICH THE EXISTING VEGETATION IS SUITABLE FOR GRAZING OF LIVESTOCK. THE MINIMUM HAIRYING UNIT FOR THIS CATEGORY IS 40 ACRES.
- URBAN AND BUILT-UP LAND**
 RESIDENTIAL LAND WITH A DENSITY OF AT LEAST SIX UNITS PER TEN-ACRE PARCEL, AS WELL AS LAND USED FOR INDUSTRIAL AND COMMERCIAL PURPOSES, GOLF COURSES, LANDFILLS, AIRPORTS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.
- OTHER LAND**
 LAND WHICH DOES NOT MEET THE CRITERIA OF ANY OTHER CATEGORY. COMMON EXAMPLES INCLUDE LOW DENSITY RESIDENTIAL DEVELOPMENTS, WETLANDS, FENCE BELT, AND TREEBELTS, GRAVEL PITS, AND SMALL WATER BODIES.
- WATER**
 PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

its productivity or value. Half of the Plan Area located east of McKinley Avenue is made up of this designation. The area contains residential parcels with confined livestock.

The off-site storm drain component of the project is predominately mapped "Prime Farmland."

San Joaquin County is part of California's Central Valley where agriculture represents a significant portion of the economy. The top 10 crops in San Joaquin County are milk, grapes, almonds, tomatoes, walnuts, cherries, cattle & calves, hay, ornamental plants, and asparagus. The gross value of agricultural production in 2005 was approximately \$1.75 billion, which is up 8 percent from the estimated 2004 value. Agricultural uses specific to the Plan Area are included above.

The California Department of Conservation (CDC) has developed a Farmland Mapping and Monitoring Program (FMMP) that classifies the different agricultural soil types related to their ability to sustain agricultural crops. The applicable criteria in this document relates to the conversion of Prime Farmland, Farmland of Statewide Important or Farmland of Local Importance.

City of Lathrop's General Plan contains agricultural policies applicable to the proposed project. Those policies assume exclusive agricultural zoning shall be continued on agricultural lands outside the boundaries of the three sub-plan areas. The protection of agricultural lands outside of the three sub-plan areas shall be reinforced by firm policies of the City to not permit the extension of sewerage and water service to such lands.

The Plan Area is within the City of Lathrop Sphere of Influence, but outside of the city limits. The land is designated in the San Joaquin County General Plan as Limited Industrial (I/L), Agricultural-Urban Reserve (A/UR), and General Commercial (C/G) and zoned in the San Joaquin County Zoning Ordinance as, Warehouse Industrial (I-W), Agriculture-Urban Reserve (AU-20), and General Commercial (C-G).

San Joaquin County Right to Farm Ordinance

As required by Agricultural Lands Implementation Policy 2 of the San Joaquin County General Plan 2010, the San Joaquin County Right to Farm Ordinance was adopted to preserve, protect, and encourage the development and improvement of agricultural land in San Joaquin County for the production of food and other agricultural products. The purpose of the ordinance is to reduce the loss of the county's commercial agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. Existing agricultural lands (in operation for more than one year) may not be considered a nuisance as a result of subsequently changed conditions in the area, such as urbanization. Under the County's current ordinance, building permit applications are provided a disclosure statement regarding the Right to Farm Ordinance, but there is no mandatory process for notifying prospective property owners. The goal of disclosure is to inform the buyer or owner of the presence of possible irritants, like tractor noise and odors, to prevent future nuisance complaints.

City of Lathrop Right-to-Farm Ordinance

The City's Agricultural Land Preservation Ordinance (Right-to-Farm Ordinance), was adopted in 1991 to conserve and protect agricultural land in the City and protect agricultural landowners from nuisance complaints related to cultivation, irrigation, spraying, fertilizing, and other activities related

to normal agricultural operations. A disclosure statement is required whenever adjacent property is sold or building permit application is submitted, notifying the prospective buyer/applicant of adjacent agricultural land and possible discomforts and nuisance factors related to agricultural operations. The focus of the ordinance is to reduce the loss of agricultural resources in the City by clarifying the circumstances under which agricultural operations may be considered a nuisance.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

According to CEQA, a project may have a significant effect on the environment if it would involve converting Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, or impair the agricultural productivity of prime agricultural land. A project may also have a significant effect on agriculture if it would indirectly result in conversion of prime agricultural land or conflict with agricultural zoning or a Williamson Act contract; conflict with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), and/or any other applicable habitat conservation plan or natural community conservation plan; cause a conflict with existing zoning for agricultural use or a designated Farmland Security Zone; involve other changes in the existing environment that, because of their location or nature, could result in conversion of farmland to nonagricultural use; or result in a conflict between existing agricultural lands and adjacent land uses.

Conversion of Agricultural Land

Development within the Plan Area would result in a conversion of Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance, as shown on the map prepared under the Farmland Mapping and Monitoring Program (FMMP) of the CDC, to nonagricultural use (Figure 5-1). Development of the off-site improvements, including the storm drain pipeline and outfall structure will not result in the conversion of agricultural land. Installation of the pipeline will result in a temporary impact to agricultural activities, as the backbone infrastructure is placed underground; no long-term permanent impacts are expected.

Development of the Plan Area would result in the permanent conversion of approximately 60 acres of Prime Farmland, 135 acres of Farmland of Statewide Importance, and 40 acres of Farmland of Local Importance. The remaining acreage on-site is classified as Urban/Built up and Other. The loss of Important Farmland as classified under the FMMP is considered a significant environmental impact. The SJMSCP provides policies, recommendations, or other direction dealing with the loss of farmland. The SJMSCP establishes mitigation measures for such a loss.

The San Joaquin County Right to Farm Ordinance was adopted in compliance with the General Plan and primarily uses disclosure in an effort to prevent future nuisance complaints and potentially the subsequent loss of farmland. While the Plan Area would be annexed into the city limits it would remain adjacent to land in the unincorporated County. The City of Lathrop Right-to-Farm Ordinance was adopted in 1991 and serves the same general purpose as the County Ordinance. Any project within the Plan Area would be required to comply with these Ordinances. Under the City's Right-to-Farm Ordinance a disclosure statement is required whenever adjacent property is sold or building permit application is submitted, notifying the prospective buyer/applicant of

adjacent agricultural land and of the possible discomforts and nuisance factors related to those operations.

Implementation of mitigation measures would substantially lessen significant impacts associated with the conversion of Important Farmland Plan Area because funding conservation easements would provide assistance to public and private sectors in protecting other farmland from the pressures of development. The easements are purchased for land exhibiting benefits to wildlife, including a combination of habitat, open space, and agricultural lands, so the compensation provided by the fee contribution for the proposed project would not be applied exclusively to agricultural lands. Therefore, fees contributed to the SJMSCP would only partially offset conversions of Important Farmland associated with project impacts. In addition, no new farmland would be made available, and the productivity of existing farmland would not be improved as a result of the SJMSCP mitigation. Therefore, full compensation for losses of Important Farmland would not be achieved resulting in a significant and unavoidable impact.

It should be noted that the Lathrop Comprehensive General Plan Environmental Impact Report, dated December 17, 1991 and amended twice (June 24, 1992 and May 20, 1997), evaluated the Plan Area as part of the overall evaluation of the build out of the City of Lathrop. The City of Lathrop Comprehensive General Plan EIR (1997) has documented that the level of impact related to the conversion of productive agricultural land to urban use within the Lathrop planning area (which includes the Lathrop Gateway Business Park Specific Plan area) would be irreversible.

Level of Significance: Significant

Mitigation Measures:

- 5-1. The Project Proponents/City would participate in the SJMSCP. Fees would be paid by the project applicant to the SJCOG on a per-acre basis for lost agricultural land during development of the proposed Lathrop Gateway Business Park. The SJCOG will use these funds to purchase conservation easements on agricultural and habitat lands in the project vicinity. The preservation in perpetuity of agricultural land throughout the SJMSCP, a portion of which would consist of Important Farmland, would ensure the continued protection of farmland in the project vicinity, partially offsetting project impacts. Written proof of such an agreement between the project proponent and SJCOG shall be provided to the City prior to the issuance of grading or other construction permits.

Significance After Mitigation: Significant and Unavoidable

Conflicts with Current Zoning

The Plan Area is currently zoned under the San Joaquin County Zoning Ordinance as General Agriculture (AG-40), Warehouse Industrial (I-W), Agriculture-Urban Reserve (AU-20), and General Commercial (C-G). If development were proposed without also proposing a zone change a conflict could occur. However, the proposed project includes both annexation of the Plan Area into the city limits and re-zoning. Upon annexation to the city the new zoning designations would be applied to the site, which do not include agricultural zoning designations. Proposed zoning would allow development of the proposed land uses. With compatible zoning in place the proposed

development within the Plan Area would not conflict with zoning for agricultural use resulting in a less-than-significant impact.

Level of Significance: Less than significant

Mitigation Measure: None required

Consistency with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The proposed project would annex approximately 384 acres into the city limits for the purposes of industrial and commercial development. Currently, approximately one-half of the Plan Area is used for agricultural purposes. The SJMSCP is a plan established to provide a strategy for balancing open space conservation, maintaining agricultural economy, and allowing development while protecting habitat for endangered species.

The Plan Area is surrounded by existing development, roadways, and railroad tracks and is not expected to significantly impact surrounding agricultural uses especially in the Primary Zone which is not adjacent to the project site. The Plan Area does not conflict with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

Level of Significance: Less than significant

Mitigation Measure: None required

Impacts of the Project to Existing Land Uses

Development within the Plan Area would remove some agricultural uses and place new industrial and commercial uses next to the remaining agricultural lands. Active agricultural uses on the project site include orchards and row crops. Conversion of the agricultural land within the Plan Area is covered earlier in this chapter. Farmland surrounding the project site primarily consists of row crops.

State Route 120, existing development, local roadways and railroad tracks surround the site. Only a small portion of the land that surrounds the project site is agricultural in nature. These existing agricultural uses adjacent to the project site that could be affected are to the southeast beyond the railroad tracks. This area is small because past development and the City of Manteca border the eastern side of the Plan Area. The Plan Area is located at the southern boundary of the City's Sphere of Influence and Planning Area. Both the City of Lathrop and San Joaquin County have Right-to-Farm Ordinances, which provide some protection for farmers from nuisance complaints from surrounding urban development. This small unincorporated area is also outside of the city's SOI and Planning Area making it unlikely that it would be developed at least in the near future. It is unlikely that development within the Plan Area would result in the conversion of surrounding farmland resulting in a less-than-significant impact.

Level of Significance: Less than significant

Mitigation Measure: None required

Impact of Project On Existing Agricultural Lands and Adjacent Land Uses

The proposed project would develop a variety of industrial and commercial uses on approximately 384 acres. The Plan Area is surrounded by a variety of uses including agriculture. Surrounding agricultural activity on adjacent properties is limited with the roadways and an array of developed uses surrounding the majority of the Plan Area. The Plan Area is bordered on the west and east by elevated railroad tracks; and along the southern boundary by the elevated freeway (SR 120). These provide a significant buffer between the Plan Area and any agricultural uses to the south and east. Existing industrial type uses are located adjacent to and west of the Plan Area. Agricultural operations north of the project site, on the north side of Vierra Court, are already adjacent to residential and commercial uses along the Plan Area's northern boundary.

With Right-to-Farm Ordinances established in both the City of Lathrop and San Joaquin County and the presence of both natural and manmade buffers the instances of conflict between existing agricultural lands and adjacent uses has been reduced. The notification procedures in the Ordinances serves to educated landowners and developers of non-agricultural uses of what the expectations are in the area with regards to agricultural activities. This is a less-than-significant impact.

Level of Significance: Less than significant.

Mitigation Measure: None required

6.0 AIR QUALITY

ENVIRONMENTAL SETTING

Air Basin

Air quality is a function of pollutant emissions as well as the topographic and climatologic characteristics of the region. The California Air Resources Board (ARB) has divided California into regional air basins according to topographic and air drainage features. The project site and the City of Lathrop are located in the San Joaquin Valley Air Basin, which encompasses the entire San Joaquin Valley. The San Joaquin Valley Air Basin is about 250 miles long and averages 35 miles wide. The boundaries of the basin are the Sierra Nevada foothills to the east, the Coast Ranges to the west, and the Tehachapi mountains to the south (Figure 6-1). The San Joaquin Valley floor is essentially flat with a slight downward gradient to the northwest, opening to the sea at the Carquinez Straits (Figure 6-2).

Climate

This section describes the climate of the project site as it relates to air quality management. Chapter 10.0, Global Climate Change, contains information and analysis related to the issue of global climate change.

While the climate of Lathrop and San Joaquin County is semiarid, it is not typical of most of the San Joaquin Valley, where summer temperatures are known to exceed 100 degrees Fahrenheit (°F) for more than 30 days at a time. Average maximum temperatures are 78.1°F for the year, 90.4°F in July, and 53.4°F in January. Average annual rainfall varies considerably, between less than seven inches during drought years and over 14 inches during wet years. Afternoon humidity averages 58% for the year and 34% in July. The Lathrop area is heavily influenced seasonally by marine breezes that flow through the Carquinez Strait and generally follow the course of the San Joaquin River in the Delta. Marine breezes are also released through the Altamont Pass west of Tracy (City of Lathrop, 1991).

Mountains surrounding the San Joaquin Valley Air Basin restrict air movement, which results in a generally weak airflow and prevents dispersion of pollutants. Air movement is further restricted vertically by persistent high barometric pressure over the valley and both summer and winter temperature inversions that generally occur below the elevation of the surrounding mountains. As a result, the air basin is susceptible to pollutant accumulation over time (San Joaquin Valley APCD, 1998).



Figure 6-1
AIR BASIN MAP



Figure 6-2
AERIAL VIEW OF
SAN JOAQUIN VALLEY



NORTH SOURCE: SJCAPCD 2002

Air Quality Standards and Regulations

The federal and state governments are responsible for the overall regulation of air quality and for the establishment of air quality standards. Air quality standards have been established with the principal goal of protecting public health with a margin of safety. Pollution standards are established for what are termed “criteria” pollutants: ozone, carbon monoxide, particulate matter, nitrogen dioxide, sulfur dioxide and lead. A summary of existing federal and state air quality standards is shown in Table 6-1.

Federal Standards and Regulations

Federal air quality regulation stems from the Federal Clean Air Act (CAA), as amended. The federal CAA required the U.S. Environmental Protection Agency (EPA) to establish the air quality standards for criteria pollutants, known as the National Ambient Air Quality Standards (NAAQS), as shown in Table 6-1. The primary standards are based on EPA medical research and are designed to protect public health. Secondary standards are intended to protect the public welfare from effects such as visibility reduction, soiling, nuisance, and other forms of damage.

Regions of the country are classified with respect to their attainment of these standards. The federal CAA requires the states to submit a state implementation plan (SIP) for nonattainment areas. The SIPs are reviewed and approved by the EPA, subject to their adequacy in demonstrating how the federal standards will be achieved. The corresponding attainment/nonattainment designations for the San Joaquin Valley Air Basin are presented in Table 6-2.

State Standards and Regulations

The California Clean Air Act (CCAA) provides the planning framework for California air quality. The CCAA establishes the State’s own set of ambient air quality standards (CAAQS) for criteria pollutants that are generally more stringent than the corresponding NAAQS. Responsibility for implementation of the CCAA requirements, and for preparation of the State Implementation Plan under the federal CAA, rests with the ARB. The local air pollution or air quality management districts are responsible for preparation of Air Quality Attainment Plans, which are input to the SIP.

No particular schedule is established for achieving attainment with the CAAQS. However, the CCAA imposes increasingly severe requirements based on the degree of nonattainment. Nonattainment is classified into the following categories: Moderate, Serious, Severe and Extreme.

District Regulation

The San Joaquin Valley Air Pollution Control District (APCD) is responsible for air quality management in San Joaquin County and seven other counties in the San Joaquin Valley. The APCD’s responsibilities include AAQS attainment planning, regulation of emissions from non-transportation sources, and mitigation of emissions from on-road sources through its Indirect Source Rule.

**TABLE 6-1
NATIONAL AND STATE AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	California Standards ¹	Federal Standards ²	
			Primary ³	Secondary ⁴
Ozone (O ₃)	1 Hour	0.09 ppm (180 ug/m ³)	--	--
	8 Hour	0.07 ppm (137 ug/m ³)	0.075 ppm (147 ug/m ³)	Same as Primary Standard
Respirable Particulate Matter (PM10)	24 Hour	50 ug/m ³	150 ug/m ³	Same as Primary Standard
	Annual Arithmetic Mean	20 ug/m ³	--	--
Fine Particulate Matter (PM2.5)	24 Hour	--	35 ug/m ³	Same as Primary Standard
	Annual Arithmetic Mean	12 ug/m ³	15 ug/m ³	Same as Primary Standard
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	9.0 ppm (10 mg/m ³)	--
	1 Hour	20.0 ppm (23 mg/m ³)	35.0 ppm (40 mg/m ³)	--
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	0.03 ppm (57 ug/m ³)	0.053 ppm (100 ug/m ³)	Same as Primary Standard
	1 Hour	0.18 ppm (339 ug/m ³)	0.1 ppm	--
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	--	0.03 ppm (80 ug/m ³)	--
	24 Hour	0.04 ppm (105 ug/m ³)	0.14 ppm (365 ug/m ³)	--
	3 Hour	--	--	0.5 ppm (1300 ug/m ³)
	1 Hour	0.25 ppm (655 ug/m ³)	--	--
Lead ⁵	30 Day	1.5 ug/m ³	--	--
	Calendar Quarter	--	1.5 ug/m ³	Same as Primary Standard
Sulfates	24 Hour	25 ug/m ³	No Federal Standards	
Hydrogen Sulfide	1 Hour	0.03 ppm (42 ug/m ³)		
Vinyl Chloride ⁵	24 Hour	0.01 ppm (26 ug/m ³)		
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.07-30 miles or more at Lake Tahoe) due to particles when relative humidity is <70%.		

NOTES:

1. California standards of ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour) and suspended particulate matter (PM10, PM2.5 and visibility reducing particles) are not to be exceeded. All other standards are not to be equaled or exceeded.
2. National standards are not to be exceeded more than once a year, except for ozone, particulate matter and those based on annual averages or annual arithmetic mean.
3. Primary Standards – levels of air quality necessary, with an adequate margin of safety, to protect the public health.
4. Secondary Standards - levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
5. The ARB has identified lead and vinyl chloride as “toxic air contaminants” with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specific for these pollutants.

Source: California Air Resources Board, 2008.

TABLE 6-2
 SAN JOAQUIN VALLEY APCD ATTAINMENT STATUS
 WITH FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	Designation/Classification	
	Federal Standards ^a	State Standards ^b
Ozone - One hour	No Federal Standard ^f	Nonattainment/Severe
Ozone - Eight hour	Nonattainment/Serious ^e	Nonattainment
PM-10	Attainment ^c	Nonattainment
PM-2.5	Nonattainment ^d	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

^aSee 40 CFR Part 81

^bSee CCR Title 17 Sections 60200-60201

^cOn September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan

^dThe Valley is designated nonattainment for the 1997 PM 2.5 federal standards. EPA designations for the 2006 PM 2.5 standards will be finalized in December 2009. The District has determined, as of the 2004-06 PM 2.5 data, that the Valley has attained the 1997 24-Hour PM 2.5 standard.

^eOn April 30, 2007 the Governing Board of the San Joaquin Valley Air Pollution Control District voted to request EPA to reclassify the San Joaquin Valley Air Basin as extreme nonattainment for the federal 8-hour ozone standards. The California Air Resources Board, on June 14, 2007, approved this request. This request must be forwarded to EPA by the California Air Resources Board and would become effective upon EPA final rulemaking after a notice and comment process; it is not yet in effect.

^fEffective June 15, 2006, the U.S. Environmental Protection Agency (EPA) revoked in the federal 1-hour ozone standard, including associated designations and classifications. However, EPA had previously classified the SJVAB as extreme nonattainment for this standard. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

Source: San Joaquin Valley APCD, 2008

The local air districts are charged to reduce pollutant concentrations for which the district is in nonattainment by 5% per year; the local air district is also required to prepare an air quality attainment plan (AQAP) if the district exceeds the state air quality standards for ozone, carbon monoxide, nitrogen dioxide or sulfur dioxide; no AQAP is required for particulate nonattainment. The local AQAPs are required to address locally generated air pollutant emissions. "Upwind" air districts are required to establish control programs that address pollutant transport to downwind districts. Air Quality Maintenance Plans have been adopted for particulate matter and carbon monoxide.

The APCD has adopted an AQAP only for ozone nonattainment, which describes the actions the APCD will take to work toward ozone attainment. Among these provisions is the District's adopted Indirect Source Rule (Rule 9510), which requires reductions in air pollutant emissions associated with land development, either directly or through payment of a fee that is used to implement other ozone precursor reductions. Rule 9510 is described in more detail below.

The APCD has adopted required attainment plans for ozone and PM 2.5 and maintenance plans for attainment pollutants. The status of APCD attainment planning is summarized below.

- Ozone. The 2004 Extreme Ozone Demonstration Plan was recommended for approval by EPA in October 2008.
- Carbon Monoxide. The APCD is attainment for carbon monoxide. The approved SIP includes measures for attainment maintenance known as the Carbon Monoxide Maintenance Plan.
- Particulate Matter (PM10). The APCD is attainment for PM10 federal standards. EPA approved a PM10 Maintenance Plan in September 2008.
- Particulate Matter (PM2.5). The APCD adopted a PM2.5 Plan in April 2008.

The APCD has adopted several regulations that are directly applicable to land development. These include regulations that limit dust generation, installation of wood-burning appliances, hydrocarbon emissions from paving activities, and volatile organic emissions from architectural coatings. These regulations are summarized below.

Regulation VIII (Fugitive Dust PM10 Prohibitions)

Rules 8011-8081 are designed to reduce PM₁₀ emissions (predominantly dust) generated by construction and demolition activities, among other potential sources. Rule 8021 applies specifically to construction, demolition and earthmoving. The rules that make up Regulation VIII require compliance with the District's 20% opacity standard. Based on the size of the project, a Dust Control Plan must be submitted to the APCD in advance of construction.

Rule 2201 (New and Modified Stationary Source Review Rule)

New stationary sources and modifications of existing stationary sources that may emit criteria pollutants must obtain an Authority to Construct and Permit to Operate the proposed facility. Emissions that exceed impact thresholds must include emission controls and may require additional mitigation.

Rule 4101 (Visible Emissions)

Rule 4101 prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.

Rule 4102 (Nuisance)

Rule 4102 dictates that if a source operation emits or may emit air contaminants or other materials such that the emissions create a public nuisance, the owner/operator may be subject to APCD enforcement action.

Rule 4103 (Open Burning)

Rule 4103 prohibits the burning of agricultural material when the land is converting from agriculture to non-agricultural (i.e. urban) purposes.

Rule 4601 (Architectural Coatings)

Rule 4601 limits emissions of volatile organic compounds from architectural coatings by specifying storage, cleanup and labeling requirements.

Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations)

Rule 4641 applies to the manufacture and application of the specified asphalt types for paving and maintenance operations.

Rule 9510 (Indirect Source Review)

Rule 9510 indirectly limits the vehicular emissions contribution of new development to regional air pollution. Through an application and review process, the developer may incorporate emission-reduction features in the project or may pay the fee prescribed in the rule. Fees collected by the APCD are indexed to the cost of providing offsetting mitigation and are used for that purpose. The provisions of the rule are described in more detail in the analysis of environmental impacts and mitigation measures.

Air Toxics

Air toxics are "toxic air contaminants" (TACs), which are defined by California Health and Safety Code Section 39655 as "air pollutant(s) which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." State TACs also include federally listed air toxics. TACs include such substances as volatile organic compounds, chlorinated hydrocarbons, asbestos, gasoline engine exhaust, and particulate matter emitted by diesel engines among many others. The State's Air Toxics Inventory (2006) includes more than 200 substances.

The State regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). Under these programs, the State is responsible for an inventory of TACs, for analysis of exposure and risk and for planning to reduce risk. Like other federal and state air quality requirements, the local air districts implement the various elements of the state air toxics program.

Air toxics include diesel particulate emissions from trucks, railroads, shipping and stationary diesel combustion sources; diesel particulate was identified as a TAC under the State programs; according to the ARB, diesel particulate constitutes approximately 70% of the statewide health risk associated with air toxics. The ARB has developed a diesel particulate Risk Reduction Plan composed of new programs and standards, which is being

implemented. The Risk Reduction Plan includes establishment of new emission standards for new diesel engines, retrofit programs for existing engines, programs that facilitate conversion to reduced-emission diesel equipment, and limitations on sulfur content in fuel, among others. ARB projects that, over time, the Risk Reduction Plan will result in significant reductions in diesel particulate emissions and associated cancer risks. The Risk Reduction Plan is expected to generate overall reductions of 75% in diesel particulate emission by 2010, and of 85% by 2020.

The ARB has also published an *Air Quality and Land Use Handbook* that addresses air toxics risk with siting recommendations for air-pollutant-sensitive land uses. The scope of the *Handbook* includes a range of major potential TAC sources, including freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, certain dry cleaners and gas stations.

City Planning Authority

The City of Lathrop has no direct responsibility for air quality standards or regulations. However, the City may indirectly influence air quality through land use planning and other decision-making. Development projects, and specifically the adoption of a specific plan or approval of a tentative map, must be consistent with the General Plan. The Lathrop General Plan addresses air quality in the following policy statements:

1. Mitigation of air quality impacts is to be achieved in part through the design and construction of an efficient system of arterial and collector streets and interchange and freeway improvements that will assure high levels of traffic service and the avoidance of unmanageable levels of traffic congestion.
2. Mitigation of air quality impacts is to be achieved in part through the development of a regional rail transit service to be incorporated into early stages of development within both growth centers.
3. The City shall adopt standards which require industrial process analysis before the fact of site and building permit approval to assure compliance with State air quality and water quality standards. Standards should provide for periodic monitoring of industrial processes which could have an adverse impact on water or air quality. Industrial process review that may be required should be conducted as part of environmental assessment by an engineer licensed in California having demonstrated experience in the industrial processes involved.
4. The City shall require positive control of dust particles during project construction activities, including watering or use of emulsions, parking of heavy equipment on paved surfaces, prohibition of land grading operations during days of high wind (beginning at 10 mph, with gusts exceeding 20 mph), and prohibition of burning on vacant parcels. The City should seek the cooperation of agricultural operators to refrain from the plowing of fields on windy days, and to keep loose soils under control to the extent reasonable to avoid heavy wind erosion of soils.

5. The beneficial effects of open space and vegetation on the air resource are to be reflected in the arrangement of land uses depicted on the General Plan. Heavy plantings of trees are encouraged to assist in maintaining oxygen levels.
6. The need to protect and preserve the air resource within the planning area and to reduce levels of vehicle emissions of air pollutants imposes practical limitations on the extent to which the City can depend on the automobile as the principal source of transportation into the next century.

Air Pollutants and Related Health Concerns

This section identifies and describes the criteria pollutants of potential concern in the APCD in a human health context, including ozone and its precursors, carbon monoxide, particulate matter (PM10 and PM2.5), and air toxics. Emissions of carbon dioxide (CO2) are not of direct health concern; these emissions are, however, of concern in the global climate change context. Global climate change concerns are addressed in detail in Chapter 10.0, Global Climate Change, and are not treated further in this chapter.

In its April 2005 Air Quality and Land Use Handbook, the ARB established preliminary risk-based recommendations for siting of new sensitive land uses near major air pollution sources. Of the potential pollution sources considered in the Handbook, which included distribution centers, railyards, ports, refineries, chrome-platers and dry cleaners, only “freeways” currently are located in the Plan Area. The Handbook noted that health risks are higher within 1,000 feet of freeways and that the highest non-cancer health risks were seen within about 300 feet of the freeway; pollutant levels were shown to drop off substantially more than 500 feet from the freeway. Among the recommendations of the Handbook was “Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.” “Sensitive land uses” include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (ARB, 2005). The project does not propose sensitive land uses near such roads.

Ozone

Ozone is a colorless gas with a pungent odor. It causes eye irritation and respiratory function impairment. Ozone is not emitted directly into the atmosphere, but is formed as a result of the interaction of ultraviolet light, reactive organic gases, and nitrogen oxides (NOx). Reactive organic gases (ROG) are composed of non-methane hydrocarbons, and NOx is composed of different chemical combinations of nitrogen and oxygen, mainly NO and NO2. A highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of ozone tend to exist only while high ROG and NOx levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional scale, ozone is considered a regional pollutant. Studies have indicated that “high ozone concentrations in the Valley were due to varying combinations of local and transported pollutants”.

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless, gas. CO causes a number of health problems including fatigue, headache, confusion, and dizziness. Since CO binds strongly to hemoglobin and reduces the blood's capacity for carrying oxygen to the heart, brain and other parts of the body. High concentrations of CO can cause heart difficulties for people with chronic diseases. It can impair mental abilities and in some cases can result in death (Table 6-1). The incomplete combustion of petroleum fuels in on-road vehicles is a major cause of CO. CO is also produced during the winter from wood stoves and fireplaces that are not burning efficiently. CO tends to dissipate rapidly into the atmosphere, but increased CO levels may occur in the winter when temperature inversions trap pollutants near the ground and concentrate the CO. However, since CO is somewhat soluble in water, normal winter conditions of rainfall and fog can suppress CO concentrations. Violations of the State CO standard are generally limited to major intersections during peak hour traffic conditions.

Suspended Particulate Matter

Suspended particulate matter (PM₁₀) consists of particles small enough to remain suspended in the air for long periods, such as dust, smoke, ash and chemical droplets. Fine particulate matter (PM_{2.5}) includes particles small enough to be inhaled, pass through the respiratory system, and lodge in the lungs, with resultant health effects. Excessive particulate matter can result in increased respiratory disease, lung damage and premature death. Particulates can include materials such as sulfates and nitrates that are particularly damaging to the lungs. The particulate matter standards have been revised by both the federal and state governments to address PM_{2.5}, reflecting studies that suggest that particulate matter less than 2.5 microns in diameter is of particular concern. Combustion sources, such as vehicles, power generation, industrial processes and wood burning, tend to be the primary sources of PM_{2.5}. While the same sources contribute to PM₁₀, unpaved roads and farming activities are also major contributing sources.

Air Toxics

Toxic air contaminants, or TACs, are non-criteria pollutants that cause or may cause cancer or other serious health effects, such as chronic eye, lung or skin irritation, reproductive effects or birth defects, neurological and reproductive disorders, or adverse environmental and ecological effects. Examples of toxic air pollutants include benzene, which is found in gasoline; perchlorethylene, which is emitted from some dry cleaning facilities; and methylene chloride, which is used as a solvent and paint stripper by a number of industries. Examples of other listed air toxics include dioxin, asbestos, toluene, and metals such as cadmium, mercury, chromium, and lead compounds.

Diesel particulate matter (PM) is designated by the State of California as a TAC, as discussed previously. Diesel PM is of particular concern because it is highly toxic, it is a potential source of both cancer and non-cancer health effects, and it is present at some concentration in all developed areas of the state. The ARB has identified diesel PM is a major contributor to ambient cancer risk levels. While diesel PM accounts for only about 4% of air toxic emissions in the state, it accounted for more than 70% of the 2000 cancer

risk associated with outdoor ambient levels of all TACs (ARB, 2006). The ARB has estimated that cancer risks from diesel PM average 500 cancer cases per million people statewide. These general risks can be elevated with proximity to the source. The ARB is in the process of implementing its risk reduction plan for this pollutant, which is expected to generate a 75% reduction in diesel PM by 2010 and an 85% reduction by 2020.

Diesel PM makes the largest single contribution to air toxic emissions in the San Joaquin Valley Air Basin, where about 60% of these emissions are derived from mobile sources. The top four air toxics in terms of emission tons per year include:

Diesel PM	4,124
Formaldehyde	3,517
Benzene	1,879
Acetaldehyde	1,139

(ARB, 2006)

The risk of exposure to air toxic pollution varies by community and location within the community. Communities are exposed to the ambient concentration of air toxics in the region or subregion, which is the result of all air toxic emissions, including diesel PM. Localized areas within the community may be subject to increased exposure based on location near to major diesel PM emitters, such as freeways or rail yards, or near industrial sources of air toxics (ARB, 2005).

Major stationary (i.e. industrial) sources of air toxics are required to prepare risk assessments for the review and approval of the local air district. Cancer risks that exceed 10 per million persons, or non-carcinogenic TACs that generate a Hazard Index greater than 1, are defined by the State as “significant.”

Existing Air Quality

Criteria Air Pollutants

Existing air quality is monitored regularly by the APCD and reported to the ARB. Air pollutant concentration data from the District’s Stockton-Hazelton monitoring station for recent years, as well as the extent to which ambient air quality standards were exceeded, are summarized in Table 6-3. The Stockton station is the closest monitoring station to the project site.

The table data indicate that the State one-hour ozone standard of 0.09 ppm have been exceeded at the Stockton station between two and six days per year during two of the preceding three years. There were no exceedences of this standard during 2007.

TABLE 6-3
STOCKTON/SAN JOAQUIN COUNTY AIR QUALITY MONITORING RESULTS

Pollutant	Pollutant Concentration		
	2006	2007	2008
Carbon Monoxide (Hazelton)			
Highest 8-Hour Average (ppm)	2.25	2.31	1.86
Second Highest 8-Hour Average (ppm)	2.24	2.13	1.76
1 hour levels not monitored			
Days > National Standard (9.0 ppm)	0	0	0
Days > State Standard (9.0 ppm)	0	0	0
Ozone (Hazelton)			
Highest 1-Hour Measurement (ppm)	0.109	0.093	0.105
Second Highest 1-Hour Measurement (ppm)	0.105	0.092	0.101
Days > State Standard (1-hour average) (0.09 ppm)	6	0	2
Highest 8-Hour Average (ppm)	0.092	0.082	0.090
Second Highest 8-Hour Average (ppm)	0.086	0.081	0.081
Days > State Standard (8-hour average) (0.07 ppm)	21	4	7
Days > Federal Standard (8-hour average)(0.08 ppm)	13	3	4
PM 10 (Hazelton)			
Highest 24-Hour Average, State (ug/m ³)	85.0	75.0	105.0
Second Highest 24-Hour Average, State (ug/m ³)	85.0	73.0	83.7
Days > State Standard (50 ug/m ³)	11	4	8
Highest 24-Hour Average, Fed (ug/m ³)	82.0	71.0	104.5
Second Highest 24-Hour Average, Fed (ug/m ³)	80.0	68.0	83.0
Days > National Standard (150 ug/m ³)	0	0	0
Annual Average (State) (20 ug/m ³)	Exceeds	Exceeds	Exceeds
Annual Average (Fed) (90 ug/m ³)	No Exceed	No Exceed	No Exceed
PM 2.5 (Hazelton)			
Highest 24-Hour Average, Fed (ug/m ³)	47.0	52.0	81.0
Second Highest 24-Hour Average, Fed (ug/m ³)	47.0	50.0	61.7
Days > Federal Standard	7.0	11.0	9.0
Annual Average (State) (12 ug/m ³)	Exceeds	Exceeds	Exceeds
Annual Average (Fed) (15 ug/m ³)	No exceed	No exceed	No exceed

ppm=parts per million; (ug/m³)=micrograms per cubic feet.

SOURCE: California Air Resources Board web site; <http://www.arb.ca.gov> (updated August 2009)

Both the State and federal maximum eight-hour-average ozone standards were exceeded in Stockton during each of the last three years. The State standard of 0.07 ppm was exceeded between four and 21 days, while the higher federal standard of 0.08 ppm was exceeded from three to 13 days. The San Joaquin Valley Air Basin is classified as nonattainment for the State one-hour ozone standard, as well as for both the State and federal 8-hour ozone standards (see Table 6-2).

The San Joaquin Valley Air Basin as a whole regularly violates the PM10 standards. In Stockton, the 24-hour average federal PM10 standard of 150 ug/m³ has not been exceeded during the previous three years. However, exceedence of the lower State PM10 standard of 50 ug/m³ occurred between four and 11 times during the previous three years. Similarly, the federal annual average PM10 standard of 50 ug/m³ was not exceeded during the previous three years, while the State standard of 20 ug/m³ was exceeded in all three years.

Monitoring at the Stockton station indicates that the federal 24-hour PM2.5 standard of 65 ug/m³ was exceeded between seven and 11 times during the last three years. There is no 24-hour State standard for this pollutant. Similar to PM10, measured annual average PM2.5 levels did not exceed the federal standard in the last three years, but did exceed the State standard in all those years.

Carbon monoxide monitoring in Stockton shows that carbon monoxide levels are consistently below both the State and federal 8-hour standards. San Joaquin County is classified Unclassified/Attainment for both federal and State for carbon monoxide. As previously shown in Table 6-2, the County is classified Attainment or Unclassified for other criteria pollutants.

The APCD maintains an inventory of criteria air pollutant emissions within the SJVAB and within San Joaquin County. The most recent inventory is summarized in Table 6-4. ROG emissions are produced primarily by stationary and area-wide sources, and mobile sources produce the majority of NO_x emissions. Mobile sources are the primary source of carbon monoxide emissions in the San Joaquin Valley Air Basin, but area sources produce over 80% of PM10 emissions in the basin.

Existing Local Air Pollution Sources

The primary source of air pollution generated from the Plan Area is vehicle traffic from existing land uses. Land uses on the Plan Area that generate traffic include rural residences, light industrial activities, offices, and a church. Another source of emissions is agricultural activities in the southern and central portion of the Plan Area. Light industrial activities in the western portion of the site may also generate emissions, although the quantity and significance of these emissions are not known.

TABLE 6-4
ESTIMATED ANNUAL AVERAGE EMISSIONS FOR
SAN JOAQUIN COUNTY AND THE SAN JOAQUIN VALLEY AIR BASIN (2008)

Source Category	Emissions (tons/day)									
	ROG		NOx		CO		PM10		PM2.5	
	SJC	AB	SJC	AB	SJC	AB	SJC	AB	SJC	AB
Fuel Combustion	0.46	11.05	6.72	57.92	4.13	36.26	0.45	6.95	0.40	6.68
Waste Disposal	0.11	2.61	0.05	0.24	0.13	0.47	0.04	0.12	0.04	0.10
Cleaning and Surface Coatings	2.25	15.33	0.00	0.00	0.00	0.00	0.05	0.12	0.05	0.12
Petroleum Production and Marketing	1.36	36.09	0.01	0.44	0.02	1.08	0.00	0.16	0.00	0.15
Industrial Processes	3.35	18.57	3.78	21.36	0.06	3.95	2.08	17.77	1.09	10.42
<i>Total Stationary Sources</i>	7.53	83.66	10.56	79.96	4.94	41.77	2.63	25.12	1.58	17.46
Solvent Evaporation	7.84	58.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Processes	7.31	90.65	1.74	17.89	22.00	268.37	26.36	250.87	6.45	67.73
<i>Total Area-Wide Sources</i>	15.15	149.51	1.74	17.89	22.00	268.37	26.36	250.87	6.45	67.73
On-Road Vehicles	12.34	79.20	40.26	329.98	116.75	705.60	1.86	14.58	1.45	11.84
Other Mobile	12.06	56.86	38.41	138.24	78.97	336.46	2.02	9.13	1.81	8.31
<i>Total Mobile Sources</i>	24.39	136.06	78.66	468.22	195.72	1042.06	3.88	23.71	3.26	20.15
Total (w/o Natural Sources)	47.07	369.23	90.96	566.07	222.65	1352.20	32.88	299.71	11.29	105.35
Natural Sources	8.22	235.2	0.01	10.6	0.20	347.5	0.02	35.2	0.02	29.8

NOTE: SJC= San Joaquin County, AB=San Joaquin Valley Air Basin
 Figures may not total exactly due to rounding.
 SOURCE: ARB (Almanac Emission Projection Data), 2009

Odors

Odors are non-health-related air quality concerns that are within the purview of the local air district. Odors are managed by the APCD primarily on a complaint basis. Odor sources located more than a mile from potential receivers are usually considered less than significant (San Joaquin Valley APCD, 2002).

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The following impact analysis is based largely on the methodology defined in the APCD's *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI). The analysis includes consideration of both project construction and long-term operation effects on criteria pollutants and air toxics.

Significance Thresholds

According to CEQA, a project may have a significant effect on the environment if it would 1) conflict with or obstruct implementation of an Air Quality Attainment Plan, 2) violate or worsen an existing violation of an ambient air quality standard, 3) result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under federal or state standards, 4) expose sensitive receptors to substantial pollutant concentrations, or 5) create objectionable odors affecting a substantial number of people.

GAMAQI defines certain thresholds of significance for the assessment of air quality impacts. Based on GAMAQI, the proposed project will be considered to have a significant impact on ozone precursor emissions if it would generate more than 10 tons per year or either ROG or NO_x. Based on input from APCD staff, the project will be considered to have a significant effect on particulate matter emissions if it would generate more than 15 tons per year. The project's impact on carbon monoxide (CO) emissions will be considered significant if the project will:

- degrade operation of an intersection to level of service (LOS) E or F, or
- substantially worsen an intersection already operating at LOS F, and
- the *Transportation Project-Level Carbon Monoxide Protocol*, or CALINE4 modeling, indicate that CO standards would be exceeded adjacent to an impacted intersection.

Based on GAMAQI, air toxics exposure effects are considered significant if they would result in:

- Lifetime cancer risk for sensitive land uses (including residential) exceeds 10 in one million.
- Ground-level concentrations of non-carcinogenic toxic air contaminants that would result in a Hazard Index greater than one (1).

If the project would be located in an area of substantial odor complaints, or would result in a sensitive odor receptor being located within a mile of an undesirable odor generator, the impact on odors may be considered significant.

The foundation of the impact analysis is the quantification of criteria pollutant emissions, including ozone precursors. The URBEMIS 2007 model (Version 9.2.4) is the latest version

of the model recommended by GAMAQI. The URBEMIS model generates pollutant emission estimates using project-specific land use and trip generation information along with default vehicle fleet mix, trip length, and trip-start information included in the model. Project-specific settings regarding project design elements or measures that would result in emission reductions are entered into the model to generate a separate “mitigated” scenario.

The project would also have off-site impacts on air quality, due to the proposed construction of a stormwater drainage pipeline to the San Joaquin River. The URBEMIS model is not suited for the evaluation of projects that are linear in character, such as roads and pipelines. Therefore, this analysis used the Road Construction Emissions Model, Version 6.3.2. This model was developed by the Sacramento Metropolitan Air Quality Management District, in coordination with ICF Jones & Stokes and Rimpco and Associates (the creator of URBEMIS). The Road Construction Emissions Model estimates emissions for both vehicle exhaust and fugitive dust, based on a methodology involving estimates of the maximum area of land disturbed daily and factors from air quality models such as EMFAC and OFFROAD.

Impacts of Project Construction on Air Quality

Approval of the project and subsequent development entitlements would result in demolition of some existing structures on the project site and substantial new construction activity. Demolition and construction activities would generate emissions of ozone precursors and particulate matter from heavy equipment operations, and particulate matter produced by land clearing, earth moving and wind erosion. As noted in the GAMAQI, construction activities such as grading, excavation and travel on unpaved surfaces can generate substantial amounts of dust, and can lead to elevated concentrations of PM10. These potential emissions were quantified using the URBEMIS modeling program. The results of this analysis are shown in Appendix D and discussed below. The URBEMIS analysis assumes a “worst case” scenario, with the maximum amount of soil disturbed by project grading and construction.

Construction emissions as modeled by the URBEMIS program are largely proportional to the land area of the proposed development. The proposed project is the approval of a 384-acre urban development site that would be developed in two phases, in accordance with market demands and the project’s objectives and plans, which are generally defined in Chapter 3.0, Project Description. However, the analysis of construction emissions considers development of the entire project, as specific development under each of the phases is not available. The analysis assumed a construction period of 20 years and development in accordance with the maximum square footage based on net acreage for each proposed land use and the applicable FAR (see Table 3.1 in Chapter 3.0, Project Description). Default construction equipment assumptions were used. URBEMIS was run both with and without mitigation measures.

Construction emissions from the proposed off-site stormwater drainage pipeline were estimated using the Road Construction Emissions Model. This estimate assumes a six-month construction period and a maximum disturbance of 0.1 acres per day. Appendix D contains the results of the Road Construction Emissions Model run.

Construction Dust Impacts

The URBEMIS model generated data for construction dust as PM10 and PM2.5 (see Appendix D). Construction would generate a total of 109.25 tons of dust during the first year of construction, which would include land disturbance and grading activities. Dust generated by construction activities during subsequent years would total approximately 162 tons annually on average, with 81.34 tons generated in the final year of construction.

The APCD has determined that implementation and enforcement of dust control measures specified in its Regulation VIII - Fugitive PM10 Prohibitions would reduce construction dust impacts to a less than significant level. The dust suppression measures incorporated into the URBEMIS model are consistent with the requirements of the Regulation VIII, and Regulation VIII is applicable to all development activities associated with the project. Conformance with Regulation VIII is required by the mitigation measures below.

Application of the dust suppression mitigation measures incorporated into URBEMIS would reduce potential dust emissions to 7.84 tons for the first year and to 6.01 tons for the final year. Between these years, average annual dust emissions would be approximately 12 tons, with a maximum of 13.94 tons per year. All of these values are below the 15-ton per year significance threshold for particulate matter.

Based on the Road Construction Emissions Model run, the total amount of PM10 and PM2.5 that would be generated by pipeline construction would be 0.2 and 0.1 tons, respectively. PM emissions generated by pipeline construction would be well below the 15-ton threshold set by the APCD. When pipeline construction emissions are added to the maximum annual dust emissions generated by project site development, the total emissions would remain below the APCD threshold. Therefore, PM emissions from stormwater drainage pipeline construction would be less than significant. However, the project would be subject to APCD regulations controlling dust emissions, including Regulation VIII and the Indirect Source Rule. Therefore, mitigation measures specifying the requirements of these regulations are presented below.

Ozone Precursors

The URBEMIS model provides estimates of ozone precursor emissions in the form of reactive organic gases (ROG) and oxides of nitrogen (NO_x), which react together with sunlight to produce ozone. ROG and NO_x emissions would amount to an annual average of 6.21 and 23.80 tons, respectively. It should be noted that NO_x emissions would decline as construction progresses, ultimately to a level of 14.53 tons per year. For the stormwater pipeline, total ROG and NO_x construction emissions would be 0.2 and 1.8 tons, respectively.

APCD Rule 9510, the Indirect Source Rule, requires mitigation of air quality impacts resulting from construction equipment emissions. Rule 9510 requires a 20% reduction in NO_x emissions and a 45% reduction in particulate emissions from construction equipment exhaust. Application of these reduction requirements to the estimated average NO_x emissions associated with project construction would lead to NO_x emissions of 19.04 tons per year. Even with the application of Rule 9510 reductions, emissions of NO_x would

exceed the threshold of 10 tons per year set by the APCD, and therefore are considered significant.

Diesel Particulate Matter

URBEMIS also yielded results for emissions of diesel PM, which is a state-designated air toxic. Potential diesel PM emissions for construction of the project would be 1.19 tons per year in the first year of construction. They would increase in the second year to 2.03 tons per year as other construction activities begin, then decline to a level of 0.73 tons per year in the later construction years. In the last year of construction, diesel PM emissions would be 0.48 tons per year. No estimates of diesel PM are available for the pipeline construction project, although such emissions are likely part of the PM10 and PM 2.5 emissions.

There is no known significance threshold for construction-related diesel PM. However, construction activities are temporary in character, and potentially significant health effects associated with diesel PM emissions are the result of long-term exposure that would not occur in conjunction with construction. Potential diesel PM emissions associated with the project would be less than the estimated 3.57 tons per year of diesel PM generated by truck traffic on the section of SR 120 adjacent to the project site, particularly in the latter stages of construction. Nevertheless, diesel PM emissions from construction activities are considered potentially significant.

Level of Significance: Significant (NOx); potentially significant (diesel PM)

Mitigation Measures:

- 6-1. For construction projects in the Plan Area exceeding 40 acres in size or involving more 2,500 cubic yards per day of excavation, the owners, developers and/or successors-in-interest (ODS) shall prepare and submit a Dust Control Plan that meets all of the applicable requirements of APCD Rule 8021, Section 6.3, for the review and approval of the APCD Air Pollution Control Officer prior to start of construction activities.
- 6-2. The ODS shall implement dust control measures, as required by APCD Rules 8011-8081, to limit Visible Dust Emissions to 20% opacity or less during all phases of demolition and/or construction in the Area. Dust control measures shall include application of water or chemical dust suppressants to unpaved roads and graded areas, covering or stabilization of transported bulk materials, prevention of carryout or trackout of soil materials to public roads, limiting the area subject to soil disturbance, construction of wind barriers, access restrictions to inactive sites as required by the applicable rules.
- 6-3. During construction activities in the Plan Area, the ODS shall implement the following dust control practices identified in Tables 6-2 and 6-3 of the GAMAQI (San Joaquin Valley APCD, 2002):

- a. All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.
 - b. All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
 - c. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall control fugitive dust emissions by application of water or by presoaking.
 - d. When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.
 - e. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.
 - f. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
 - g. Limit traffic speeds on unpaved roads to 15 mph; and
 - h. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- 6-4. Architectural coatings applied to all structures in the Plan Area shall meet or exceed volatile organic compound (VOC) standards set in APCD Rule 4601. The ODS shall submit to the APCD a list of architectural coatings to be used and shall indicate how the coatings meet or exceed VOC standards. If the APCD determines that any architectural coatings do not meet VOC standards, the ODS shall replace the identified coatings with those that meet standards.
- 6-5. The ODS shall make application to the APCD for a permit under APCD Rule 9510, Indirect Source Rule (ISR) prior to issuance of the first building permit for construction in the Specific Plan area, if required. The ODS shall incorporate mitigation measures into project construction and/or pay ISR

fees as required to comply with Rule 9510 emission reduction requirements for construction NOx and PM emissions.

- 6-6. The ODS shall use emission-controlled construction equipment during demolition and construction activities in the Plan Area. The developers shall select construction contractors based in part on the age, condition and emission control status of their construction equipment fleets, recognizing that ISR permit fees will be reduced for project elements that can be constructed with cleaner equipment fleets.

Significance After Mitigation: Less than significant

Implementation: The ODS will be responsible for compliance with dust control standards, for preparation of Dust Control Plans and for preparation and submittal of Indirect Source Rule applications in conjunction with future Specific Plan projects.

Monitoring: The APCD, in coordination with the Community Development Department – Planning Division, will verify that the ODS have complied with the mitigation measures.

Effects of Project Operations on Criteria Pollutant Emissions, Including Ozone Precursors

Following construction of the project, the occupancy and use of the various proposed land uses would result in additional emissions of criteria pollutants. These emissions would result from combustion of natural gas and other fuels in association with the planned use of buildings, predominantly in conjunction with space and water heating. These emissions, known as area sources, include emissions from commercial and industrial water and space heaters, as well as emissions associated with internal combustion equipment for the maintenance of property. The major source of emissions associated with operation of the proposed project would result from increased on-road vehicle travel; these include ROG and NOx emissions that are considered "ozone precursors." Operation emissions also include relatively small amounts of carbon monoxide, sulfur dioxide and diesel particulate matter. The URBEMIS model also quantifies carbon dioxide (CO2) emissions, the data for which are available in Appendix D and discussed in Chapter 10.0, Global Climate Change.

As a result of the air basin's degree of ozone nonattainment, the GAMAQI includes a specific analysis scheme for ozone precursors. GAMAQI describes a three-tier approach, based on the size of the project, for determining the appropriate level of analysis for assessing a project's generation of ozone precursor emissions. The Small Project Analysis Level (SPAL), which is the first tier, includes projects that are so small that quantification of ozone precursor emissions is not required. For the tier that includes the largest projects (e.g., general plan updates, large specific plans, and large general plan amendments), GAMAQI recommends use of travel demand models and the Direct Travel Impact Model. The APCD recommends use of the URBEMIS model for calculating mobile source emissions for the middle tier, which includes most development projects. The proposed project has been addressed within the middle tier. It has been determined that the

URBEMIS analysis adequately describes the project's potential air quality impacts. While GAMAQI recommends using travel demand models for large specific plans, GAMAQI is an advisory document only. In addition, GAMAQI does not define a "large specific plan," other than such plans often cover 20 years or more of development. The CEQA analysis for this project anticipates full buildout to occur approximately 10 years after initiation of the first development phase.

The URBEMIS model was run for the full buildout of the project, that is the occupation and use of all of the proposed land uses. No mitigation measures were assumed for the initial run, which included all the default model assumptions. Annual total emissions for the full buildout scenario, as reported by URBEMIS for both area sources and vehicle travel are shown together with mitigated levels in Table 6-5.

**TABLE 6-5
ESTIMATED ANNUAL CRITERIA POLLUTANT EMISSIONS
WITH AND WITHOUT APPLICABLE URBEMIS MITIGATIONS
(TONS PER YEAR)**

Scenario	ROG	NOx	PM10	PM2.5	CO	SO2
<u>Unmitigated Emissions</u>						
Area Sources	6.11	3.82	0.01	0.01	3.62	0.00
Vehicle Travel	113.73	165.69	77.82	18.11	1,189.46	0.88
Total Unmitigated	119.84	169.51	77.83	18.12	1,193.08	0.88
<u>Emissions With Applicable URBEMIS Mitigation Measures</u>						
Area Sources	5.47	3.05	0.01	0.01	2.89	0.00
Vehicle Travel	103.65	149.76	70.27	16.35	1,074.73	0.80
Total Mitigated	109.12	152.81	70.28	16.36	1,077.62	0.80
Total Reduction	8.9%	9.8%	9.7%	9.7%	9.7%	9.1%

Project buildout would involve unmitigated emissions of ROG, NOx and particulate matter that would substantially exceed the established significance thresholds of 10, 10 and 15 tons per year, respectively. ROG and NOx emissions would contribute significantly to existing ozone nonattainment, and PM emissions would contribute significantly to particulate matter nonattainment. There are no separate significance thresholds for PM10 and PM2.5. Without mitigation, development of the project would result in significant air quality effects and would contribute to adverse health effects associated with these pollutants.

The URBEMIS model was run again, incorporating the applicable mitigation options built into the model. The mitigation options are displayed explicitly in the model output shown in Appendix D. The assumed mitigation measures generated reductions in ROG, NOx and particulate matter emissions of approximately 9% (see Table 6-5). Even with the

incorporation of these mitigation measures, emissions of ROG, NO_x, PM₁₀ and PM_{2.5} would exceed the defined significance thresholds.

The proposed project would include several design features that would contribute to potential reductions in ozone precursor emissions, as recognized in the URBEMIS model. The project would provide transit improvements or right-of-way sufficient to provide transit improvements where requested by San Joaquin RTD (see Chapter 16.0, Transportation). All proposed streets would be lighted to City standards. Where signalized intersections are recommended, they would provide pedestrian signalization and signage consistent with City standards. The project would include bike paths along major streets, and right-of-way would be provided for other on-street bikeways. The project proposes landscaping areas adjacent to sidewalks along arterial and collector streets. These areas would include tree plantings providing for intermittent shade.

Project-related emissions of ozone precursors and particulate matter would represent a small fraction of the countywide emissions identified in Table 6-4. Unmitigated project emissions would contribute to countywide totals for ROG, NO_x and particulate matter in a range from 0.44% to 0.70%. Although small by percentage, these increases would contribute to local and regional pollutant levels, which would in turn have potential health effects on the general population and portions of the population with pollution-related health issues.

While the actual contribution of project-related emissions on regional pollutant levels cannot be quantified, medical research has identified quantifiable relationships between specific increases in ozone levels that exceed federal standards. Gent, et. al. (2003) linked a 50 parts per billion (ppb) 1-hour ozone level increase with a quantifiable increase of wheeze (35%) and chest tightness (47%) in children using (asthma) rescue medication; increased ozone levels resulted in shortness of breath and increased use of rescue medication. Pope, et. al. (2002) found that 10 microgram/cubic meter increases in PM_{2.5} were associated with 4%, 5% and 8% increases in "all-cause," cardiopulmonary and lung cancer mortality; coarse particles were not linked with mortality. Kunzii, et. al. (2004) found a quantifiable linkage between PM 2.5 levels and arterial thickness, a measure of atherosclerosis.

Indirect Source Rule

In addition to any mitigation measures that may be incorporated into the proposed project, the required application of the APCD's adopted Rule 9510 Indirect Source Rule to the project would also result in substantial mitigation of NO_x and PM emissions. The required NO_x and PM reductions required by Rule 9510 amount to 33.3% and 50% reductions, respectively, from the unmitigated levels associated with the project. These reductions may in part be accomplished by the project applicant's incorporation of mitigation measures into the project, such as those described above. The emission reductions associated with these measures are credited to the reductions required by Rule 9510.

To fulfill the requirements of the Rule, the project applicant must pay the required Indirect Source Rule fee for any required reductions that have not been accomplished through project mitigation commitments. For example, assuming that the project generates 100

tons per year of NO_x annually, the ISR would require a reduction of 33.3 tons per year. The applicant incorporates mitigation measures into the project that would result in a reduction of 10 tons per year of NO_x emissions. The applicant would be required to pay the NO_x per-ton fee on the remaining 23.3 tons per year. The current fees are \$9,350 per ton of NO_x and \$9,011 per ton of PM. For operational emissions, this fee must be paid for ten years of emissions. The actual calculations will be accomplished by the APCD and project applicants as individual projects (i.e. portions of the Specific Plan) are brought forward to the APCD for approval under Rule 9510.

The substantial reductions in NO_x and PM - and associated ROG - emissions accomplished by the application of the ISR probably represent the best achievable mitigation for indirect sources. However, even with the application of these measures, emissions levels would remain above the defined thresholds of significance. As a result, the air quality impacts of the project would remain significant and unavoidable.

As shown in Table 6-5, buildout of the project would also result in substantial emissions of carbon monoxide associated primarily with vehicle travel. The San Joaquin Valley Air Basin is in attainment of both the state and federal standards for this pollutant. The project would not result in any exceedence of the applicable standards or require additional air quality planning or enforcement. The project would not involve a significant air quality effect with respect to regional emissions of these pollutants. An analysis of the potential for carbon monoxide hot spot impacts is provided in a subsequent section.

Level of Significance: Significant

Mitigation Measures:

- 6-7. The ODS shall receive a permit under APCD Rule 9510, Indirect Source Rule (ISR) prior to issuance of the first building permit for construction in the Plan Area. The ODS shall incorporate mitigation measures into the project and/or pay the required ISR fees to the APCD as required to comply with Rule 9510 emission reduction requirements for NO_x and PM emissions associated with project operations.
- 6-8. The ODS of development projects in the Plan Area shall prepare improvement plans that incorporate the following features, consistent with adopted City improvement standards and to be installed by the developer:
 - Bus turnouts and transit improvements where requested by the San Joaquin RTD.
 - Continuous public sidewalks adjacent to all proposed public streets.
 - Pavement and striping for bike lanes/paths.
 - Street lighting.
 - Pedestrian signalization, signage and safety designs at signalized intersections.

- Shade trees to shade sidewalks in street-side landscaping areas.
- 6-9. The ODS of development projects in the Plan Area shall prepare and implement a transportation demand management (TDM) plan that incorporates the measures listed below, though the TDM plan shall not be limited to those measures. The plan shall be subject to City review and approval prior to issuance of the first building permit for construction in the Plan Area.
- Provide secure bicycle parking in conjunction with commercial and office development.
 - Provide designated vanpool parking spaces close to the employment center entry locations.
 - Provide preferential carpool parking spaces close to the employment center entry locations.
 - Provide on-site amenities that encourage alternative transportation modes such as locker, shower, and secure bike storage facilities.
 - Provide on-site services such as personal mail boxes and day care that reduce mid-day trip generation.
 - Provide telecommuting options.
 - Provide transit vouchers.
 - Provide information to employees on carpooling, ride sharing and other available programs.

Significance After Mitigation: The mitigation measures would reduce emissions from project operations. The amount of reductions cannot be quantified, as the exact land use activities that would be established in the Plan Area is not known. Because of this, it cannot be stated with certainty that the project emissions would decrease below the significance thresholds contained in GAMAQI. Therefore, as a conservative conclusion, project impacts are considered significant and unavoidable.

Implementation: The owners, developers, and/or successors-in-interest will be responsible for incorporating air quality measures in project improvement plans.

Monitoring: The APCD, in coordination with the Community Development Department – Planning Division, will be responsible for ensuring that air quality measures are incorporated in project improvement plans submitted by owners, developers, and/or successors-in-interest.

Project Impacts on Carbon Monoxide Hot Spots

Potential CO concentrations at impacted intersections based on the analysis presented in the project traffic study, available in Appendix F and described in Chapter 18.0, Transportation. The analysis considered whether CO emissions from project-generated traffic would exceed the GAMAQI's screening threshold for potentially significant project contributions to CO concentration impacts. That is, it considered whether the project would cause the predicted level of service at these intersections to degrade to LOS E or F or substantially worsen traffic at intersections already predicted to function at these levels. GAMAQI significance thresholds indicate that intersections that operate at LOS E or F may involve significant concentrations of carbon monoxide, and the presence of such concentrations at intersections where sensitive receptors exist would constitute a significant environmental effect.

The potential for CO hot spot impacts was first considered for Existing plus Project conditions, based on traffic data described in Chapter 18.0, Transportation. Under Existing conditions without the project, these two intersections operate at LOS E or F:

- Interstate 5 southbound ramps/Lathrop Road
- Main Street/Louise Avenue

Under Existing plus Project conditions, an additional three intersections would operate at LOS E or F:

- Interstate 5 northbound ramps/Lathrop Road
- McKinley Avenue/Lathrop Road
- McKinley Avenue/Yosemite Avenue

Mitigation measures described in Chapter 18.0, Transportation, would improve operations at all these intersections to LOS D or better, which would avoid potential CO hot spot impacts.

The potential for CO hot spot impacts was also considered under cumulative conditions. A description of potential cumulative impacts is contained in Chapter 19.0, Cumulative Impacts.

Level of Significance: Potentially significant

Mitigation Measures: Refer to Chapter 18.0, Transportation

Significance After Mitigation: Less than significant

Implementation: Refer to Chapter 18.0, Transportation

Monitoring: Refer to Chapter 18.0, Transportation

Generation of or Exposure to Toxic Air Contaminants (TACs)

The proposed project would involve the development of commercial, office and industrial land uses. The industrial uses proposed on the project site would be "limited industrial." According to the draft Specific Plan, land use activities included in the "limited industrial" designation are office, research and development, light manufacturing, warehousing, distribution, and service commercial. The Specific Plan explicitly prohibits the following industrial activities:

- Can and metal container manufacture.
- Film refuse.
- Leather and fur finishing and dyeing, not including tanning and curing.
- Linoleum and oilcloth manufacture.
- Metal alloys and foil manufacture, including solder, pewter, brass, bronze and tin, lead and gold foil.
- Paint manufacture, including enamel, lacquer, shellac, turpentine and varnish.
- Paper products manufacture.
- Paraffin products manufacture.
- Plastic manufacture.
- Shoe polish manufacture.
- Steel products manufacture and assembly, including steel cabinets and lockers, doors, fencing and furniture.
- Wire and cable manufacturing.
- Soap manufacturing.
- Dyeing.
- Sheet metal.
- Forges.
- Electroplating.
- Large-scale gas manufacturing.
- Rubber manufacturing and processing.
- Wood pulp and fiber processing.

These prohibited activities would be likely to generate air toxics. In contrast, the limited industrial uses the Specific Plan proposes to allow would be less likely to generate air toxics. New business that could involve such emissions would be subject to APCD regulations that would prohibit operations unless risks to vulnerable off-site sensitive receptors were below significance criteria. This restriction would apply whether those receptors were located in or outside of the project site.

The ARB's CHAPIS mapping system was consulted, with negative results. There are no known substantial point sources of air toxics located on or in the vicinity of the project site.

The SR 120 freeway, which forms the southern boundary of the project site, presently accommodates existing traffic of approximately 77,000 vehicles per day on the segment from the Interstate 5 interchange to the Yosemite Avenue/Guthmiller Road interchange adjoining the project site (see Chapter 18.0, Transportation). Under projected future conditions, traffic on this freeway segment is expected to exceed 172,000 vehicles per day (see Chapter 19.0, Cumulative Impacts). Freeways are a source of various TACs, including

diesel particulate emissions. In addition, the Specific Plan would allow some land uses that may generate TACs, such as distribution centers, dry cleaners using perchloroethylene, and gasoline dispensing facilities.

State and local air quality agencies are in the process of defining risk levels and appropriate modeling techniques for TACs. One such effort by the California Air Resources Board (ARB, 2005) is the *Air Quality and Land Use Handbook: A Community Health Perspective* (the "ARB Handbook"). This publication identifies areas of potential health risk from air pollution generally with an emphasis on air toxics. Freeways are among the identified potential health risk generators. The ARB Handbook recommends against siting of new sensitive land uses within 500 feet of a freeway. "Sensitive land uses," as defined in the ARB Handbook, include schools and schoolyards, parks and playgrounds, day care centers, nursing homes, hospitals and residential communities (ARB, 2005).

The Specific Plan does not propose any sensitive land uses, as defined in the ARB Handbook, on the project site. Employees on the project site would be in buildings most of the time on the project site, and would therefore have limited exposure to diesel PM. In addition, studies have shown that the concentration of diesel PM – the most common air toxic associated with freeways – decreases substantially within approximately 500 feet of a freeway (ARB, 2005). A lower diesel PM concentration correlates with a decrease in health risk. Most of the project site construction would occur more than 500 feet away from SR 120.

The ARB Handbook recommends not placing new sensitive land uses within 1,000 feet of a distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week. It also recommends not placing sensitive land uses within 300 feet of any dry cleaning operation or large gas station (defined as a station with a throughput of 3.6 million gallons per year or greater). For typical gas stations, a separation of 50 feet is recommended (ARB, 2005). As previously noted, the project does not propose any sensitive land uses.

Whether or not these risks are or will be significant in the future requires some speculation as to the potential risk that currently exists and which may or may not exist in the future. Risk evaluation involves an assessment of exposure to certain contaminant levels, which are assumed to be sustained over a 70-year lifetime. In this case, contaminant levels are expected to decline dramatically within a 10-15 year period and may be reduced to insignificant levels in a comparable timeframe. Accounting for this uncertainty, this effect is for the purposes of this EIR considered potentially significant.

In 2000, the ARB adopted the Diesel Risk Reduction Plan. This plan has as its objective reductions in diesel PM emissions and associated cancer risks of 75 percent by 2010 and 85 percent by 2020. The plan proposes to accomplish this objective with three approaches:

- New regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce diesel PM emissions by about 90 percent overall from current levels;

- New retrofit requirements for existing on-road, off-road, and stationary diesel-fueled engines and vehicles where determined to be technically feasible and cost-effective; and
- New Phase 2 diesel fuel regulations to reduce the sulfur content levels of diesel fuel to no more than 15 ppm to provide the quality of diesel fuel needed by the advanced diesel PM emission controls.

Implementation of the Diesel Risk Reduction Plan would reduce potential health impacts on employees in developments located near SR 120. Other measures described below would further reduce potential exposure to diesel PM.

Level of Significance: Potentially significant

Mitigation Measures:

6-10. ODSA health risk assessment shall be conducted for the following future development projects that meet the following criteria:

- A distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week, placed within 1,000 feet of a residence in or adjacent to the Plan Area.
- A dry cleaning operation placed within 300 feet of a residence in or adjacent to the Plan Area.
- A gas station placed within 50 feet of a residence in or adjacent to the Plan Area.

If the health risk assessment identifies a significant risk as defined by GAMAQI, the assessment shall identify measures to reduce the health risk to levels that are less than significant, which the project shall incorporate in its design and construction.

Significance After Mitigation: Less than significant

Implementation: The owners, developers, and/or successors-in-interest will be responsible for incorporating these measures in project improvement plans.

Monitoring: The Community Development Department – Planning Division, in coordination with the APCD, will be responsible for ensuring that these are incorporated in project improvement plans submitted by owners, developers, and/or successors-in-interest.

Odor Impacts

No residences or other sensitive receptors would be constructed in the Plan Area. As a result, development of the proposed project is not expected to result in any substantial exposure of new residences or other sensitive receptors to existing odors.

The proposed project would not result in the development of new odor sources of concern. Planned new development would consist of new light industrial and commercial development. Neither type of development may be expected to result in odor concerns. New commercial development may result in food service-related odors, as the proposed Specific Plan would allow eating establishments throughout the Plan Area, but these would not be considered adverse odor effects. Because of the proposed type of development, rural residences remaining in the Plan Area during project development would not be exposed to odors. Eventually, these rural residences would be removed.

Level of Significance: Less than significant

Mitigation Measures: None required

7.0 BIOLOGICAL RESOURCES

INTRODUCTION

This chapter addresses the potential biological resource impacts of the proposed project, both on the project site and in off-site areas affected by the project. The chapter is based on the Baseline Biological Assessment for the Lathrop Gateway Business Park, prepared by Moore Biological Consultants (2010). Appendix B contains the Biological Assessment, which includes supporting documentation. The focus of the assessment was to document existing biological resources of the project site, to conduct a survey to determine the presence or absence of waters of the U.S. and wetlands, and to search for suitable habitat for or presence of special-status species in the project area.

As part of the assessment, Moore Biological Consultants conducted a search of the California Natural Diversity Database (CNDDDB), maintained by the California Department of Fish and Game (CDFG). The CNDDDB search area encompassed approximately 120 square miles surrounding the Plan Area. In addition, the consultant reviewed the list of federally threatened and endangered species kept by the U.S. Fish and Wildlife Service (USFWS) for listed species that may occur in the area. A 2006 biological report prepared by Sycamore Environmental Consultants for a portion of the Plan Area was also reviewed. The reviews were supplemented by field surveys conducted on June 10, August 5 and August 12, 2009, and March 4, 2010. The surveys consisted of driving and walking around the Plan Area and the storm drain alignment, making observations and noting habitat conditions, surrounding land uses, and plant and wildlife species. A more detailed discussion of the methodology is available in the Biological Assessment in Appendix B.

ENVIRONMENTAL SETTING

The Plan Area includes almond orchards, annual cropland, residential parcels, and several industrial, logistics and commercial businesses. There is a large truck storage yard in the western part of the Plan Area. The south-central portion of the Plan Area was historically orchard, but it is now fallow cropland and strawberries. Residences in the Plan Area are primarily clustered along Yosemite and McKinley Avenues. The storm drain alignment is located at the base of elevated railroad tracks within the railroad right-of-way, adjacent to fields farmed in alfalfa and other annual crops.

Surrounding land uses are primarily industrial and agricultural, interspersed with areas of relatively new residential and commercial development. A number of industrial businesses are located northwest of the Plan Area, and a business park and the ACE commuter train station are located to the northeast. There are agricultural fields and a few businesses to the east of the Plan Area, across the Union Pacific Railroad tracks. Most of the land south of the Plan Area across SR 120 is in agriculture, with associated residences.

Vegetation

Virtually all of the habitats in the Plan Area and along the storm drain alignment are highly disturbed by agriculture and urban development. The orchard floors, road shoulders and other ruderal (weedy) areas in the Plan Area are vegetated with various native and non-native annual grass and weed species. A comprehensive list of observed plant species is available in Table 1 of the Biological Assessment, which is in Appendix B.

Dominant grasses on the site include oats, soft-chess brome, ripgut brome, foxtail barley, Bermuda grass, and perennial ryegrass. Other grassland species intermixed with the grasses include tumbleweed, fiddleneck, black mustard, bull thistle, prickly lettuce, pigweed, dove weed, common mallow and filaree. In addition to hundreds of orchard trees, the site contains trees such as blue gum, mulberry, California fan palm, date palm, edible fig, Fremont cottonwood, coastal redwood, pines, black walnut, olive, tree-of-heaven and a number of other ornamental trees. These ornamentals are primarily growing along the edges of the roads and fields and around the homes and business.

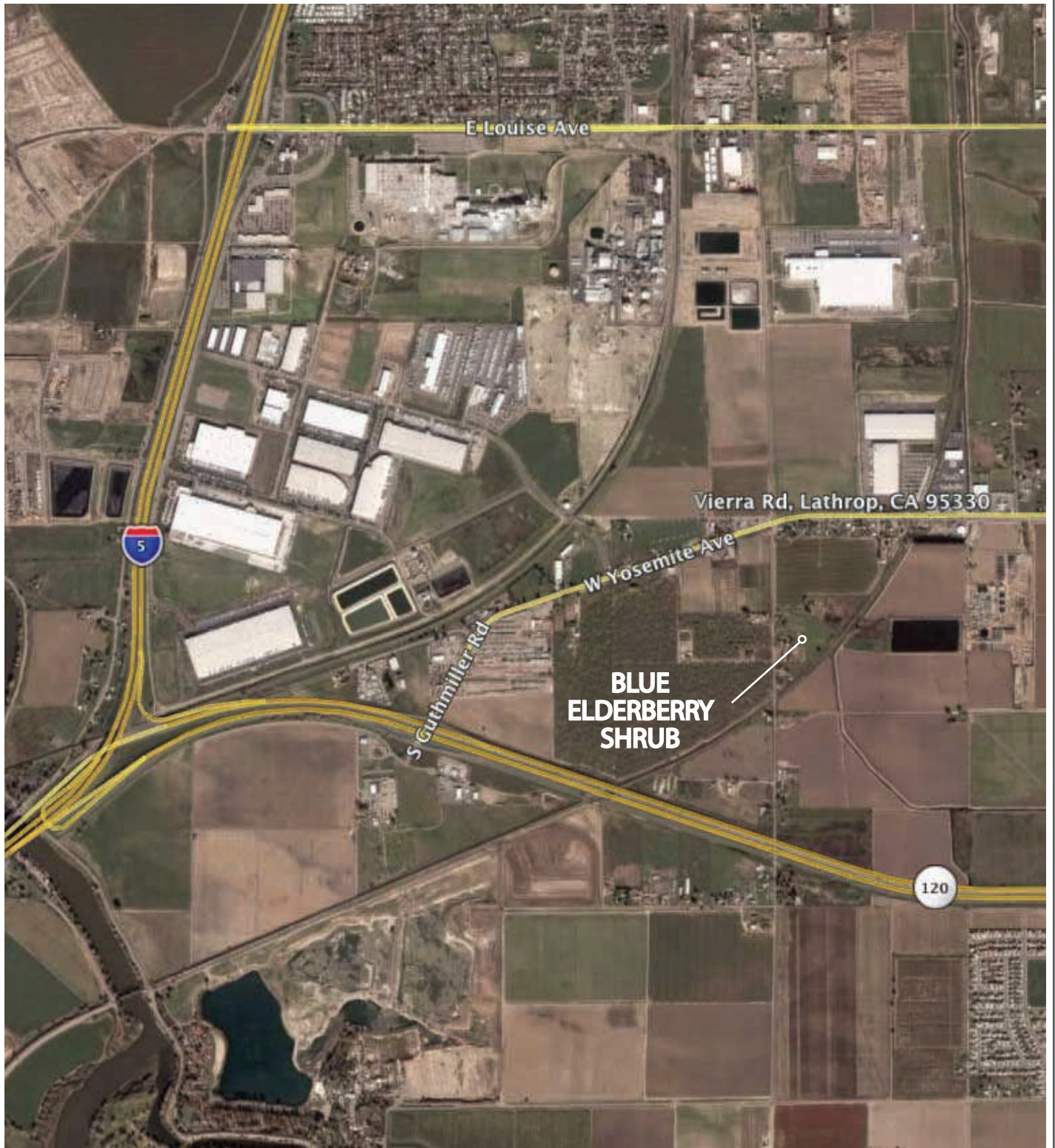
There are no trees along the storm drain alignment. However, the riparian corridor along the San Joaquin River in the vicinity of the proposed outfall supports a discontinuous band of valley oak, coastal live oak and Fremont cottonwood. Oak trees are of special interest to the State, as California enacted the Oak Woodlands Conservation Act in 2001, declaring the preservation of oak woodlands a State priority. No oak trees are located in the Plan Area.

A single blue elderberry shrub was observed growing in the back yard of a residential parcel (Figure 7-1). No other blue elderberry shrubs were observed, and a cluster of off-site elderberry shrubs documented in the 2006 Sycamore report was not located. The elderberry shrub provides habitat for the valley elderberry longhorn beetle, listed as threatened under the federal Endangered Species Act. As discussed below, this beetle is unlikely to be found in the Plan Area.

Wildlife

A variety of wildlife species were observed in the Plan Area. A comprehensive list of observed wildlife species is available in Table 2 of the Biological Assessment, which is in Appendix B.

Some of the more common birds observed include red-tailed hawk, mourning dove, rock dove, American crow, northern mocking bird, yellow-billed magpie and western scrub jay. All of these species are commonly found in agricultural, urban and industrial areas in the plan vicinity. Swainson's hawks were observed soaring over the western part of the site and lands to the west. No active raptor nests were located during the field surveys. However, there are several potential nest trees in the Plan Area that are suitable for nesting raptors and other protected migratory birds, including Swainson's hawk. There were some raptor stick nests in some of the large trees on the site, and it is possible that Swainson's hawks used some of these nests. In addition, a pair of red-tailed hawks was observed flying and calling over the central part of the Plan Area. This territorial behavior suggests these hawks nested nearby.



NORTH

SOURCE: GOOGLE EARTH

INSITE ENVIRONMENTAL, INC.

Figure 7-1
ELDERBERRY SHRUB

A variety of mammals common to agricultural and semi-rural areas are expected to use habitats in the Plan Area. Hundreds of California ground squirrels and were observed in the Plan Area. Evidence of coyote, raccoon, and striped skunk was also observed. Virginia opossum and black-tailed hares are expected to occur in the area. A number of species of small rodents also are likely to occur, including mice and voles.

Based on habitat types present, a limited variety of amphibians and reptiles are expected to use habitats in the Plan Area. Pacific chorus frog was the only amphibian observed in the Plan Area; western fence lizard was the only reptile observed. The Plan Area and surrounding lands provide suitable habitat for coast horned lizard, western toad, common king snake, gopher snake and common garter snake, although none of these species were observed.

Special-Status Species

Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

Special-status wildlife species also includes species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The federal Migratory Bird Treaty Act and California Fish and Game Code protect special-status bird species year-round, as well as their eggs and nests during the nesting season. The California Fish and Game Code also provides protection for mammals and fish.

Special-status plants include those designated rare, threatened, or endangered and candidate species for listing by the USFWS. Special-status plants also include species considered rare or endangered under the conditions of the CEQA Guidelines Section 15380, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society (CNPS, 2001). Finally, special-status plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the CNPS Inventory.

Table 7-1 provides a summary of the listing status of special-status plant and wildlife species either documented in the Plan Area vicinity or which have potentially suitable habitat within the Plan Area, based on information in the CNDDB. This table also includes an assessment of the likelihood of occurrence of each of these species within the Plan Area, based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

**TABLE 7-1
POTENTIAL SPECIAL-STATUS SPECIES IN PLAN AREA AND VICINITY**

Common Name	Status			Habitat	Likely Occurrence on Project Site
	Federal	State	CNPS		
Plants					
Slough thistle	None	None	1B	Chenopod scrub, sloughs containing marshes and swamps, and riparian scrub	Extremely low in Plan Area – no suitable habitat. May possibly occur along the San Joaquin River.
Delta button celery	None	E	1B	Riparian scrub on seasonally inundated floodplain with a clay substrate	Extremely low in Plan Area – no suitable habitat. May possibly occur along the San Joaquin River.
Suisun Marsh aster	None	None	1B	Marshes and swamps (brackish and freshwater)	Extremely low in Plan Area – no suitable habitat. May possibly occur along the San Joaquin River.
Wright’s trichocoronis	None	None	2	Marshes and swamps, riparian forest, meadows and seeps, and vernal pools	Extremely low in Plan Area – no suitable habitat. May possibly occur along the San Joaquin River.
Wildlife					
<i>Birds</i>					
Burrowing owl	None	SC	--	Grasslands, deserts and scrublands with low-growing vegetation	Moderate – there are numerous ground squirrel burrows, where this species primarily nests
Swainson’s hawk	None	T	--	Nesting: large trees, usually within riparian corridors. Foraging: agricultural fields and annual grasslands	High – several larger trees on site are suitable for nesting. Open grassland and cropland in the area provides foraging habitat. Records of nesting hawks in northeast part of site.
Tricolored blackbird	None	SC	--	Requires open water and protected nesting substrate, usually cattails and riparian scrub with surrounding foraging habitat	Moderate – a few patches of emergent wetland on site that provide suitable nesting habitat. Open fields and grassland are suitable for foraging. Possible record of species in northeast corner of site.
Yellow-headed blackbird	None	SC	--	Nests in freshwater emergent wetlands with dense vegetation and deep water, usually in lakes and ponds	Very low – no highly suitable nesting habitat
<i>Mammals</i>					
Riparian brush rabbit	E	E	--	Riparian thickets within Stanislaus and southern San Joaquin Counties	Extremely low – no suitable habitat
<i>Amphibians and Reptiles</i>					
Western pond turtle	None	SC	--	Ponds, marshes and irrigation ditches with aquatic vegetation for cover. Needs basking sites and nearby upland habitats for egg laying.	High – species observed in fire suppression pond in west part of site. San Joaquin River is potentially suitable habitat.
California tiger salamander	T	SC	--	Seasonal water bodies without fish near grassland/ woodland habitats with summer refugia (i.e., burrows)	Low – on-site seasonal pond provides potential breeding habitat, but only recorded occurrence of species is 0.25 miles south of site.
<i>Invertebrates</i>					
Valley elderberry longhorn beetle	T	None	--	Elderberry shrubs, usually in valley riparian habitats	Low – only one elderberry shrub on site, and it is not in riparian area.

NOTES: E = endangered, T = threatened, SC = California Species of Concern
 CNPS List 1B – species that are rare, threatened or endangered in California and elsewhere
 CNPS List 2 – species that are rare, threatened or endangered in California, but common elsewhere
 SOURCE: CNDDDB, 2010.

Special-Status Plants

Special-status plants identified in the area include slough thistle, delta button celery, Suisun Marsh aster, and Wright's trichocoronis. Most of the special-status plants found in the project vicinity generally occur in relatively undisturbed areas within vegetation communities such as vernal pools, marshes, swamps, chenopod scrub, and riparian scrub. None of these habitat types occur within the site; therefore, no special-status plant species are expected to occur in the Plan Area.

It is possible that slough thistle, delta button celery, Suisun Marsh aster and Wright's trichocoronis may still occur along the San Joaquin River at or near the outfall site, although the likelihood of their occurrence is very low. The leveed bank at the proposed outfall construction site is open grassland and does not support riparian scrub vegetation. There is also no marsh vegetation along the water line.

Special-Status Wildlife

While the Plan Area and surrounding areas may have provided habitat for some of the special-status wildlife species listed in Table 7-1 at some time in the past, farming and development in the area have substantially modified natural habitats. Of the wildlife species identified in the CNDDDB, Swainson's hawk, burrowing owl, tricolored blackbird, western pond turtle and California tiger salamander are the only species that have the potential to occur in the Plan Area on more than a transitory or very occasional basis. While not recorded in the CNDDDB, valley elderberry longhorn beetle could occur in the on-site elderberry shrub.

Swainson's hawk (*Buteo swainsoni*)

Swainson's hawk is a migratory hawk listed by the State of California as a threatened species. Swainson's hawks are found in the Central Valley primarily during their breeding season. A population is known to winter in the San Joaquin Valley. Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western United States. This raptor generally arrives in the Central Valley in mid-March, and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July, and most Swainson's hawks leave their breeding territories by late August.

Burrowing owl (*Athene cunicularia*)

Burrowing owl is a State Species of Special Concern. Burrowing owls are year-round residents in a variety of grasslands, as well as scrub lands that have a low density of trees and shrubs with low growing vegetation. Burrowing owls that nest in the Central Valley may winter elsewhere. The primary habitat requirement of the burrowing owl is small mammal burrows for nesting. The owl usually nests in abandoned ground squirrel burrows, although they have been known to dig their own burrows in softer soils. In urban areas, burrowing owls often utilize artificial burrows, including pipes, culverts and piles of concrete pieces. This semi-colonial owl breeds from March through August, and is most active while hunting during dawn and dusk.

Tricolored blackbird (*Agelaius tricolor*)

The tricolored blackbird is a State Species of Special Concern. Tricolored blackbirds are colonial nesters requiring very dense stands of emergent wetland vegetation and/or dense thickets of wild rose or blackberries adjacent to open water for nesting. This species is endemic to California.

Western pond turtle (*Actinemys marmorata*)

The western pond turtle is a State Species of Special Concern. Western pond turtles are associated with permanent or nearly permanent bodies of water with adequate basking sites such as logs, rocks or open mud banks.

California tiger salamander (*Ambystoma californiense*)

The California tiger salamander is a State Species of Special Concern and was recently listed as threatened by the USFWS. For breeding, California tiger salamanders require stock ponds without game fish or deep, large vernal pools that hold water well into the spring (April or May). Following breeding, the young disperse to nearby grasslands and woodland habitats and spend the summer months in subterranean refugia such as small mammal burrows. While most salamanders aestivate in burrows within several hundred feet of their breeding ponds, they have been documented over-summering up to 1+ mile from their breeding pond. In August 2005, the USFWS designated critical habitat for the Central Valley population of California tiger salamander. The Plan Area is not within designated critical habitat of California tiger salamander.

Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)

The valley elderberry longhorn beetle is listed as a federally threatened species. Its host plant is the blue elderberry shrub. The USFWS *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (1999) identifies stems in excess of one inch diameter at ground level as potential habitat for the beetle.

Other Species

A number of sensitive fish species occur in Delta waterways during various times of the year. These include delta smelt; fall/late fall-run, spring-run and winter-run Chinook salmon; Central Valley steelhead; green sturgeon; river lamprey; Pacific lamprey and longfin smelt. It is considered likely that some of these fish species use the San Joaquin River at or near the proposed storm drain outfall site, at least on a seasonal basis.

The USFWS species list contains several species that have essentially no potential for occurrence in or near the Plan Area due to lack of habitat or the Plan Area being outside the known range of the species. For example, California red-legged frog does not occur on the Central Valley floor. There are no occurrences of giant garter snake documented in the Biological Assessment search area, and no suitable habitat for this species was found in the Plan Area or along the storm drain alignment. The Plan Area is well east of the known range of the San Joaquin kit fox.

The USFWS list also includes vernal pool fairy shrimp and vernal pool tadpole shrimp. Both species require vernal pools or seasonal wetlands, and neither of these habitats occurs in the Plan Area. The

seasonal pond in the eastern part of the Plan Area does not have the attributes of vernal pools, such as underlying clay pan and typical vernal pool flora. The wetlands along the storm drain alignment also are not suitable for the two shrimp species. The likelihood of listed vernal pool branchiopods occurring in the Plan Area is very low.

Waters of the U.S. and Wetlands

Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, many of their tributaries, and adjacent wetlands. Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. For a wide variety of wildlife species, wetlands and Waters of the U.S. provide critical habitat components, such as nest sites and a reliable source of water.

State and federal agencies regulate these habitats, and Section 404 of the federal Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into waters of the U.S. Currently, the U.S. Army Corps of Engineers (ACOE) and the U.S. Environmental Protection Agency (EPA) share authority to determine the jurisdictional status of waters of the U.S., including wetlands. Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the ACOE *Wetlands Delineation Manual* and Regional Supplement (ACOE, 1987; 2008). Both ACOE and CDFG have jurisdiction over modifications to riverbanks, lakes, stream channels and other wetland features.

The only part of the Plan Area that could potentially fall under the jurisdiction of ACOE is a ±0.75-acre seasonal pond in the eastern part of the Plan Area near the Union Pacific railroad tracks (Figure 7-2). This pond was dry during the 2009 surveys but was inundated during other times. The pond appears to hold water to a depth of up to 5 feet and is likely inundated for several months during most winters and springs. Vegetation on the floor of the pond includes species such as perennial ryegrass, Bermuda grass, curly dock and Mediterranean barley. This pond is not adjacent to or tributary to creeks or drainages and may fall outside ACOE jurisdiction, due to hydrologic and geographic isolation from jurisdictional wetlands and Waters of the U.S.

There is a created pond west of South Guthmiller Road surrounded by a number of industrial businesses. The pond is aerated, has bulkhead on one side, and signage indicating it is part of a local fire suppression system. Immediately south of the pond is a low area supporting cattails, umbrella sedge and other hydrophytes. This small wetland appears to be fed from seepage from the fire suppression pond. Insert Figure 7-2 Seasonal Pond

Due to the created nature of the fire suppression pond and adjacent low area, and its hydrologic and geographic isolation from jurisdictional wetlands and Waters of the U.S., these areas are believed to fall outside ACOE jurisdiction.

No other potential jurisdictional wetlands or Waters of the U.S. were observed in the Plan Area. Specifically, no vernal pools, seasonal wetlands, marshes, ponds, creeks, or lakes of any type were observed.

There are two isolated wetlands along the storm drain alignment that are adjacent to but outside the Union Pacific railroad right-of-way (Figure 7-3). These wetlands appear to collect agricultural tail water from fields to the north. Similar to the seasonal pond in the eastern part of the Plan Area, these wetlands are not adjacent to or tributary to creeks, and may fall outside ACOE jurisdiction due to hydrologic and geographic isolation from jurisdictional wetlands and Waters of the U.S.

Relevant Plans and Regulations

Federal Endangered Species Act

Under the Federal Endangered Species Act (FESA), the USFWS and the National Marine Fisheries Service (NMFS) have the responsibility for maintaining a list of threatened and endangered species. Projects that would result in “take” of any federally-listed threatened or endangered species are required to obtain authorization from USFWS and/or NMFS through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project. The Section 7 authorization process is used to determine if a project with a federal nexus would jeopardize the continued existence of a listed species and what mitigation measures would be required to avoid jeopardizing the species. The Section 10(a) process allows take of endangered species or their habitat in non-federal activities.

California Endangered Species Act

The California Endangered Species Act (CESA) was enacted in 1984. Under the CESA, the California Fish and Game Commission has the responsibility for maintaining a list of threatened and endangered species. CDFG also maintains lists of species of special concern which impacts would be considered significant under CEQA Guidelines Section 15380 and could require mitigation. 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 area and determine whether the proposed project would have a potentially significant impact on such species. In addition, CDFG encourages informal consultation on any proposed project which may impact a candidate species. CESA prohibits the take of California listed animals and plants in most cases, but CDFG may issue incidental take permits under special conditions (Fish and Game Code - Sections 3503, 3503.5, 3513).

CEQA Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines section 15380(b) provides that a species not on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. They allow a public agency to undertake a review to determine if a significant effect on species not yet listed by either the USFWS or CDFG (i.e., species of concern) would occur. Whether a species is rare, threatened, or endangered can be legally significant because, under CEQA Guidelines Section 15065, an agency must find an impact to be significant if a project would “substantially reduce the number or restrict the range of an endangered, rare, or threatened species.”



NORTH SOURCE: MOORE BIOLOGICAL

INSITE ENVIRONMENTAL, INC.

Figure 7-2
SEASONAL POND



NORTH SOURCE: MOORE BIOLOGICAL

INSITE ENVIRONMENTAL, INC.

Figure 7-3
WETLANDS ALONG OFF-SITE STORM DRAIN
ALIGNMENT

Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

Migratory Bird Treaty Act

The Federal Migratory Bird Treaty Act (16 USC, Sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

California Native Plant Society

The CNPS maintains an inventory of special-status plant species. CNPS maintains four species lists of varying rarity. Vascular plants listed as rare or endangered by the CNPS, but which have no designated status or protection under Federal or state-endangered species legislation, are defined as follows:

- List 1A Plants Believed Extinct.
- List 1B Plants Rare, Threatened, or Endangered in California and elsewhere.
- List 2 Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.
- List 3 Plants About Which More Information is Needed - A Review List.
- List 4 Plants of Limited Distribution - A Watch List.

In general, plants appearing on CNPS List 1 or 2 are considered to meet CEQA Guidelines Section 15380 criteria, and impacts on these species are analyzed in this document.

San Joaquin County General Plan

The following objectives and policies related to biological resources from the San Joaquin County General Plan were considered in this analysis:

Vegetation, Fish and Wildlife Habitat Objectives (Chapter VI):

To protect and improve the County's vegetation, fish, and wildlife resources.

To provide undeveloped open space for nature study, protection of endangered species, and preservation of wildlife habitat.

Resource Protection and Management Policies (Chapter VI):

Resources of significant biological and ecological importance in San Joaquin County shall be protected. These include wetlands; riparian areas; rare, threatened and endangered species and their habitats as well as potentially rare or commercially important species; vernal pools; significant oak groves and heritage trees (see Table VI-1).

No public action shall significantly diminish the wildlife and vegetative resources of the County; cumulatively significant impacts shall be avoided.

The County shall encourage the protection of those habitat areas that are of a size or quality so that they are no more than minimally affected by adjacent development. Connection of habitat areas shall be encouraged.

No net loss of riparian or wetland habitat or values shall be caused by development.

Development projects which have the potential to destroy wetlands shall not be permitted, unless: no suitable alternative site exists for the land use, and the use is considered necessary to the public; there is no degradation of the habitat or numbers of any rare, threatened, or endangered plant, or animal species as a result of the project.

Habitat of superior quantity and superior or comparable quality will be created or restored to compensate for the loss.

The county shall support feeding areas and winter habitat for migratory waterfowl.

Strips of land along waterways shall be protected for nesting and foraging habitat and for protection of waterway quality.

Habitat Protection, Preservation, and Restoration Program:

The County shall develop and implement, with the California Department of Fish and Game, a program to protect, restore, and manage wildlife and habitat resources. The project shall include establishment of financing by project mitigation funds. (Planning).

The County shall support habitat conservation and restoration plans for special-status taxa and shall work with the California Department of Fish and Game and other agencies or organizations in developing such plans. (Planning).

City of Lathrop General Plan

The following Fish, Wildlife and Vegetation policies from the Resource Management Element of the City General Plan are relevant to the Lathrop Gateway Business Park Specific Plan.

- Habitat Retention. Objectives include preservation of vegetation along waterways that provide habitat; “no-net-loss” of wetland acreage; careful introduction of recreation within habitat areas, so as not to disturb natural conditions.
- Habitat Enhancement. Objectives include improvement of natural habitat along waterways. Land use within areas of riparian habitat shall be restricted to nature oriented passive recreation.

Lathrop Municipal Code

Chapter 12.16.060 Responsibility for replacement of trees.

Any tree which is removed by a property owner under the provisions of this chapter shall be replaced by the property owner in accordance with the provisions of the comprehensive street tree plan or master guidelines for trees, whichever is applicable. Where required, replacement shall be

made at the expense of the property owner within ninety (90) days of obtaining a permit for the removal of the original tree as prescribed under Section 12.16.070. (Prior code § 98.06)

Chapter 12.16.070 Permit required to plant or remove trees.

No person shall plant, remove, injure or interfere with any tree upon the public streets of the city without the prior written permission of the public works director. The director of public works is authorized to grant such permission at his or her discretion, as being necessary; provided, however, that a permit to remove a tree shall not be granted until the parks and recreation commission has reviewed the proposal in the manner prescribed under Section 12.16.080; and further provided, that a removed tree shall be replaced by an approved tree in the manner prescribed under Section 12.16.060. A permit to remove a tree shall be valid for a period not to exceed ninety (90) days after its date of issuance. (Prior code § 98.07)

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

San Joaquin County and other participating agencies have prepared the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMHCPC) with the goal of protecting special-status plants and wildlife and their habitats, while allowing for planned growth in the County. This protection is accomplished through identification of important habitats and habitat features to aid in the development of protection areas, and the establishment of funding mechanisms through which project proponents can provide replacement habitat while enabling them to meet their no net loss of habitat value goals. Participants in the SJMHCP may conduct SJMHCP permitted activities that result in or could result in “incidental take” of listed species and other unlisted species should they become listed.

Projects subject to the SJMSCP must be reviewed by the San Joaquin Council of Governments (SJCOG) board and by its Habitat Technical Advisory Committee. After both agencies approve the project, the applicant must schedule a SJMSCP biologist to perform a pre-construction survey prior to any ground disturbance. After the survey is completed, SJMSCP staff will give the project applicant documentation with Incidental Take Minimization Measures, which the applicant must sign and return. The project applicant also must pay the appropriate fee based on SJMSCP findings. Once these requirements are met, the required permit will be released. SJCOG has determined the project to be subject to the SJMSCP.

One of the goals of the SJMHCP is to preserve and manage large contiguous tracts of habitat for special-status plant and wildlife species in the region, while concurrently protecting other native plant and wildlife species not specifically covered by the SJMHCP through preservation of that habitat. Protection of contiguous tracts of natural habitat is important in maintaining biological diversity in the region, as the larger contiguous tracts are capable of supporting both greater numbers and a greater diversity of plant and wildlife species. Additionally, this allows for the natural movement of wildlife through the area for migration and dispersal to other areas of suitable habitat, and provides a buffering effect to those species that live there, as they are less vulnerable to disturbances related to adjacent urban areas. Non-contiguous parcels are considered less valuable because they do not allow movement of wildlife through the area, and do not support either the number or diversity of plant or wildlife species of large interconnected habitat areas. Species that occur in small, isolated areas are also highly vulnerable to urban-related disturbances such as vehicle casualties, pollution, ambient light and noise, and harassment from local residents or their pets.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to the CEQA Guidelines, a project would have a significant impact on biological resources if it would:

- Adversely impact, either directly or through habitat modifications, any endangered, rare, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)
- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.)
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

Impacts on Specific Special-Status Plant and Wildlife Species

The individual projects that occur in the Plan Area would participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), as required by the Specific Plan. The sensitive biological resources – both plant and wildlife - that have the potential to occur within the Plan Area or the storm drain alignment are addressed by the SJMSCP. The primary effect of the SJMSCP is to compensate for the loss of special-status species habitat through the acquisition, protection and enhancement of habitat lands. Other potential impacts on special-status species, such as interference with nesting activities, are considered “incidental take.” The SJMSCP prescribes incidental take measures that would reduce potential impacts to a less than significant level. The

special-status species potentially affected by the project are described below, along with the applicable measures of the SJMSCP.

Special-Status Plants

Special-status plants identified in the area include slough thistle, delta button celery, Suisun Marsh aster, and Wright's trichocoronis (see Table 7-1). Most of the special-status plants found in the Plan Area vicinity generally occur in relatively undisturbed areas within vegetation communities such as vernal pools, marshes, swamps, chenopod scrub, and riparian scrub. None of these habitat types occur within the Plan Area. However, it is possible that these special-status plant species may be found in the construction site for the proposed outfall for the storm drainage pipeline. While none of these plant species were observed in the Biological Assessment field surveys, it is possible that the surveys were conducted outside the blooming season for these plants.

The SJMSCP states that complete avoidance of delta button celery and slough thistle is required. Compliance with this measure may require relocation of the storm drain outfall if these plant species are identified in the proposed construction area. For the Suisun Marsh aster, the SJMSCP states that the parcel owner shall be approached to consider selling a conservation easement, including a buffer area, sufficient to maintain the hydrological needs of the plants. Alternatively, the landowner may be approached to consider land dedication in lieu of paying SJMSCP development fees. If the project proponent is not agreeable to acquisition, then compensation shall be as prescribed in the SJMSCP.

Swainson's Hawk

The Swainson's hawk is listed by the State of California as a threatened species. The Migratory Bird Treaty Act and California Fish and Game Code protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). The CNDDDB (2009) contains numerous occurrences of nesting Swainson's hawks within a few miles of the Plan Area, including two recent (1998 and 2003) records in the northeast part of the site. Swainson's hawks were observed soaring over the west part of the site and lands to the west during the 2009 surveys, but no active nests were located within the Plan Area. There are areas of open grassland and cropland in and near the Plan Area that may be used by foraging Swainson's hawks. There are also a few relatively large trees in and near the Plan Area that may be used by nesting Swainson's hawks.

Under the SJMSCP, the project proponent has the option of retaining known or potential Swainson's hawk nest trees or removing the nest trees. If the proponent elects to retain a nest tree, and the nest tree becomes occupied during construction activities, then all such activities shall remain a distance of two times the dripline of the tree, measured from the nest. If the proponent elects to remove the nest tree, removal shall be accomplished between September 1 and February 15, when the nests are unoccupied. Under the SJMSCP, each acre of Swainson's hawk habitat (i.e., Agricultural Habitat Lands) would be mitigated by the establishment of one acre of Row and Field Crop /Riparian Preserve (a 1:1 mitigation ratio).

Burrowing Owl

The Migratory Bird Treaty Act and California Fish and Game Code protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Burrowing

owls are documented in the CNDDDB (2009) in several locations in the Plan Area vicinity, including an occurrence just north of the northeast part of the Plan Area. No burrowing owls were observed in the Plan Area during the 2009 surveys. While numerous ground squirrels and ground squirrel burrows were observed in the site, none of the ground squirrel burrows had any evidence of burrowing owl occupancy (i.e. whitewash, feathers and/or pellets). Intensive agriculture and development within and surrounding the Plan Area substantially reduce the likelihood of owls potentially using the site for nesting. However, this species likely flies over the Plan Area on an occasional basis and could nest in the site during some years.

The presence of ground squirrels and squirrel burrows are attractive to burrowing owls. To discourage ground squirrels from entering the project site, the SJMSCP states that the project proponent may plant new vegetation or retain existing vegetation entirely at a height of approximately 36 inches above the ground, until construction begins. Alternatively, if burrowing owls are not known or suspected on a project site and the area is an unlikely occupation site for red-legged frogs, San Joaquin kit fox or tiger salamanders, the project proponent may disc or plow the entire project site to destroy any burrows. At the same time, ground squirrels should be removed through methods specifically approved in the SJMSCP. If these measures are not attempted or attempted but failed, and burrowing owls occupy the project site, then these measures shall be implemented:

- During the non-breeding season (September 1 through January 31), burrowing owls occupying the project site should be evicted from the site by passive relocation, as described in the CDFG's Staff Report on Burrowing Owls (October 1995).
- During the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and shall be provided with a 75-meter protective buffer, until and unless the TAC, with the concurrence of the Permitting Agencies' representatives on the TAC; or unless a qualified biologist approved by the Permitting Agencies verifies through non-invasive means; that either 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed.

Tricolored Blackbird

The tricolored blackbird is a State of California Species of Concern and is also protected by the federal Migratory Bird Treaty Act. No tricolored blackbirds were observed nesting, foraging or perching within the Plan Area during the 2009 surveys. There are a few patches of emergent wetlands in the site, such as the fire suppression pond, that provide marginal yet potentially suitable nesting habitat for tricolored blackbird. Open grassland and cropland in and near the site may be used for foraging. The nearest occurrence of tricolored blackbirds in the CNDDDB (2009) is mapped in the extreme northeast corner of the Plan Area. This record is not mapped with high precision and may have been just off-site. However, suitable habitat exists for tricolored blackbird in the Plan Area.

Acquisition of colonial nesting sites for tricolored blackbird is a high priority of the SJMSCP. Project proponents shall be informed of avoidance measures which eliminate compensation requirements for disturbance of colonial nesting areas in project design. If the project proponent rejects both acquisition and avoidance, then a setback of 500 feet from colonial nesting areas shall be

established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback would apply whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of known occupied nests. Setbacks shall be marked by brightly colored temporary fencing.

Western Pond Turtle

Western pond turtle is a State of California Species of Special Concern. Western pond turtles have been observed in the fire suppression pond in the western part of the Plan Area. In addition, the San Joaquin River is potentially suitable habitat, so construction of the storm drain outfall could potentially affect western pond turtle habitat.

The SJMSCP states that, when nesting areas for pond turtles are identified on a project site, a buffer area of 300 feet shall be established between the nesting site and the wetland located near the nesting site. The nesting site may be immediately adjacent to wetlands or extend up to 400 feet away from wetland areas in uplands. These buffers shall be indicated by temporary fencing if construction has or will begin before nesting periods are ended (the period from egg laying to emergence of hatchlings is normally April to November).

California Tiger Salamander

California tiger salamander is a State of California Species of Special Concern and was recently listed as threatened by the USFWS under the Federal Endangered Species Act. The only record of this species in the CNDDDB (2009) in the area are 1974 and 1996 observations of larvae in a pond just southwest of the intersection of SR 120 and McKinley Avenue, approximately 0.25 miles south of the Plan Area. This breeding population is well west of the current distributional range of the species in San Joaquin County, and it is not known if this pond still exists to support a breeding population of California tiger salamanders. The seasonal pond in the eastern part of the Plan Area provides potential breeding habitat for California tiger salamander, although use of this wetland by this species has not been confirmed. It is considered unlikely any salamanders breeding in the off-site pond southwest of the intersection of SR 120 and McKinley Avenue would migrate north across the elevated railroad tracks and/or elevated SR 120 on to the site. Unless the on-site pond is a breeding pond, the likelihood of California tiger salamanders over-summering in the site is very low. However, the possibility exists that the seasonal pond could be used as a breeding site.

The SJMSCP provides two alternatives for minimizing impacts on tiger salamander. If a project requires a Section 404 permit from the U.S. Army Corps of Engineers, then all required minimization measures would be prescribed through technical assistance provided to the Corps by USFWS concurrent with formal consultations conducted for vernal pool species, or through the SJMSCP's Joint Powers Agency with the concurrence of the Permitting Agencies' representatives on the TAC. The measures will be based on the need to avoid and minimize impacts to breeding, feeding and sheltering behaviors of tiger salamander. In potential tiger salamander habitat, projects shall survey according to the current protocol approved by the TAC and the Permitting Agencies. If salamanders are detected, the SJMSCP's Incidental Take Minimization Measures shall be applied.

For projects that do not require a Section 404 permit, the SJMSCP states that the following measures shall be implemented:

- Retain known breeding sites.
- In potential tiger salamander habitat, projects shall survey according to the current protocol approved by the TAC and the Permitting Agencies' representatives on the TAC. If salamanders are detected, the SJMSCP's Incidental Take Minimization Measures shall be applied.
- If a project intends to eliminate aquatic habitat (including wetlands, ponds, springs and other standing water sources) and create a new, on-site habitat, then the newly created habitat shall be created and filled with water prior to dewatering and destroying the pre-existing habitat. The SJMSCP specifies other conditions for this action.
- If a project intends to eliminate aquatic habitat and not create a new, on-site habitat, then dewatering should occur prior to commencement of construction and other site-disturbing activities. The SJMSCP specifies other conditions for this activity.
- Apply those other measures that are utilized to minimize impacts and take of the tiger salamander that are developed as described in SJMSCP Section 5.2.4.5.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle is listed as a federally threatened species. As previously noted, the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* identifies stems in excess of one-inch diameter at ground level as potential habitat for the beetle. The Biological Assessment found only one elderberry shrub, which was located in a back yard in the eastern part of the Plan Area. The shrub was not inspected up closely, but it appeared healthy. The shrub is surrounded by farmland and residential parcels, and it is not in a riparian setting. This makes the shrub less likely to support valley elderberry longhorn beetle. Nevertheless, since the shrub appears healthy, valley elderberry longhorn beetle could potentially occur in the shrub.

The SJMSCP states that if elderberry shrubs are present on a project site, a setback of 20 feet from the dripline of each elderberry bush shall be established. Brightly colored flags or fencing shall be placed surrounding elderberry shrubs throughout the construction process. For shrubs without beetle exit holes which cannot be retained on the project site, compensation for removal of these shrubs shall be provided by the Joint Powers Agency within SJMSCP preserves. For shrubs with evidence of exit holes, transplanting of shrubs to beetle mitigation sites shall be undertaken during the dormant period for elderberry shrubs (November 1 – February 15). For such shrubs that cannot be transplanted, compensation shall be provided.

Other Special-Status Species

The USFWS list of threatened and endangered species that may occur in or be affected by projects in the Lathrop and Manteca topographic quadrangles includes two of the same species included in the CNDDDB (i.e., California tiger salamander and riparian brush rabbit). Additionally, the USFWS species list contains several species that have essentially no potential for occurrence in or near the Plan Area due to lack of habitat. For example, California red-legged frog, giant garter snake and several special-status fish that occur in Central Valley waterways (i.e., salmon, steelhead, delta smelt, green sturgeon) have no potential for occurrence in the Plan Area due to an absence of

aquatic habitats. The site is well east of the known range of San Joaquin kit fox. With the exception of Swainson's hawk, burrowing owl, tricolored blackbird, western pond turtle, California tiger salamander, and valley elderberry longhorn beetle, no special-status wildlife species are expected to occur in the Plan Area on more than a very occasional or transitory basis.

While sensitive fish species would not occur in the Plan Area, they may be found in the San Joaquin River on at least a seasonal basis. The Specific Plan proposes construction of a storm drain pipeline with an outfall on the San Joaquin River. Storm water runoff discharged from the pipeline could be a potential source of contaminants, which could adversely affect water quality in the river, and in turn adversely affect sensitive fish species in the vicinity. Chapter 13.0, Hydrology and Water Quality, discusses the potential water quality impacts of runoff from the Plan Area. It describes the structural Best Management Practices future development must implement that would reduce the amount of pollutants in the runoff, as part of the City's NPDES storm water permit. Implementation of these Best Management Practices would reduce water quality impacts to a less-than-significant level. Therefore, impacts of runoff discharge on sensitive fish species would also be less than significant. Chapter 13.0 also discusses the potential impacts of project construction on water quality, along with mitigation to reduce potential erosion that could adversely affect water quality. With this mitigation plus construction of the outfall above the water, impacts on water quality would be less than significant. This also means that impacts of project construction on sensitive fish species would also be less than significant.

The Plan Area contains trees that could be used by nesting raptors and other protected bird species. As previously discussed, there is evidence that nearby trees have been used by Swainson's hawks for nesting. Construction of individual projects in the Plan Area may involve the removal of these trees, which would directly impact protected bird species if they are nesting at the time of removal. Projects in the Plan Area would participate in the SJMSCP, which prescribes that a setback of 100 feet from nesting areas be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of known occupied nests. Setbacks shall be marked by brightly colored temporary fencing.

With Lathrop Gateway Business Park Specific Plan participation in the SJMSCP, including implementation of required Incidental Take Minimization Measures, projects within the Plan Area would have less than significant effects on special-status plants. Since the SJMSCP provides a comprehensive framework intended to minimize impacts on special-status species, participation in the SJMSCP would reduce potential project impacts to a level that is less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impacts on Wildlife Corridors

The Plan Area consists of actively cultivated agricultural land, with urban and residential development distributed throughout. In addition, major roadways and railroad tracks border or bisect the Plan Area. As a result, the Plan Area is subject to regular disturbance related to agricultural practices and other human activities. Although the Plan Area does provide suitable

habitat for some common and a few special-status wildlife species, no wildlife corridors or important wildlife nursery sites are present within the Plan Area. Therefore, impacts on wildlife corridors are considered less than significant.

Level of Significance: Less than significant

Mitigation Measure: None required

Impacts on Federally Protected Wetlands

The only area within the Plan Area that potentially may fall under the jurisdiction of ACOE is a seasonal pond in the eastern part, near the Union Pacific railroad tracks. A small fire suppression pond and adjacent low area in the western part of the site are believed to fall outside ACOE jurisdiction. No other ponds, ditches, seasonal wetlands, vernal pools, streams, lakes, or other potentially jurisdictional wetlands or waters of the U.S. of any kind were observed in the Plan Area. On the storm drain alignment, two seasonal wetlands along the railroad tracks may fall outside ACOE jurisdiction, due to their hydrologic and geographic isolation from jurisdictional wetlands and waters of the U.S.

Implementation of the proposed project could result in the loss of some or the entire seasonal pond during grading for project construction. Additionally, changes in land cover in the watershed of the pond could result in permanent changes to its hydrology, which would reduce water quality, quantity, and functionality of this feature. Removal of wetlands, under either federal jurisdiction or waters of the State, is prohibited without prior approval through Sections 404 and 401 of the Clean Water Act, CDFG Wetland Protection Regulations, California Wetland Protection Policies, and other applicable regulations.

The storm drain outfall would be constructed along the east bank of the San Joaquin River, which is a navigable Water of the U.S. The section of the river at the outfall site is bounded by levees on both sides, providing a clear separation between jurisdictional waters and adjacent farmlands. The jurisdictional limit of the river is defined by an ordinary high water mark, and the water side of the levees are vegetated with riparian trees and shrubs. The San Joaquin River falls under the jurisdiction of several agencies, including the ACOE, CDFG, the State Reclamation Board, and the Regional Water Quality Control Board (RWQCB).

Projects in the Plan Area would be required to participate in the SJMSCP, which sets forth measures to minimize impacts on wetlands. In addition, implementation of the following mitigation measures would either protect the seasonal pond through preservation of the feature and watershed supporting those features, or by replacing the acreage, function and value of all wetlands lost through project construction at an approved off-site location, which would reduce this impact to a less-than-significant level.

Level of Significance: Potentially significant

Mitigation Measures:

- 7-1. The ODS shall, where feasible, preserve the maximum amount of the seasonal pond, the fire suppression pond and the seasonal wetlands along the storm drain alignment

and establish minimum 25 to 50 foot buffers around all sides of these areas. In addition, the final project design shall not cause significant changes to the pre-project hydrology, water quality or water quantity in any wetland that is to be retained on site.

Where avoidance of existing wetlands and drainages is not feasible, and fill material is to be placed within the ponds and wetlands, then the ODS shall prepare a wetland delineation with the assistance of a qualified wetland specialist, and submit the delineation to ACOE for verification. If any of the ponds and wetlands are deemed jurisdictional wetland by ACOE, then the ODS shall acquire all appropriate wetland permits prior to the issuance of grading permits by the City. These permits may include, but are not limited to, a Section 404 Wetlands Fill Permit from the U.S. Army Corps of Engineers and a Section 401 Water Quality Certification from the Regional Water Quality Control Board. The ODS shall comply with all conditions and mitigation requirements attached to the granted wetland permits.

Significance After Mitigation: Less than significant

Implementation: The ODS will be responsible for the implementation of the mitigation measure, in coordination with the applicable wetland protection agencies.

Monitoring: The Community Development Department – Planning Division will be responsible for ensuring that the mitigation measures are implemented.

Project Consistency with Applicable Plans

Both the San Joaquin County General Plan and the Lathrop General Plan contain policies designed to reduce the impacts of development on biological resources. The project would be in compliance with these policies with participation in the SJMSCP.

As discussed previously, one of the goals of the SJMSCP is to preserve and manage large contiguous tracts of habitat for special-status plant and wildlife species in the region. Small, isolated areas do not allow movement of wildlife through the area, do not support either the number or diversity of plant or wildlife species of large interconnected habitat areas, and are highly vulnerable to urban-related disturbances. The Plan Area represents a relatively small area of habitat that is isolated from other areas of natural habitat by urban and agricultural development. The habitat present in the Plan Area is highly disturbed and is not capable of supporting the diversity of species that are present in less disturbed habitats in the region. The Plan Area is designated and zoned for future development, and the loss of habitat at this location was assumed in the SJMSCP. Participation of the project in the SJMSCP would ensure project consistency with its goals; therefore, there would be a less than significant impact.

Level of Significance: Less than significant

Mitigation Measures: None required

8.0 CULTURAL RESOURCES

ENVIRONMENTAL SETTING

This section of the EIR assesses potential effects to cultural resources that could result from implementation of development with the Lathrop Gateway Business Park Specific Plan area (Plan Area). Since the proposed project will ultimately involve physical disturbance to ground surface and sub-surface components, the potential exists to impact any cultural resources that may be located within the Area of Potential Effect (APE). In this case, the APE would consist of the 384 acres (or Plan Area); plus storm drain easement and outfall structure; and the offsite recycled water disposal area. The alternative recycled water disposal system (i.e., ponds and spray fields) has been evaluated in other CEQA documentation and those findings re-stated in this EIR.

Cultural resources are defined as historic-period buildings and structures and prehistoric or historic-period archaeological resources. This section briefly describes the cultural setting of the Plan Area and discusses known cultural resources within the Plan Area and within the vicinity of the Plan Area. Applicable state, federal, and local regulations are identified, followed by impact analysis and mitigation measures, where available, to reduce adverse impacts on cultural resources to less-than-significant levels.

The Plan Area was the subject of an archaeological inventory survey prepared by Genesis Society (2010). The survey effort included a record search at the Central California Information Center of the California Historical Resources Information System at CSU-Stanislaus and consultation with affected Native American representatives. Genesis Society conducted a complete intensive-level coverage pedestrian field survey of the Plan Area in accordance with State Historic Preservation Office guidelines.

An archaeological inventory survey report was prepared that identifies project effects and recommends appropriate mitigation measures for any significant or potentially significant sites that might be affected or otherwise impacted by development within the Plan Area and within the right-of-way of the off-site storm drain improvements. Appendix C contains the Archaeological Inventory Survey, which includes supporting documentation.

Location and Cultural Context

The Plan Area contains lands that have been historically utilized for ranching and farming, although it currently consists of a variety of land uses such as industrial, agricultural and residential. The San Joaquin River, which is located approximately one-half mile from the project site, is a natural surface water source.

The Plan Area is situated within lands of low to moderate archaeological sensitivity in relationship to prehistoric and historic-period sites, despite the effects of prior impacts to ground surface and subsurface components as a result of agricultural, residential and commercial uses through its history.

Prehistory

The San Joaquin Valley area generally has a long and complex cultural history with distinct regional patterns that extend back more than 11,000 years. The first generally agreed-upon evidence for the presence of prehistoric peoples in the area is represented by the distinctive fluted spear points, some resembling Clovis Points, found on the margins of extinct lakes in the San Joaquin Valley. The Clovis Points are found at the same surface with bones of extinct animals such as mammoths, sloths, and camels, dating to a narrow time range between about 10,900 BP and 11,200 BP. The next cultural period represented, the Western Pluvial Lakes Tradition is another widespread complex that is characterized by stemmed spear points, dated to between about 8,000 and 10,000 years ago. About 8,000 years ago, many California cultures shifted the main focus of their subsistence strategies from hunting to seed gathering. Cultural patterns as reflected in the archeological record, particularly specialized subsistence practices, became codified with the last 3,000 years. The archeological record becomes more complex, as specialized adaptations to locally available resources were developed and populations expanded.

Ethnography

The Plan Area and off-site components are located within territory claimed by the Penutian-speaking Northern Valley Yokuts. The Yokuts occupied an area extending from the crest of the Coastal Range ("Diablo) east into the foothills of the Sierra Nevada, north to the American River and south to the upper San Joaquin River. Their villages were frequently located on elevated features such as natural levees and knolls which adjoined streams, inhabited primarily in the winter since seasonal relocation was necessitated for food gathering to the hills and higher elevations. Villages typically consisted of a scattering of small structures while larger villages with twelve to fifteen or more houses might also contain an earth lodge. The economic life for the Yokuts, like most California Indian groups, revolved around hunting, fishing and collecting plant foods. Collection and processing of these varying food sources was accomplished with the use of a wide variety of wood, bone and stone artifacts. Only fragmentary evidence of their material culture remains due in part to perishability and to the impacts of intensive agricultural use on these resources.

The discussion of regional prehistory and ethnography provides insight into the *types* of Native American sites that have been documented within the region generally. These include:

- Large village sites located along the margins of streams, particularly at confluences, and at or near other natural surface water sources (springs, marshes, sloughs and other wetlands) and on naturally elevated ground.
- Surface scatters of lithic artifacts without buried cultural deposits, resulting from short-term occupation and/or specialized economic activities.
- Petroglyphs, often in the form of cupped boulders, at or close to village sites or encampments and where bedrock is exposed.
- Bedrock food-processing (milling) stations, where suitable bedrock is exposed.
- Trails.
- Mortuary sites, often but not exclusively associated with large village complexes.
- Isolated finds of aboriginal artifacts and flakes.

Clearly, not all of these site types have been documented within the immediate vicinity of the project area; rather, these represent the range of site *types* that were considered to be potentially present within the project area.

Historic Context

During the early part of the 19th Century, early visits by Anglo-American fur trappers, Russian scientists and Spanish-Mexican expeditions occurred in California followed by a rapid escalation of European-American activities culminating in a massive influx triggered by the discovery of gold at Coloma in 1848. By the mid-1820- fur trappers traversed the Valley on behalf of the Hudson's Bay Company and by the late 1830's and early 1840's small permanent European-American settlements had settled in the Central Valley and surrounding foothills, including Ranchos in the interior Coast Range and New Helvetia (Sutter's Fort) at the confluence of the Sacramento and American Rivers.

Once gold was discovered in 1848, demand for commodities led quickly to the expansion of ranching and agriculture, followed by permanent communities along major transportation corridors. The transformation brought about by the railroad is of particular importance to the growth of this area. The Southern Pacific and Central Pacific Railroads, along with a number of smaller interurban lines began intensive projects in the late 1860's and by the turn of the Century, nearly 3,000 miles of lines connected the cities of Modesto and Stockton and surrounding areas.

Project Site History

Intensive agricultural and urban development followed initial railroad construction and by the end of the 19th Century, a substantial portion of the Central Valley was being cultivated with increasing mechanization occurring through the 20th Century with substantial expansion of cultivated acreage accompanying arrival of water from the Central Valley Project (CVP). The Plan Area was historically used for ranching and agriculture, which document the presence of a wide range of historic site and feature types throughout the area generally. Relevant types would include:

- Large village sites located along the margins of streams, particularly at confluences, and at or near other natural surface water sources (springs, marshes, sloughs and other wetlands) and on naturally elevated ground.
- Surface scatters of lithic artifacts without buried cultural deposits, resulting from short-term occupation and/or specialized economic activities.
- Petroglyphs, often in the form of cupped boulders, at or close to village sites or encampments and where bedrock is exposed.
- Bedrock food-processing (milling) stations, where suitable bedrock is exposed.
- Trails.
- Mortuary sites, often but not exclusively associated with large village complexes.
- Isolated finds of aboriginal artifacts and flakes.

As with prehistoric sites, it was not considered likely that most of these were present within the Plan Area, but rather that these represent the range of site types considered potentially present within the Plan Area or surrounding lands.

Record Search Results

Genesis Society requested and received an archaeological records search for the proposed project from the Central California Information Center of the California Historical Resource Information System at CSU-Stanislaus for any existing recorded prehistoric or historic sites (CCIC File #7420L, dated, June 17, 2009 and CCIC File #7614L, dated February 24, 2010). In addition, Genesis Society consulted with affected Native American representatives and the Native American Heritage Commission; and reviewed available published and unpublished documents relevant to regional prehistory, ethnography and early historic developments.

The Central California Information Center records document the following existing conditions with respect to previous archaeological surveys and cultural resources within the project vicinity.

1. The information center identified a total of twenty-nine (29) archeological studies which have been conducted within, adjacent, or in close proximity to the proposed APE.
2. A total of thirty-two (32) cultural resources have been identified within or immediately adjacent to the Plan Area. One (P-39-4608) consists of an isolate and therefore does not achieve the threshold for historical resource and consequently warrants no further consideration or treatment.
3. One multi-component site (P-39-141) consists of a prehistoric occupation local and burial mound which includes the site of the old Mossdale School. This site is situated completely outside of the Plan Area and therefore warrants no further consideration or treatment.
4. Two sites (P-39-2 and P-39-98) represent segments of the Southern Pacific/Union Pacific and Western Pacific Railroads, respectively; however, both are located adjacent to, but outside of the present Plan Area and therefore warrant no further consideration or treatment.
5. The remaining twenty-eight (28) sites represent historic-era built environment buildings, structures and features. Two (P-39-4608 and P-39-4610) are located outside of the Plan Area and warrant no further consideration or treatment.

In total, the records search indicated twenty-six (26) historical-period sites documented within the Plan Area. Detailed evaluation of those structures and buildings were not completed. No additional historic-period sites or features were observed during the Genesis Society pedestrian survey.

Genesis Society conducted a field survey of the Plan Area. The survey, conducted by Sean Jensen, was accomplished by walking systematic transects at 20 meter intervals throughout agricultural fields, roadways, along the margins of railroads and other open areas. Mr. Jensen took into account the results of background research and surveyed for any unusual contours, soil changes, distinctive

vegetation patterns, exotic materials, artifacts, feature or feature remnants and other possible markers of cultural sites.

Approximately 40% of the Plan Area is located in heavily disturbed areas such as roads, industrial yards, commercial facilities and residences. Most of the remainder of the APE was subjected to moderate disturbance associated with the continuing and ongoing agricultural and farming activities.

The intensive survey found no additional surface indicators or evidence of prehistoric use or presence. No artifacts, flakes or elevated spots or other soil characteristics presented the possibility of village encampment in the Plan Area.

Native American Consultation

Because the proposed project would require the approval of a specific plan, the project is required to comply with Senate Bill (SB) 18 (Government Code sections 65352.3, 65352.4), which requires cities and counties to contact, and consult with, California Native American tribes prior to amending or adopting a general plan or specific plan, or designating land as open space. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places.

Genesis Society requested the Native American Heritage Commission (NAHC) to search its sacred lands database to determine if any Native American cultural resources are located on or near the project site. The NAHC response letter stated that the search of the sacred lands database failed to indicate the presence of Native American resources in the immediate project area. The NAHC response indicated that no Sacred Land listings existed for the Plan Area or adjacent lands. The Northern Valley Yokuts Tribe in Linden, California were requested to supply any specific information they might have concerning prehistoric sites or traditional use of the area. There has been no response from that tribe.

Paleontological Resources

The Geologic Map of the San Francisco-San Jose Quadrangle lists the geologic formation in the Plan Area as Pleistocene Modesto Formation. The Modesto Formation is described as loose eolian sands, loose fluvial sands and silts, and compacted fluvial sands and silts. A portion of the southern village of the project site (adjacent to the San Joaquin River) lies within the Holocene Alluvium Formation, which consists of undivided supratidal floodplain deposits. This unit consists of unweathered gravel, sand, silt and clay deposited by present-day stream and river systems. The closest fossil-bearing geologic formations are located 16 miles west of the Plan Area.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

For the purposes of this EIR, impacts on cultural resources are considered significant if the proposed project would:

- Cause a substantial adverse change in the significance of a historical resource or a unique archaeological resource or as defined in §21083.2 of CEQA and §15064.5 of the State CEQA Guidelines, respectively;
- Disturb any human remains, including those interred outside of formal cemeteries; or
- Directly or indirectly destroy a unique paleontological resource or site of a unique geologic feature.

Federal, state, and local governments have developed laws and regulations designed to protect significant cultural resources that may be affected by actions they undertake or regulate. The National Historic Preservation Act (NHPA) and CEQA are the basic federal and state laws governing the preservation of historic and archaeological resources of national, regional, state and/or local significance.

Federal

Federal regulations for cultural resources are primarily governed by Section 106 of the NHPA of 1966, which applies to actions taken by federal agencies. The goal of the Section 106 review process is to offer a measure of protection to sites that are determined eligible for listing on the NRHP. The criteria for determining NRHP eligibility are found in 36 Code of Federal Regulations (CFR) Part 60. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and affords the federal Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, "Protection of Historic Properties," are found in 36 CFR Part 800. The NRHP criteria (contained in 36 CFR 60.4) are used to evaluate resources when complying with NHPA Section 106. Those criteria state that eligible resources comprise districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

1. Are associated with events that have made a significant contribution to the broad patterns of our history; or
2. Are associated with the lives of persons significant in our past; or
3. Embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or

4. Have yielded or may be likely to yield, information important to history or prehistory.

Archaeological site evaluation assesses the potential of each site to meet one or more of the criteria for NRHP eligibility based upon visual surface and subsurface evidence (if available) at each site location, information gathered during the literature and records searches, and the researcher's knowledge of and familiarity with the historic or prehistoric context associated with each site.

The American Indian Religious Freedom Act, Title 42 United States Code, Section 1996, protects Native American religious practices, ethnic heritage sites, and land uses.

State

Under the California Environmental Quality Act (CEQA), public agencies must consider the effects of their actions on both "historical resources" and "unique archaeological resources." Pursuant to Public Resources Code, 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."

"Historical resource" is a term with a defined statutory meaning (see Public Resources Code, Section 21084.1 and CEQA Guidelines Section 15064.5 (a) and (b)). The term embraces any resource listed in or determined to be eligible for listing 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.

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 the purposes of CEQA unless a preponderance of evidence indicates otherwise (Public Resources Code, Section 5024.1; 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.

In addition to assessing whether historical resources potentially impacted by a proposed project are listed or have been identified in a survey process, lead agencies have a responsibility to evaluate them against the CRHR criteria prior to making a finding as to a proposed project's impacts on historical resources (Public Resources Code, Section 21084.1; CEQA Guidelines, Section 15064.5 (a)(3)). In general, an historical resource, under this approach, is defined as any object, building, structure, site, area, place, record, or manuscript that:

1. Is historically or archeologically significant; or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California;
2. Meets any of the following criteria: is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritages associated with the lives of persons important in our past; embodies the distinctive characteristics of

a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; and

3. Has yielded, or may be likely to yield, information important in prehistory or history.

For historic structures, CEQA Guidelines Section 15064.5 (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. Potential eligibility also rests upon the integrity of the resource. Integrity is defined as the retention of the resource's physical identity that existed during its period of significance. Integrity is determined through considering the setting, design, workmanship, materials, location, feeling, and association of the resource.

As noted above, CEQA also requires lead agencies to consider whether projects will impact "unique archaeological resources." Public Resources Code, Section 21083.2 (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" (Public Resources Code, Section 21083.2 (g)).

Treatment options under Section 21083.2 of the Public Resources Code 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").

Advice on procedures to identify cultural resources, evaluate their importance, and estimate potential effects is given in several agency publications, such as the series produced by the Governor's Office of Planning and Research (OPR). The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including but not limited to, museums, historical commissions, associations and societies, be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains. Section 7050.5 (b) of the California Health and Safety code specifies protocol when human remains are discovered.

Potential Impacts on Prehistoric Cultural Resources

Development of the proposed urban uses associated within the Plan Area would not result in significant effects on any known prehistoric cultural resources. The entire Plan Area has been surveyed for archaeological resources, and the results of these surveys were negative.

Although unlikely, development on any other portion of the Plan Area may also have the potential to unearth buried and/or previously-undiscovered cultural resources. While no additional prehistoric resources (midden deposits, artifacts, or human remains or other evidence of burial) were encountered during the field survey, buried cultural material related to prehistoric habitation are occasionally discovered. These resources can remain undiscovered below the surface, despite intensive-level pedestrian survey. In this case, proper treatment of any resources encountered would be necessary to avoid significant environmental effects. The following mitigation measures would address this issue.

Level of Significance: Potentially significant

Mitigation Measures:

- 8-1. If any subsurface cultural resources, including either prehistoric or historic resources, are encountered during construction, all construction activities in the vicinity of the encounter shall be halted until a qualified archaeologist can examine these materials and make a determination of their significance. The City of Lathrop Community Development Department shall be notified, and the ODS shall be responsible for mitigation and associated costs of any significant cultural resources pursuant to the CEQA Guidelines.
- 8-2. If human remains are encountered at any time during the development of the project, all work in the vicinity of the find shall halt and the County Coroner and the Community Development Department shall be notified immediately. If it is determined that the remains are those of a Native American, the Coroner must contact the Native American Heritage Commission. At the same time, a qualified archaeologist must be contacted to evaluate the archaeological implications of the finds. The CEQA Guidelines detail steps to be taken when human remains are found to be of Native American origin. The ODS shall be responsible for all mitigation costs.

Significance After Mitigation: Less than significant.

Implementation: The ODS (ODS) will be responsible for retaining an archaeological monitor, retaining a cultural resource consultant to educate construction contractors, for documenting the completion of such training, for imposing cultural resource protection controls on grading and excavation contractors, and for retaining a qualified archaeologist if cultural resources are encountered during construction.

Monitoring: The Community Development Department will be responsible for ensuring that archaeological monitoring occurs, and documentation of contractor training has been provided by the ODS prior to the approval of improvements. If cultural resources are uncovered, the Community Development Department will monitor compliance with archaeological mitigation measures during construction. Monitoring shall consist of comparing construction activities to the archaeologist's recommendations. The ODS shall be responsible for all monitoring costs.

Impact of Project on Historical Resources

Twenty-six buildings from the historic period (more than 50 years old) were identified on the project site and include single-family residences, duplexes, quadplexes, and industrial buildings. These structures were recorded with the Central California Information Center. All but one had been either demolished, partially or completely altered. A structure located at 3049 W. Yosemite Avenue (Site ID No. P-39-004618) consist of a former gas station built in the 1930's or 1940's and has been recorded as not being altered.

The proposed project will result in the removal of some or all of the 26 potentially historic buildings within the Plan Area as phases of the project are developed. Because none of these 26 potentially significant resources has been formally evaluated to determine if they qualify as historical resources under CEQA, removal of any of these resources is considered a potentially significant impact.

The following mitigation measures require the evaluation of all potentially historic buildings and structures on the project site to determine if any of the buildings or structures qualify as historical resources as defined by CEQA. For buildings or structures determined through the evaluation to not qualify as historical resources under CEQA, demolition would result in no impact. For any building or structure determined to qualify as an historical resource under CEQA, the mitigation measure requires documentation of the resource by a qualified architectural historian and the dissemination of the documentation to the appropriate repositories in order to reduce the impact on an historical resource by preserving a permanent record of the property.

Level of Significance: Potentially significant

Mitigation Measures:

- 8-3. Prior to the initiation of demolition activities within a development phase, any buildings and/or structures within that phase shall be evaluated by an individual who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History to determine if any of the buildings or structures qualify as historical resources as defined in §21083.2 of CEQA and §15064.5 of the State CEQA Guidelines. The City of Lathrop Community Development Department shall be notified of the findings, and the ODS shall be responsible for all mitigation costs. The following procedures shall be followed unless specified differently by the qualified individual:
 - a. Documentation and Recordation of Significant Historical Resources – For any buildings or structures that qualify as historical resources under CEQA,

written and photograph documentation shall be prepared to record the property. The written documentation for the property shall be prepared based on the National Park Services' (NPS) Historic American Building Survey (HABS) Historical Report Guidelines. Photograph documentation standards shall meet the intent of the NPS – Advisory Council on Historic Preservation (ACHP) revised policy for developing alternate forms of documentation for properties meeting a criterion of less than nationally significant. The alternative documentation shall not be reviewed by the NPS or transmitted to the Library of Congress and therefore will not be a full-definition HABS dataset. This type of documentation is based on a combination of both HABS standards (Levels II and III) and NPS new policy for NR-NHL photographic documentation as outlined in the National Register of Historic Places and National Historic Landmarks Survey Photo Policy Expansion (March 2005).

Either HABS standard large format or digital photography may be used. If digital photography is used, the ink and paper combinations for printing photographs must be in compliance with NR-NHL photo expansion policy and have a permanency rating of approximately 115 years. Digital photographs will be taken as uncompressed .TIF file format. The size of each image will be 1600x1200 pixels at 300 ppi (pixels per inch) or larger, color format, and printed in black and white. The file name for each electronic image will correspond with the Index to Photographs and photograph label.

- b. Dissemination of Documentation –The written and photograph documentation of historical resources shall be disseminated on archival quality paper to appropriate repositories and interested parties. The distribution of the documentation shall include the State Historic Preservation Officer in the California Office of Historic Preservation; the California Historical Resources Information System Central California Information Center at California State University, Stanislaus; the San Joaquin County Historical Society & Museum; and other local repositories identified by the City of Lathrop Community Development Department.

Significance After Mitigation: Less than significant

Implementation: The ODS (ODS) will be responsible for retaining an individual who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History to determine if any of the buildings or structures qualify as historical resources.

Monitoring: The Community Development Department will be responsible for ensuring that the ODS retains a qualified historian to prepare formal evaluations for any structure to be demolished that may qualify as a historical resource.

Impact of Project on Paleontological Resources

Although unlikely, the possibility remains that the proposed project could directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature. This is considered a potentially significant impact. Implementation of the following mitigation measure will ensure that paleontological or unique geological resources will be treated in accordance professional standards and will therefore reduce this impact to a less-than-significant level.

Level of Significance: Potentially significant

Mitigation Measures:

- 8-4. Should paleontological or unique geological resources be identified at any project construction sites during any phase of construction, the project manager shall cease operation at the site of the discovery and immediately notify the City of Lathrop Community Development Department. The project applicant shall retain a qualified paleontologist to provide an evaluation of the find and the significance of the materials and mitigation measures if needed, and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the consulting paleontologist, the City of Lathrop Community Development Department shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, specific plan policies and land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for paleontological resources is carried out.

Significance After Mitigation: Less than significant.

Implementation: The ODS (ODS) will be responsible for retaining a cultural resource consultant to educate construction contractors, for documenting the completion of such training, for imposing cultural resource protection controls on grading and excavation contractors, and for retaining a qualified archaeologist if cultural resources are encountered during construction.

Monitoring: The Community Development Department will be responsible for ensuring that archaeological monitoring occurs, and documentation of contractor training has been provided by the ODS prior to the approval of improvements. If undiscovered resources are uncovered, the Community Development Department will monitor compliance with archaeological mitigation measures during construction. Monitoring shall consist of comparing construction activities to the archaeologist's recommendations.

9.0 GEOLOGY AND SOILS

ENVIRONMENTAL SETTING

This section of the EIR describes the existing geology, soils, and seismic conditions, in the Lathrop Gateway Business Park Specific Plan area (Plan Area) and analyzes the potential physical environmental effects related to seismic hazards and erosion. The Initial Study prepared for the proposed project concluded that the proposed development of the Plan Area would not have significant impacts related to landslides and mineral resources. As such, these issues are not discussed nor analyzed in this EIR. There were no comments received in response to the NOP that pertained to geology and soils.

Data used in preparation of this section were obtained from various sources, including six preliminary geotechnical reports for the various properties in the Plan Area. Chapter 23.0, Sources, lists the geotechnical reports, prepared by ENGEO Incorporated. These reports were prepared for the Beeler, Bronchini, Terra Ranch, Flowers, Mendes, and Mendes No. 2 properties, all located north of State Route 120. All technical reports referenced in this section are on file at the City of Lathrop City Hall, Community Development Department. Other sources used to prepare this document include the City of Lathrop General Plan (General Plan), Central Lathrop Specific Plan Draft Environmental Impact Report, and previously published information from the California Geological Survey (formerly California Division of Mines and Geology).

Regional Setting

The Lathrop Gateway Business Park Specific Plan area lies in the San Joaquin Valley in central California. The San Joaquin Valley is located in the southern portion of the Great Valley Geomorphic Province. The Great Valley, also known as the Central Valley, is a topographically flat, northwest-trending, structural trough (or basin) about 50 miles wide and 450 miles long. It is bordered by the Tehachapi Mountains on the south, the Klamath Mountains on the north, the Sierra Nevada on the east, and the Coast Ranges on the west.

The San Joaquin Valley (Valley) is filled with thick sedimentary rock sequences that were deposited as much as 130 million years ago. Large alluvial fans have developed on each side of the Valley. The larger and more gently sloping fans are on the east side of the Valley, and overlie metamorphic and igneous basement rocks. These basement rocks are exposed in the Sierra Nevada foothills and consist of metasedimentary, volcanic, and granitic rocks.

The sediments that form the Valley floor were derived largely from erosion of the Sierra Nevada. The smaller and steeper slopes on the west side of the Valley overlie sedimentary rocks more closely related to the Coast Ranges. Most of the soils located within the San Joaquin Valley consist of sand, silt, loamy clay alluvium, peat, and other organic sediments. These soils are the result of long-term natural soil deposition and the decomposition of marshland vegetation.

The Geologic Map of the San Francisco-San Jose Quadrangle, compiled by Wagner et al. (1991), lists the geologic formation in the Plan Area as Pleistocene Modesto Formation. The Modesto

Formation is described as loose eolian (transported by wind) sands, loose fluvial (deposited by streams) sands and silts, and compacted fluvial sands and silts. An offsite area adjacent to the San Joaquin River that will contain storm drainage improvements to serve the Plan Area lies within the Holocene Alluvium Formation, which consists of undivided supratidal floodplain deposits. This unit consists of unweathered gravel, sand, silt and clay deposited by present-day stream and river systems.

The California Division of Mines and Geology, now part of the California Geological Survey, has classified portions of the state into Mineral Resource Zones (MRZs). The lands within the Plan Area are classified as MRZ-1 and MRZ-3 on the Mineral Land Classification Map. Most of the Plan Area (central portion) is classified as MRZ-1. The definition of MRZ-1 is that adequate information indicates that no significant mineral deposits are present, or little likelihood exists for their presence within this zone. Small areas in the southwestern and northeastern portions of the Plan Area are classified as MRZ-3. This zone contains deposits whose significance cannot be evaluated from available data.

Groundwater encountered in borings ranged from approximately 5 to 21 feet below the existing grade at the time of drilling. Fluctuations in groundwater levels are expected to occur seasonally in response to changes in precipitation, irrigation, and other factors. Chapter 13.0, Hydrology and Water Quality, discusses groundwater issues in more detail.

Soils

The soils in the Lathrop Gateway Business Park Specific Plan area generally consist of approximately 2 to 20 feet of medium dense to very dense silty sand and sand, underlain by interbedded layers of very stiff to hard silty clay, and medium dense to dense silty sand and sand, to the maximum depth explored of 23½ to 50 feet. According to the United States Department of Agriculture (USDA) Soil Survey of San Joaquin County, the on-site soils consist of the following:

- **Delhi loamy sand.** This very deep, somewhat excessively drained, nearly level soil was formed in wind-modified alluvium. Permeability is rapid in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is low. The risk of corrosion is moderate for uncoated steel, and low for concrete. Soil limitations on building site development are slight, except that shallow excavations are subject to caving.
- **Timor loamy sand.** This moderately well drained, nearly level soil formed in alluvium. Permeability is rapid in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is low. The risk of corrosion is high for uncoated steel, and low for concrete. Soil limitations on building site development are considered moderate to severe, due to flooding potential. However, as discussed in Chapter 13.0, Hydrology and Water Quality, flooding impacts are expected to be less than significant.
- **Grangeville fine sandy loam.** This very deep, somewhat poorly drained, nearly level soil formed in alluvium. Permeability is moderately rapid in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is low. The risk of corrosion is high for uncoated steel, and low for concrete. Soil limitations on building site development are considered moderate to severe, due to flooding potential. However, as

discussed in Chapter 13.0, Hydrology and Water Quality, flooding impacts are expected to be less than significant.

- **Bisgani loamy coarse sand, partially drained.** This very deep, poorly drained, nearly level soil formed in alluvium. Permeability is rapid in this soil. Runoff is very slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is low. The risk of corrosion is high for uncoated steel, and low for concrete. Soil limitations on building site development are considered moderate to severe, due to flooding potential. However, as discussed in Chapter 13.0, Hydrology and Water Quality, flooding impacts are expected to be less than significant.
- **Tinnin loamy coarse sand.** This very deep, well drained, nearly level soil formed in alluvium. Permeability is rapid in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is low. The risk of corrosion is high for uncoated steel, and low for concrete. Soil limitations on building site development are slight, except that shallow excavations are subject to caving.

The Grangeville and Bisgani soils are also found in the proposed construction area for the stormwater drainage pipe and outfall south of the Plan Area. In addition, three other soil types were identified in that area by the San Joaquin County Soil Survey:

- **Egbert silty clay loam, partially drained.** This very deep, poorly drained, nearly level soil formed in alluvium. Permeability is slow in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is moderate to high. The risk of corrosion is high for uncoated steel, and moderate for concrete. Soil limitations on building site development are considered moderate to severe, due to shrink-swell and flooding potential. However, as discussed in Chapter 13.0, Hydrology and Water Quality, flooding impacts are expected to be less than significant.
- **Guard clay loam.** This very deep, poorly drained, nearly level soil formed in alluvium. Permeability is slow in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is moderate. The risk of corrosion is high for uncoated steel, and low for concrete. Soil limitations on building site development are considered moderate to severe, due to flooding and shrink-swell potential. However, as discussed in Chapter 13.0, Hydrology and Water Quality, flooding impacts are expected to be less than significant.
- **Manteca fine sandy loam.** This moderately well drained, nearly level soil formed in alluvium. Permeability is moderate in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is low. The risk of corrosion is high for uncoated steel, and low for concrete. Soil limitations on building site development are considered moderate to severe, due to flooding potential and the existence of cemented pan. However, as discussed in Chapter 13.0, Hydrology and Water Quality, flooding impacts are expected to be less than significant.

Soil Hazards

Soil Erosion

Soil erosion is the process by which soil particles are removed from a land surface by wind, water, or gravity. Most natural erosion occurs at slow rates; however, the rate of erosion increases when land is cleared of vegetation or structures, or otherwise altered and left in a disturbed condition. The topography of the project site is generally flat and level, with surface elevations in the Plan Area ranging from approximately 17 feet above mean sea level in the southeast to 22 feet above mean sea level in the northwest. Due to the relatively flat and level nature of the Plan Area, the occurrence of soil erosion is low.

Expansive (Shrink-Swell) Soils

Expansive soils have a significant amount of clay particles that can give up water (shrink) or take on water (swell). The change in volume exerts stress on buildings, infrastructure and other loads placed on these soils. The occurrence of these soils often is associated with geologic units having marginal stability. Expansive soils can be dispersed widely, found in hillside areas, as well as low-lying areas in alluvial basins. As a result, soils testing to identify expansive characteristics and appropriate remediation procedures are routinely required by current grading and building codes. As described above, soils in the Plan Area generally possess a low expansion potential. However, some soils with high shrink-swell potential are found within the alignment of the proposed stormwater off-site drainage pipe.

Subsidence

Subsidence involves a sudden sinking or gradual settling and compaction of soil and other surface material with little or no horizontal motion. There are five potential causes of subsidence – compaction by heavy structures, compaction of unconsolidated soils by earthquake shaking, erosion of peat soils, peat oxidation, and withdrawal from underground deposits. Underground deposits include groundwater, oil and natural gas. Differential settlement of the ground surface from subsidence can cause significant damages to infrastructure, such as roads, bridges, canals, wells, and water and sewer systems. Subsidence may result in structural damages to facilities or losses in capacity due to settlement. The Lathrop General Plan did not identify subsidence as an issue.

Regional Faulting and Seismicity

The Plan Area, along with the rest of Lathrop, is located in a seismically active region. The distribution, recurrence, and intensity of earthquakes over time define the seismicity of a region. Earthquakes are caused by the release of stored energy that can rupture brittle earth materials at or near the surface of the earth. The rupture surface along which the ground is displaced is called a fault plane. The expression of this displacement on the ground surface is called a fault trace or fault line. Potential seismic hazards resulting from a nearby moderate to major earthquake can generally be organized into primary and secondary hazards. The primary hazard is ground rupture, also called surface faulting. Common secondary seismic hazards include ground shaking, soil liquefaction, and lateral spreading. Primary hazards are discussed in this section, and secondary hazards are discussed in following sections.

Historically, the relative size of an earthquake was measured in magnitude (M) on the Richter Scale. The Richter Scale measures the amplitude of seismic waves recorded by a seismograph. More recently, the “size” of an earthquake (i.e., the amount of energy released) has been expressed in terms of Moment Magnitude (Mw). The Mw conveys a more precise numerical indication of earthquake size, particularly for earthquakes above Richter magnitude 7.5. Earthquake intensity is measured on the Modified Mercalli Intensity Scale, which measures the severity of an earthquake by the way it is felt and responded to by humans, and by the amount of damage it does to buildings and structures. Table 9-1 identifies the level of intensity according to the Modified Mercalli Intensity Scale and describes that intensity with respect to how it would be received or sensed by its receptors.

TABLE 9-1

MODIFIED MERCALLI INTENSITY SCALE

Modified Mercalli Intensity	Description
I	Detected by only sensitive instruments
II	Felt by a few people at rest
III	Felt noticeably indoors, but not always recognized as a quake; vibration like a passing truck
IV	Felt indoors by many and outdoors by few
V	Felt by most people. Some breakage of windows, dishes, and plaster
VI	Felt by all; falling plaster and chimneys; damage small
VII	Damage to buildings varies; depends on quality of construction
VIII	Walls, monuments, chimneys fall; panel walls thrown out of frames
IX	Buildings shift off foundations; foundations crack; ground cracks; underground pipes break
X	Most masonry and frame structures destroyed; ground cracks; landslides
XI	Ground fissures; pipes break; landslides; rails bent; new structures remain standing
XII	Damage total; waves seen on ground surface; objects thrown into the air

SOURCE: Nuclear Reactors and Earthquakes, Atomic Energy Commission, TID7024.

The terms Maximum Credible Earthquake (MCE) and Maximum Probable Earthquake (MPE) have been used for many years to describe the largest earthquake that would be likely to occur along a particular fault and within a given timeframe, respectively. Recent revisions incorporated into the California Building Code, based on recommendations identified by the Seismology Committee of the Structural Engineers Association of California, have eliminated the use of these terms. The 2001 California Building Code revisions require that the Mw of the “characteristic earthquake” be used in geotechnical calculations for design purposes. The new criterion for describing the energy release (i.e., the “size” of an earthquake along a particular fault segment) was determined by the Seismology Committee to represent a more reliable descriptor of future fault activity than the MCE or the MPE. Although the Mw value may differ slightly from the MCE or MPE values reported in some of the

older documents cited in this EIR, this current method for describing future fault activity does not alter the assumptions or conclusions of this EIR.

A review of geological literature did not identify the presence of any known active or potentially active faults within the Plan Area. The Geologic Map of the San Francisco-San Jose Quadrangle shows no faults mapped on the site.

Seismic Hazards

Ground Shaking

The major cause of structural damage from earthquakes is ground shaking. The intensity of ground motion expected at a particular site depends upon the magnitude of the earthquake, the distance to the epicenter, and the geology of the area between the epicenter and the property. Greater movement can be expected at sites on poorly consolidated material, such as loose alluvium, in close proximity to the causative fault, or in response to an event of great magnitude.

Geotechnical reports prepared by ENGEO identified potential seismic sources within 100 kilometers (62 miles) of various properties within the Plan Area. Two of the closest known faults classified as active by the California Geological Survey are the Greenville fault, located approximately 23 miles to the west, and the Foothills Fault System, located approximately 33 miles to the east. The Great Valley Fault is located approximately 13 miles to the west; however, it was omitted from a 1998 International Conference of Building Officials map of active faults in California due to a lack of surface expression. Other faults that could potentially affect the Plan Area include the Mount Diablo, Calaveras, Hayward, Ortigalita and San Andreas Faults.

Ground motions are reported in terms of a percentage of the acceleration of gravity (percent g), where $g = 32$ feet per second per second. One hundred percent of gravity (1 g) is the acceleration a skydiver would experience during free-fall. An acceleration of 0.4 g is equivalent to accelerating from 0 to 60 miles per hour in about seven seconds. An earthquake of moderate to high magnitude generated within the Northern California Region, similar to those that have occurred in the past, could cause considerable ground shaking in the Plan Area. The mean peak horizontal ground acceleration for the Plan Area is approximately 0.31 g for a 10 percent probability of exceedance in 50 years.

Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally substantially smaller than the expected peak forces that would be associated with a major earthquake. Therefore, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance to the current building code does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake. However, it is reasonable to expect that a well-designed and well-constructed structure will not collapse or cause loss of life in a major earthquake.

Ground Lurching

Ground lurching is a result of the rolling motion imparted to the ground surface during energy released by an earthquake. Such rolling motion can cause ground cracks to form. The potential for the formation of these cracks is considered greater at contacts between deep alluvium and bedrock. Such an occurrence is possible at the site, as in other locations in the Central Valley, but the offset or strain is expected to be minor.

Liquefaction

Liquefaction is a phenomenon in which saturated cohesionless soils are subject to a temporary, but essentially total, loss of shear strength because of pore pressure build-up under the reversing cyclic shear stresses associated with earthquakes. Liquefaction potential of the silts and sands were measured for penetration resistance using the Standard Penetration Test. Due to the cohesive nature of the subsurface material and the dense nature of the sands encountered in the borings below the groundwater table, the potential for liquefaction is low at the site. However, since some of the granular materials on the Terra Ranch and Mendes No. 2 properties were characterized as loose to medium dense and potentially liquefiable, it was estimated that up to ½ to 1 inch of settlement may occur as a result of liquefaction-induced densification. Structures would be designed to accommodate ½ inch of total and ¼ inch of differential settlement over the length of the structure.

Densification of loose granular soils can cause settlement of the ground surface due to earthquake-induced vibrations. Due to the relatively dense sand and stiff cohesive soil at the site, the potential for dynamic densification at the site is low.

Collapsible Soils

Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Soils prone to collapse are commonly associated with man-made fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods. During an earthquake, even slight settlement of fill materials can lead to a differentially settled structure and significant repair costs. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors. Soils in the Plan Area were not identified by the geotechnical studies to be susceptible to collapse.

Lateral Spreading

Lateral spreading is a failure within a nearly horizontal soil zone (possibly due to liquefaction) that causes the overlying soil mass to move toward a free face or down a gentle slope. Since the potential for liquefaction is moderately low and the slopes or free faces at the site are minor or nonexistent, the potential for lateral spreading is low.

Regulatory Setting

Alquist-Priolo Earthquake Fault Zoning Act

The State Legislature enacted the Alquist-Priolo Earthquake Fault Zoning Act in 1972. The purpose of the Act is to prohibit the location of most structures for human occupancy across the traces of active faults, thereby mitigating the hazard of fault rupture. For the purposes of the Act, an "active" fault is defined as a fault that has surface displacement during the Holocene epoch (i.e., the last 11,000 years). A fault is considered "potentially active" if it shows evidence of surface displacement during the Quaternary period (i.e., the last 1.6 million years). The Act requires the State Geologist to establish regulatory zones - known as Earthquake Fault Zones - around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all [affected cities, counties](#), and state agencies for their use in planning and controlling new or renewed construction in these zones. The California Geological Survey does not list Lathrop as an area included in the Alquist-Priolo Earthquake Fault Zones.

City of Lathrop

The Safety and Resources Management Elements of the City of Lathrop General Plan include the following goals and policies that are relevant to the proposed project.

- Policy 2: All new building construction shall conform to the latest seismic requirements of the Uniform Building Code as a minimum standard.
- Policy 4: Facilities necessary for emergency service should be capable of withstanding a maximum credible earthquake and remain operational to provide emergency response.
- Policy 5: Preliminary soil compaction tests and geotechnical analysis of soil conditions shall be submitted as part of the justification for development proposals contained in any Specific Plan.
- Policy 6: Soil compaction tests, and geotechnical analysis of soil conditions and behavior under seismic conditions shall be required of all subdivisions and of all commercial, industrial and institutional structures over 6,000 square feet in area (or in the case of institutional structures, those which hold 100 or more people).
- Policy 7: A preliminary soils report is to be prepared by a registered geo-technical engineer for any residential development project, based upon adequate test borings. If the report indicates the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects, the developer shall provide for and submit the findings of a soil investigation of each non-residential lot or housing site proposed. The soil investigation shall be prepared by a state-registered civil engineer and shall recommend corrective action likely to prevent structural damage to each dwelling to be constructed. Prior to the issuance of a building permit, any recommended action approved by the Building Official shall be incorporated into the construction of each dwelling.

Policy 8: A preliminary geologic report, prepared by a state-certified engineering geologist and based on adequate test borings, shall be submitted to the Building Official for every subdivision, planned development or other residential project at the time of submitting a tentative map or other type of development application to the City.

Policy 9: If the preliminary geologic report indicates the presence of critically expansive soils or other soil problems (e.g., potential for liquefaction which if not corrected could lead to structural defects), the developer shall provide such additional soils investigation for each development site as may be requested by the Building Official. The geologic investigation shall be prepared by a state-certified engineering geologist and shall, recommend further corrective action likely to prevent structural damage to dwelling units. Prior to the issuance of a building permit, any recommended action approved by the Building Official shall be incorporated into site preparation and the construction of each dwelling.

Policy 10: The provisions of policy nos. 6 - 9, above, shall be applicable to all commercial, industrial, institutional and public development projects.

The City of Lathrop has standards and guidelines that are relevant to geologic and soils conditions that are identified in the Lathrop Municipal Code. Prior to the commencement of any earthwork in the City, a full-scale geotechnical investigation must be completed. The geotechnical investigation must include soil borings to collect samples and laboratory testing to determine the appropriate design parameters for use in determination of the structural fill, roadbed fill, and landscaping fill requirements, along with the fill placement requirements. The various soils may be tested for corrosivity, to allow for proper infrastructure and foundation design. The geotechnical evaluation must provide grading and design recommendations to address potential slope and foundation instability, stream bank protection and slope evaluation, expansive soils, and differential settlement. The report must evaluate the soil types to test for shrink-swell potential to determine load-bearing and strength concerns. The geotechnical evaluation must be provided to the City's Community Development Department as part of the City's building permit process. The City reviews the geotechnical report along with other project design documents to confirm that the recommendations in the geotechnical report are reflected in project design.

The City of Lathrop has adopted the 2007 California Building Code, with local changes, as the City's building code. Chapter 16 of the California Building Code deals with General Design Requirements, including, but not limited to, regulations governing seismically resistant construction (Chapter 16, Division IV) and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction materials. Chapters 18 and A33 deal with site demolition, excavations, foundations, retaining walls, and grading, including (but not limited to) requirements for seismically resistant design, foundation investigations, stable cut and fill slopes, and drainage and erosion control. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching as specified in California Occupational Safety and Health Administration (Cal-OSHA) regulations.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The analysis of potential geology, soils, and seismicity impacts is based on available technical reports and published information, which were reviewed and summarized to establish existing conditions. Widely available industry sources were examined to document regional and local geology. Project-specific geologic information, soil characteristics, and landslide and liquefaction potential were obtained from the preliminary geotechnical reports prepared for the Plan Area or adjacent areas. Where potential geological hazards are identified, such hazards would be expected to affect any proposed development in the hazard area. Adherence to design and construction standards, as required by state and local regulations, would ensure maximum practicable protection for users of the buildings and associated infrastructure.

The following analysis considers the potential effects of proposed industrial, office, and service commercial development. Construction-related impacts are considered for the project as a whole. For operational impacts, the proposed development is considered within the context of seismic or other geological impacts to employees or visitors.

Significance Thresholds

For the purposes of this EIR, impacts on earth resources are considered significant if the proposed project would:

- Expose people or structures to potential substantial adverse impacts, including risk of loss, injury, or death through the rupture of a known earthquake fault, strong seismic shaking, seismic-related ground failure, soil liquefaction, or landslides;
- Locate project facilities on a geologic unit that is unstable, or that would become unstable as a result of the proposed project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse;
- Locate project facilities on expansive soil, creating substantial risks to property;
- Result in substantial soil erosion or the loss of topsoil;
- Result in the loss of availability of known mineral resources that would be of value to the region and the residents of the state; or
- Result in the loss of availability of a locally important mineral resources recovery site delineated on the general plan.

Impacts of Groundshaking on Plan Area

As with the rest of the Central Valley in Northern California, the Plan Area is situated between two seismically active regions. Although the Plan Area would not likely experience a fault rupture, ground shaking could result in structural damage to proposed developments within the Plan Area.

According to the geotechnical studies prepared for the area, the Plan Area could be subject to moderate ground shaking in the event of a major earthquake along known faults to the west and east of the Plan Area. The Great Valley and Greenville faults would be expected to produce the greatest peak site accelerations and highest estimated intensities according to the Modified Mercalli Intensity Scale. Estimated ground shaking potential in the Plan Area produced by these faults could be equivalent to an intensity of VIII on the Modified Mercalli Intensity Scale, which is associated with damage to walls and structures (see Table 9-1). Other faults identified in the Environmental Setting portion of this chapter could potentially generate earthquakes with a Modified Mercalli intensity of VII, which also may cause damage to buildings. Furthermore, due to the increase in employee and visitor populations associated with the proposed development of industrial, office, commercial, and public uses, the proposed project would increase exposure of people to the potential ground shaking hazards.

The 2007 California Building Code, adopted by the City, contains several provisions related to design and construction of buildings for seismic safety, as described previously. Based on an existing regulatory framework that addresses earthquake safety issues and adherence to the requirements of the 2007 California Building Code, it is reasonable to expect that seismically induced ground shaking would not present a substantial adverse hazard to people working at or visiting the Plan Area. Routine implementation and enforcement of the adopted building code would reduce the potential for earthquake damage to a level that is generally regarded by structural engineers throughout California as acceptable, and therefore considered under CEQA Guidelines to be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impacts of Liquefaction on Plan Area

In general, ground shaking or related secondary effects such as liquefaction or settlement could affect any part of development within the Plan Area. Because of the variety of soil types in the Plan Area, the extent of damage, if any, would depend on the specific physical characteristics of the underlying soils and/or fill, the depth to groundwater during the earthquake, and the duration and intensity of shaking.

Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded fine sands below the groundwater table. Boring tests revealed loose sand to a depth ranging from approximately 1½ to 10 feet in the Plan Area. The preliminary liquefaction analyses for the Plan Area suggest that the potential for liquefaction is low for most of the Plan Area, due to the cohesive nature of the subsurface material and the dense nature of the sands encountered in the borings below the groundwater table. However, some of the granular materials on the Terra Ranch and Mendes No. 2 properties in the portion of the Plan Area east of McKinley Avenue were characterized as loose to medium dense and potentially liquefiable. It was estimated that from ½ to 1 inch of settlement may occur on these properties as a result of liquefaction-induced densification. Furthermore, proposed development would increase employee and visitor populations in the Plan Area, increasing exposure of people as well as structures to potential liquefaction hazards. This impact is considered potentially significant.

Compliance with the provisions of the 2007 California Building Code would reduce the potential impact associated with seismic-related ground failure, including liquefaction. Implementation of the following mitigation measures would further reduce the potential impact to a less-than-significant level.

Level of Significance: Potentially significant

Mitigation Measures:

- 9-1. A site-specific, design-level geotechnical study shall be completed for each project development component in the Specific Plan area (i.e., light industrial areas, commercial areas, office areas, and infrastructure) before a grading permit is issued. The studies shall include an evaluation of liquefaction potential in the development area and identify appropriate means to minimize or avoid damage from liquefaction. Geotechnical design recommendations included in each study shall be implemented during project design and construction. Potential recommendations include over-excavating and recompacting the area with engineered fill or in-place soil densification. In-place densification measures may include deep dynamic compaction, compaction grouting, vibro-compaction, and the use of non-liquefiable caps. Special design features may need to be utilized for foundations. Other foundation types may be considered if further geotechnical study shows the liquefaction potential to be less than significant or if the effects of liquefaction-induced settlement can be mitigated with earthwork.

Significance After Mitigation: Less than significant

Implementation: The project applicants and/or successors-in-interest will be responsible for obtaining geotechnical reports and conforming site improvements (i.e., infrastructure) and building designs (i.e., site grading and foundation construction) to report specifications.

Monitoring: The Public Works Department and Building Division will verify the adequacy of the geotechnical reports and the incorporation of specifications into the improvement plans and building design.

Impacts of Other Potential Seismic Events on Plan Area

As previously noted, there are no known active faults crossing the Plan Area, and the site is not located in an Alquist-Priolo Earthquake Fault Zone. Therefore, fault rupture is considered unlikely. Based on topographic and lithologic data, the risk of regional subsidence or uplift, lateral spreading, ground lurching, landslides, tsunamis or seiches is considered negligible at the site.

Level of Significance: Less than significant

Mitigation Measures: None required

Impacts of Project Resulting in Soil Erosion or Loss of Topsoil

The Plan Area is currently utilized for a mix of agricultural, residential and industrial uses. The agricultural portion of the Plan Area is subject to regular watering and tilling activities, and thus experiences soil disturbance. Soil disturbance would occur over the entire Plan Area as a result of construction activities such as excavation, grading, and temporary stockpiling of soils. These extensive earthwork activities could expose soils to wind and water erosion during the construction phase.

Although the Plan Area is subject to erosion during construction activities, the topography of the Plan Area is relatively flat, which would minimize erosion potential. Also, overall erosion potential would be expected to decrease as a result of development within the Plan Area, due to the increase in impervious surface areas. In addition, construction contractors would be required to comply with the City's Storm Water Pollution Prevention Plan (SWPPP) as part of project design, and to implement Best Management Practices (BMPs) to minimize potential erosion. Chapter 13.0, Hydrology and Water Quality, discusses the SWPPP and its requirements in more detail. Therefore, erosion impacts related to geology and soils are considered to be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impacts of Expansive Soils on Project

As previously discussed, shrink-swell soils are a potential hazard to buildings and infrastructure. According to the San Joaquin County Soil Survey, the shrink-swell potential of soils within the Plan Area is low. Therefore, development in the Plan Area would not encounter a significant expansive soil hazard. However, the proposed off-site stormwater pipeline would go through soils identified as having a moderate to high shrink-swell potential. If left in place, the shrinking and swelling of these soils could possibly damage the pipeline. This would be a potentially significant impact. The following mitigation measure would reduce the potential shrink-swell damage to the pipeline, thereby reducing potential impacts to a less than significant level.

Level of Significance: Potentially significant

Mitigation Measures:

- 9-2. A site-specific, design-level geotechnical study shall be completed for the stormwater drainage pipeline from the Specific Plan area to the San Joaquin River before appropriate construction permits are issued. The studies shall include an evaluation of shrink-swell potential in the pipeline construction area and identify appropriate means to minimize or avoid damage from expansive soils. Geotechnical design recommendations included in the study shall be implemented during project design and construction. Potential recommendations may include, but are not limited to, removing expansive soils and replacing them with engineered fill.

Significance After Mitigation: Less than significant

Implementation: The ODS will be responsible for obtaining the geotechnical study and conforming site design and improvements to study specifications.

Monitoring: The Public Works Department and Building Division will verify the adequacy of the geotechnical study and the incorporation of specifications into the improvement plans.

10.0 GLOBAL CLIMATE CHANGE

This chapter assesses the potential contribution of the Lathrop Gateway Business Park Specific Plan project to the worldwide phenomenon of global climate change. There is general consensus that global climate change is occurring and that it is related to increasing atmospheric levels of greenhouse gases (GHGs). GHGs are emitted by natural processes and human activities, which consist largely of combustion of fossil fuels. The GHG emissions that are related to human activity are the subject of increasing scientific and public concern, and of government action.

In California, the Legislature has declared that global climate change is an important environmental issue that must be addressed under CEQA. Several efforts are underway to further define and quantify CEQA analysis issues, and the relevant efforts are discussed below. One such effort by the California Association of Environmental Professionals (AEP 2007) indicates that land development projects (i.e., projects whose GHG contribution is related primarily and indirectly to vehicle travel and energy use) will ordinarily have less than significant effects on global climate change at a project (local) level. Under CEQA, then, global climate change associated with land development is considered as a potential *cumulative* effect, and it is in that framework that the issue is discussed in this chapter.

ENVIRONMENTAL SETTING

Global Climate Change Background

Global climate change is a subject of increasing scientific and public dialogue and concern. A major source of global climate change is understood to be atmospheric concentrations of greenhouse gases (GHGs) that trap heat in the earth's atmosphere. GHGs include carbon dioxide (CO₂), the most abundant GHG, as well as methane, nitrous oxide and other less-abundant gases. Total worldwide emissions of GHGs in 2004 were estimated at 20,135 million metric tons (MMT) of CO₂ equivalent (CO₂e). U.S. emissions during the same year were estimated at 7,074 MMT CO₂e. One million metric tons are approximately 1.1 million U.S. tons.

The 2005 GHG concentration in the atmosphere was estimated at 375 parts per million (ppm). The United Nations Intergovernmental Panel on Climate Change (IPCC) has constructed several emission trajectories of greenhouse gas concentrations needed to stabilize global temperatures and climate change impacts. The IPCC concluded that stabilization of greenhouse gases at a concentration of 400-450 ppm CO₂e is required to keep mean global warming below 2° Celsius, which is assumed to be necessary to avoid dangerous climate change (IPCC, 2001).

GHG emissions are associated with numerous human activities, primarily those that involve the combustion of carbon-based fuels. The major sources of greenhouse gases in California include transportation (40.7%), electric power generation (20.5%), industrial activity (20.5%), agriculture and forestry (8.3%) and others (8.3%) (California Energy Commission, 2006). GHG emissions in California in 2004 were estimated at 484 MMT CO₂e.

Some GHGs have considerably higher global warming potential (GWP) than others. The GWP is the potential of a gas or aerosol to trap heat in the atmosphere. The reference gas for GWP is carbon dioxide, which has an assumed GWP of one. Methane has a GWP of 21, which means that it has 21 times greater global warming effect than carbon dioxide on a molecule-by-molecule basis. GWPs for other GHGs include nitrous oxide, with a GWP of 120, and HFC-23, with a GWP of 264. Carbon dioxide is by far the most common greenhouse gas and the largest contributor to global climate change.

Concerns related to global climate change include the direct consequences of an altered, warmer climate, but also include reduced air quality, reduced snowpack, higher-intensity storms and the impact of these changes on water supply. Melting of polar ice will contribute to rising sea levels. All of these changes have implications for the built environment, as well as existing ecosystems and the species that depend on them.

Regulatory Background

International Background

Global climate change is a subject of longstanding international dialogue and action dating from the 1988 establishment of the Intergovernmental Panel on Climate Change (IPCC) to further the understanding of human-induced climate change, its potential impacts, and options for adaptation and mitigation (IPCC, 2004). The United States joined other countries around the world in the United Nations Framework Convention on Climate Change (UNFCCC), which established an agreement to gather and share related information and take action to address the impacts of climate change (UNFCCC, 2007). The Kyoto Protocol, a treaty negotiated under UNFCCC, committed the participants to reduce emissions of GHGs or engage in emissions trading. However, the U.S. Senate did not ratify the treaty.

In 2009, the UNFCCC held its annual Climate Change Conference in Copenhagen, Denmark. At the conference, member states agreed to make voluntary pledges for GHG emission reductions to be achieved by 2020. If the pledges are considered insufficient to meet the goal of global temperature rise to no more than 2° Celsius, then the accord would be reviewed no later than 2015 (UNFCCC, 2009).

Federal Background

Until recently, the federal government has not adopted any comprehensive national strategy for reducing GHG emissions. Under the new administration, however, efforts have been made to institute new federal fuel economy and GHG emissions standards, modeled after existing California standards. In a related action, the U.S. Environmental Protection Agency (EPA) in 2009 granted California the authority to implement GHG-reducing automobile emission standards. The federal government is planning additional efforts to support alternative and renewable energy sources, including a new requirement that 25% of energy generation be derived from renewable sources by 2025. Additional energy conservation standards and institution of a federal cap and trade systems are being considered. Additional action by Congress and the President can be expected in the near future.

California Background

The Governor of California and the State Legislature have declared their concern with regard to global climate change and have set State agencies in motion to identify and implement strategies for the reduction of GHG emissions, primarily through AB 32, the Global Warming Solutions Act of 2006. AB 32 identifies global climate change as a “serious threat to the economic well-being, public health, natural resources and the environment of California.” A project that would contribute to global climate change may involve a significant effect on the environment that needs to be considered under CEQA.

Primary responsibility for AB 32 implementation was placed with the California Air Resources Board (CARB). CARB’s Climate Action Team directs a variety of activities oriented toward meeting the AB 32 goals of reducing GHG emissions to 2000 levels by 2010 and to 1990 levels by 2020. These specific legislative goals are directly related to the Governor’s overall objective, established in Executive Order S-3-05, of reducing GHG levels to 80% of 1990 levels by the year 2050. The State’s planning efforts are oriented toward meeting the legislated 2010 and 2020 goals, while placing the State on a trajectory that will facilitate eventual achievement of the 2050 goal. The desired GHG emission reduction of 80% below 1990 levels is consistent with the IPCC objectives for stabilizing global climate change.

The CARB recognizes that reducing GHG emissions will require a broad response across the spectrum of activities in the state. GHG reduction strategies being explored include, among others, new industrial and emission control technologies; alternative energy generation technologies; advanced energy conservation in lighting, heating, cooling and ventilation; reduced-carbon fuels; hybrid, electric and other no-, low- or lower-carbon vehicles; methods of improving vehicle mileage; and changes in travel patterns.

CARB adopted its Climate Change Scoping Plan for meeting the AB 32 targets in December 2008. The Climate Change Scoping Plan details the various GHG reduction initiatives that will be undertaken by the state or passed down to local government, and it quantifies the GHG emission reductions associated with each of the initiatives. Self-described as “ambitious but achievable”, the Scoping Plan proposes to achieve a 30% reduction in projected business-as-usual emission levels for 2020. The GHG reduction provisions of the Scoping Plan include expansion of energy efficiency programs; increase in the use of renewable energy sources; development of a cap-and-trade program; establishment of regional targets for reduction of transportation-related greenhouse gas emissions; implementation of clean car, goods movement, and low-carbon fuel standards; and creation of certain fees to price use of public goods and incentivize GHG emission reduction.

The Scoping Plan defines the 2020 GHG emissions target as 427 MMT CO₂e. Achieving this level will require a reduction of 169 MMT CO₂e from the State’s projected 2020 “business-as-usual” emissions of 596 MMT CO₂e, which is approximately 30% of those emissions and a 10% reduction of 2002-2004 average emissions. The Scoping Plan’s recommended reduction measures are projected to result in a total GHG emission reduction of 174 MMT CO₂e by 2020, which exceeds the target reduction by 5 MMT CO₂e. Of these reductions, nearly 85% will be achieved under the proposed regional cap-and-trade system and “complementary measures”. Several other measures, including emission reduction in state and local government operations, are identified and would contribute an additional 42 MMT CO₂e or more of GHG reductions. The potential contribution of local government operation-related reductions is not quantified in the Scoping Plan.

Most of the Scoping Plan's provisions, and the bulk of the emission reductions that would be achieved by the Scoping Plan, are not directly related to local land development projects. These provisions are generally oriented to effecting change in transportation-related GHG emissions by changing vehicle and fuel efficiency and carbon content standards. GHG emission reductions that would result from these measures would be generated by the state's population as a whole. Likewise, energy efficiency measures for buildings would be applicable to new and existing development alike. Increases in the Renewables Portfolio Standard for electrical utilities, defined Industrial Measures, Goods Movement measures and High Speed Rail would apply to other industries and systems. Of the various Scoping Plan recommended actions, three are applicable in the local land use context. These include:

- *Regional Transportation-Related GHG Targets.* This is the only local-government-oriented measure that is counted toward meeting the AB 32 goal for 2020. This measure would generate a reduction of 5 MMT CO₂e, approximately 3% of the 169 MMT CO₂e needed to meet the GHG reduction target for 2020. SB 375, passed in 2008, requires CARB to establish GHG emission reduction targets by September 30, 2010 for each area covered by a metropolitan planning organization (MPO). The impact discussion section of this chapter describes SB 375 requirements in more detail.
- *Recycling and Waste.* This includes measures to move toward reduced methane emissions from landfills, high-percentage recycling and ultimately "zero-waste." The measure is addressed primarily to improved landfill management, extended waste producer responsibility, and increased commercial recycling. This measure would produce up to 9 MMT CO₂e. This measure is not counted toward meeting 2020 goals and is only indirectly related to land development. The CARB expresses its intent to work with the California Integrated Waste Management Board (CIWMB) to develop new programs to realize this goal. New CIWMB programs or regulations may ultimately reach down to the municipal level.
- *Green Building Sector.* GHG reductions would result from increases in residential and commercial building energy and resource efficiency. The Scoping Plan indicates that almost one-fourth of the State's greenhouse gas emissions can be attributed to buildings. The improvements envisioned by the State are embodied in green building systems for new development such as LEED and Build It Green, which are discussed below. The Scoping Plan specifically calls for local government adoption of "beyond-code" green building requirements such as these. The Scoping Plan also calls for retrofitting existing residential and commercial buildings in conformance with an "environmental performance rating system" that is yet to be developed. The green building measure would produce up to 26 MMT CO₂e by 2020, but these gains are accounted for in the reductions attributed to other sectors affected by the recommended actions.

The recommended actions also include a Local Government Operations item, reductions from which are not quantified by the Scoping Plan. However, the Scoping Plan notes that local governments have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect greenhouse gas emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations (CARB, 2008).

San Joaquin Valley APCD Background

In August 2008, the San Joaquin Valley APCD adopted its Climate Change Action Plan. The Climate Change Action Plan directed the APCD's Air Pollution Control Officer to develop guidance to assist APCD staff, Valley businesses, land use agencies and other permitting agencies in addressing GHG emissions as part of the CEQA process. Regarding CEQA guidance, some of the goals of the Climate Change Action Plan are to assist local land use agencies, developers and the public by identifying and quantifying GHG emission reduction measures for development projects and by providing tools to streamline evaluation of project-specific GHG effects, and to assist Valley businesses in complying with State law related to GHG emissions.

A product of this direction to provide CEQA guidance is the *Final Staff Report – Climate Change Action Plan: Addressing GHG Emissions Impacts*, presented to the APCD Board in December 2009. A central component of the *Final Staff Report* is the establishment of Best Performance Standards, which are specifications or project design elements that identify effective, feasible GHG emission reduction measures. Emission reductions achieved through Best Performance Standards implementation would be pre-quantified, thus negating the need for project-specific quantification of GHG emissions.

For projects not implementing Best Performance Standards, demonstration of a 29% reduction in GHG emissions from business-as-usual conditions is required to determine that a project would have a less than cumulatively significant impact. Appendix J of the *Final Staff Report* provides a table of GHG emission reduction measures for development projects, along with a point value that corresponds to a percentage decrease in GHG emissions when available.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

Effective March 18, 2010, Appendix G of the CEQA Guidelines includes questions that will serve as qualitative significance thresholds to determine project impacts on global climate change. Based on these questions, a project may have a significant effect on the environment if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose reducing the emissions of greenhouse gases.

The CARB is charged with the development of significance thresholds for global climate change. CARB staff issued a paper outlining a potential approach to establishing quantitative significance thresholds in late 2008. No additional guidance has been issued by CARB to date. However, the San Joaquin Valley APCD, in its Climate Change Action Plan, states that a project that reduces its GHG emissions by at least 29% from business-as-usual conditions would be considered to have an individual and cumulative impact that is less than significant. This percentage reduction is consistent with the goal set in the CARB's Climate Change Scoping Plan, which calls for a reduction

from 2020 business-as-usual emissions to 1990 emission levels – a reduction that would be the same percentage as that in the APCD’s Climate Change Action Plan.

It should be noted that the Attorney General's office, in a letter to the APCD dated November 2, 2009, has expressed reservations about APCD's approach to assessing GHG emission impacts. Among its concerns are a potential awarding of reduction credit for measures already required by state or local law, failure to consider impacts of past and current sources of emissions, and avoidance of environmental review by large projects that meet the APCD's thresholds (California Department of Justice, 2009). However, for the purposes of this analysis, the project is being evaluated for its consistency with the current Climate Change Action Plan.

Generation of Project-Related Greenhouse Gas Emissions

GHG emissions would result directly and indirectly from the construction and operation of land uses authorized by adoption of the Lathrop Gateway Business Park Specific Plan. Potential construction sources would include GHG emissions resulting from construction employee travel and the operation of heavy and light internal combustion construction equipment used in the construction process. Indirect GHG emissions would result from use of commercial energy during the construction process and from resource extraction and manufacturing of construction materials. These emissions would be short-term and limited to the period of project construction.

Development of the industrial, office commercial and service commercial land uses pursuant to the adoption of the Lathrop Gateway Business Park Specific Plan would also generate GHG emissions. However, these emissions would be long-term, continuing indefinitely. Direct GHG sources would include emissions from the combustion of natural gas for water and space heating in industrial type structures. Vehicle travel associated with the three land uses would produce continuing GHG emissions by internal combustion engines. The use of electrical energy for heating, lighting and other services would also generate indirect GHG emissions from electrical generation. Water usage and waste disposal associated with the project would generate additional GHG emissions.

GHG emissions associated with the Specific Plan under “business-as-usual” conditions are shown in Table 10-1. “Business-as-usual” conditions assume no features that would mitigate GHG emissions. Table 10-1 includes projected construction emissions, which are averaged over an assumed 20-year buildout period and operational emissions for the most substantial sources. CARB’s URBEMIS 2007 (v 9.2.4) model was used to calculate direct CO₂ emissions from construction activities and area source operations, and indirect emissions from vehicular travel associated with the various proposed land uses. URBEMIS bases its emission calculations on vehicle trips generated by the land use activities proposed by the project, using trip generation factors developed by the Institute of Transportation Engineers (ITE). It also applies emission factors to construction vehicles and equipment.

TABLE 10-1
 2020 GREENHOUSE GAS EMISSIONS (Tons CO2e/Year)
 LATHROP GATEWAY BUSINESS PARK SPECIFIC PLAN
 BUSINESS-AS-USUAL CONDITIONS

Source	Estimated Emissions (tons CO2e/year)
Construction Emissions (20-year average) ¹	12,606
Area Source Direct Emissions ¹	4,577.24
Area Source Indirect Emissions ²	33,731
Mobile Source CO2 Emissions ¹	89,346.71
<i>Limited Industrial</i>	28,382.62
<i>Office Commercial</i>	11,127.02
<i>Service Commercial</i>	49,837.07
Mobile Source Methane and NO2 Emissions ²	1.42
Waste Disposal Emissions ³	51,626
Total	208,934.37
Total, million metric tons/year	0.189

Source Notes:

¹ URBEMIS 2007 v 9.2.4 (see Appendix D of this EIR)

² Based on factors in California Climate Action Registry General Reporting Protocol, Version 3.1 (2009).

³ Based on factors in EIR Chapter 15.3, Solid Waste, and in Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks (3rd ed.), U.S. Environmental Protection Agency (2006).

Area source indirect emissions were calculated using the General Reporting Protocol of the California Climate Action Registry. The California Climate Action Registry was established by California statute as a non-profit voluntary registry for GHG emissions. The purpose of the Registry is to help companies and organizations with operations in the state to establish GHG emissions baselines against which any future GHG emission reduction requirements may be applied. The General Reporting Protocol assists Registry members in calculating their baseline emissions by providing formulas and emission factors, based on technical advice provided to the Registry by the State of California. GHG emissions from solid waste were calculated using factors provided by a U.S. Environmental Protection Agency (EPA) publication on GHG emissions from landfills.

As shown in Table 10-1, planned service commercial development would be the source of most of the mobile source emissions. Although service commercial uses would occupy fewer acres than the other proposed land uses, they would generate more traffic, as determined by the ITE trip generation factors incorporated by URBEMIS. Office and limited industrial development, while occupying more acres, would not contribute as great an amount of GHG mobile source emissions. Total projected annual emissions associated with Specific Plan development would be 0.189 MMT CO2e, which would amount to approximately 0.04% of the 2004 statewide GHG emissions, and approximately 0.044% of the 2020 statewide GHG emission goal of 427 MMT CO2e.

Construction GHG emissions for the off-site stormwater pipeline were not included in Table 10-1, as it was anticipated that this construction work would not occur in 2020. These emissions were calculated using the Road Construction Emissions Model, Version 6.3.2, as it was used to calculate other construction emissions (see Chapter 6.0, Air Quality). Based on the results of the model,

pipeline construction would generate 280.9 U.S. tons of CO₂ throughout its estimated six-month construction period, or 254.83 metric tons.

As indicated by Table 10-1, the project would contribute GHG emissions when the state is actively seeking to reduce such emissions to counter potential climate change. However, mitigation measures incorporated in the URBEMIS model would reduce mobile source CO₂ emissions from 89,346.71 tons (see Table 10-1) to 80,675.73 tons – a reduction of approximately 9.7%. Overall CO₂e emissions (excluding construction emissions) would decrease from 196,328.37 tons to 169,696.09 tons – a reduction of approximately 13.5%. The mitigation measures employed in the revised URBEMIS run include the following:

- Presence of local serving retail.
- Transit and rail service.
- Bike and pedestrian facilities.
- Transportation Demand Management

The Specific Plan proposes service by local transit and is located near the ACE commuter rail station. It also proposes extensive bike and pedestrian facilities that would encourage use of these modes of transportation. The Service Commercial land use designation allows by right or with a permit retail activities such as restaurants, gas stations, dry cleaning services, and general merchandise. Retail stores located near the employment centers would reduce potential vehicle trips. Outside of reductions accounted for by URBEMIS, these measures would reduce GHG emissions by approximately 0.35%

The following mitigation measures would further reduce GHG emissions consistent with the mitigation measures in URBEMIS, along with the use of green building techniques.

Level of Significance: Potentially significant

Mitigation Measures:

- 10-1. Applicant(s) shall employ green building techniques in the design of proposed buildings within the Lathrop Gateway Business Park Plan Area. Specifically, projects shall conform at a minimum to the California Green Building Code or equivalent green building standards.
- 10-2. The ODS shall implement a Transportation Demand Management program applicable to businesses with 25 or more employees to reduce potential vehicle trips. The Transportation Demand Management program shall contain at least five of the following components, although other components not listed may be included:
 - Free transit passes.
 - Telecommuting.
 - Secure bicycle parking (at least one space per 20 vehicle parking spaces).
 - Showers/changing facilities.
 - Car-sharing services.
 - Information on transportation alternatives, such as bus schedules and bike maps.

- Dedicated employee transportation coordinator.
- Carpool matching programs.
- Preferential carpool/vanpool parking.

The ODS shall provide a funding mechanism to maintain the Transportation Demand Management program, which may include but is not limited to creation of a special assessment district. The Transportation Demand Management program shall be submitted to the Community Development Department for its review and approval.

10-3. The following mitigation measures shall be implemented during future development in the Plan Area:

- Parking in the Specific Plan area shall be provided at the minimum level required by the Lathrop Municipal Code. Shared parking shall be implemented when determined to be feasible.
- Parking lot designs shall include clearly marked and shaded pedestrian pathways between transit facilities and building entrances, for projects adjacent to or containing transit facilities.
- Buildings shall use Energy Star roofs, or equivalent, and shall be designed so that their orientation to take advantage of the winter sun and to shade building from the summer sun.

Significance after Mitigation: Significant and unavoidable. Implementation of the mitigation measures, along with Specific Plan features, would reduce the amount of GHG emitted by Specific Plan development. However, it cannot be stated with certainty that such measures would reduce GHG emissions from unmitigated levels by the 29% threshold set by the APCD. Therefore, as a conservative conclusion, project impacts on GHG emissions are considered significant and unavoidable.

Implementation: The ODS will be responsible for implementing the mitigation measures, including the incorporation of the aforementioned green building standards in the design of buildings.

Monitoring: The Community Development Department, Planning and Building Divisions will be responsible for ensuring that projects comply with these mitigation measures, in coordination with the APCD.

Project Consistency with Applicable GHG Reduction Plans

Climate Change Scoping Plan

As discussed above, CARB's Climate Change Scoping Plan includes 16 recommended measures that would produce estimated GHG reductions of 174 MMT CO₂e by 2020 and achieve the State's goal of reducing GHG emissions to 1990 levels by 2020. Implementation of these measures would result in statewide changes in vehicle efficiency, use of lower-carbon fuel sources, and improving energy

efficiency of buildings. These changes would be effected through a cap-and-trade system and “complementary measures.”

Of these 16 measures recommended by the Scoping Plan, only one measure is directly related to land development: Regional Transportation-Related GHG Targets, which would generate a total of 5 MMT CO₂e statewide. Six “Other Recommended Measures” are set forth in the Scoping Plan, of which two are relevant to local land development: 1) Green Buildings, and 2) Recycling and Waste. The Specific Plan, as mitigated by the recommendations of this EIR, would be consistent with each of the relevant Scoping Plan recommendations, as discussed below.

Regional Transportation-Related GHG Targets. The Scoping Plan relies on SB 375 to cause long-term changes in land use patterns that would result in GHG reductions. SB 375 requires metropolitan planning organizations (MPOs) like the San Joaquin Council of Governments (SJCOG) to collaboratively establish regional passenger vehicle GHG emissions reduction targets for 2020 and 2035 by September 2010. The MPOs would adopt a Sustainable Communities Strategy that would reach the regional GHG target. CEQA relief and transportation funding incentives would encourage conformance with the Sustainable Communities Strategy.

The targets, plans and systems for implementation of the Regional Transportation-Related GHG Targets measure are not in place, and no detailed information is available as to the probable content of this system. The Lathrop Gateway Business Park Specific Plan, however, embodies many of the characteristics likely to be favored under this Scoping Plan measure. The Plan Area is adjacent to and within the sphere of influence of the City of Lathrop, and located by existing and/or approved urban development. The proposed Lathrop Gateway Business Park is served by existing urban streets and utilities and is bordered by SR 120. The Plan Area is also accessed by and in close proximity to existing and future transit routes, including the existing Lathrop-Manteca Altamont Commuter Express (ACE) train station. Development of the Plan Area represents the completion of planned urban growth in the southeast Lathrop area, north of the SR 120.

The proposed project creates an employment center that contains a varying intensity of industrial and commercial type uses. Proximity to the ACE train station would promote the use of an alternative mode of transportation. In addition, walkability within the Plan Area would be promoted and enhanced by well-designed streets and pedestrian corridors. Therefore, the project is considered consistent with this Scoping Plan measure.

Green Building Sector. The State’s green building strategy involves State-led efforts to encourage or require adherence to green building standards across the economy. The strategy specifically identifies existing green building systems such as LEED and Build It Green and calls for local government adoption of such “beyond-code” green building requirements.

The California Green Building Code became effective August 1, 2009, with mandatory compliance becoming effective January 1, 2011. A supplement to the California Building Code, the Green Building Code sets standards for energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality in the planning, design and construction of buildings. Implementation of the provisions in the Green Building Code would reduce GHG emissions by reducing energy consumption (and therefore energy production) in the construction and operation of buildings and reduced energy costs in processing building materials.

Future development in the Plan Area would be required to comply with the Green Building Code at a minimum (see Mitigation Measure 10-1). Therefore, the project would be consistent with this Scoping Plan measure.

Recycling and Waste. The Recycling and Waste measure focuses on increased capture of landfill methane, diversion of organic waste to energy generation or composting operations, replacement of raw with recycled materials at the manufacturing stage, increased commercial recycling and promotion of Environmentally Preferable Purchasing. These programs would be organized by the California Integrated Waste Management Board and implemented by counties, cities and waste disposal site operators, in accordance with new policy and regulations.

City of Lathrop wastes are currently disposed to a private landfill, which is subject to state regulation. The City engages in Environmentally Preferable Purchasing and requires the recycling of commercial wastes through its franchised collectors. Construction waste must also be recycled. The City operates a three-cart source separation system for residential uses. Urban development pursuant to adoption of the Lathrop Gateway Business Park Specific Plan would be subject to all applicable City programs and requirements. The Scoping Plan recommendations for recycling and waste do not include elements in which the Specific Plan could directly participate.

As previously mentioned, the Scoping Plan proposes a reduction in GHG emissions from 596 MMT CO₂e to 422 MMT CO₂e by 2020. This represents a reduction of approximately 29%. As mentioned in the previous impact discussion, the implementation of mitigation measures for the Specific Plan would reduce GHG emissions by at least 30% from business-as-usual conditions. Therefore, the project would reduce GHG emissions to a level consistent with the reduction target set in the Scoping Plan.

APCD's Climate Change Action Plan

As previously discussed, the *Final Staff Report* for the APCD's Climate Change Action Plan provides a table of GHG emission reduction measures for development projects, along with a point value that corresponds to a percentage decrease in GHG emissions when available. According to the *Final Staff Report*, projects achieving a 29% reduction in GHG emissions would be determined to have a less than significant individual and cumulative impact for GHG emissions. The percentage reduction is consistent with the GHG reduction percentage sought by the state's Scoping Plan. As discussed, the GHG emission reductions anticipated from Specific Plan features plus the proposed mitigation measures would be at least 30%. Therefore, the project would be consistent with the reduction target set in the Climate Change Action Plan.

Overall, the project would be consistent with the reduction targets established by the Scoping Plan and the APCD. Based on the criteria set forth in the APCD's Climate Change Action Plan, the project would have an individual and cumulative impact that is less than significant.

Level of Significance: Less than significant.

Mitigation Measures: None required.

Impacts of Climate Change on Project

Aside from impacts a project may have on climate change, recent CEQA guidance also encourages an evaluation of impacts that climate change may have on a project. The California Climate Change Center issued a report in 2006 that provided a summary of impacts that may occur as a result of increased temperatures. These impacts included:

- Deterioration of air quality, with associated health effects.
- More days of severe heat (temperatures above 90°F), with associated health effects.
- Decreased Sierra Nevada snowpack, a major source of the state's water.
- Reduced production of electricity from hydropower.
- Decline in quantity and quality of yield for many agricultural products.
- Increased threat of wildfires.
- Declining forest productivity.
- Rising sea levels and increased coastal flooding.

Some of these potential impacts would have no impact on the Plan Area, while others may directly affect future development. These include air quality deterioration, increased severe heat days, and decreased snowpack. These impacts on the project would be the same as those on both existing and proposed projects throughout San Joaquin County and the Central Valley region.

The project would implement measures that would address the potential impacts of climate change. Chapter 6.0 discusses mitigation measures and regulations that would be applied to development in the Plan Area that would reduce the amount of air pollution generated by activities there. Energy efficiency measures described in this chapter would reduce the amount of electricity used by Plan Area development. The Specific Plan proposes the maximum use of recycled water for the irrigation of public rights-of-way and open space, and acknowledges the potential for the irrigation of private open space and landscaping with recycled water. In addition, the Plan Area, along with the City of Lathrop, must comply with the requirements of AB 1881, the Updated Model Water Efficient Landscape Ordinance.

As indicated in the above discussion, some project features in the Specific Plan, state and local regulations, and mitigation measures described in this and other chapters of this EIR would reduce many of the impacts climate change would have on the project. With these measures and regulation, impacts would be reduced to less than significant levels.

Level of Significance: Less than significant

Mitigation Measures: None required

11.0 HAZARDS AND HUMAN HEALTH

ENVIRONMENTAL SETTING

This section evaluates potential environmental impacts associated with the presence of hazardous materials within or near the proposed Lathrop Gateway Business Park Specific Plan area. Data used to prepare this section was taken from various sources, including eight Phase I Environmental Site Assessments (ESAs) prepared for properties within the Plan Area by ENGEO Incorporated, as well as the City of Lathrop General Plan (City of Lathrop 1991). Phase I ESAs were prepared for the following properties: Brocchini, Lin, Morimoto, Mendes, Mendes No. 2, Flowers, Terra Ranch and Beeler. These properties will be referred to as “subject properties” in this document. In addition to the Phase I ESAs noted above, an Agrichemical Impact Analysis was conducted by ENGEO in October 2005. All technical reports referenced in this section are on file at the City of Lathrop City Hall, Community Development Department.

The Initial Study prepared for the proposed project (see Appendix A) found that the Plan Area or off-site improvements are not located on a list of known hazardous material contamination sites compiled pursuant to Government Code Section 65962.5, located within the vicinity of either a public airport or private airstrip, or located in an area where development would result in the risk of wild land fire. For this reason, these issues are not addressed further in this section.

Comments received in response to the Notice of Preparation (NOP, see Appendix A) that addressed hazardous materials and public health included a letter from the San Joaquin County Environmental Health Department, which suggested that existing on-site septic systems located on properties within the Plan Area be destroyed and connected to the sewage infrastructure to be developed as part of build out of the Plan Area, and two letters, one from the California Public Utilities Commission (PUC) and the Union Pacific Railroad (UPRR) concerning public safety associated with development within the Plan Area in close proximity to operating rail lines. Issues associated with on-site sewage or septic systems will be addressed in the Utilities and Services section. Issues with public safety associated with adjacent railroads are addressed in this section.

Regulatory Setting

State and Local Agencies

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety. These agencies include the California Environmental Protection Agency (Cal EPA) and the Office of Emergency Services. The California Highway Patrol and California Department of Transportation (Caltrans) enforce regulations specifically related to hazardous materials transport. Within Cal EPA, the Department of Toxic Substances Control (DTSC) has primary authority to enforce hazardous materials regulations. State hazardous waste regulations are contained primarily in Title 22 of the California Code of Regulations (CCR).

Individual Regional Water Quality Control Boards (RWQCBs) are the lead agencies responsible for identifying, monitoring, and cleaning up leaking underground storage tanks. The San Joaquin County Environmental Health Department (SJCEHD) regulates the cleanup of contaminated properties in its jurisdiction in coordination with Cal EPA.

Chapter 6.5 of the California Health and Safety Code sets forth definitions and regulations related to hazardous materials management and disposal. This EIR uses the definition given in Section 25501(o) of the California Health and Safety Code, which defines a hazardous material as: “Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. “Hazardous Materials” include, but are not limited to, hazardous substances, hazardous wastes, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or environment.”

Workers and the general public are potentially at risk whenever hazardous materials have been used or where there could be an exposure to such materials as the result of the presence of unidentified fill materials or historic uses of a site. Ecological communities, such as avian and terrestrial habitats and the aquatic environment may also be at risk, depending on the type of populations and locations relative to potential exposure sources. Inherent in the setting and analyses presented in this section are the concepts of the “hazard” of these materials and the “risk” they pose to human health and the ecological environment.

A hazard is any situation that has the potential to cause damage to human health and the ecological environment. The risk to human health and the ecological environment is determined by the probability of exposure to hazardous material, and the severity of harm such exposure would pose. That is to say, the likelihood and means of exposure, in addition to the inherent toxicity of a material, are used to determine the degree of risk to human health or the ecosystem. For example, a high probability of exposure to a low toxicity chemical would not necessarily pose an unacceptable human health or ecological risk, whereas a low probability of exposure to a very high toxicity chemical might. Various regulatory agencies, such as the U.S. Environmental Protection Agency (EPA), State Water Resources Control Board and the Regional Boards (SWRCB), the California Department of Toxic Substances Control (DTSC), and Federal and State Occupational Safety and Health Administrations (OSHA and Cal-OSHA, respectively) are responsible for developing and/or enforcing risk-based standards to protect the public and the environment.

Projects within the City of Lathrop to use recycled wastewater to irrigate private and public landscaping. Use of recycled wastewater in California is regulated under CCR Title 22, Division 4. The intent of these regulations is to ensure the protection of public health associated with the use of recycled water. The regulations establish acceptable levels of constituents and pathogens in recycled water for a range of uses and prescribe means of assuring reliability in the production of recycled water. The California Department of Health Services (DHS) has jurisdiction over the distribution of recycled water and the enforcement of Title 22 regulations. RWQCBs are responsible for issuing waste discharge requirements (including discharge prohibitions, monitoring, and reporting programs). They also are responsible for user reuse requirements associated with implementation of wastewater reclamation projects.

San Joaquin County General Plan

The San Joaquin County General Plan (County General Plan) does not specifically address the potential for existing hazardous materials in the Plan Area but includes policies regarding the safe use, manufacture, production, transportation, storage, treatment, disposal, and clean-up of hazardous materials and wastes. The following policies under the Hazardous Materials and Wastes section of the County General Plan would apply to the proposed project:

- Policy No. 1: Hazardous materials and wastes shall not contaminate air or water resources or soils.
- Policy No. 2: The use, storage and disposal of hazardous materials and wastes shall be controlled to prevent harm to individuals.
- Policy No. 3: Land uses and structures which contain hazardous materials or wastes which may be a safety hazard for nearby areas shall be located away from existing and planned populated areas.
- Policy No. 4: The use of hazardous materials and the creation of hazardous wastes shall be minimized.
- Policy No. 5: All development shall be consistent with the County's Waste Management Plans.

City of Lathrop General Plan

The City of Lathrop General Plan (City General Plan) does not specifically address the potential for existing hazardous materials in the Plan Area but includes policies to regulate the extent and location of land uses that may generate hazardous materials and other public health impacts. The following policies under the Safety Goals and Policies section of the City General Plan would apply to the proposed project:

- Policy No. 4: The City will continue to maintain and update emergency service plans, including plans for managing emergency operations, the handling of hazardous materials and the rapid cleanup of hazardous materials spills.
- Policy No. 6: The City will seek to reduce the risks and potential for hazards to the public through planning and zoning practices and regulations which avoid hazardous land use relationships, and by the continued and timely adoption of new-edition building and fire codes.

Plan Area Setting

The Plan Area consists of approximately 384 acres located in the Lathrop/Manteca area of San Joaquin County, California. The Plan Area is relatively level, at an elevation of about 10-25 feet above mean sea level (msl). The regional topographic gradient slopes to the west-northwest. The geologic materials underlying the area are mapped as Quaternary deposits of sands, silts and clays.

The specific depth to groundwater and direction of flow was not determined as part of the assessment for all subject properties. However, groundwater depth in the vicinity of the Lin, Madonna, Beeler, Brocchini, and Terra Ranch properties were found to be approximately 7-14 feet below the existing ground surface, which reflects the possibility of a shallow aquifer beneath those properties. Fluctuations in groundwater levels are expected to occur seasonally in response to changes in precipitation, irrigation, and other factors.

The current uses in the Plan Area and adjacent lands are predominantly a mix of agricultural activities, interspersed with rural residential and industrial uses. The majority of the subject properties are currently cultivated with agricultural fields. Numerous dwellings, barns, storage buildings, equipment and maintenance buildings, and other structures associated with agricultural operations are located in the Plan Area.

A review of aerial photographs and available historical records found that the Plan Area has been used for agricultural, commercial, and rural residential purposes, with a majority of the area being used for agricultural activities since at least 1937.

Hazardous Sites

A search of government agency database records was performed as part of the ESAs to evaluate activities that may have contributed to a release of hazardous substances or petroleum hydrocarbons to soil and/or groundwater at and in the general vicinity of the Plan Area. The records research conducted by ENGEO Incorporated did not find documentation of soil or groundwater impairments associated with the use of the subject properties. A review of regulatory databases maintained by county, state, and federal agencies found no documentation of hazardous materials violations or discharge on the subject properties. The ESAs did not reveal evidence of significant Recognized Environmental Conditions (RECs) in connection with the use of the properties.

Due to the potential age of existing buildings in the Plan Area, some components could contain hazardous materials that may require special handling if removed and disposed of off-site. Such materials include asbestos, lead, polychlorinated biphenyls (PCBs), mercury and other metals.

- Asbestos, a naturally-occurring fibrous material, was used as a fireproofing and insulating agent in building construction before such uses were banned by EPA in the 1970s. Because it was widely used prior to the discovery of its health effects, asbestos may be found in a variety of building materials and components including sprayed-on acoustic ceiling materials, thermal insulation, walls and ceiling texture, floor tiles, and pipe insulation.
- Lead is a naturally occurring metallic element. Among its numerous uses and sources, lead can be found in paint, water pipes, solder in plumbing systems, and in soils around buildings and structures painted with lead-based paint. In 1978, the federal government required the reduction of lead in house paint to less than 0.06 percent (600 parts per million). However, some paints manufactured after 1978 for industrial uses or marine uses legally contain more than 0.06 percent lead.
- PCBs are organic chemicals, usually in the form of oils that were formerly used in electrical equipment, including transformers and capacitors, primarily as electrical insulators. Some PCB-containing fluorescent light ballasts could also be present in existing buildings that would be demolished or renovated under the Proposed Project. Nearly all ballasts manufactured prior to 1979 contain PCBs. PCB ballasts manufactured after July 1, 1978 that do not contain PCBs are required to be clearly marked "No PCBs."
- Elemental mercury can be found in many electrical switches, including thermostats, and when disposed of, such mercury is considered hazardous waste. Spent fluorescent light tubes, thermostats, and other electrical equipment contain heavy metals. Lighting tubes sometimes contain concentrations of mercury that exceed regulatory thresholds for hazardous waste and, as

such, must be managed in accordance with hazardous waste regulations. In sufficient concentrations, the metals and mercury are toxic and are regulated as hazardous wastes.

Agricultural Operations

ENGEO prepared an Agrichemical Impact Assessment dated October 2005. The Agrichemical Impact Analysis covered 190 acres of the Plan Area's 384 acres (see Figure 11-1). The purpose of the analysis was to determine if residual chemicals used in agricultural operations over many decades are present in site surface soils on the subject properties tested. Based on the results of the soil sampling and laboratory testing, the soils within the subject properties that make up the 190 acres analyzed have not been adversely impacted from past agricultural practices.

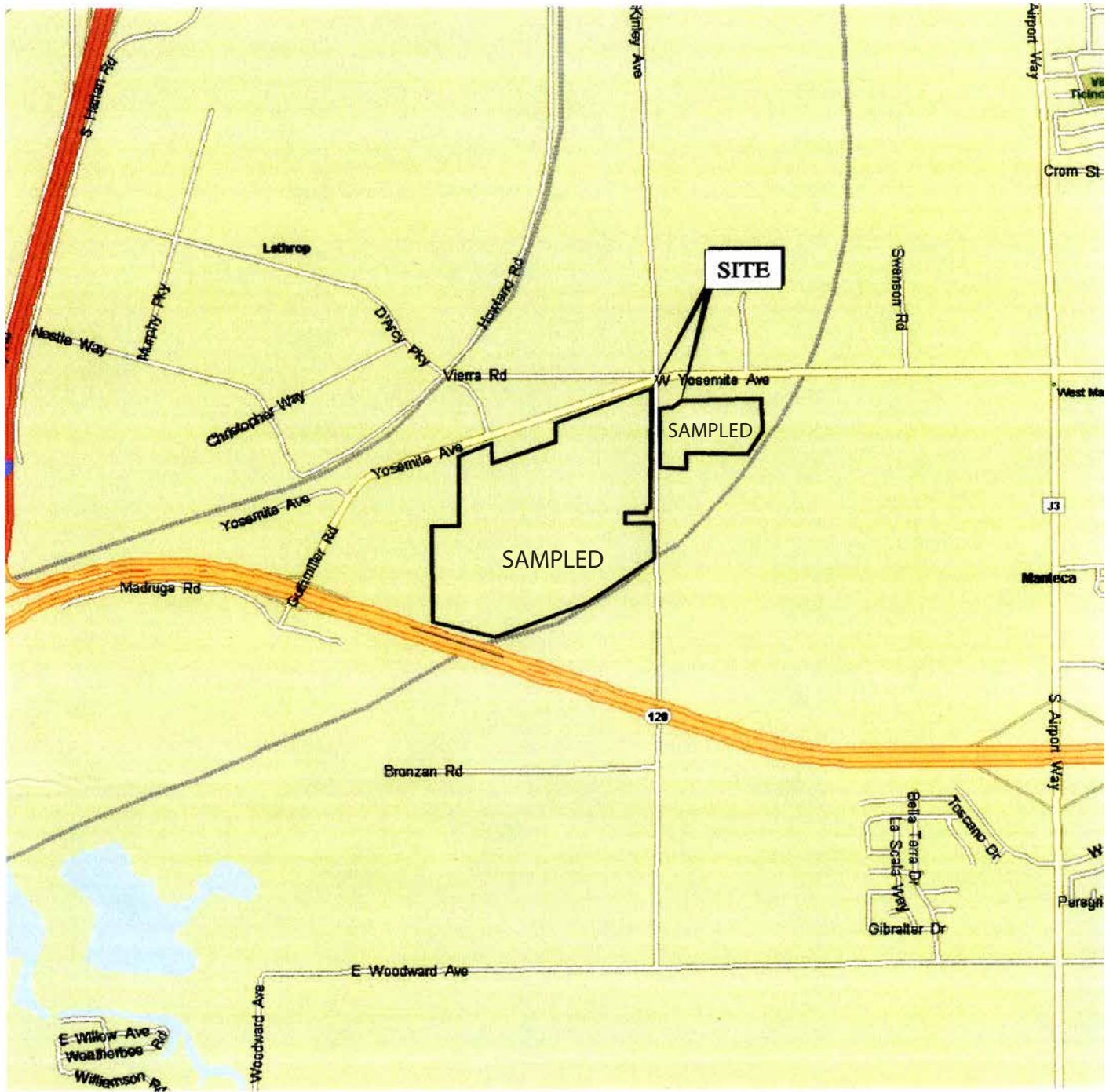
Transportation Concerns

Highways and railroads represent human health and safety risks associated with noise and accidents that could result in injury to persons or damage to structures located on adjoining or nearby lands. Noise concerns associated with transportation sources and mitigation measures are addressed in detail in Chapter 14.0 Noise and are related primarily to railroad and traffic noise.

SR 120 is located adjacent to the southern project boundary. SR 120 is a state highway that accommodates approximately 77,000 daily vehicle trips, including substantial volumes of commercial truck traffic. Traffic accidents very rarely extend beyond roadway rights-of-way.

Union Pacific Railroad lines are located along the eastern and western project boundaries. Precise details of the number of daily train trips these lines accommodate, and the type and volume of potentially hazardous materials transported along these lines are not available to the public for security reasons. Nonetheless, substantial amounts of hazardous materials are assumed to be transported along these lines. The risk of accidents, and more specifically accidents involving hazardous materials, is relatively low. The U.S. Department of Transportation Federal Railroad Administration found the UPRR company train accident rate to be 4.18 train accidents per one million train miles traveled, resulting in a less than 0.001% chance of an accident adjacent to the Plan Area. The possibility of a railroad accident containing hazardous materials is considered much lower, as only an average of eight accidents involving hazardous material spills occur annually in California.

The Union Pacific Railroad Company does implement a security plan in compliance with the Department of Transportation Final Rule 49 CFR Part 172 Hazardous Materials (HM 232): Security Requirements for Offerors and Transporters of Hazardous Materials. The plan includes requirements to enhance the security of transported hazardous materials and ensures proper cleanup procedures in the instance of an accidental release.



SOURCE: ENGeo INCORPORATED

INSITE ENVIRONMENTAL, INC.

Figure 11-1
 AGRICULTURE IMPACT ANALYSIS-
 AREAS SAMPLED

Power Lines

High-voltage transmission lines are defined as those with a line voltage of 50 kilovolts (kV) or more. High-voltage transmission lines generate electromagnetic fields (EMFs), which vary in proportion to the line voltage and distance from the line. Existing high voltage power lines (115kV), within PG&E power line easements, traverse through a portion of the Plan Area running east/west and north/south (taking a turn at Vierra Road heading east, then terminating less than a half mile along the northern Plan Area boundary at an electrical substation).

There has been public concern since 1979 that long-term exposure to EMFs surrounding major transmission lines and other electrical equipment has the potential to contribute to increased risk of cancer. The topic of EMF hazards has been studied intensively and debated for many years. A 1996 report by the National Research Council determined that there is no convincing evidence that EMFs harm human health in any way (Leary, 1996). A 1998 report from an international panel of experts convened by the National Institute of Environmental Health Sciences indicated that EMFs should be regarded as a "possible human carcinogen;" however, the panel chairman indicated that the risk "is probably quite small, compared to many other public health risks." A congressionally mandated study by the National Institute of Environmental Health Sciences concluded in June 1999 that the evidence for a risk of cancer and other human disease from electric magnetic fields around power lines is "weak".

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

For purposes of this analysis, the typical use of hazardous materials and their effects were qualitatively assessed through review and evaluation of available documents that identified potential contaminants and hazardous material uses within the Plan Area. The information in this section is based upon reviews of previously prepared reports documenting environmental investigations for several properties within the Plan Area. Other properties within the Plan Area that were not investigated as part of previously prepared reports were included in the EDR database searches contained in each of the available Phase I ESAs. InSite reviewed the EDR database searches to confirm if the other properties within the Plan Area were identified on any of the regulatory lists. None of the other properties appeared on any of the reported regulatory lists.

Significance Thresholds

Exposure to hazardous materials could occur either through the routine use of hazardous materials during construction or occupancy of the project, or because hazardous materials could potentially be present in surface and subsurface soils and groundwater in the Plan Area as a result of historical land uses. Disturbance of hazardous materials through construction or demolition activities could potentially expose construction workers, the general public, and/or ecological communities to various health risks. Hazardous materials left in place following development could potentially expose future site users and workers to health risks. In determining the level of significance, the analysis assumes that construction and occupancy of the proposed project would comply with relevant federal and State laws and regulations, City ordinances and Improvement Standards.

Development within the Plan Area would cause a significant impact related to hazardous materials and public health if it would:

- Create a public health hazard through the use, production, generation, release, or disposal of materials that pose a hazard to human, animal, or plant populations;
- Expose construction workers to hazardous materials that would create health risks during construction; or
- Expose long-term employees or visitors to health or potential health hazards.

Exposure of Construction Workers, Employees and Others to Existing Hazardous Materials

Although no Recognized Environmental Conditions (RECs) have been identified to date within a portion of the Plan Area, the entire Plan Area has not been evaluated using the ESA process. Past agricultural and farming operations, as well as existing industrial and commercial types uses in the western, northern and eastern portions of the Plan Area could have resulted in contamination of soil and/or groundwater in some locations. Demolition, excavation, and construction activities in the Plan Area could result in the exposure of construction workers to hazardous materials, including asbestos, lead, petroleum hydrocarbons, pesticides, herbicides, and fertilizers. In addition, if potential contaminated sites are present in the Plan Area and are not remediated before occupation or use of the site, then long-term employees and others could be exposed to hazardous materials.

There is potential that previously unrecorded incidences of contamination or RECs could be located in areas not evaluated in a Phase I ESA. There is also the potential for areas previously evaluated in ESAs to become contaminated between the time of the ESA review and project construction (2010–2020). Development of the Lathrop Gateway Business Park would involve site grading, excavation for utilities, dewatering of open trenches, backfilling, demolition of existing facilities, and construction of new businesses, including commercial facilities. Excavation and construction activities at or near areas of currently unrecorded soil and/or groundwater contamination could expose construction workers to hazardous materials. If areas identified as potentially having contaminated soil and/or groundwater are not remediated, future employees and others could come into contact with and be exposed to hazardous materials. In addition, several onsite structures could include asbestos-containing building materials and lead-containing materials (e.g., paint, sealants, pipe solder), which could become friable or mobile during demolition activities and come into contact with construction workers. Potential exposure of construction workers, employees, and others to hazardous materials on the project site is considered a potentially significant impact.

Level of Significance: Potentially significant

Mitigation Measures:

- 11-1. The SJCEHD shall be notified by the ODS if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during excavation and dewatering activities. Any contaminated areas shall be remediated by the ODS in accordance with recommendations made by SJCEHD; RWQCB; DTSC; or other appropriate federal, state, or local regulatory agencies.

- 11-2. Before demolition of any onsite buildings built prior to 1980, the ODS shall hire a qualified consultant to investigate whether any of these buildings contain asbestos-containing materials and lead that could become friable or mobile during demolition activities. If found, the asbestos-containing materials and lead shall be removed by an accredited inspector in accordance with EPA and California Occupational Safety and Health Administration (Cal/OSHA) standards. In addition, all activities (construction or demolition) in the vicinity of these materials shall comply with Cal/OSHA asbestos and lead worker construction standards. The asbestos-containing materials and lead shall be disposed of properly at an appropriate offsite disposal facility.

Significance After Mitigation: Less than significant

Implementation: The owner, developer and/or successors-in-interest will be responsible for obtaining an accredited inspector to remove identified asbestos and lead material.

Monitoring: The Building Division and the Community Development Department will be provided evidence of abatement activities before issuing demolition permits.

Use of Hazardous Materials In Construction and Operation

The proposed project could involve the storage, use, and transport of hazardous materials within the Plan Area during construction activities. In addition, because the project proposes industrial and commercial type uses, it is likely that some facilities (e.g., manufacturers, dry cleaners and gas stations) could use hazardous materials during operation. However, use of hazardous materials within the Plan Area would be in compliance with local, state, and federal regulations. Therefore, impacts related to creation of significant hazards to the public through routine transport, storage, use, disposal, and risk of upset would not occur. This impact is considered less than significant.

The project applicant, builders, contractors, business owners, and others would be required to use, store, and transport hazardous materials in compliance with local, state, and federal regulations during project construction and operation. Facilities that would use hazardous materials on site after the project is constructed would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. Because the project would implement and comply with existing hazardous material regulations, impacts related to creation of significant hazards to the public through routine transport, use, disposal, and risk of upset would not occur with project development.

The impact to offsite uses due to the transport of hazardous materials to and from the Plan Area is also considered to be less than significant. Transportation of hazardous materials on area roadways are regulated by the California Highway Patrol and Caltrans, whereas use of these materials is regulated by the DTSC, as outlined in Title 22 of the CCR.

Level of Significance: Less than significant

Mitigation Measures: None required

Potential Public Health Impacts Associated with Recycled Water

The proposed project includes plans to use recycled water from the City's proposed Water Recycling Plant #2 (WRP #2) to irrigate private and public landscaping and for crop irrigation at recycled water disposal sites. If wastewater recycling facilities do not operate properly, the public could come into contact with contaminated water, resulting in a public health hazard. However, recycled water treated at WRP #2 would comply with Title 22 requirements for unrestricted use (i.e., disinfected tertiary treatment). Methods for application and use of the recycled water would also need to follow Title 22 requirements. Because the recycled water used at the project site would comply with Title 22 health requirements (allowing for better control of public contact), the potential public health impact is considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Potential Hazard Associated with Railroad Adjacent to Plan Area

The project site is bounded on the east and west by Union Pacific Railroad lines, and proposed development would be exposed to risks associated with train accidents. General statistical information regarding railroad accidents indicates the risk of accidents or incidents is relatively low. Additionally, site design would include a barrier in the form of a fence or wall along the railroad rights-of-way that would restrict direct access to the railroad tracks and set backs would ensure no structure is placed at the property line. Furthermore, the Union Pacific Railroad company has developed and implemented a security plan in compliance with the Department of Transportation Final Rule 49 CFR Part 172 Hazardous Materials (HM 232): Security Requirements for Offerors and Transporters of Hazardous Materials. This plan implements measures to reduce accidental spills, and assures that accidental spillages are remediated. These treatments would avoid significant safety risk to future employees and visitors to the Plan Area.

Level of Significance: Less than significant

Mitigation Measures: None required

High-Voltage Power Lines

There are "high-voltage" (115kV) electrical lines located within the central portion of the Plan Area. Future development will be required to setback from the power line easement. Existing lower voltage power lines (34kV and under) will be relocated and/or be placed underground as the Plan Area develops. New power lines constructed to serve the Plan Area, as well as all other utilities, will be installed underground. In any event, either left in place above ground or placed underground, the evidence for a risk of cancer or other human health concerns from EMF around power lines is "weak," even in the vicinity of lines with much higher voltage; as a result, the project would not be subject to significant EMF risk.

Level of Significance: Less than significant

Mitigation Measures: None required

12.0 LAND USE

ENVIRONMENTAL SETTING

This section of the EIR describes the land uses on and surrounding the proposed Lathrop Gateway Business Park Specific Plan area (Plan Area). The Plan Area consists of a 384-acre site adjacent to the City of Lathrop in unincorporated San Joaquin County. The Plan Area is within the City's Sphere of Influence (SOI) and would be annexed into the City as part of the proposed project. Key policy issues to be considered include consistency with General Plan and Zoning designations, General Plan policies, and San Joaquin County LAFCO policies. Other key issues include potential conflicts with existing and proposed uses in the area and conversion of Important Farmland.

A site visit was performed on August 12, 2009 at which time the site and surrounding area were observed and photographed from public roads, including SR 120. Land uses on the project site and the surrounding area were noted. Aerial maps were also used as a tool in determining the uses of the surrounding area.

Plan Area

The approximately 384-acre Plan Area is situated south of Vierra Road and Yosemite Avenue, between the two Union Pacific Railroad (UPRR) tracks that pass through southern Lathrop, and north of State Route (SR) 120. Existing uses in the Plan Area include residential, agricultural, industrial uses as well as a church. Portions are also undeveloped/fallow. Orchards, as well as disked fields and row crops are present.

Improved roads including Guthmiller/Yosemite Avenue, McKinley Avenue, D'Arcy Parkway and Vierra Road currently exist within the Plan Area.

Surrounding Area

Surrounding uses include large industrial, manufacturing and distribution buildings; retail and commercial buildings; SR 120; City of Lathrop Waste Water Treatment Plant and wastewater holding ponds; agricultural fields; and railroad tracks. Historically, vegetation in the region consisted primarily of riparian and freshwater marsh communities with native grasslands, oak woodlands, vernal pools, and seasonal wetlands in the upland areas away from the San Joaquin River. Over time many of these communities have been replaced by non-native naturalized vegetation communities, due to agricultural and urban conversion and other infrastructure activities. Agricultural land is currently the most common vegetation type in the region, including row crops, and orchards.

Vierra Court and Yosemite Avenue border the site to the north. Beyond these roads are a variety of uses from agricultural uses, primarily row crops, to large warehouse type buildings. A PG&E substation is also located to the north of the Plan Area. The Lathrop Industrial Park (LIP) and the

ACE Station are the located adjacent to the Plan Area's northeast corner. The ACE Station consists of the UPRR tracks, a few covered benches, and nighttime lighting.

The UPRR tracks border the site to the west and east. The tracks are elevated on an earthen berm. Beyond the easterly tracks are primarily agricultural uses, primarily row crops, the City of Manteca Wastewater Treatment Plant and vacant land. Beyond the westerly tracks are industrial uses as well as the City of Lathrop Wastewater Recycling Plan No. 1. The San Joaquin River is located approximately three quarters of a mile to the west of the Plan Area's western most point; on the west side of Interstate 5. The river is lined and contained within a levee system and at certain locations contains trees and other riparian vegetation.

SR 120 borders the Plan Area's southern boundary. South of SR 120 are primarily agricultural uses, some rural residential uses and UPRR tracks. Further south of the UPRR tracks, is the Lakes residential subdivision consisting of single-family detached lots around a man-made lake.

Regulatory Setting

State Planning and Zoning Laws

California Government Code §65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of the City or County and of 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, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the General Plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the City's or County's vision for the area. The General Plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Finally, although the General Plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

The State Zoning Law (California Government Code §65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with the General Plan and any applicable specific plans. When amendments to the General Plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure the land uses designated in the General Plan would also be allowable by the zoning ordinance (Gov. Code, §65860, subd. (c)).

San Joaquin LAFCO

San Joaquin LAFCO currently has authority over the Plan Area. The San Joaquin LAFCO is responsible for coordinating logical and timely changes in local governmental boundaries within San Joaquin County. This includes annexations and detachments of territory, incorporations of cities, formations of special districts, and consolidations, mergers, and dissolutions of districts. San Joaquin LAFCO also reviews ways to reorganize, simplify, and streamline governmental structure; has the authority to initiate proposal involving district consolidation, mergers, and reorganizations; and is responsible for reviewing out-of-agency service agreements between property owners and service providers.

San Joaquin LAFCO has adopted its Guidelines for Formation and Development of Local Governmental Agencies (San Joaquin LAFCO Guidelines), which are based on statutory criteria and identify standards against which annexation proposals are evaluated. The following criteria are applicable to the Plan Area:

- No proposal shall go to hearing by the Commission until the boundary description has been reviewed and approved by the County Surveyor. If the Commission approves a proposal subject to condition imposing boundary alternations, it shall be the responsibility of the proponent(s) to submit three (3) copies of correctly amended boundary descriptions and maps to the Executive Officer within thirty (30) days of the date of approval.
- The Executive Officer's report on all annexations or formations shall ascertain if the adoption of the proposal would result in two or more districts or a city and a district possessing, in any common territory, the authority to perform the same or similar functions, will be opposed.
- Proposals for annexations to cities shall include all contiguous public roads that can be included without fragmenting governmental responsibility by alternating city and county road jurisdiction over short sections of the same roadway.
- Annexation to an adjacent city will be favored over a proposal for providing urban services by special districts.
- Annexations to agencies providing urban services shall be progressive steps toward filling in the territory designated by the affected agency's adopted Sphere of Influence. Proposed growth shall be from inner toward outer areas.
- Boundaries which create islands, strips or corridors within an agency providing urban services shall be avoided.
- Annexation to or formation of a multiple service agency will be favored over a proposal for providing urban services by a multiplicity of limited service districts.
- Annexation to an existing agency will be favored over a proposal for forming a new agency to provide the same services.
- A proposal that does not establish an economically sound base for financing required services will not be approved.
- Economical efficiency of a larger annexation will be favored over a proposal for "single-parcel" or "piecemeal" annexation.
- A proposal establishing urban encroachment of areas designated by the County General Plan for open space or agricultural use will be opposed unless it complies with a previously adopted Sphere of Influence of an incorporated City.
- It will be the responsibility of the proponent(s) of any proposal not complying with these guidelines to show that approval of such proposal will not be detrimental to the public interest.

Delta Protection Act

The California Legislature passed the Johnston-Baker-Andal-Boatwright Delta Protection Act of 1992 (Delta Protection Act) on September 23, 1992. The Delta Protection Act provided the means to prepare the Land Use and Resource Management Plan for the Primary Zone of the Delta (Management Plan). The Management Plan includes policies and recommendations with the overall goal to “protect, maintain, and where possible, enhance and restore the overall quality of the Delta environment, including but not limited to agriculture, wildlife habitat, and recreational activities.” Two zones have been established under the Delta Protection Act; the Primary Zone and the Secondary Zone. The western portion of the Plan Area, the outfall structure and disposal fields and ponds are within the Secondary Zone. The Primary Zone is not adjacent to the site and is on the west side of I-5, generally following the San Joaquin River. “Between 1976 and 1993, about 21,600 acres in the Secondary Zone of the Delta were developed. The following are the applicable goal, policy, and recommendation with relation to land use and agriculture:

Land Use Policies

- P-8: Local government policies regarding mitigation of adverse environmental impacts under the California Environmental Quality Act may allow mitigation beyond county boundaries, if acceptable to reviewing fish and wildlife agencies, for example in approved mitigation banks. Mitigation in the Primary Zone for the loss of agricultural lands in the Secondary Zone may be appropriate if the mitigation program supports continued farming in the Primary Zone.

Land Use Recommendations

- R-5: To the extent possible, any development in the Secondary Zone should include an appropriate buffer zone to prevent impacts of such development on the lands in the Primary Zone. Local governments should consider needs of agriculture in determining such a buffer.

City of Lathrop General Plan

While the Plan Area is currently in an unincorporated portion of San Joaquin County, the Plan Area is located within the Sphere of Influence of the City of Lathrop and will be annexed into Lathrop; therefore the City of Lathrop’s policies would be applicable to the proposed project.

The current City of Lathrop General Plan was adopted in 1991 and most recently amended in November 2004. The City General Plan does not specifically identify any goals or objectives related to land use. Section A of the Community Development Element sets forth policies and proposals which are to provide the basis for the zoning and development of all public and private land within the community. The project site is in not currently within the city limits, but is within Lathrop’s Planning Area and Sphere of Influence (SOI). The Planning Area is broken up into Sub-plan Area #1, Sub-plan Area #2, and Sub-plan Area #3. The project site is within Sub-plan Area #1. Sub-plan Area #1 is located east of I-5 and northeast of the San Joaquin River. Development priorities are established for each of the sub-areas in the General Plan. The priorities for Sub-plan Area #1 include residential, retail, highway commercial, and freeway and service commercial development.

The City General Plan establishes development categories that correspond to land use designations shown on the General Plan Map. The project site is currently designated Service Commercial (SC),

Freeway Commercial (FC) and General Industrial (GI). The General Plan also establishes the following policies related to industrial development:

- Areas designated for industrial use are intended to take advantage of rail and freeway access.
- Areas designated for industrial use are to assure that there will be sufficient long-term availability of industrial land to expand the City's economic base and capability for meeting the on-going costs of public services required by the community. A slow pace of industrial development is not to be construed alone as justification for designating industrial land areas for another type of urban use unless such use would be of a regional commercial character.
- Industrial proposals should be located where possible within an industrial park designed for the accommodation of a community of industries that are compatible in terms of operational characteristics, aesthetic qualities, utility service requirements and street circulation.
- Industries are to be developed and operated in such manner as to avoid damage, destruction or degradation of the environment.

The Resources Management Element of the City's General Plan contains agricultural policies that are applicable to the Plan Area. Exclusive agricultural zoning shall be continued on agricultural lands outside the boundaries of the three sub-plan areas identified in the General Plan. The protection of agricultural lands outside of the three Sub-Plan Areas shall be reinforced by firm policies of the City to not permit the extension of sewage and water service to such lands.

The Plan Area is within the City of Lathrop Sphere of Influence, but outside of the city limits. The land is designated in the San Joaquin County General Plan as Limited Industrial (I/L), Agricultural-Urban Reserve (A/UR), and General Commercial (C/G) and zoned in the San Joaquin County Zoning Ordinance as Warehouse Industrial (I-W), Agriculture-Urban Reserve (AU-20), and General Commercial (C-G). Pre-zoning under the jurisdiction of the City of Lathrop would be required as part of the proposed project's desired entitlements.

San Joaquin County Right to Farm Ordinance

As required by Agricultural Lands Implementation Policy 2 of the San Joaquin County General Plan 2010, the San Joaquin County Right to Farm Ordinance was adopted to preserve, protect, and encourage the development and improvement of agricultural land in San Joaquin County for the production of food and other agricultural products. The purpose of the ordinance is to reduce the loss of the county's commercial agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. Existing agricultural lands (in operation for more than one year) may not be considered a nuisance as a result of subsequently changed conditions in the area, such as urbanization. Under the County's current ordinance, building permit applications are provided a disclosure statement regarding the Right to Farm Ordinance, but there is no mandatory process for notifying prospective property owners. The goal of disclosure is to inform the buyer or owner of the presence of possible irritants, like tractor noise and odors, to prevent future nuisance complaints.

City of Lathrop Right-to-Farm Ordinance

The City's Agricultural Land Preservation Ordinance (Right-to-Farm Ordinance), was adopted in 1991 to conserve and protect agricultural land in the City and protect agricultural landowners from nuisance complaints related to cultivation, irrigation, spraying, fertilizing, and other activities related to normal agricultural operations. A disclosure statement is required whenever adjacent property is sold or building permit application is submitted, notifying the prospective buyer/applicant of adjacent agricultural land and possible discomforts and nuisance factors related to agricultural operations. The focus of the ordinance is to reduce the loss of agricultural resources in the City by clarifying the circumstances under which agricultural operations may be considered a nuisance.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

For the purposes of this EIR, impacts on land use are considered significant if the proposed project would:

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigation an environmental effect;
- Conflict with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, the Delta Protection Act, and/or any other applicable habitat conservation plan or natural community conservation plan;
- Result in a conversion of Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance, as shown on the maps prepared under the Farmland Mapping and Monitoring Program of the CDC, to nonagricultural use;
- Cause a conflict with existing zoning for agricultural use or a designated Farmland Security Zone;
- Involve other changes in the existing environment that, because of their location or nature, could result in conversion of farmland to nonagricultural use; or
- Result in a conflict between existing agricultural lands and adjacent land uses.

Consistency with San Joaquin County LAFCO

The Plan Area is in an unincorporated portion of San Joaquin County adjacent to the City of Lathrop's city limit and within the City's Planning Area. The proposed project would annex the approximately 384-acre site into the city limits and develop the site with urban uses.

Annexation of the proposed Plan Area will require review and approval by the San Joaquin County LAFCO. LAFCO is responsible for determining whether an annexation is consistent with the LAFCO

objectives of logical and orderly patterns of urban growth, avoiding premature conversion of farmland, ensuring that services will be available to new development within proposed annexation areas, and promoting affordable housing. These objectives are embedded in LAFCO's 14 policies for annexations, which are summarized in Table 12-1. The Lathrop Gateway Business Park project would be consistent with all of these policy provisions.

The proposed annexation area is adjacent to the existing Lathrop City Limits and is an extension of existing or approved development activity in the immediate vicinity. Adjoining lands have been approved for and/or developed for urban industrial and commercial development. The project represents a logical and orderly extension of urban development.

The proposed annexation would extend the City boundary south to SR 120 and east to the Union Pacific Railroad tracks, which is coterminous with the City's Urban Services Boundary and a logical boundary for the City limit; and the implementation of development within the Plan Area would not involve premature conversion of farmland.

The Plan Area is enclosed on the north and northwest by existing and approved urban development, and it is within the City's proposed 10-year timeframe in the 2009 Municipal Services Review. Development within the Plan Area would involve no potential conflict with LAFCO policies in terms of the availability of municipal utility services. As discussed in Chapters 16.0 and 17.0, all necessary municipal utilities and services are or will be made available to planned development in conjunction with project buildout. This would include the extension of master planned sewer, water and storm drainage lines. City services would become available to the Plan Area upon its annexation.

The proposed project would not result in any known conflict with LAFCO annexation policies and would therefore not involve a significant environmental effect in this issue area.

Level of Significance: Less than significant

Mitigation Measures: None required

Consistency with City of Lathrop General Plan

Since the Plan Area could be annexed into the city limits, the City of Lathrop General Plan would be the applicable planning policy document. The General Plan establishes three Sub-plan Areas for the city and the Plan Area is within Sub-plan Area #1. The project proposes land use designations that would be consistent with the proposed development. If the proposed project is approved the proposed designations would also be approved and the General Plan Land use map amended resulting in the project being consistent with the applicable General Plan policies. The project site would also be pre-zoned.

The General Plan includes standards for commercial and industrial development that regulate density (building height) and building intensity (floor area ratios). Other entitlements that would require approval to implement the proposed project include amendments to the Water, Wastewater and Recycled Water Master Plans; a project area Drainage Plan; a Bicycle Master Plan Amendment; Design Guidelines; annexation of the Plan Area into the City of Lathrop city limits; and Development Agreements with the landowners. Many of these plans are discussed in other

TABLE 12-1

LATHROP GATEWAY BUSINESS PARK
CONFORMANCE WITH LAFCO ANNEXATION POLICIES

Annexation Policy	Project Conformance
The annexation area must be within the 5-10 year planning boundary; the City's Municipal Service Review must indicate that adequate services can be provided within the development timeframe.	The Plan Area is within 10-Year timeframe of the 2009 Municipal Services Review (MSR), which indicates that adequate services are available.
The annexation must include a Plan for Services that conforms to the City's Municipal Services Review.	Proposed Plan Area utilities and services plans are consistent with the 2009 MSR.
The proposed annexation area must be substantially contiguous with the existing City boundary and not difficult to serve.	The proposed annexation area's entire north, northwest boundary is contiguous with the existing City of Lathrop boundary, which exceeds the "substantial contiguity" criterion.
Priority should be given to development of agricultural lands within the City or its Sphere of Influence before annexation of additional agricultural lands outside the City or its Sphere.	There are no substantial agricultural lands that are not already committed to other development projects.
Annexations shall constitute progressive steps toward urbanization of the City's Sphere of Influence.	The proposed annexation would complete the ongoing annexation of areas south of Vierra Road up to SR 120.
Small or piece-meal annexations are prohibited; LAFCO may modify such proposals to promote orderly annexation and logical agency boundaries.	The proposed annexation consists of 384 acres and is neither small nor piece-meal.
Annexations that eliminate unincorporated islands are normally approved; lands included in annexations to or prevent the creation of unincorporated islands may not require detailed development plans.	The proposed annexation does not include nor create unincorporated islands.
Annexations that would create unincorporated islands or that further distort existing boundaries will normally not be approved.	The proposed annexation would result in a more logical and uniform City boundary.
For the purposes of Government Code Section 56375.5, "substantially surrounded" means within the annexing agency's Sphere of Influence and 2/3 of the annexation area boundary is surrounded by the agency.	The proposed annexation is not "substantially surrounded."
All annexation boundaries will be definite and certain...	The proposed annexation boundaries are definite and certain.
Annexations shall not be approved to facilitate the delivery of one or a few services to the detriment of the larger range of services available.	The proposed annexation is for the general purpose of obtaining all City services.
LAFCO will consider and may condition the project with respect to the effects of annexations on other public service providers and recipients in the area.	The proposed annexation would not inhibit LAFCO's ability to implement this policy.
Annexations must reflect the logical allocation of streets and rights-of-way, considering City responsibility traffic generation by urban development and avoiding fragmentation of maintenance responsibilities.	The proposed annexation area includes surrounding street rights-of-way.
City must pre-zone properties to be annexed; general plan designations or zoning for annexed lands may not be changed for two years.	The proposed Plan Area would be pre-zoned prior to annexation by the City of Lathrop.

technical sections of this EIR as appropriate including 4.0 Aesthetics, 18.0 Transportation, 12.0 Hydrology and Water Quality, 16.0 Public Services and 17.0 Public Utilities.

The proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigation an environmental effect resulting in a less-than-significant impact.

Level of Significance: Less than significant

Mitigation Measures: None required

Consistency with the Land Use and Resource Management Plan

The Land Use and Resource Management Plan, which resulted from the Delta Protection Act, includes policies and recommendations aimed at protecting the overall quality of the Delta. The Plan Area falls partially within the Secondary Zone established by the Act. The majority of the policies are aimed at implementing mitigation, and providing buffers around the Primary Zone. The Plan Area is surrounded by existing development, roadways, the river, and railroad tracks and is not expected to significantly impact surrounding agricultural uses especially in the Primary Zone which is not adjacent to the project site.

Level of Significance: Less than significant

Mitigation Measures: None required

Consistency with Existing Zoning

The project site is currently zoned under the San Joaquin County Zoning Ordinance as Warehouse Industrial (I-W), Agriculture-Urban Reserve (AU-20), and General Commercial (C-G). If development were proposed without also proposing a zone change a conflict could occur. However, the proposed project includes both annexation of the site into the city limits and re-zoning. Upon annexation to the city the new zoning designations would be applied to the site, which do not include agricultural zoning designations. Proposed zoning would allow development of the proposed land uses. With compatible zoning in place the proposed development would not conflict with zoning for agricultural use resulting in a less-than-significant impact.

Level of Significance: Less than significant.

Mitigation Measures: None required

Conflicts Between Existing Agricultural Lands and Future Non-Agricultural Proposed Land Uses Within the Plan Area

The proposed project would develop industrial/commercial uses on approximately 384 acres in multiple phases of construction. It is anticipated that existing agricultural uses will continue until market conditions promote the need to develop a non-agricultural type use identified in the Specific Plan. Subsequent phases will be required to identify necessary infrastructure needed to serve that particular phase. Infrastructure improvements will include roadway improvements, the extension of

utilities to the phase and site improvements. Development review and site inspections will ensure that construction activity is isolated to the area identified in that particular phase.

With Right-to-Farm Ordinances established in both the City of Lathrop and San Joaquin County and the presence of manmade buffers (i.e., existing roadways, construction fencing, and other barriers), the instances of conflict between existing agricultural lands and future land uses within the Plan Area will be reduced. The notification procedures in the Ordinances serves to educate landowners and developers of non-agricultural uses of what the expectations are in the area with regards to agricultural activities. This written notification in combination with the physical construction of a phase should minimize conflicts.

Level of Significance: Less than significant

Mitigation Measures: None required

13.0 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL SETTING

This section analyzes hydrology and water quality in the Lathrop Gateway Business Park Specific Plan area (Plan Area) and the adjacent portion of the San Joaquin River proposed to accommodate an outfall structure. The off-site component involving recycled water disposal fields and basins in north Lathrop have been addressed and evaluated in other CEQA approved documents. Refer to Section 17, Public Utilities for additional discussion regarding this component of the project. This evaluation uses existing information from previously completed documents that address water resources in the project vicinity, including (1) Environmental Impact Report for the Lathrop Water, Wastewater, and Recycled Water Master Plan (EDAW 2001); (2) Environmental Impact Report for the Mossdale Landing Urban Design Concept (EDAW 2002), and (3) Environmental Impact Report for the Central Lathrop Specific Plan (EDAW 2004).

Surface Water

Regional Surface Hydrology

The City of Lathrop is located in the Sacramento River and San Joaquin River Delta (Sacramento-San Joaquin Delta) and includes Stewart Tract. The Sacramento-San Joaquin Delta is a 600-square mile area of channels and islands at the confluence of the Sacramento and San Joaquin Rivers. The Delta is an integral part of California's water system and receives runoff from over 40 percent of the State's watersheds including flows from the Sacramento, San Joaquin, Mokelumne, Cosumnes, and San Joaquin Rivers. The Delta supports agricultural and recreational activities, is the focal point for water distribution throughout the southern half of the State, and provides habitat for many species of fish, birds, mammals, and plants.

About 21 million acre-feet of water will reach the Delta annually, but actual inflow varies widely from year to year and within the year. In 1977, a year of extraordinary drought, Delta inflow totaled 5.9 million acre-feet. In 1983, an exceptionally wet year, Delta inflow was about 70 million acre-feet. On a seasonal basis, average monthly flow into the Delta varies by more than a factor of 10 between the highest month in the winter or spring and the lowest month in the fall. The Sacramento River contributes an average of 77 percent of the inflow to the Delta, while the San Joaquin River contributes about 15 percent of the inflow, and the remainder is contributed by the Mokelumne, Cosumnes and San Joaquin Rivers. Future contributions to Delta inflows from the San Joaquin River will increase as a result of the San Joaquin River Restoration Plan's increase in release of flows from Friant Dam.

The total length of the Sacramento River is approximately 327 miles. Its drainage area encompasses 27,200 square miles, and is bounded by the Sierra Nevada to the east, the Coast Range to the west, the Cascade Range and Trinity Mountains to the north, and the Delta-Central Sierra area to the south. The Sacramento River is the principal river in the basin. Its major tributaries are the Pit and McCloud Rivers, which join the Sacramento River from the north, and the Feather and American Rivers, which are tributaries from the east. Numerous tributary creeks flow from the east and west and drain into the Sacramento. The San Joaquin River to the south is fed by runoff from an

approximately 15,880 square-mile watershed. The Lathrop Gateway Business Park Specific Plan Area (Plan Area) is located approximately 4,000 feet east of the main channel of the San Joaquin River. Surface water flows converge with flows from the Sacramento in the Delta and eventually discharge into San Francisco Bay and the Pacific Ocean.

The Delta system experiences variations in water levels during different parts of the year and during different parts of the month. Two factors affecting water levels are the amount of runoff entering the system from the rivers watersheds and the amount of water being released from dams upriver. The melting snow pack in the Sierra Nevada and federal and State managed dams and reservoirs maintain flows in the Delta during most of the summer. The Delta system is also subject to tidal action from the Pacific Ocean. Every 12.4 hours, the tides cause water to move in and out of the Delta. Most of the time, tides cause a five- to eight-mile back and forth movement of water in the western part of the Delta. The average tidal flow into the Delta on the flood tide and out of the Delta on the ebb tide is approximately 170,000 cubic feet per second. The movement of freshwater through the Delta is superimposed on the tidal flows. Typical freshwater flows are much smaller than tidal flows. The average Delta freshwater outflow for the period 1984 to 2004 was only 23,340 cubic feet per second.

Local Surface Hydrology

The Plan Area is essentially flat with elevated rail lines and roadways – State Route 120, along three of the four boundaries of the Plan Area. The northern boundary has no elevated feature. Elevation contour lines generally trend west, with the highest elevation at 25 feet and lowest lying area at 10 feet. Based on this observation, the Plan Area generally slopes and drains towards the west.

The Plan Area contains no formal drainage improvements. Runoff leaches into the permeable soils and excess runoff sheet flows to roadside ditches that carries storm flows off-site. Two man-made ponds, primarily for fire suppression and agricultural purposes are located in the western and eastern portions of the Plan Area.

Flooding

The Plan Area lies within the larger area known as the Delta Basin, which historically was a tidal marsh formed in an overflow area of the Sacramento and San Joaquin Rivers. During the early part of the 20th century, over 80 percent of the Delta was reclaimed through construction of levees. There are over 1,100 miles of man-made levees protecting land in the Delta from flooding. The City of Lathrop is also protected by levees, including those that encircle Stewart Tract. These levees are maintained by Reclamation District 0017 (RD17) for portions of the City east of the San Joaquin River, and RD 2062 for Stewart Tract, and are designated as “project levees” by the US Army Corps of Engineers (Corps). Approximately 5 miles of levees located within the City are designated as “non-project levees”. The non-project levees are also maintained by local reclamation and levee maintenance districts. Non-project levees were not built to a common standard and have different heights and cross sections.

Flood protection in the Delta is generally provided by controlled releases from dams. The major reservoirs on the Sacramento River and its tributaries that provide substantial flood protection are Lake Shasta and Folsom Lake, and for the San Joaquin River is Millerton Lake, Hensley Lake, Lake McClure, New Don Pedro, and New Melones. To provide a 1-percent-annual-chance level of flood

protection (formerly referred to as 100-year flood protection), FEMA requires levees to have at least three feet of freeboard, which is the vertical distance between the water level and the top of the levee. The entire Plan Area and surrounding areas are classified as Zone X, or in areas that are protected by levees from the 1-percent-annual-chance flood event. However, floodplain maps throughout the nation are being updated by FEMA under its Map Modernization Program pursuant to the procedures contained in Procedure Memoranda 34 and 43, issued in August 2005 and September 2006 respectively. These procedures require strong evidence of geotechnical and maintenance adequacy of levees for the base flood in order to maintain their current accreditation by FEMA. State-Federal project levees in the Central Valley are being evaluated for geotechnical adequacy by the Department of Water Resources (DWR). The evaluations will be used to support planning studies and decisions, the design of repairs and improvements, and floodplain mapping studies.

Level of Flood Protection - Federal

The levee along the eastern bank of the San Joaquin River is owned and maintained by Reclamation District No. 17 (RD 17). The levees maintained by RD 17 provide flood protection to portions of the cities of Lathrop, including the Plan Area, Manteca, Stockton and rural areas within San Joaquin County. The RD 17 levee system was originally constructed in the 1960's and substantially upgraded in 1988. In 1990 the RD 17 levee was accredited by FEMA, which removed large areas of Stockton, Lathrop, Manteca and the County from the 100-year floodplain.

Following the accreditation in 1990, standards for flood protection have been changing and in May 2007 FEMA extended an offer of a Provisionally Accredited Levee (PAL) Agreement for the RD 17 levee system. A PAL is a levee that meets the FEMA requirements for flood protection but requires additional supporting documentation. In August 2007, the Lathrop City Council authorized the City Manager to execute a Provisional Accredited Levee Agreement with FEMA for the RD 17 levee.

Since August 2007, RD 17 has been implementing improvements to the levee system and in the summer of 2009 began constructing a seepage berm (a bank of earth placed against the existing levee) in the River Parks area of Lathrop, at the base of the levee to decrease the risk of seepage under the current levee and to strengthen the levee system. In addition, similar work to construct a seepage berm has recently occurred along the east levee of the San Joaquin River between the SR-120 and I-5 interchange and the Union Pacific Rail Road right-of-way. The purpose of these improvements is to meet the flood protection requirements of FEMA and maintain the levee accreditation. The PAL Agreement expired in August 2009 and at that time FEMA determined based on the current condition of the levee and the additional supporting documentation, that the RD 17 levee will maintain its accreditation.

Level of Flood Protection - State of California

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB5) requires that the 200-year protection be consistent with criteria used or developed by DWR. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year flood protection in order to approve development. The new law restricts approval of development after 2015 if "adequate progress" towards achieving this standard is not met. Urban and urbanizing areas protected by State-Federal project levees cannot use "adequate progress" as a condition to approve development after 2025.

Surface Water Quality

The water quality in the Delta is managed by the Central Valley Regional Water Quality Control Board (CVRWQCB), by means of The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan), revised in September 2004, to prevent water quality from degrading in the Delta. The water quality standards in the Basin Plan are defined by the water quality goals designating the use or uses to be made of the water. The CVRWQCB has designated beneficial uses for the waters of the Delta and identified the water quality standards for compliance with the Clean Water Act (CWA), section 303(c).

The beneficial uses of surface waters in the general Lathrop region include: municipal and domestic water supply; industrial service and process supply; agricultural irrigation; groundwater recharge; navigation; contact and non-contact recreation; commercial and sport fishing; migration of aquatic organisms; Plan A spawning reproduction and early development; wildlife habitat; and habitat for rare, threatened, and endangered species. The State Water Resources Control Board (SWRCB) determined that the quality of these waters does not fully support all of the beneficial uses assigned to the water bodies in the project area. Water quality impacts are a result of tidal fluctuations; Sacramento River and San Joaquin River inflows; local agricultural, industrial, and municipal diversions and returns; and inadequate channel capacities.

Delta water is subject to large variations in salinity and mineral concentrations and is also vulnerable to many anthropogenic and natural sources of water quality degradation. The Delta is listed by the CRWQCB as impaired. This is due to elevated levels of boron, chlorpyrifos, DDT, Group A Pesticides, electrical conductivity, mercury, and unknown toxicity. The quality of surface waters is impacted by ocean salinity intrusion, agricultural return waters, point-source and non-point-source pollution (both industrial and municipal), and atmospheric deposition. All rivers and streams draining into the Delta have also been identified as Category I watersheds in California's Unified Watershed Assessment. This is a part of the Clean Water Action Plan and is a national initiative to identify opportunities for finding comprehensive solutions to water quality problems in specific geographic areas. Category I watersheds are candidates for increased restoration activities due to impaired water quality or other impaired natural resource goals, with an emphasis on aquatic systems. Contaminated sediments may exist in the irrigation canals and drains from extensive pesticide use on the irrigated croplands in the Delta.

Groundwater

Regional Groundwater Hydrology

The City of Lathrop is located in San Joaquin County and within the Central Valley, a 400-mile long, 50-mile wide asymmetrical structural valley with the Sierra Nevada Range to the east and the Coastal Range to the west. The Sierra Nevada range is comprised of pre-Tertiary igneous and metamorphic rocks while the Coastal Range is comprised of pre-Tertiary and Tertiary semi-consolidated to consolidated marine sedimentary rocks. Six to 10 miles of sediment have been deposited within the Central Valley and include both marine and continental gravels, sands, silts and clays that influence the movement, quantity, and quality of groundwater.

Reported groundwater levels for selected wells located in eastern San Joaquin County show a significant decline in water levels since the 1960s with an average drop of 60 feet. The hydrographs of these wells report average groundwater level declines of around 1.3 feet per year. In general, the lowest groundwater levels were reached in the late 1970s, recovering 10 to 20 feet, but then

declined again in the mid-1990s. These significant declines have produced a cone of depression located in the eastern and southern portion of eastern San Joaquin County. In addition, wells in this area have a significant seasonal variation of 10 to 20 feet.

Wells located further away from the main cone of depression, primarily further west and north show less dramatic declines than the other wells, and more noticeable increases from wet years of 1981 through 1983. The seasonal variation in these wells is distinct but not as pronounced as shown on the other hydrographs. In summary, the hydrographs reviewed for eastern San Joaquin County illustrate the following general patterns:

- In the central part of San Joaquin County the groundwater table dropped continuously from the 1950s and possibly earlier to the mid 1980s.
- In the northern part of the County the groundwater table decline continued into the early 1990s.
- Starting in the early 1980s a distinct drawdown and recovery cycle appears to have developed. The cycle covers a 10- to 15-year time period, and appears to be driven by climatic conditions more than long-term changes in groundwater use. This recovery and drawdown cycle may indicate that groundwater levels are beginning to equilibrate under current groundwater/surface water use patterns.

The rivers that influence regional hydrogeology are the Cosumnes River, Mokelumne River, Dry Creek, San Joaquin River, Stanislaus River, Tuolumne River, and San Joaquin River. The Eastern San Joaquin Groundwater Basin Plan Groundwater Management Plan (SJGMP) modeling results indicate that the Tuolumne and the upstream reaches of the Mokelumne and San Joaquin Rivers were gaining rivers – that is groundwater discharged into the rivers. On the other hand, the SJGMP found that the San Joaquin, Dry Creek, Stanislaus, and the downstream reaches of the Mokelumne and San Joaquin Rivers were all losing rivers – i.e. rivers recharged the groundwater. On average from 1970 to 1993, there was a groundwater gain from streams of 140,000 acre-feet (AF) and a groundwater loss to streams of 100,000 AF; resulting in positive groundwater recharge.

Groundwater use in eastern San Joaquin County has increased over the years to levels that were more than groundwater recharge rates; leading to what is known as overdraft conditions. Based on SJGMP the net groundwater overdraft was estimated to be approximately 150,000 to 160,000 AF/YR. The net groundwater overdraft is the difference between total groundwater outflow and inflow plus the estimated inflow from the San Joaquin River and lateral basin inflow in west Stockton. However, it is assumed that all basin inflow in west Stockton is saline.

The result of the long-term groundwater overdraft has resulted in significant declines in groundwater levels and increased inflows from area waterways. Increased inflows in the western fringes of the groundwater basin and the Lower San Joaquin River are undesirable due to elevated salinity levels. Saline groundwater intrusion has forced the closure of several wells in the region.

Groundwater flow in the basin converges on the cone of depression with relatively steep groundwater gradients eastward from the lower San Joaquin-Sacramento River Delta (Delta) toward the cone of depression. The eastward flow from the Delta is significant because of the poorer quality water characterized by higher total dissolved solids (TDS) and chloride levels. Projections in

the SJGMP indicate that the rate of eastward migration of the saline inflow is approximately 150 to 250 feet per year. Degradation of water quality due to TDS or chloride contamination threatens the long-term sustainability of a very important water resource for San Joaquin County, since water high in TDS and/or chloride is unusable for either urban drinking water needs or for irrigating crops.

Local Groundwater Hydrology

The Plan Area is located within the eastern San Joaquin County groundwater. Most of the fresh groundwater is unconfined and at depths of less than 2,500 feet. Several geohydrologic formations underlie the Lathrop area; however, only the top two, the Victor and Laguna formations, are currently used as a source of fresh water. The Victor formation, the uppermost formation, extends from the ground surface to a maximum depth of approximately 150 feet.

The underlying Laguna formation is hydrologically connected to the Victor formation and is estimated to be about 1,000 feet thick in the area of the Plan Area. Most of the municipal and industrial wells in the Lathrop area penetrate through the Victor formation into the deeper Laguna formation. Groundwater used for drinking water in the Lathrop area is generally obtained from depths of 100–250 feet (i.e., the deep aquifer).

The groundwater surface in the Lathrop area generally slopes from south to north. Within the Plan Area, groundwater is very shallow as a result of the low elevation and proximity to the San Joaquin River channel. Groundwater levels have been measured since 2005 for quarterly groundwater sampling by ENGEO Incorporated. The last quarterly report prepared on October 5, 2007 reported that groundwater levels from August 2006 to August 2007 ranged from 7.5 to 14 feet below ground surface. High groundwater can be influenced by water levels in the San Joaquin River, subsurface groundwater flow from areas of higher elevation to the east, and local irrigation practices. Winter observations by Reclamation District No. 17 staff during flood periods identified high groundwater and surface ponding near the San Joaquin River levee. Even during the summer dry season, groundwater may be within five to ten feet of the ground surface.

Because of saltwater intrusion into the Delta region of the County, and because of infiltration of runoff from the San Joaquin River, agricultural areas, and urban areas, the quality of groundwater taken from the shallower Victor formation in the Lathrop area is generally poor. TDS provides a measure of the level of saltwater intrusion into the groundwater supply. The recommended secondary TDS standard for drinking water is 500 mg/l. The upper limits for TDS are 1,000 mg/l for long-term use and 1,500 mg/l for short-term use.

Groundwater quality from the Victor formation in the Lathrop area generally has concentrations of chloride above 300 mg/l and TDS above 500 mg/l (and in many instances exceeding 1,000 mg/l) (EDAW 2002). However, as described above, the City wells draw water from the deeper aquifer and the poor quality shallow groundwater is generally not used for drinking water purposes.

TDS levels in water from the City's wells have averaged from 245 mg/l to 422 mg/l, with an overall average of 297 mg/l. Other groundwater quality concerns in the Lathrop area include nitrate, iron, manganese, and bacteriological and radiological contamination. As a result of bacteriological contamination, the City began chlorinating water at all of its municipal wells in 1996. In general, groundwater within the City currently meets all drinking water standards.

ENVIRONMENTAL ISSUES AND MITIGATION MEASURES

Thresholds of Significance

Development within the Plan Area would result in significant hydrology and water quality impacts if it would:

- violate any water quality standards or waste discharge requirements, including violating NPDES waste discharge or stormwater runoff requirements, state or federal antidegradation policies, enforceable water quality standards contained in the Central Valley RWQCB Basin Plan or statewide water quality control plans, or federal rulemakings to establish water quality standards in California;
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a substantial lowering of the local groundwater table level;
- 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 that would result in substantial erosion or siltation onsite or offsite;
- create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- substantially degrade water quality;
- place within a 100-year flood hazard area structures that 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;
- create inundation by seiche, tsunami, or mudflow; or
- measurably reduce water supplies to other water users.

Direct Effects on Surface Water Features

Proposed limited industrial, office commercial and service commercial uses associated with the Lathrop Gateway Business Park Specific Plan would be developed within upland areas and would not involve direct effects on existing natural surface water resources. Development within the Plan Area consist of a system having the following three (3) integrated components: 1) gravity lines that collect and deliver surface runoff; 2) “watershed” detention facilities that hold the collected runoff; and 3) two pump stations and an off-site force main that conveys water to a proposed San Joaquin River outfall structure (refer to Figure 3-6). The San Joaquin River channel and floodplain are separated from the areas proposed for development by the river’s existing levee system.

The outfall structure would be located within the San Joaquin River levee system and would involve a new direct discharge to the river. As described in Chapter 3.0, the outfall facility would include pipelines that would extend above the 100-year flood elevation to discharge gates set in a concrete headwall; flows would be released to energy dissipation structures or rock slope protection. The biological effects of these improvements are addressed in Chapter 7.0 Biological Resources. With respect to hydrologic effects, outfall structures are required to be engineered to avoid impacts on the operation of the floodway, and these facilities would be subject to the same design constraints, permitting requirements and mitigation measures for any structure encroaching into a regulated water body.

Elements constructed within the levee system that involve potential effects on peak flows would be subject to review and approval of the City of Lathrop as well as several agencies with jurisdiction, including the Central Valley Flood Protection, the Regional Water Quality Control Board, the San Joaquin County Flood Control and Water Conservation District, the California Department of Fish and Game, and the US Army Corps of Engineers. Construction of facilities within the San Joaquin River levee system would also involve the potential for biological impacts on wetlands and other aquatic resources in the vicinity of the stream channel. These potential effects are addressed in Chapter 7.0 Biological Resources of this document.

Level of Significance: Potentially Significant

Mitigation Measures:

13-1. Any proposed improvements within the San Joaquin River floodway shall be subject to the approval of the City Engineer and the Community Development Director as well as federal, state and local permit agencies with jurisdiction, including the US Army Corps of Engineers, the Central Valley Flood Protection, the Regional Water Quality Control Board, the San Joaquin County Flood Control and Water Conservation District, and the California Department of Fish and Game.

Significance After Mitigation: Less than significant

Implementation: The ODS will be responsible for preparation of plans, acquisition of required permits and construction of all drainage improvements.

Monitoring: The Public Works Department will be responsible for ensuring that necessary permits and approvals have been obtained prior to the start of construction.

Changes in Volume or Flow in Surface Water Resources

The potential impacts of development within the Plan Area on flows in the San Joaquin River are considered in the following section. The project would not detract from existing flows in the San Joaquin River during non-storm periods. The project will involve no withdrawal, diversion or other effect on the flow of the San Joaquin River, other than localized temporary diversions associated with construction of the outfall structure along the levee bank.

Proposed urban development would increase runoff from the Plan Area during and following storm events. Runoff from the Plan Area would be collected in the proposed storm drainage system,

which would provide flow detention and reduction in the potential peak discharge to the San Joaquin River. The watershed within the Plan Area is made up of six sub-sheds, Sheds A through F. Shed A is the larger shed that will contain a pump station that is sized to accommodate the entire Plan Area. Each shed contains a detention basin to limit the overall discharge from the Plan Area to the San Joaquin River. Sheds B through F will all discharge a limited amount of runoff into the collection system that connects to the Shed A basin and pump station.

The proposed stormwater collection system functions by discharging all runoff directly into the river up to the point where the runoff rate exceeds the capacity of the pump station (which is limited to 30 percent of the 100 year developed condition flow rate from the watershed). When the rate of runoff exceeds the pump station capacity, water “backs up” into the detention system until the runoff rate declines and once again equals the capacity of the pump station. The water level in the detention facilities then decreases, emptying completely within a City mandated 24-hour period.

Based on preliminary information, the approximate size of the detention facility and pump station for each of the six watersheds is summarized in Table 13-1, below. Storage is based on the maximum pumping rate shown.

TABLE 13-1
WATERSHED STORAGE REQUIREMENTS

Watershed	Maximum Discharge Rate (CFS)	Approximate Basin Area (Acres)	Basin Storage (acre-feet)
A	30	6.5	22.3
B	4.9	2.4	9.3
C	3.3	1.5	2.8
D	1.6	1.2	2.5
E	1.5	1.2	2.3
F	2.5	2.6	5.9

With construction and operation of the proposed drainage system, development of the Lathrop Gateway Business Park would not result in significant effects on surface water volumes during storm periods.

Level of Significance: Less than significant

Mitigation Measures: None required

Exposure of Proposed Development to Flooding Hazards

The Plan Area is not exposed to significant flooding hazards from existing waterways in the vicinity. Existing levees on the San Joaquin River are adequate to accommodate projected 100-year flood flows, including flow contributed by the Plan Area. As discussed in the previous section, development of the Lathrop Gateway Business Park would involve a contribution to San Joaquin River flows, but as a result of the design capacity of the levee system, and of proposed detention facilities, proposed development would not impact the ability of the San Joaquin River levee system to accommodate the 100-year flood event.

The Plan Area drainage system would involve construction of an outfall structure within the San Joaquin River levee system. As noted in the discussion of Direct Effect on Surface Water Features, this improvement has the potential to affect the floodway capacity of the San Joaquin River. However, this improvement will be short-term in nature and subject to mitigation measures that require the employment of engineering techniques to minimize any significant backwater effects. These measures will reduce potential floodway impacts to a less than significant level.

Level of Significance: Less than significant

Mitigation Measures: None required

Project Construction Effects on Surface Water Quality

Construction activities within the Plan Area would be extensive. Grading, earth moving, excavation and utility installation, infrastructure development, and building construction would disturb the existing vegetative cover, soil, and drainage systems over the entire Plan Area. Additional offsite disturbance would occur in order to construct up to 98 acres of ponds for storage of treated municipal wastewater (refer to the discussion of operational effects of recycled water below). Construction activities is anticipated to occur on and off in various locations across the Plan Area over several years. During this period, disturbed sites, throughout the 384-acre area and at the offsite storage pond locations, would be subject to exposure to wind erosion, rain, and winter stormwater runoff events. In particular, construction activities could result in substantial soil erosion and stormwater discharges of suspended solids, increased turbidity, and potential mobilization of other pollutants from project construction sites as contaminated runoff or direct discharges to drainage channels. Although the Plan Area is relatively flat and the potential for soil erosion is considered low, intense rainfall and associated stormwater runoff could result in short periods of sheet erosion within areas of exposed or stockpiled soils. If this erosion is uncontrolled, these soil materials could cause sedimentation and blockage of drainage channels. Further, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase the potential for runoff and erosion.

Non-stormwater discharges could result from activities such as construction dewatering procedures; direct construction disturbances of drainage channels or the San Joaquin River channel during installation of the proposed outfall; or discharge or accidental spills of hazardous substances such as fuels, oils, concrete, paints, solvents, cleaners, or other construction materials. Because of the shallow, perched groundwater conditions in the Plan Area, construction dewatering activities are likely to be necessary for foundation and utility installations. Potential disposal options for the

dewatering discharges include land application with subsequent evaporation and percolation back to the groundwater, use for dust control mitigation practices, or direct discharge to the existing or constructed stormwater drainage channels. Dewatering discharges may contain elevated levels of suspended sediment or other construction-related contaminants. Shallow groundwater beneath the project site may also be of poor quality because of saltwater intrusion within the Delta and runoff/infiltration of agricultural and urban drainage (e.g., elevated levels of dissolved solids). Many construction-related wastes have the potential to degrade existing water quality by altering the dissolved oxygen content, temperature, pH, suspended sediment and turbidity levels, nutrient content or causing toxic effects in the aquatic environment. Construction activities for the proposed project that are implemented without mitigation could violate water quality standards or cause direct harm to aquatic organisms. Consequently, the potential surface water quality impacts on onsite and offsite drainage channels and the San Joaquin River from proposed construction activities are considered potentially significant.

The City of Lathrop has adopted a Storm Water Management Plan (SWMP) to minimize the potential storm water quality impacts of development, including construction. The principal SWMP control on construction storm water quality is the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which is required for any development project exceeding one acre in size; this is a requirement of both the state general permit system and the City's SWMP. The SWPPP identifies potential construction pollution sources, identifies needed construction BMPs, and specifies maintenance and monitoring activities needed to prevent violation of applicable water quality standards. Construction BMPs include provisions for erosion control including limitations on disturbance and temporary soil stabilization through the use of mulch, seeding, soil stabilizers, and fiber rolls and blankets. BMPs may also include filtration devices, silt fences, straw bale barriers and sediment traps or temporary basins.

The SWPPP must be prepared prior to construction, be implemented during construction, and be available on the construction site. A Notice of Intent (NOI) describing the status of the project and SWPPP must be filed with the SWRCB, which then issues a Waste Discharger's Identification Number (WDID). These requirements, which are applicable to the project, are restated as mitigation measures below.

Level of Significance: Potentially significant

Mitigation Measures:

- 13-2. The ODS shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for Lathrop Gateway Business Park construction activities and file a Notice of Intent (NOI) with the State Water Resources Control Board prior to commencement of construction activity. The SWPPPs shall be available on the construction site at all times.
- 13-3. Site development (i.e. construction) plans shall incorporate all applicable provisions of the SWPPP. The SWPPP shall be submitted to Public Works Department for approval.

Significance After Mitigation: Less than significant.

Implementation: The ODS will be responsible for compliance with applicable city codes, for preparation of the SWPPP, for submittal of the Notice of Intent to the SWRCB and for submittal of the SWPPP to the Public Works Department.

Monitoring: The Public Works Department will be responsible for assessing project compliance with City codes, for review and approval of the SWPPP, and for ensuring that the NOI and WDID are properly filed, prior to the issuance of a Grading Permit.

Effects of Project Operation on Surface Water Quality

The proposed project would convert agricultural lands to industrial, commercial, and office uses and thereby change the amount and timing of potential waste discharges in stormwater runoff to the San Joaquin River. However, the combination of nonstructural and structural BMPs for the new stormwater drainage system would reduce the overall amount of potential contaminant discharges compared to existing conditions. Therefore, this impact is considered less than significant.

Proposed industrial and office type uses of the site would result in the generation of urban runoff from buildings, paving and landscaped areas, and would result in contributions of urban runoff pollutants to the City's storm drainage system. These pollutants may include sediments, heavy metals, petroleum hydrocarbons, microbial pathogens, pesticides, materials toxic to aquatic life, and nutrients that may contribute to depressed dissolved oxygen levels. Storm water pollution generated by land uses is subject to the requirements of the City's Storm Water Management Plan; the primary applicable requirement of the SWMP to project operations is the incorporation of the "post-construction" storm water quality BMPs in new development.

The predominant existing land use in the Plan Area is agriculture. No water quality monitoring data exists from the local drainage system. In general, irrigation and stormwater runoff from agricultural lands are not considered of high quality and contain a variety of constituents/contaminants in relatively high concentrations. In addition, agricultural runoff, including in the Plan Area, is not typically treated or passed through various BMPs.

The conversion of agricultural land within the Plan Area to urban land uses would alter the types, quantities, and timing of contaminant discharges in stormwater runoff relative to existing conditions. The level of contaminants in stormwater runoff from the Lathrop Gateway Business Park development is anticipated to be substantially lower than the existing runoff from agricultural activities following implementation of structural and nonstructural pollution prevention and control BMPs.

Operation of the urban uses proposed by the Lathrop Gateway Business Park Specific Plan would involve no direct discharges to surface waters. Storm water generated by uses within the Plan Area would be directed to proposed urban storm drainage systems and the proposed permanent storm water detention facilities located in the western and central portions of the Plan Area. Storm runoff would be routed through water quality treatment facilities prior to discharge to the San Joaquin River via a storm drainage pump station and outfall structure. The structural BMPs, which are designed to remove pollutant constituents from runoff, would substantially improve runoff water quality compared to the quality of existing agricultural runoff. The implementation of nonstructural BMPs, through various public education and outreach programs maintained by the City under the municipal NPDES MS4 stormwater permit and as authorized by the Central Valley RWQCB, would

also have the potential to prevent or substantially reduce the types, amounts, and likely discharges of contaminants into stormwater.

Level of Significance: Less than significant

Mitigation Measures: None required

Effects of Recycled Water Use on Surface and Groundwater Quality

Wastewater generated by the Plan Area would be conveyed to City of Lathrop's Water Recycling Plan (WRP) #1 and/or #2 for treatment and then returned to the plan area and offsite areas for storage and land disposal through irrigation. Alternatively, if available, all or a portion of the Plan Area's sewage could be routed to the City of Manteca Wastewater Treatment Plant pursuant to an agreement between the two cities. If WRP #1 and/or #2 is used, a portion of the recycled water generated by the future uses within the Plan Area would be land applied onsite for irrigation of public (e.g., landscape within roadway rights-of-way) and private landscaping. The remainder would be disposed of offsite through irrigation of dedicated agricultural spray fields. There is the potential that use of recycled water could result in contaminants reaching the San Joaquin River via over application of recycled water resulting in direct runoff, or from stormwater carrying contaminants from recycled water application areas to the river. Percolation of recycled water through the soil could also carry contaminants to sub-surface aquifers. However, for a variety of reasons, adverse impacts to the San Joaquin River and groundwater water quality from use of recycled water is considered highly unlikely.

Recycled water leaving WRPs #1 and #2 would be disinfected and would undergo tertiary treatment to Title 22 standards for unrestricted use. Tertiary treatment includes the removal of nutrients such as phosphorous and nitrogen, and practically all suspended and organic matter from wastewater. Therefore, the recycled water would contain minimal to no water quality constituents that could be directly (via runoff of recycled water) or indirectly (via deposition in the recycled water disposal areas then subsequent mobilization through stormwater runoff) transported to the San Joaquin River, or reach groundwater aquifers via percolation through the soil. As indicated in the Water Master Plan EIR (EDAW 2001), extensive quantitative modeling conducted for a direct discharge of tertiary-treated wastewater to the San Joaquin River indicated that resulting water quality effects on the river would be considered less than significant even under a direct discharge condition because the tertiary-treated water being discharged into the river would be of higher quality (i.e., lower levels of contaminants) than the river flow. Recycled water would be applied at agronomic rates to minimize percolation below the root zone and to avoid runoff or ponding at the surface. Therefore, recycled water is unlikely to reach the San Joaquin River through runoff from over irrigation, or contact groundwater from percolation through the soil. The uptake of any contaminants and nutrients by vegetation irrigated with the recycled water, and binding of contaminants and nutrients to soil particles, would further reduce the potential for recycled water to adversely affect the San Joaquin River or groundwater sources.

Any stormwater or recycled water that might leave application areas in the Plan Area would pass through the project's stormwater system and associated BMPs, providing additional contaminant removal before reaching the San Joaquin River. The San Joaquin River levee serves as a physical barrier that separates the project site from the river, preventing gravity flow of recycled water to the river and ensuring that recycled water and stormwater from Plan Area application areas must pass

through the stormwater drainage system and associated BMPs. Because recycled water would be highly treated and would contain minimal to no constituents that could adversely affect water quality, and because various mechanisms would prevent or minimize the potential for constituents that might be present to reach the San Joaquin River or groundwater, the use of recycled water in the Plan Area would not adversely affect water quality in the San Joaquin River or groundwater aquifers. This impact is considered less-than-significant.

Level of Significance: Less than significant

Mitigation Measures: None required

14.0 NOISE

This chapter describes the existing noise environment within and in the vicinity of the Lathrop Gateway Business Park Specific Plan area (Plan Area) and the potential noise impacts associated with build out of the Plan Area. This chapter is derived primarily from the Environmental Noise Assessment for the Lathrop Gateway Business Park Specific Plan EIR, prepared by Bollard Acoustical Consultants (2009). Appendix E contains a copy of this noise study.

ENVIRONMENTAL SETTING

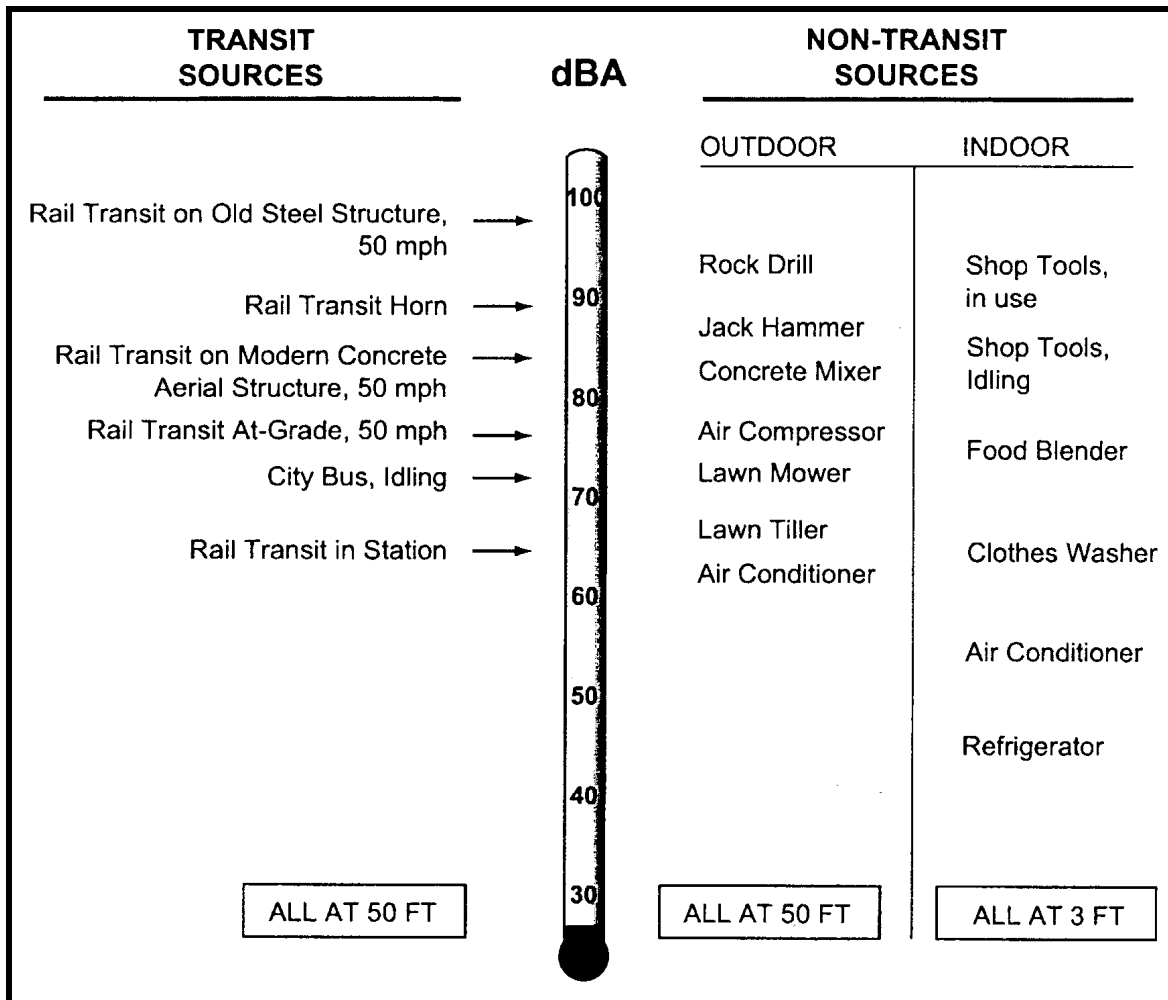
Acoustical Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel (dB) scale was devised. The decibel scale uses the hearing threshold as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Changes in decibel levels correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by the A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels. A graphic representation of the relative "loudness" of A-weighted noise is shown in Figure 14-1.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

Figure 14-1
 REPRESENTATION OF THE RELATIVE "LOUDNESS" OF A-WEIGHTED NOISE



The Day-Night Average Level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighting applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Existing Noise Environment

The Plan Area is currently composed of agriculture, rural residential, commercial, and light industrial uses, and is bordered by like uses. Noise-sensitive land uses in the immediate project vicinity include existing rural residences to the south-southeast. These uses may be affected by project-related increases in traffic noise on local area roadways and project construction. The project proposes no residential land uses.

Ambient Noise Levels

The existing ambient noise environment in the immediate project vicinity is defined primarily by traffic on SR 120, traffic on local surface roadways, and Union Pacific Railroad train operations. Some noise from local and distant industrial sources is evident.

To quantify the existing ambient noise environment in the project vicinity, long-term (24-hour) ambient noise level measurement surveys were conducted at four locations in the project area on October 18-23, 2006. Figure 14-2 illustrates the noise measurement locations. Table 14-1 summarizes the ambient noise level survey results. The ambient noise level measurement surveys indicate that existing noise levels in the immediate project vicinity are appropriate for the proposed project uses (i.e., commercial and light industrial).

TABLE 14-1
EXISTING AMBIENT NOISE MONITORING RESULTS

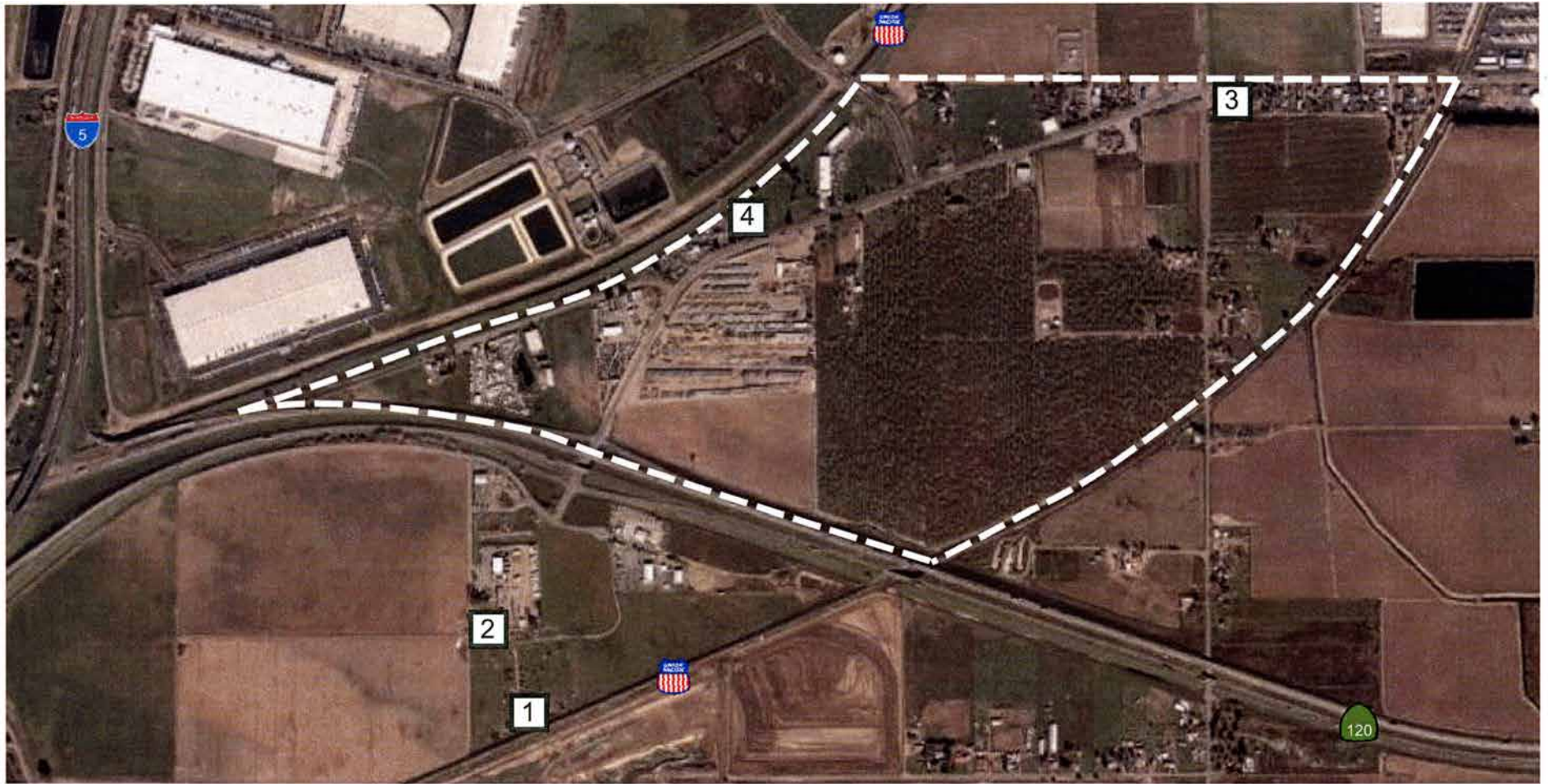
Site	Location	Average Ldn, dB (Range)	Average Daytime L50, dB (Range)	Noise Source
1	1010 Madrugua Road – North	67.4 (67-68)	57.2 (46-65)	SR 120/I-5 Traffic, Trains
2	1010 Madrugua Road -- South	67.2	47.8 (40-59)	Trains, Distant Traffic (SR 120/I-5)
3	2978 W. Yosemite Avenue	59.4 (57-61)	50.8 (45-57)	Local Traffic, Natural Sounds
4	Highway 120 Towing Yosemite Avenue	66.7 (66-68)	51.8 (46-62)	Distant Traffic, Commercial, Trains



Source: Bollard Acoustical Consultants, Inc., 2009

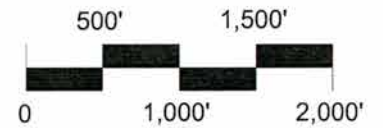
Traffic Noise

To predict existing noise levels due to traffic on roadways in the project area, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The Model is based on the Calveno reference noise factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the Plan Area.

Traffic volumes were obtained from the Lathrop Gateway Business Park Specific Plan Traffic Circulation Study, prepared by traffic consultant Wood Rodgers, Inc. (see Chapter 18.0, Transportation/Circulation). The traffic consultant and Caltrans provided truck split information, while traffic speed information was based on observations during a visit of the Plan Area.



 General Project Boundary
 Noise Measurement Site



SOURCE: BOLLARD ACOUSTICAL CONSULTANTS

INSITE ENVIRONMENTAL, INC.

Figure 14-2
NOISE MEASUREMENT LOCATIONS

Table 14-2 shows the calculated, existing traffic noise levels in terms of L_{dn} at a reference distance of 100 feet from the centerlines of existing project-area roadways. The table also includes the distances to existing traffic noise contours. Existing traffic noise contours for the Plan Area roadways are presented in the noise study, available in Appendix E.

TABLE 14-2
EXISTING TRAFFIC NOISE LEVELS AND CONTOUR DISTANCES

Roadway	Segment	L_{dn} (dB) @ 100 feet	Distance to Noise Contour (feet)			
			70 dB L_{dn}	65 dB L_{dn}	60 dB L_{dn}	
Roth Road	East of I-5 NB Ramps	61	24	52	113	
Lathrop Road	Harlan Rd. to 5th St.	65	50	107	232	
	5th St. to McKinley Ave.	65	47	102	219	
	McKinley Ave. to Airport Way	65	46	98	212	
	Airport Way to Union Rd.	64	39	85	183	
	East of Union Rd.	65	46	99	214	
Louise Avenue	Harlan Rd. to 5th St.	65	43	93	201	
	5th St. to McKinley Ave.	65	45	96	208	
	McKinley Ave. to Airport Way	64	37	80	173	
	Airport Way to Union Rd.	64	40	87	187	
	Union Rd. to Main St.	66	55	119	257	
Yosemite Avenue	East of Main St.	65	50	107	230	
	West of McKinley Ave.	60	23	50	108	
	McKinley Ave. to Airport Way	63	33	71	153	
	Airport Way to Union Rd.	66	54	117	252	
	Union Rd. to Main St.	64	40	87	187	
	Main St. to SR 99 Ramps	67	67	144	311	
5th Street	East of SR 99 NB Ramps	68	69	149	321	
	Lathrop Rd. to Louise Ave.	57	14	30	64	
	Howland Road	South of Louise Ave.	51	6	12	26
	McKinley Avenue	Lathrop Rd. to Louise Ave.	58	17	36	78
		Louise Ave. to Yosemite Ave.	61	25	55	118
		South of Yosemite Ave.	55	9	20	43
Airport Way	North of Lathrop Rd.	62	28	60	129	
	Lathrop Rd. to Louise Ave.	63	34	74	160	
	Louise Ave. to Yosemite Ave.	65	43	93	200	
	Yosemite Ave. to Daniels St.	64	42	90	194	
Union Road	North of Lathrop Rd.	61	27	58	124	
	Lathrop Rd. to Louise Ave.	65	47	102	220	
	Louise Ave. to Yosemite Ave.	66	55	119	256	
	Yosemite Ave. to SR 120 WB	66	58	12	268	
Main Street	North of Louise Ave.	67	60	129	277	
	Louise Ave. to Yosemite Ave.	67	60	130	281	
	Yosemite Ave. to SR 120 WB	66	57	122	263	
SR 120	Adjacent to Plan Area	79	410	884	1,904	

Note: Distances to traffic noise contours are measured in from the centerlines of the roadway.
Source: Bollard Acoustical Consultants, 2009

Train Noise

Noise measurement equipment at Sites 1 and 4 (Figure 14-2) were programmed to record noise events associated with train pass-bys along the south (east) and north (west) tracks of the Union Pacific Railroad, respectively. A total of 11 assumed train events were recorded at Site 1 on October 19, 2006, with five of the events occurring during nighttime hours (10 p.m.-7 a.m.). The calculated train-related noise exposure was approximately 68 dB L_{dn} at a distance of approximately 75 feet from the center of the tracks. Maximum noise levels from assumed train pass-bys was 80-91 dB L_{max} . Trains are a significant source of noise along the south project property line. A total of two assumed train events were recorded at Site 4 on October 19, 2006, with one of the events occurring during nighttime hours. The calculated train-related noise exposure was approximately 62 dB L_{dn} at a distance of approximately 80 feet from the tracks. Maximum noise levels measured during assumed train pass-bys was 78-96 dB L_{max} .

Based on the measurement data summarized above, the location of existing train noise contours on the project site were determined. The noise study, in Appendix E of this document, contains an illustration of the assumed train noise contours. Since there is no information regarding future operations on the rail lines, and there is no indication that operations will change in the future, these contours were used to assess future train noise exposure on the Plan Area.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

The CEQA Guidelines indicate that a significant effect on the environment may result if the project will result in exposure of persons to, or generation of, noise levels in excess of adopted standards, generation of excessive groundborne vibration or groundborne noise levels, or a substantial temporary, periodic or permanent increase in ambient noise levels in the project vicinity.

The City of Lathrop General Plan Noise Element establishes land use compatibility criteria for various community land uses. For noise generated by transportation noise sources such as traffic and trains, the Noise Element specifies that residential land uses are compatible with exterior noise levels of up to 60 dB L_{dn} without the need for noise mitigation. The 60 dB L_{dn} noise level is considered an acceptable noise environment for residential outdoor activities. The City may allow an exterior transportation-related noise level of up to 65 dB L_{dn} provided that practical exterior noise mitigation measures are implemented and interior noise levels do not exceed the applicable limit.

The City's interior noise level criterion of 45 dB L_{dn} is specified in the Noise Element for all noise-sensitive uses, including residential and commercial/office uses, exposed to transportation noise sources. The intent of this interior noise level standard is to provide a suitable environment for indoor communication and sleep within residential structures.

The City of Lathrop Noise Element of the General Plan also establishes noise limits for non-transportation noise sources with respect to their impact on noise-sensitive receivers. Table 14-3 summarizes these standards, which would be applied at residential uses adjacent to the project.

**TABLE 14-3
NOISE LEVEL PERFORMANCE STANDARDS
FOR NON-TRANSPORTATION NOISE SOURCES**

Noise Descriptor	Daytime 7am - 10pm	Nighttime 10pm - 7am
L ₅₀	55	45
L ₂₅	60	50
L ₈	65	55
L ₂	70	60
L _{max}	75	65

Source: City of Lathrop General Plan (1991)

The potential increase in traffic noise exposure due to the project is a factor in determining the significance of project-related traffic noise impacts. Research into the human perception of changes in sound level indicates the following:

- A 3 dB change is barely perceptible,
- A 5 dB change is clearly perceptible, and
- A 10 dB change is perceived as being twice or half as loud.

Table 14-4 is based on recommendations made in August 1992 by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been asserted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the Ldn. Specifically, they provide good correlation to transportation-related noise sources. An increase in the traffic noise levels becomes more significant as the ambient noise level increases. For instance, a significant increase in traffic noise level is expected to be 1.5 dB when the no-project traffic noise level exceeds 65 dB Ldn. However, a significant increase in traffic noise level is expected to be 5 dB when the no-project traffic noise level is less than 60 dB Ldn. In other words, as ambient noise levels increase, a smaller increase in noise resulting from the project is sufficient to cause significant annoyance.

For this analysis, noise impacts associated with the proposed project would be considered significant if the following were to occur:

- a) Exposure of persons to or generation of noise levels in excess of standards established in the City of Lathrop General Plan.
- b) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, as defined by FICON (Table 14-4).

TABLE 14-4
SIGNIFICANCE OF CHANGES TO NOISE ENVIRONMENT

Noise Level Without Project (Ldn)	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: Federal Interagency Committee on Noise

Traffic Noise Exposure at Existing Noise-Sensitive Land Uses

The noise study did not identify any significant noise impacts associated with potential land use activities in the Plan Area. The main noise impact associated with Plan Area development was the generation of traffic on local roadways. To assess noise impacts due to traffic on the local roadway network, traffic noise levels were predicted at a representative distance (100 feet from roadway centerlines) for traffic under existing and cumulative conditions evaluated in the traffic impact study for the Specific Plan. Chapter 18.0, Transportation, and the traffic impact study in Appendix F describe these traffic conditions. Chapter 19.0, Cumulative Impacts, discusses noise impacts under cumulative conditions.

The Existing plus Project conditions were used in evaluating project-specific traffic noise impacts. The traffic noise levels for Existing plus Project conditions were predicted using the same modeling methodology applied to evaluating existing noise conditions. Table 14-5 summarizes the results of this analysis. Based on the FICON criteria set forth in Table 14-4, significant traffic noise impacts may be expected on Yosemite Avenue west of Airport Way, and McKinley Avenue south of Louise Avenue. Project-related traffic noise increases at existing residential uses in the Plan Area vicinity are expected to exceed the FICON criteria. Specifically, residential uses on Yosemite Avenue between Swanson Road and Airport Way and McKinley Avenue between the south border of the Plan Area and just south of Bronzan Road would experience increased noise levels resulting from the project that would be noticeable to local residents.

TABLE 14-5
PREDICTED TRAFFIC NOISE EXPOSURE – EXISTING PLUS PROJECT

Roadway	Segment	L _{dn} (dB) @ 100 feet	Change from Existing
Roth Road	East of I-5 NB Ramps	61	0
Lathrop Road	Harlan Rd. to 5th St.	66	+1
	5th St. to McKinley Ave.	65	0
	McKinley Ave. to Airport Way	65	0
	Airport Way to Union Rd.	64	0
	East of Union Rd.	65	0
Louise Avenue	Harlan Rd. to 5th St.	65	0
	5th St. to McKinley Ave.	65	0
	McKinley Ave. to Airport Way	64	0
	Airport Way to Union Rd.	65	+1
	Union Rd. to Main St.	66	0
	East of Main St.	66	+1
Yosemite Avenue	West of McKinley Ave.	66	+6
	McKinley Ave. to Airport Way	67	+4
	Airport Way to Union Rd.	68	+2
	Union Rd. to Main St.	66	+2
	Main St. to SR 99 Ramps	68	+1
	East of SR 99 NB Ramps	68	0
5th Street	Lathrop Rd. to Louise Ave.	57	0
Howland Road	South of Louise Ave.	51	0
McKinley Avenue	Lathrop Rd. to Louise Ave.	61	+3
	Louise Ave. to Yosemite Ave.	64	+3
	South of Yosemite Ave.	65	+10
Airport Way	North of Lathrop Rd.	62	0
	Lathrop Rd. to Louise Ave.	64	+1
	Louise Ave. to Yosemite Ave.	65	0
	Yosemite Ave. to Daniels St.	65	+1
Union Road	North of Lathrop Rd.	62	+1
	Lathrop Rd. to Louise Ave.	65	0
	Louise Ave. to Yosemite Ave.	67	+1
	Yosemite Ave. to SR 120 WB	67	+1
Main Street	North of Louise Ave.	67	0
	Louise Ave. to Yosemite Ave.	67	0
	Yosemite Ave. to SR 120 WB	66	0
SR 120	Adjacent to Plan Area	80	+1

Note: Distances to traffic noise contours are measured from the centerlines of the roadway.
Bold: Levels represent potential noise impacts.
Source: Bollard Acoustical Consultants, 2009

Typical measures to reduce the significant impact of the noise increases along these off-site roadway segments would be to construct a noise barrier along the property line in form of a masonry sound wall. However, because the applicant and/or their successors do not control these property lines, and the residential uses front the roadways and require driveway access, the construction of sound walls is not feasible. An alternative construction method of utilizing rubberized asphalt may be considered as a viable option to mitigate project-related traffic noise exposure increases at existing noise-sensitive receiver locations along the impacted roadway segments.

Studies conducted for the Sacramento County Department of Environmental Review and Assessment and the Transportation Department to determine the noise reduction provided by rubberized asphalt have been completed. The studies show an average traffic noise level reduction of approximately 4 dB over that provided by conventional asphalt. The European Commission Green Paper (1997) showed that the emission noise levels could be reduced from levels generated on equivalent non-porous road surfaces by between 3 and 5 dB on average. The use of noise-reducing paving materials in the impacted areas appears to be a feasible means of achieving a 3 to 5 dB decrease in traffic noise and reducing the potential for adverse public reaction to future traffic noise levels along the impacted roadway segments identified above.

Level of Significance: Significant

Mitigation Measures:

- 14-1. Rubberized asphalt shall be installed on the segments of Yosemite Avenue (between Swanson Road and Airport Way) and McKinley Avenue (between the south border of the Plan Area and just south of Bronzan Road). Because these segments are located within the jurisdiction of the City of Manteca, the City of Lathrop shall prepare and negotiate an inter-agency agreement on the apportionment of costs and responsibilities related to the installation of the rubberized asphalt. The ODS shall be responsible for all costs related to the agreement and installation of material.

Significance After Mitigation: Project-related traffic noise exposure increases after mitigation along the impacted section of Yosemite Avenue would likely be 1 dB or less for the Existing plus Project condition. Based on the FICON criteria (see Table 14-4), noise impacts along Yosemite Avenue would be less than significant after mitigation. However, the impacted section of McKinley Avenue would still experience a noise level increase of approximately 5-7 dB under Existing plus Project conditions. Therefore, even after mitigation, the noise impacts along McKinley Avenue would be significant and unavoidable.

Implementation: The ODS will be responsible for the installation of the rubberized asphalt along identified roadway segments on Yosemite Avenue and McKinley Avenue, in accordance with the agreement reached with the Cities of Lathrop and Manteca.

Monitoring: The Department of Public Works will be responsible for ensuring that the pavement is installed in conjunction with review and approval of subsequent development projects in the Plan Area.

Transportation-Related Noise Exposure in the Plan Area

The noise study did not identify exposure to noise from railroad operations as a significant impact. However, the study identified exposure to traffic noise from SR 120 as potentially significant. Noise exposure from SR 120 traffic may exceed 70 dB L_{dn} along the southern portion of the Plan Area. Office uses, or other noise-sensitive commercial/industrial buildings, constructed within the 70 dB L_{dn} contour may experience interior traffic noise exposure in excess of the applicable 45 dB L_{dn} standard. Noise exceeding the standard may disturb employees in these buildings.

Assuming standard commercial construction practices, it would be expected that noise-sensitive rooms/buildings within the 70 dB L_{dn} contour line may provide the needed interior noise mitigation. The addition of the following mitigation measure would reduce interior noise levels to a less-than-significant level.

Level of Significance: Significant

Mitigation Measures:

- 14-2. Acoustically rated exterior doors and windows shall be installed at facades with line-of-sight to State Route 120. These upgraded windows and doors shall provide a minimum STC performance of 35.

Significance After Mitigation: Less than significant.

Implementation: The ODS will be responsible for the installation of the exterior doors and windows to applicable development projects.

Monitoring: The Planning and Building Divisions of the Community Development Department, and the Public Works Department, will be responsible for ensuring that noise mitigation measures have been incorporated in improvement or building plans.

Construction Noise Impacts

Table 14-6 shows noise levels from construction equipment typically used in development projects, at a distance of 50 feet from an operating machine. Activities associated with Plan Area construction would result in elevated noise levels, with maximum noise levels ranging from 77 to 85 dB (L_{max}). Such noise would likely be audible at the nearest existing residences.

Construction noise is temporary in nature and would cease once construction work is completed. Moreover, construction activities would likely occur during normal daytime working hours, not during nighttime when noise would be most disturbing to residents. Nonetheless, because construction activities would result in periods of elevated noise levels, and since nearby residences would likely be exposed to these elevated noise levels,

this impact is considered potentially significant. Noise impacts from construction of the stormwater drainage pipeline are not considered significant, as the pipeline would be installed on mostly vacant land. There are no noise-sensitive land uses in the vicinity of the proposed pipeline right-of-way.

TABLE 14-6
CONSTRUCTION EQUIPMENT NOISE LEVELS (50 FT.)

Type of Equipment	Lmax, dB	Hourly Leq, dB/% Use
Backhoe	78	74/40%
Concrete Mixer Truck	79	75/40%
Dump Truck	77	73/40%
Front End Loader	79	75/40%
Pneumatic Tools	85	82/50%
Air Compressor	78	74/40%

Source: Roadway Construction Noise Model V 1.0, U.S. Department of Transportation

Lathrop Municipal Code Section 8.20.110 contains the following regulation concerning construction noise:

It shall be unlawful for any person within a residential zone or within a radius of five hundred (500) feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures or projects or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hours of ten p.m. of one day and seven a.m. of the next day, or eleven p.m. and nine a.m. Fridays, Saturdays and legal holidays, in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefore has been duly obtained from the office or body of the city having the function to issue permits of this kind.

Compliance with this section of the Lathrop Municipal Code would reduce the amount of noise experienced by nearby residential areas. However, other mitigation measures are recommended to further minimize construction noise impacts.

Level of Significance: Potentially significant

Mitigation Measures:

- 14-3. Contractors performing grading and construction work in the Plan Area shall fit all internal combustion engines with factory-specified mufflers.

- 14-4. Contractors performing grading and construction work in the Plan Area shall not place construction staging and heavy equipment storage areas within 500 feet of residential receivers to the south-southeast of the Plan Area.

Significance After Mitigation: Less than significant

Implementation: The owners, developers, and/or successors-in-interest shall be responsible for management of construction contractors.

Monitoring: The Planning and Building Divisions of the Community Development Department, and the Public Works Department, will be responsible for ensuring that noise mitigation measures have been incorporated in improvement or building plans.

15.0 POPULATION, EMPLOYMENT AND HOUSING

The purpose of this chapter is to identify, estimate, and evaluate population and housing changes that would be caused by development of the proposed project that have the potential to cause physical environmental effects. This chapter also describes the existing population and housing levels in the City of Lathrop, San Joaquin County, and the neighboring Cities of Manteca and Stockton.

The increased population and changes to demographics resulting from new development do not necessarily cause direct adverse physical environmental effects. However, indirect physical environmental effects could occur, such as increased traffic or air quality deterioration. These indirect effects are analyzed in the relevant technical sections of this EIR. Growth-inducing impacts are described in Chapter 21.0. This chapter summarizes City plans and policies pertaining to commercial/office uses, including policies related to the maintenance of a jobs/housing balance. Potential inconsistencies with adopted City plans or policies are identified.

The information contained in this chapter is used as a basis for analysis of project and cumulative impacts in the technical sections of this EIR. However, changes in population and housing, in and of themselves, are generally characterized as social and economic effects,. CEQA provides that economic or social effects are not considered significant effects on the environment, unless these effects are connected to physical environmental effects. A social or economic change related to a physical change may be considered in determining whether the physical change is significant (CEQA Guidelines Section 15382). Section 15131(a) of the CEQA Guidelines provides direction for the treatment of economic and social effects:

Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on physical changes.

ENVIRONMENTAL SETTING

Regional Population

According to the San Joaquin Council of Governments (SJCOG), the greater Lathrop area, as well as the cities of Escalon, Lodi, Manteca, Ripon, Stockton, and Tracy in San Joaquin County, has experienced rapid population growth and development over the last decade. As the fastest growing region in the San Joaquin Valley, and one of the fastest in the state, it is expected that the population in San Joaquin County will reach 1.7 million by 2050. As of January 1, 2009, San Joaquin County had a total population of 689,840. SJCOG projections adopted in 2004 indicate that the County's population will reach 1,117,006 by 2030, which would represent a 62% increase (Table 15-1).

However, population growth in San Joaquin County has slowed in recent years. According to the California Department of Finance, annual population growth in the County fell from a high of 3.89% in 2001 to 0.88% in 2009, slightly lower than the state's growth rate of 0.93% in that year (California Department of Finance, 2009). Reasons for the apparent slowdown in population growth may include the decline in the housing market in the past two years, and the economic recession with a concurrent increase in unemployment.

City of Lathrop Population

Between 1990 and 2000, the City of Lathrop experienced a nearly 53% change in population, from 6,841 to 10,445. The California Department of Finance (DOF) estimates Lathrop's January 1, 2009 population at 17,671, which is a 69% increase over the 2000 population. SJCOG's population projections for the City of Lathrop estimate a population of 41,556 by 2030, an increase of 23,885 residents, or approximately 134% (see Table 15-1). Lathrop has also experienced a decline in its population growth rate. After an estimated population increase of 13.56% in 2006, the City's growth rate fell to 1.90% in 2009 (California Department of Finance, 2009).

TABLE 15-1
POPULATION, EMPLOYMENT, AND HOUSING NUMBERS

	San Joaquin County	City Of Lathrop
POPULATION		
Current (As of 1/1/2009)	689,480	17,671
Projected to 2030	1,117,006	41,424*
Percent Change	62%	134%
EMPLOYMENT		
Current (As of 2005)	207,397	4,872
Projected to 2030	289,461	6,833
Percent Change	39%	40%
HOUSING		
Current (As of 2000)	189,160	2,991
Projected to 2030	359,414	15,321
Percent Change	90%	412%

* 2028 Projection, based on City of Lathrop's Municipal Service Review.

Sources: State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change – January 1, 2008 and 2009, May 2009; San Joaquin Council of Governments, Data Services, Census Data, April 2004 Projections for Population, Employment and Housing, Center, <http://www.sjcog.org>, Accessed October 2, 2009; City of Lathrop, Municipal Service Review, September 2009.

In recognition of recent changes in economic conditions, the Municipal Service Review adopted by the Lathrop City Council in September 2009 developed its own population growth projection. It is based on the California Department of Finance's 2008 population estimate for Lathrop, the 2000 U.S. Census average persons per household for the City (3.54), approved residential units in the City, and a 6% vacancy rate. This growth projection method incorporated the major approved residential developments and potential future development in east Lathrop. Lathrop's population is projected to grow to 29,419 by 2023, but increase to 41,424 by 2028 (City of Lathrop, 2009). The 2028 projection in the Municipal Service Review is similar to SJCOG's 2030 projection of 41,556.

Employment

Regional Employment

San Joaquin County's employment growth has been fueled by a number of factors, including strategic location, an expected strong state economy, affordable land, population increase, and spillover business expansions from the San Francisco Bay Area to the Central Valley. Employment gains were expected across all major industry divisions with the largest increases occurring in services, trade, and government. However, the recent economic recession and housing market decline has led to an increase in unemployment. The unemployment rate in San Joaquin County increased from 8.1% in 2007 to 10.4% in 2008, and to 18.4% in January 2010 (EDD, 2010).

The number of jobs in San Joaquin County in 2005 was 207,397. SJCOG projections estimated the number of jobs in San Joaquin County at 289,461 by 2030, which is a 39 percent increase from the 2005 total (see Table 15-1). The SJCOG estimates were adopted in 2004, and there have not been more recent projections. The number of jobs does not equate to the number of employed residents in the jurisdiction.

City of Lathrop Employment

In 2005, according to SJCOG, the City of Lathrop had approximately 4,872 jobs. By 2030, the City of Lathrop was projected by SJCOG to have 6,833 jobs, which is a 40 percent increase from the 2005 figure (see Table 15-1). The projection was made in 2004, before the current economic recession. As in San Joaquin County, Lathrop has experienced an increase in unemployment. In 2000, the unemployment rate in Lathrop was 4.8%. In January 2010, this figure increased to 15.4%, unadjusted for seasonal employment (EDD, 2010).

Housing

Regional Housing Supply

Rapid job expansion throughout the Bay Area in the last two decades had stimulated a growing demand for the limited Bay Area housing supply. The economic boom of the technology sector had forced many families who could no longer afford to live in the Bay Area to leave. The shortage of affordable housing in the Bay Area led to increased subdivision activity in San Joaquin County.

The 2000 U.S. Census found that thousands of San Joaquin County residents commuted to work outside of the County. Approximately 19,954 residents commuted into Alameda County, 7,046 residents commuted to Santa Clara County, and 3,669 residents commuted to Contra Costa County.

Other major commute areas were Stanislaus County, with 6,640 San Joaquin County residents commuting there, and Sacramento County, where 6,296 residents commuted.

The 1990 Census found there were 158,657 housing units in San Joaquin County. In 2000, the County had a total of 189,160 housing units. The number of San Joaquin County housing units were projected to increase to 359,414 units by 2030, which would be an approximately 90 percent increase from the 2000 total (see Table 15-1). It is anticipated that this growth would be divided between single-family and multi-family units at 73 and 27 percent respectively. As with other projections from SJCOG, this projection was made prior to the current economic recession and housing market decline.

City of Lathrop Housing Supply

In 2000, the City of Lathrop had a total of 2,991 housing units (2,908 occupied and 83 vacant), which was an increase by 981 units from 1990. A total of 85.2 percent of total households resided in single-family dwellings in 2000, 3.1 percent lived in a 2- to 5-unit multifamily building, 0.2 percent lived in a multifamily building greater than five units, and 11.5 percent lived in mobile homes.

According to California Department of Finance data, the number of housing units in Lathrop in 2009 was 4,992 – an increase of 2,001 units over the 2000 total (California Department of Finance, 2010). By 2030, Lathrop was projected to increase its housing supply to a total of 15,321 housing units (see Table 15-1). However, housing construction has slowed in recent years, due to the current recession and the decline in the housing market. In 2006, 560 housing units were added to Lathrop's housing stock. In 2007, the number of additional units declined to 265, and in 2008 only 75 units were added to the City's stock (California Department of Finance, 2010).

The following is a summary of major projects within the City of Lathrop that have significant housing components.

West Lathrop Specific Plan

The West Lathrop Specific Plan (WLSP) area forms the southwestern portion of the City of Lathrop's Planning Area. West Lathrop is comprised of two large areas: Stewart Tract (made up of River Islands and Southeast Stewart Tract totaling 5,974 acres) and Mossdale Village (1,611 acres). The WLSP area is proposed as a new mixed-use community. It will contain a wide range of housing types and neighborhoods, a mixed-use town center, workplaces ranging from business parks to highway-related commercial, and many forms of outdoor recreation. Approval of the WLSP potentially added 13,325 housing units to the City (2,325 from Mossdale Village and 11,000 from River Islands).

Central Lathrop Specific Plan

The Central Lathrop Specific Plan (CLSP) area within the City of Lathrop encompasses approximately 1,521 acres and is proposed for development of residential, commercial, public and civic uses, and park and open space features. Most of the CLSP area is designated for residential development, with 6,790 planned housing units in high-density, variable-density, and residential/mixed use designations. Approximately four million square feet of office and commercial uses are also planned.

Regulatory Setting

San Joaquin County General Plan

The San Joaquin County General Plan includes the following policies related to employment and housing that are relevant to this analysis.

- Housing Policy No. 5: Public or private projects that displace residents or eliminate neighborhoods shall be rejected unless they would, in balance, contribute to the public's health, safety, and welfare.
- Economic Policy No. 1: Development of diverse employment opportunities shall be encouraged.
- Economic Policy No. 2: The County shall work to achieve a closer balance between jobs and residents in the County.
- Economic Policy No. 5: The County should actively promote continued industrial growth, increased recreational development, and a regional shopping center site adequate to serve the region's future population.

City of Lathrop General Plan

The City of Lathrop General Plan includes the following goal and policies related to industrial type uses that are relevant to this analysis.

Goal: Balancing the social and economic costs and benefits of urbanization.

Policy 2 - Areas designated for industrial use are to assure that there will be sufficient long-term availability of industrial land to expand the City's economic base and capability for meeting the on-going costs of public services required by the community. A slow pace of industrial development is not to be construed alone as justification for designating industrial land areas for another type of urban use unless such use would be of a regional commercial character.

Policy 3 - Industrial proposals should be located where possible within an industrial park designed for the accommodation of a community of industries that are compatible in terms of operational characteristics, aesthetic qualities, utility service requirements and street circulation.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to the CEQA guidelines, the project may have a significant impact related to population or housing if it would induce substantial growth or concentration of population; displace a large number of people; or displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

Project Impacts on Population Growth

Development under the proposed Lathrop Gateway Business Park Specific Plan would not include any new residential units. Therefore, the project would not directly increase the permanent population of Lathrop. However, the project may indirectly induce population growth through the development of commercial, office and industrial land use, which are expected to provide jobs. The potential employment impacts are discussed later in this chapter.

The project would provide employment opportunities for existing City residents. This would reduce indirect impacts related to traffic, noise and air quality resulting from City residents currently commuting outside Lathrop for employment. However, the creation of employment opportunities could also attract new residents to the City of Lathrop or nearby areas of San Joaquin County, thereby increasing the population. Based on approved specific plans, the City would have a sufficient amount of housing to accommodate any population increase indirectly generated by the project. As discussed later in this chapter, the number of employees generated by Plan Area development can be accommodated by planned housing development.

Level of Significance: Less than significant

Mitigation Measures: None required

Project Impacts on Employment

The proposed project proposes a variety of office/commercial, industrial, and service commercial uses that would provide a mixture of employment opportunities for existing and new residents. The estimated number of employees at full buildout of the Lathrop Gateway Business Park would be 5,964 (see Table 15-2). These estimates are based on factors used in a fiscal impact analysis model, and provide a reasonable estimate of employment generated by land uses designated in the Specific Plan. With a significant increase in the number of housing units projected by the year 2030, the proposed project would provide jobs within the City of Lathrop and San Joaquin County to help improve the jobs/housing balance.

TABLE 15-2

LATHROP GATEWAY BUSINESS PARK SPECIFIC PLAN ESTIMATED EMPLOYMENT

Land Use	Max. Square Footage	Employment Rate*	Est. Employees
Office/Commercial	740,956	1 employee/350 sq. ft.	2,117
Limited Industrial	3,139,282	1 employee/2,500 sq. ft.	1,256
Service Commercial	1,554,656	1 employee/600 sq. ft.	2,591
Total	5,434,894		5,964

*Note:

Factors Obtained From South Florida Regional Planning Council, Fiscal Impact Analysis Model.

The jobs/housing balance provides an indication of the potential commute patterns in a given area. A jobs/housing balance greater than 1.00 indicates there are more jobs than housing, which may mean workers are unable to obtain housing in the area and therefore must commute there. A balance less than 1.00 indicates fewer jobs than housing units, which may mean workers must commute out of the area to jobs elsewhere. It is desirable that the jobs/housing balance be as close to 1.00 as possible. Under that circumstance, few workers would be commuting either into or out of an area, thereby minimizing the indirect environmental impacts of commuting such as increased traffic volumes and increased air pollutant emissions. Currently, the City has more housing units planned for development than potential jobs. The housing market decline and general loss of jobs has exacerbated this condition. The jobs that Plan Area development are anticipated to generate would move the City closer to the desired jobs/housing balance of 1.00.

Regionally-oriented office, commercial and industrial uses are anticipated to not only be convenient for employed City residents but also for residents of nearby cities, which would alleviate business and employment commutes from southern San Joaquin County to distant job centers. This would be consistent with the long-range goals of the City of Lathrop and San Joaquin County. Therefore, the project would not result in an adverse impact on employment, and may have a beneficial impact.

Level of Significance: Less than significant

Mitigation Measures: None required

Project Impacts on Housing

Approximately 50 existing residential units are located within the Plan Area boundaries. As proposed development is phased in, existing residential unit located within the footprint of any particular phase would be demolished. Eventually, upon full buildout of the Specific Plan, all existing residential units would be demolished. For purposes of this analysis, it is assumed that the residential units demolished as part of future phases would be sold by a willing seller and purchased by the developer of that phase. The seller would use the compensation to relocate to some other residential location. As previously noted, the City has approved specific plans that would provide thousands of new housing units. Adequate housing stock would be available in the City for existing residents currently located within the Plan Area, should they choose to relocate to Lathrop. Therefore, the loss of the existing housing units within the Plan Area boundaries would not have a significant impact on the housing stock.

Level of Significance: Less than significant

Mitigation Measures: None required

16.0 PUBLIC SERVICES

INTRODUCTION

Information to prepare this section was derived from the City of Lathrop Municipal Service Review (September 2009), City of Lathrop Comprehensive General Plan (December 1991), the Lathrop Gateway Business Park Specific Plan, the South Lathrop Specific Plan, the Central Lathrop Specific Plan DEIR (July 2004), the California Integrated Waste Management Board, and the California Department of Education, information from service providers, and other environmental documentation.

The Initial Study and Notice of Preparation (IS/NOP, see Appendix A) prepared for the Lathrop Gateway Business Park Specific Plan identified that project impacts on fire protection, police protection and other public facilities were potentially significant and would be addressed in this EIR. Potential impacts to schools and parks were determined to be less than significant and are briefly discussed in this EIR. There were no comments on public services impacts received in response to the NOP.

16.1 POLICE PROTECTION

Environmental Setting

Police protection services in the City of Lathrop are provided through a contract with the San Joaquin County Sheriff's Department. The Lathrop Police Department is staffed by deputy sheriffs who work only within the City and receive training specific to City law enforcement issues. The Lathrop Police Department provides services such as emergency law enforcement, routine patrol, traffic enforcement, a Crime Stoppers program to involve citizens in efforts to reduce crime within the City, and a Crime Prevention Through Environmental Design program, which assesses ways to improve community design in order to promote safe surroundings for citizens and prevent design features that may promote crime.

The Police Department is located at 15597 South Seventh Street in Lathrop, less than two miles north of the Plan Area. As of September 2009, the Police Department is staffed by 24 sworn officers, which include one captain, one lieutenant, three sergeants, two detectives, 19 deputy sheriffs, and four civilian staff members (one of which is a criminal research analyst). The Police Department is staffed 24 hours a day in a series of seven shifts. Based on current staffing levels and City population, the department currently maintains a ratio of 1.5 sworn officers per 1,000 residents. When necessary, additional assistance is supplied by a mutual aid agreement with surrounding cities and the County. Current response time in the core area of the City is approximately 2-4 minutes.

Regulatory Setting

The following policy related to police protection services is from the City of Lathrop General Plan Safety Goals and Policies section:

- Policy 1: The City will continue to give high priority to the support of police protection.

Environmental Impacts and Mitigation Measures

Significance Thresholds

For the purposes of this EIR, impacts on police protection resources are considered significant if the proposed project would:

- Create a need for the development of new service facilities (e.g., fire, police, schools), the construction of which could result in significant environmental impacts;
- Create circumstances where existing services and facilities could not meet established performance standards (i.e., response times, provider per residents ratios); or
- Substantially impede existing services.

Impacts on Police Protection Services

The proposed project would involve the development of limited industrial uses, office/commercial uses and service commercial uses, which would increase the demand for police protection in the Plan Area as it is built out. The Lathrop General Plan established police staffing standards based on a unit of 1,000 residents, and not on commercial/industrial square footage. However, it is expected that the additional commercial and industrial land uses, and the individual employed by these uses, would require additional police officers.

According to the EIR for the Central Lathrop Specific Plan, the existing police station is capable of accommodating some additional officers required for new development. No occupied development within the Central Lathrop Specific Plan has occurred as of the preparation of this EIR. Thus, the existing police station maintains some capacity for new development. However, at some point during development, a new police station or other facility would be required to accommodate the additional officers and administrative staff (City of Lathrop, 2004). According to the City's Municipal Service Review, any new facility would likely be located adjacent to the new government center at 390 Towne Center Drive (City of Lathrop, 2009).

It is City policy that development will pay for all City services that it requires. According to the Municipal Service Review, capital costs for new police facilities would be funded through development impact fees, while operational costs would be funded through the increased tax base (City of Lathrop, 2009). The following mitigation measure would reduce impacts associated with an increased demand on police protection services in Lathrop by requiring that the applicant pay fees that would go toward the hiring and training of new police officers and purchase of equipment. With an adequate number of police staff, levels of service for police protection would not be adversely affected by the proposed project. Other mitigation measures would facilitate responses by

emergency vehicles, including police patrol cars, and reduce the demand for police services during the construction phase of a project in the Plan Area.

Level of Significance: Potentially significant

Mitigation Measures:

- 16-1. The ODS shall pay, prior to issuance of building permits, the appropriate City of Lathrop Capital Facility Fees for police and fire protection services. Also, prior to issuance of the first building permit for a project in the Specific Plan area, the ODS shall form a special assessment district that covers the Plan Area and provides adequate funding for the annual cost to provide City services specific to and directly benefiting the Plan Area. The City and the ODS shall determine the level of funding the special assessment district shall provide.
- 16-2. The ODS shall incorporate access, water supply and other fire suppression and emergency access/response needs in the proposed project designs. Said designs shall be developed in consultation with the Fire, Police and Public Works Departments, and shall address such items as the mapping and measures deemed necessary to permit access of emergency vehicles and firefighting equipment, minimize response times and provide adequate evacuation routes.
- 16-3. The ODS shall fence and monitor contractors' storage yards during the construction phases of the project to prevent theft and vandalism, and to reduce calls for assistance from the Police Department.

Significance After Mitigation: Less than significant

Implementation: The ODS will be responsible for implementing the mitigation measures.

Monitoring: The Community Development Department, Planning and Building Divisions, will be responsible for ensuring that projects comply with mitigation measures specified in this EIR. The City Department of Finance shall monitor the establishment and operation of the special assessment district.

16.2 FIRE PROTECTION

Environmental Setting

Fire protection services within the City of Lathrop are provided by the Lathrop-Manteca Fire Protection District (Fire District), which, until 2002, was known as the Manteca-Lathrop Rural County Fire Protection District. The Fire District has been in operation since 1936. Along with fire protection services, the Fire District provides medical emergency response, river rescue, urban search and rescue, and fire prevention services. The service area for the Fire District includes 100 square miles in southern San Joaquin County, excluding the City of Manteca, which operates its own fire department. The Fire District contains a mix of urban and rural uses, which is characteristic

within San Joaquin County, including residences, commercial and industrial spaces, and agricultural lands.

The Fire District operates four fire stations: Station #31 on J Street, Station #32 on Union Road, Station #33 on Austin Road, and Station #34 in Mossdale Landing. Fire suppression services are provided by the Fire District 24 hours a day at all stations. The Fire District is staffed by both paid and volunteer personnel, which includes 33 career personnel and 10 reserve firefighters. Of the 33 uniformed employees, there is one interim Fire Chief, one Division Chief, 12 fire captains and 18 firefighters/engineers. There are three non-safety employees: a Business Manager for the Fire Chief, a Fire Inspector and a Fire Permit Clerk.

According to the Fire District's most recent Master Plan, response times for fire suppression in both residential and industrial/commercial areas were four to five minutes. The Fire District maintains delivery standards for the provision of emergency services of up to three minutes in urban areas, four to five minutes in rural areas for 90 percent of the population, and five minutes for all rural areas. Medical aid and rescue services in residential areas had response times of four minutes for urban areas and five minutes in rural areas. In industrial/commercial areas, medical aid and rescue services response times were four to five minutes.

Adequate fire flow - the amount of water available to control fire and required duration that water is needed to control such a fire - is necessary for fire suppression services within the Fire District. The fire flow needed to extinguish a certain fire is determined by several factors, including building design, internal square footage, construction materials, dominant use, height, number of floors, and distance to adjacent buildings. Minimum requirements for fire flow are determined by the California Fire Code. The fire flow that would be associated with the proposed project would generally be between 1,500 and 3,000 gallons per minute (gpm) for industrial/commercial development, measured at 20 pounds per square inch (psi), with a minimum 2-hour duration.

Regulatory Setting

The following policies related to fire protection are from the City of Lathrop General Plan Safety Goals and Policies section:

- Policy 1: The City will continue to give high priority ... to fire suppression and prevention and life safety functions of the Fire Department. Ultimate expansion of the City's fire service is to include additional stations affording adequate response within a maximum of 3-4 minutes to all parts of the urban area.
- Policy 2: The City will work to maintain a fire flow standard of 3,000 gpm for all commercial and industrial areas, and 1,500 gpm for residential areas, to assure capability to suppress urban fires. In strategic areas, the City should provide above ground water storage with capabilities sufficient to supply the City for required durations.
- Policy 3: The City will maintain a street system that is capable of providing access to any fires that may develop within the urban area, and which is capable of providing for the adequate evacuation of residents in the event of an emergency condition of magnitude.

The following policy related to fire protection is from the City of Lathrop General Plan Seismic Goals and Policies section:

- Policy 3: The present building height limit of 50 feet shall be maintained, with a maximum of four stories. This policy shall stay in force until such time that high-rise construction is desired and capability for evacuation and fire fighting in upper stories is possible through the availability of appropriate equipment.

In order to meet the three- to four-minute standard response time as outlined in the City of Lathrop General Plan, the Fire District will have to expand their number of fire stations and personnel. The Fire District has prepared a Master Plan (2006) to anticipate and prepare for future fire protection requirements. The Master Plan has identified (but not yet located) four proposed stations to provide future fire protection service. The closest proposed fire station to the Plan Area identified in the Fire District Master Plan would be located in the vicinity of D'Arcy Parkway. The City of Lathrop General Plan Map (2008) shows a future fire station site at the northeast corner of Yosemite Avenue and McKinley Avenue, adjacent to the Plan Area. The timing of the construction of these four stations, including the one near the Plan Area will be triggered by new development and will be funded by the Fire Facility Fee Ordinance.

Environmental Impacts and Mitigation Measures

Significance Thresholds

For the purposes of this EIR, impacts on fire protection resources are considered significant if the proposed project would:

- Create a need for the development of new service facilities (e.g., fire, police, schools), the construction of which could result in significant environmental impacts;
- Create circumstances where existing services and facilities could not meet established performance standards (i.e., response times, provider per residents ratios); or
- Substantially impede existing services.

Impact of Project on Fire Protection Services

As discussed above, the Lathrop Gateway Business Park Specific Plan proposes the development of industrial, office commercial and service commercial land uses, all of which would require fire protection services to be provided by the Fire District. The increase in demand for fire protection services could result in the need for additional staff and equipment to maintain current levels of service and standard response times.

The nearest fire stations are located approximately two miles to the north and two miles to the northwest. The Fire District determines appropriate locations for new fire stations using guidelines for maximum travel distance based on fire flow requirements. These guidelines require that areas with high fire flow requirement be no further than $\frac{3}{4}$ mile from an engine company and one mile from a ladder company. Areas with low fire flow requirements should be no more than $\frac{1}{2}$ mile from an engine company and two miles from a ladder company. The Plan Area includes commercial and industrial areas, which have a high fire flow requirement. Since the Plan Area is two miles from the

nearest fire station, response times could be adversely affected and may not meet the Fire District's response time standard of three to four minutes in urban areas. This may require the construction of a fire station closer to the Plan Area to ensure adequate response times. The Fire District Master Plan and the City's General Plan have identified a couple locations just north of the Plan Area for a future fire station. Possibly not meeting the Fire District's response time standard is considered a potentially significant impact, however construction of a new fire station along Yosemite Avenue, somewhere in the area between D'Arcy Parkway and McKinley Avenue would reduce impacts to less than significant levels. Until the future fire station site is constructed, if development within the Plan Area exceeds the Fire District guidelines for response times, this will remain a potentially significant impact.

The Fire District has the authority to ensure that adequate fire flow - including water volume, pressure, and quantity - is maintained within its service area. Minimum fire flow is calculated based on a number of factors, including structure density, height, number of stories, square footage, building materials, and structural design. Generally, industrial/commercial development would have a minimum fire flow requirement of 3,000 gpm. If fire flow is not adequate, fire protection services within the Plan Area could be impacted. It is not known if fire flow would be adequate within the Plan Area. This is considered a potentially significant impact, as new water facilities may need to be constructed or existing water facilities would need to be improved.

According to the Municipal Service Review, capital costs for new fire facilities would be funded through development impact fees (City of Lathrop, 2009). The following mitigation measure would reduce impacts associated with an increased demand on fire protection services in Lathrop by requiring that the applicant pay fees that would go toward the hiring and training of new firefighters and purchase of equipment. With adequate fire staff and facilities, levels of service for fire protection would not be adversely affected by the proposed project. Other mitigation measures would ensure that future development in the Plan Area would have adequate fire protection. In addition, Mitigation Measure 16-1 would require the creation of a special assessment district that would provide adequate funding for area-specific fire services that the Plan Area would receive.

Level of Significance: Potentially significant

Mitigation Measures:

- 16-4. As development proceeds within the Plan Area, the City shall authorize occupancy of new structures only if confirmation of three to four-minute average emergency response times to the structures can be provided using Fire District methodologies. If the required response time cannot be satisfied, the ODS shall coordinate with the Fire District to identify temporary fire prevention measures to allow development to proceed to the satisfaction of the Fire District. In addition, the ODS shall coordinate with the Fire District and identify potential alternative locations along Yosemite Avenue near D'Arcy Parkway, within the Plan Area, for a possible new fire station site.
- 16-5. The ODS shall pay all applicable fire service fees and assessments required to fund its fair share of fire district facilities and services required to serve the Plan Area.

- 16-6: The ODS shall install fire hydrants and water distribution facilities that will provide fire flows that are adequate to support the City's existing ISO rating and that conform to adopted Building Code Fire Safety Standards for all of the uses proposed within the Plan Area.
- 16-7. The City shall not approve any structures in the Plan Area greater than 50 feet in height until the Fire District possesses appropriate equipment that can serve such heights. If site plans includes structures greater than 50 feet, the ODS shall pay fees toward its fair share of this equipment.

Significance After Mitigation: Less than significant

Implementation: The owner, developer or successor-in-interest will be responsible for implementing the mitigation measures.

Monitoring: The Community Development Department, Planning and Building Divisions, will be responsible for ensuring that projects comply with mitigation measures specified in this EIR.

16.3 SOLID WASTE

Environmental Setting

Solid waste generated in the City of Lathrop is collected by Allied Waste Service and hauled to Lovelace Transfer Station, operated by San Joaquin County. From the transfer station, waste is then hauled to Foothill Sanitary Landfill in eastern San Joaquin County, approximately 35 miles northeast of the Plan Area. The landfill is permitted to accept up to 1,500 tons of waste per day and has a remaining estimated capacity of 97,900,000 cubic yards. The facility is expected to remain in operation until 2054.

The City of Lathrop disposed of 8,932 tons of household solid waste in 2005 and 13,398 tons of business solid waste in 2004, for a total of approximately 22,330 tons. Overall, household waste accounts for approximately 40 percent of Lathrop's waste stream, while 60 percent is generated by businesses. The City achieved a diversion rate of 80 percent in 2004, exceeding the State-mandated requirement of 50 percent. The California Integrated Waste Management Board (CIWMB) estimates that the City of Lathrop has a solid waste disposal rate of 4 pounds per resident per day for household waste and 39.8 pounds per employee for business waste.

Regulatory Setting

Volume 40 of the Code of Federal Regulations, Part 258 (Resource Conservation and Recovery Act) contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills.

In 1989, the California Legislature passed AB 939, the Integrated Waste Management Act. AB 939 requires local jurisdictions to reduce the amount of waste sent to landfills by 25% by 1995, and 50% by 2000. As part of AB 939, cities and counties were required to develop a Source Reduction and Recycling Element (SRRE) that demonstrates how the jurisdiction will meet the waste diversion

goals. AB 939 also established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance..

The following policy related to solid waste is from the City of Lathrop General Plan Air Quality and Solid Waste Management Policies section:

- Policy 7: Environmental assessments for the development projects proposed consistent with the General Plan shall provide all of the information required under the “Waste Plan Format for Development Projects” that is employed by the San Joaquin County Department of Public Works.

Environmental Impacts and Mitigation Measures

Significance Thresholds

The analysis of solid waste service impacts is based upon the estimated amount of solid waste Plan Area development is projected to generate. The business waste generation rate of 39.8 pounds per employee per day, provided by the CIWMB, is typical of the City of Lathrop and was used for this analysis. The estimated solid waste was compared to the remaining landfill capacity at the Foothill Sanitary Landfill to determine the project’s impact on that facility.

For the purposes of this EIR, impacts on solid waste resources are considered significant if the proposed project would:

- Substantially impede existing services;
- Generate solid waste beyond the capacity of existing landfills; or
- Violate federal, state, or local statutes and regulations related to solid waste.

Impacts of Project on Solid Waste Generation

The proposed project would develop limited industrial, office/commercial and service commercial uses which would generate employees who would generate solid waste. The CIWMB estimates that within the City of Lathrop, approximately 39.8 pounds of business waste are generated per employee per day. Based on the estimated 6,005 employees at buildout (see Chapter 15.0, Population and Housing), the proposed project would generate 238,999 pounds per day of business waste, or approximately 119.5 tons per day. Assuming the City continues to divert 80% of its solid waste, a minimum of approximately 95.6 tons of solid waste per day from Plan Area development would be recycled. The remaining solid waste, 23.9 tons per day, would go to Foothill Sanitation Landfill.

As discussed earlier, the solid waste in the City of Lathrop is collected by Allied Waste Service and eventually transported to the landfill. According to the CIWMB, Foothill Sanitary Landfill in 2000 had approximately 97,900,000 cubic yards (96 percent) of remaining capacity and an estimated closure date of 2054. Based on this large remaining capacity at the landfill and the fact that the proposed project would comply with all federal, State, and local regulations pertaining to solid waste collection and disposal, the proposed project would not require the construction of new or

improved facilities for solid waste. Therefore, development of proposed uses within the Plan Area would have a less-than-significant impact.

Level of Significance: Less than significant

Mitigation Measures: None required

16.4 SCHOOLS

Environmental Setting

The plan area is located within the service boundaries of the Manteca Unified School District (MUSD). MUSD provides school services for grades K through 12 within the communities of Manteca, Lathrop, Stockton, and French Camp. The district operates 19 elementary schools, four high schools, one continuation school, and two community day schools. According to the California Department of Education's Dataquest database, MUSD had a total enrollment of 23,077 students in 2008-2009, of which 7,111 were high school students. According to the Central Lathrop Specific Plan EIR, the MUSD was operating at or near capacity for its elementary and high schools in 2004 (City of Lathrop, 2004).

Environmental Impacts and Mitigation

Significance Thresholds

For the purposes of this EIR, impacts on schools are considered significant if the proposed project would:

- Create a need for the development of new school facilities, the construction of which could result in significant environmental impacts; or
- Substantially impede or cause a deterioration in existing services.

Impacts of Project on Schools

Impacts on schools generally occur whenever residences are constructed. The Specific Plan proposes industrial and commercial development, and no residential development, therefore, development would not generate any student population. No impact to local schools would occur.

The MUSD funds new facilities with 50% state and 50% local sources. For MUSD, developer impact fees constitute the major source of local funding. Currently, developers are charged \$2.97 per square foot for residential development, and \$0.47 per square foot for commercial development (Karen King, pers. comm., 2010). Since the Plan Area is within the MUSD, future development would be required to pay the development impact fees.

Level of Significance: Less than significant

Mitigation Measures: None required

16.5 PARKS AND RECREATION

Environmental Setting

The City of Lathrop Parks and Recreation Department operates three community parks and nine neighborhood parks within the City. The Parks and Recreation Department also operates a senior center, a community center, a skate park, and a dog park temporarily located at Mossdale Community Park.

The City currently has 68 developed acres of parkland. Based on the City's estimated 2009 population of 17,671, the City did not meet its General Plan parkland requirement of five acres per 1,000 residents, with a parkland deficit of approximately 20 acres. The City is planning to obtain additional parkland using Quimby Act funds.

On a regional scale, the City is located in the Sacramento-San Joaquin Delta (Delta), which contains several recreational areas and facilities, primarily for water-based recreation. Regional County parks near the City include the 9.85-acre Dos Reis Regional Park and the 3.7-acre Mossdale Crossing Regional Park, both located along the San Joaquin River. Mossdale Crossing Park is located near the Plan Area on the west side of Interstate 5. Each of these parks includes boat launch ramps, picnic/barbeque areas, and children's play areas. Dos Reis Regional Park also has camping facilities. Also in the vicinity is the Haven Acres Marina, a private marina located on the San Joaquin River north of Dos Reis Regional Park. This facility provides river access to the San Joaquin River and includes parking areas, a boat ramp, and 10 boat berths.

Regulatory Setting

The Quimby Act was enacted by the State Legislature in 1965 to preserve open space and parkland in the urbanizing areas of the state. It allows cities and counties to establish requirements for new development to dedicate land for parks, pay an in-lieu fee, or combine the two. The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan recreation element if it adopts a parkland dedication/fee ordinance. The City of Lathrop has collected Quimby Act fees since its incorporation.

The Lathrop Bicycle Transportation Plan is a long-range plan for a comprehensive bikeway system in the City. It includes goals, policies and programs and provides direction for the development of new bikeways. The plan proposes that bikeways will be provided as a condition of development throughout the City's General Plan area.

Environmental Impacts and Mitigation

Significance Thresholds

For the purposes of this EIR, impacts on parks and recreation are considered significant if the proposed project would:

- Create a need for the development of new park or recreational facilities, the construction of which could result in significant environmental impacts; or

- Increase the use of existing parks or recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.

Impact of Project on Parks and Recreation

The Specific Plan proposes industrial and commercial land uses, and no residential uses. Therefore, development in the Plan Area would not result in an increase of population, which would generate additional use of or demand for City parks and recreational facilities. It should be noted that the Specific Plan contains some features that would encourage some recreational activities, including a comprehensive plan for bikeways and pedestrian pathways. This plan would be consistent with the provisions of the City's Bicycle Transportation Plan. In addition, future land uses would include some form of open space area for employees. Although no impacts have been identified, future project developers would be required to pay into applicable Quimby Act fees for parks, as required by City regulation.

Level of Significance: Less than significant

Mitigation Measures: None required

16.6 ANIMAL CONTROL

Environmental Setting

The Lathrop Animal Services Department, a department within Administrative Services, provides animal control services in the City. The Animal Services Department rescues stray, abandoned, abused and unwanted animals and picks up stray deceased animals. It also investigates animal cruelty and enforces City and State laws regulating animals, manages rabies control and dog licensing programs, educates the community about animals, operates an adoption program for spayed and neutered animals, and manages a lost and found program. Animal Services handles over 700 animals per year and responds to over 2,000 calls for service per year. Lathrop does not have its own shelter, but contracts with the City of Manteca for shelter services. Funding for these services come from the City's General Fund and from fees for licenses and impoundments.

Animal Services are required to respond to the general public's requests for service on a continual basis. As projects throughout the city build out, additional personnel, vehicles and equipment would be needed to meet these needs. Payment of the City's Capital Facility Fee for the City services would be requested to offset capital needs for animal control.

Environmental Impacts and Mitigation

Significance Thresholds

For the purposes of this EIR, impacts on animal control services are considered significant if the proposed project would:

- Create a need for the development of new animal control facilities, the construction of which could result in significant environmental impacts; or
- Substantially impede existing services.

Impacts of Project on Animal Control Services

At build out, the proposed project is unlikely to create a significant impact on animal control services since the Specific Plan proposes industrial, office and commercial uses, not residential uses. Residential development would generate the greatest demand for animal control services, as many residents would have pets. However, the Plan Area contains several existing residences that would become part of the City of Lathrop upon annexation of the Plan Area. As Plan Area development progresses, existing residences would be removed, thereby reducing, but not eliminating, the main source of demand for animal control services over time. While office, commercial and industrial land uses at full build out may require particular services, such as removal of a wild animal, such occurrences would likely be infrequent. However, until build out of the Plan Area occurs, the existing residences and the introduction on new businesses into a rural setting will have a potentially significant impact on Animal Control services. Level of Significance: Potentially significant

Mitigation Measures:

- 16-8. As identified in Mitigation Measure 16-1, prior to issuance of the first building permit for a project in the Specific Plan area, the ODS shall form a special assessment district that covers the Plan Area and provides adequate funding for the annual cost to provide City services specific to and directly benefiting the Plan Area. Animal Control Services shall be included in this community facilities district or an equivalent funding mechanism. The City and the ODS shall determine the level of funding the special assessment district shall provide.
- 16-9. The ODS shall pay capital facilities fees to defray capital facility costs associated with an animal control facility.

Significance After Mitigation: Less than significant

Implementation: The ODS will be responsible for implementing the mitigation measures.

Monitoring: The Community Development Department, Planning and Building Divisions, will be responsible for ensuring that projects comply with mitigation measures specified in this EIR. The City Department of Finance shall monitor the establishment and operation of the special assessment district.

17.0 PUBLIC UTILITIES

This chapter addresses the potential effects of the Lathrop Gateway Business Park project on the urban utility systems that would provide service to future businesses within the Plan Area. Utility systems subject to analysis include City of Lathrop potable water, wastewater systems including the use of recycled water, storm drainage, and the state-regulated utilities that provide electricity, natural gas and related services. The Specific Plan includes conceptual plans for the extension of these utilities into and through the Plan Area in order to provide required service to the proposed land uses as they are constructed. These facilities would be constructed primarily at the developer's expense; the Specific Plan includes a plan for the financing of these improvements. The analysis of potential project effects on each of the utility systems is provided in the subsequent subsections.

The City of Lathrop General Plan (1991) identifies goals and policies associated with providing water, wastewater, recycled water, electricity, and natural gas to new development. The General Plan provides guidance on the provision of utility services and on eliminating deficiencies and obstacles to the expansion of utility services to adequately serve existing and future development. In addition to the City's General Plan, state legislation ties proposed development to the availability of adequate long-term water supplies to serve the proposed project. These city and state requirements, as they apply to each utility element, are summarized below.

17.1 WATER SUPPLY

ENVIRONMENTAL SETTING

This section describes the water supply that would serve the proposed project in relation to overall water supplies provided by the City of Lathrop. It assesses the expected water demand resulting from the proposed project, evaluates the effects of the proposed project on existing and future water infrastructure, and recommends mitigation measures where appropriate. Information in this section is based on the Water Supply Assessment (WSA) prepared for the Lathrop Gateway Business Park Specific Plan project, the City of Lathrop Urban Water Management Plan (UWMP), the City of Lathrop General Plan, and information from City staff.

Existing Water Sources and Supplies

The City provides potable water to its residents and businesses from two supply sources: (1) groundwater from the City's well field, and (2) surface water from the South County Surface Water Supply Program (SCSWSP) by the South San Joaquin Irrigation District (SSJID).

Groundwater Source

The groundwater basin used by the City is the Eastern San Joaquin Subbasin of the Eastern San Joaquin County Groundwater Basin. The basin is located in the Sacramento-San Joaquin Delta sub-region, a part of the Central Valley aquifer system that occupies most of the large basin in central

California between the Sierra Nevada and the Coast Range mountains.

Prior to surface water supplies becoming available from the SCSWSP, the City relied solely on local groundwater wells to meet municipal and industrial water demands. Currently, four groundwater wells supply potable water to City residents: Well Nos. 6, 7, 8 and 9. Well No. 10 has been drilled and is awaiting improvements and tie-in to the distribution system before being operational. Well No. 21 is not permitted for use as a potable water source by the California Department of Public Health due to the presence of coliform bacteria (Herum Crabtree, 2009). Well No. 21 is located within the Plan Area. Two proposed City well sites (Well Nos. 22 and 23) would be located within the Plan Area. Another proposed well, Well No. 24, will be located outside the boundary of the Plan Area. The additional wells would be constructed when needed to provide water supplies. Private wells supply groundwater for use in agricultural and industrial (manufacturing) operations.

The pumping capacity of the four currently active City wells is approximately 7.4 million gallons per day (mgd). With the completion of Well No. 10, the City would have additional capacity of 1.8 mgd, and an activated Well No. 21 would add another 1.8 mgd. The three proposed wells would add 5.4 mgd of pumping capacity. The City pumped 3,117 acre-feet/year of groundwater in 2008, or approximately 2.8 mgd. Although the 2008 pumping represented an increase greater than 1,000 acre-feet/year from 2007, the general trend in the City's groundwater extraction since 2004 has been downward, with the availability of surface water from SSJID (Herum Crabtree, 2009).

According to the most recent annual water quality report available from the City (March 2009), water from the City's wells meets all state and federal water supply standards, except for one. Sampling of the City's wells indicates that the water exceeds the federal Maximum Contaminant Level for arsenic, which is 10 parts per billion (ppb). The average of the samples from the City's wells was 20.6 ppb, with a range from 17 to 26 ppb. The City is planning to install a treatment system to remove arsenic in wells with levels above the federal standard. In the meantime, the City is supplementing its well water with surface water, which helps lower arsenic levels. The City has determined that water customers are not at immediate risk from the arsenic levels in the water.

Surface Water

The City currently receives surface water from SSJID through the South County Surface Water Supply Project (SCSWSP). SSJID is the owner and operator of the SCSWSP. SSJID's source of supply is the Stanislaus River, based on pre-1914 water rights and post-1914 appropriative water rights for direct diversion to storage. SSJID's water rights are subject to a 1988 Agreement and Stipulation with the United States Bureau of Reclamation regarding New Melones Dam Reservoir operation. The SCSWSP is being constructed in two phases. Phase I of the SCSWSP was completed in July 2005. The initiation of Phase II would occur when the project participants (Escalon, Lathrop, Manteca, and Tracy) request the initiation of Phase II by notifying SSJID. Phase II is scheduled for completion in 2020.

On October 1, 1995, the City signed a Water Supply Development Agreement (Development Agreement) with SSJID as part of the SCSWSP. The Development Agreement extends through 2029 and appropriates potable water to the City. The Development Agreement allots the City a maximum total of 8,007 acre-feet/year and 11,791 acre-feet/year of treated potable water during Phase I and Phase II of the project, respectively. With Phase I completed, the City plans to use its maximum allotment of 8,007 acre-feet/year in 2010. The City's goal is to ultimately obtain most of the City's

water from the Woodward Reservoir treatment plant and to reduce dependence on well water.

Water Treatment

Treatment of water supplies occurs as necessary to meet federal, state, and local standards. The SCSWSP surface water supply is treated at a centralized facility located outside the City of Lathrop, while Lathrop's groundwater extractions are typically treated at the wellhead. As a result, there is not a need for potable water treatment facilities in the Plan Area beyond wellhead treatment facilities.

Water Storage and Distribution

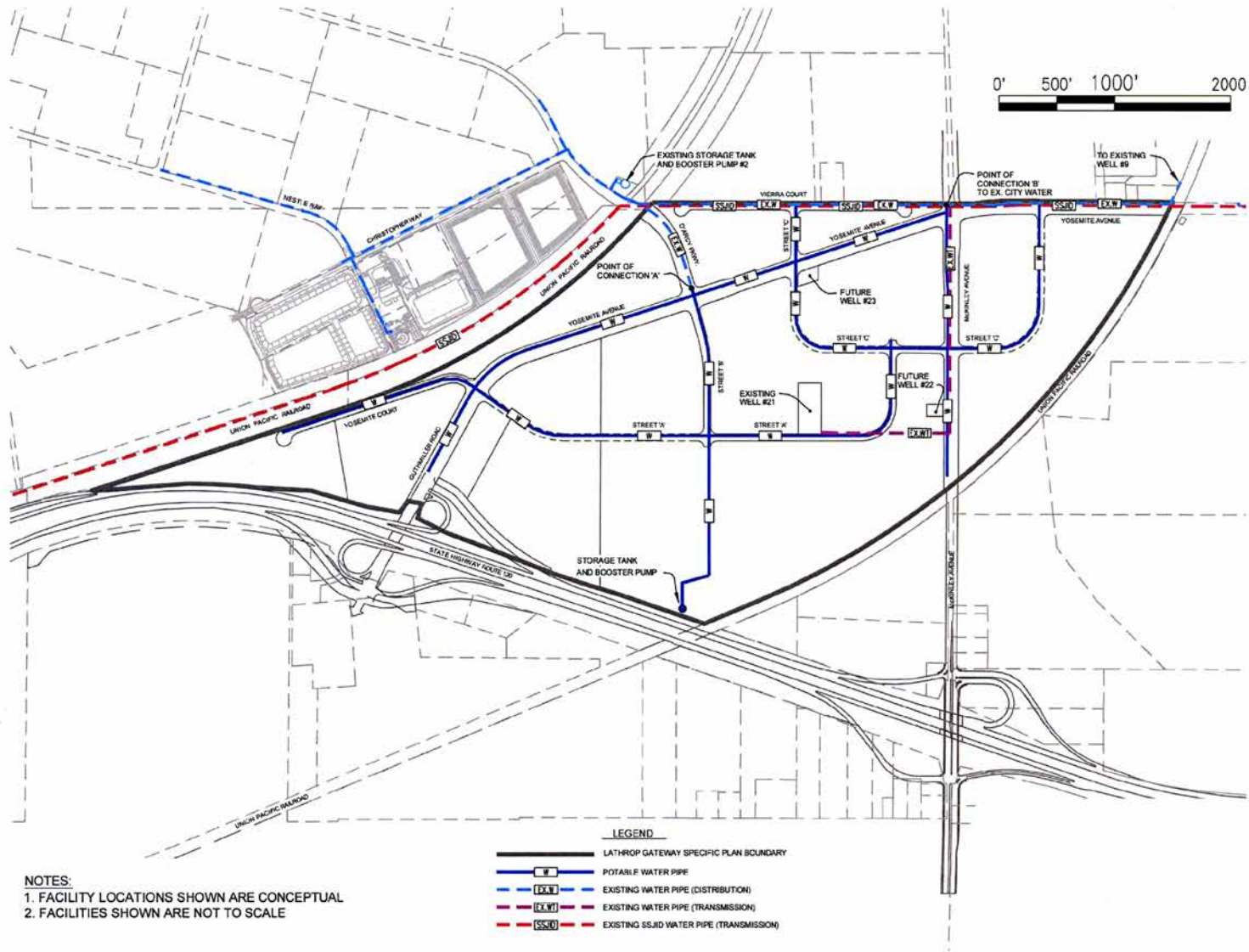
There are no existing water mains located within the Plan Area. Two water lines are located north of the Plan Area, but terminate prior to entering the project boundaries. The first is a 12-inch water main that is located along D'Arcy Parkway and ends at Christopher Avenue. The second line is a 10-inch water main that follows Harlan Road northwest of the project site and terminates about 750 feet north of Howland Road. Figure 17-1 shows both existing and proposed water lines in the Plan Area.

Regulatory Setting

City of Lathrop General Plan

The City General Plan Water Supply Goal is to provide for a secure source of fresh water for existing and future residents of Lathrop and for the reuse of wastewater so that there is no net increase in water pollution, including point and nonpoint sources (Goal 10: Water Supply, Wastewater, and Surface Water Management). In support of this goal, the following City General Plan policies apply to the proposed project:

- Policy 1: The City of Lathrop is the most logical governmental entity to assume management responsibility for water service to the developing urban pattern. Development within the City's three sub-plan areas is to be served by the City under development agreements between the City and project developers.
- Policy 2: Urban development outside the existing city limits shall not be allowed to occur until reasonable certainty is established that additional firm supplies of potable water will be available to meet the needs of urban expansion into perpetuity.
- Policy 3: The Water System Master Plan should provide for the eventual integration of the water well and distribution system serving the existing community with the system(s) needed to serve areas of urban expansion to avoid potential future problems of groundwater quality associated with the existing system.



NOTES:
 1. FACILITY LOCATIONS SHOWN ARE CONCEPTUAL
 2. FACILITIES SHOWN ARE NOT TO SCALE

- LEGEND**
- LATHROP GATEWAY SPECIFIC PLAN BOUNDARY
 - W — POTABLE WATER PIPE
 - EX.W — EXISTING WATER PIPE (DISTRIBUTION)
 - EX.WT — EXISTING WATER PIPE (TRANSMISSION)
 - SSJID — EXISTING SSJID WATER PIPE (TRANSMISSION)



NORTH SOURCE: MACKAY & SOMPS

Figure 17-1
 PUBLIC UTILITIES

- Policy 4: In developing additional groundwater sources to meet requirements for firm water supply, the City will be required to meet State and Federal standards of water quality, including concern for such factors as taste, odor control, color, removal of any unique compounds or minerals identified through water testing, and need for disinfection and/or residual chlorination.

In addition, the following measure under the City General Plan Seismic Goals and Policies applies to water supply for the proposed project:

- Seismic Policy 12: All lines which are part of the domestic water distribution system should be looped to assure adequate pressure in the event of major fire, earthquake or explosion. Emergency standby power generation capability should be available at all water wells to assure water availability in the event of a major power failure.

SB 610

At the state level, Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the Urban Water Management Planning Act, as well as the California Water Code Section 10910 *et seq.* The foundation document for compliance with SB 610 is the Urban Water Management Plan (UWMP), which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well as a Water Supply Assessment (WSA) required under SB 610.

Water Code Section 10910 (c)(4) states “If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.”

Water supply planning under SB 610 requires reviewing and identifying adequate available water supplies necessary to meet the demand generated by a project, as well as the cumulative demand for the general region over the next 20 years, under a broad range of water conditions. This information is typically found in the current UWMP for the project area. SB 610 requires the identification of the public water supplier for a project. The City of Lathrop has been identified in the WSA as the public water supplier to the Lathrop Gateway Business Park.

In addition, SB 610 requires the preparation of a WSA if a project meets the definition of a “Project” under Water Code Section 10912 (a). The code defines a “Project” as meeting any of the following criteria:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;

- A commercial building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A hotel or motel with more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

Alternately, if a public water system has less than 5,000 service connections, the definition of a “Project” includes any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of service connections for the public water system. The proposed project includes more than 650,000 square feet of floor area as part of a proposed industrial park, and therefore, qualifies as a “Project” under Section 10912 (a) of the Water Code. Thus, the City has prepared a WSA as required by these criteria under SB 610. The WSA is included in this EIR as Appendix G.

Environmental Impacts and Mitigation Measures

The analysis in this section focuses on the nature and magnitude of the change in levels of water use compared with existing and projected water use in the Plan Area and the City’s water service area. To determine potential impacts, water demands were estimated from demand projection calculations and quantitative evaluation of data relative to the proposed project, along with existing land uses, approved projects, and proposed development. The primary resources used for this analysis include the following technical documents:

- Water Supply Assessment (WSA) for the Proposed Lathrop Gateway Business Park Specific Plan Project, dated October 2009;
- Water Supply Study (WSS) for the City of Lathrop prepared by RBF Consulting and dated January 2009;
- Municipal Service Review and Sphere of Influence Plan, prepared by RBF Consulting and dated September 2009; and
- Urban Water Management Plan (UWMP) Prepared for the City of Lathrop, prepared by Maddaus Consulting and dated 2000.

Significance Thresholds

According to the CEQA Guidelines, a project may have a significant effect on the environment if it would:

- Require or result in the construction or expansion of water facilities that could cause significant environmental effects; and/or
- Require the development of new water supplies to serve the project.

Water Demand Analysis

Water Code Section 10910 (c)(3) states “If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system’s total projected water supplies available during normal, dry and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system’s existing and planned future uses, including agricultural and manufacturing uses.”

The most accurate projection of demand can be developed using water demand factors based on land use sectors. The expected water use of the proposed project was determined by analyzing each parcel and land use and then assigning a demand factor for each use. To determine the water demand factors of the proposed project, water use demand factors were formulated based on data from a number of water supply planning sources including regional water resources studies, current or historical uses at similar facilities, federal guidelines, personal communications with the State Department of Water Resources, the South San Joaquin Irrigation District, and the City of Lathrop. Table 17-1 shows the estimated average water demand of Specific Plan development at buildout.

TABLE 17-1
PLAN AREA WATER DEMAND BY LAND USE SUMMARY

Land Use	Average Water Demand Factor (gpd)*	Acres	Average Water Demand (gpd)*
Service Commercial	1,500	83.0	124,500
Office Commercial	2,000	58.1	116,200
Limited Industrial	2,000	166.2	332,400
Major Roads	0	56.5	0
Well Site	0	2.9	0
Detention	0	15.6	0
Open Space	0	1.6	0
Total	--	383.9	573,100
Acre-Feet Demand per Year			641.95

* gpd – gallons per day

Sources: Water Supply Assessment (October 2009); Lathrop Gateway Business Park Specific Plan.

Project Impacts on Water Supplies

Potable water would be supplied to the Plan Area by the City of Lathrop. It is anticipated that approximately two-thirds of the water needed for the Lathrop Gateway Business Park project would come from the SCSWSP, with the remainder coming from the expansion of City wells. There is one identified well site within the Plan Area (Well Number 21). There are two planned future well sites in the Plan Area, one located at the southeastern portion of Yosemite Avenue and the other located on the western side of McKinley Avenue between Yosemite Avenue and Highway 120 (Wells Number 22 and 23). Well 21 already exists along with a water treatment facility within the Plan Area. In addition to the potable supply, the proposed project would make maximum use of recycled wastewater for the irrigation of rights of way and other public landscaping.

A water supply study conducted for the City in January 2009 evaluated the City's current and future water demands, including those of the Specific Plan area at buildout, against water supplies to ensure that adequate water is, or will be, available to accommodate development within the City of Lathrop's sphere of influence. Water demand projections through buildout of the City's current sphere of influence area, which includes the Plan Area, is shown in Table 17-2 (Water Supply and Demand During Normal Years).

TABLE 17-2
WATER SUPPLY AND DEMAND DURING NORMAL YEARS (ACRE-FEET/YEAR)

	2005	2010	2015	2020	2025	2030	Build-out
Surface Water	8,007	8,007	8,007	8,007	11,791	11,791	11,791
Groundwater	6,048	6,048	8,064	12,096	12,096	12,096	12,096
Demand	8,026	9,884	14,112	18,043	20,511	20,867	20,980
Difference	+6,029	+4,171	+1,959	+2,060	+3,376	+3,020	+2,907

¹ The City's contract with SSJID expires in 2029. Projected allocations after this date are based on current contract allocations.

² Positive values are supply surpluses.

Source: Municipal Service Review and Sphere of Influence (September 2009).

The WSA evaluated water supply and demand during a single dry year and multiple dry years. The WSA concluded that in the year 2030, the City's water supply would exceed demand in single-year and multiple year droughts by 839 acre-feet/year. This assumed no change in the City's demand during such years.

In order to address long-term issues of water quality in dry years, the City intends to implement Demand Management Measures described in the City's Urban Water Management Plan, adopted in 2009. The City also will require developer-implemented conservation measures as presented in the UWMP. The WSA estimates that such measures would reduce water demand in the City by 20%. This would make more water available during dry years. In addition, the Plan Area proposes to maximize reuse opportunities for recycled water – wastewater treated and disinfected to tertiary levels, the highest level of treatment (see Section 17.2 – Wastewater). The recycled water would be used for irrigation of public landscaping, of which there would be an estimated 11.3 acres in the Plan Area. The use of recycled water would conserve potable water for other uses.

The WSA anticipate an increase in groundwater use by the City. As described in Chapter 13.0, Hydrology and Water Quality, the groundwater subbasin used by the City is in an overdraft situation. However, the WSA indicated that the overdraft problem is not as serious in its southern portion, which includes Lathrop. The “safe yield” – the maximum amount of groundwater that can be extracted regularly without causing adverse impacts to groundwater levels and quality – is estimated to be 1.0 acre-feet/year per acre, according to the 1999 EIR for the SCSWSP. Although the City’s pumping has historically exceeded this safe yield, use of surface water from the SCSWSP would allow the City to pump groundwater within the safe yield (Herum Crabtree, 2009). Therefore, the project would not significantly affect groundwater supplies or quality.

The City’s water supply study and project-specific WSA concluded that, with the combined groundwater and SCSWSP surface water sources, there are adequate water supplies available to serve the proposed Lathrop Gateway Business Park project for various scenarios.

Level of Significance: Less than significant

Mitigation Measures: None required

Project Impacts on Water Supply Infrastructure, Including City Wells and Treatment Facilities

Existing water supply infrastructure from neighboring areas of the Plan Area would be extended and distribution lines from the existing network would serve the various parts of the Plan Area. Installation of the water distribution facilities would occur in concurrent phases with construction of development within the Lathrop Gateway Business Park. Each of the major roadways in the Plan Area will include a water main. These proposed mains form a looped infrastructure water system into which individual parcels will subsequently be connected. The exact size of the infrastructure water mains will be determined through a water model analysis that considers the rest of the City’s water system and pressures necessary to meet fire flow requirements.

According to the City of Lathrop’s Water Master Plan EIR (2001), wells #21, #22, and #23 (and any additional new or replacement wells) would each consist of a well head and pump rated at 1,250 gpm, would each be a maximum of 10 feet tall, and would have a footprint and fenced area ranging from 1.0 to 1.3 acres in size. According to the Water Master Plan EIR, the construction and operation of the planned city wells would potentially result in significant environmental effects in several areas of the environment, but with implementation of recommended mitigation measures all impact areas, except for one would be reduced to less than significant levels. Impacts associated with conversion of farmland would be considered significant and unavoidable. This is the same conclusion made in Chapter 5.0 of this EIR regarding the conversion of farmland as a result of development within the Plan Area, including development of infrastructure to serve the uses within the Plan Area. In accordance with the Water Master Plan, the City prepared a project-level CEQA analysis for the construction of Wells #21-23, and would prepare similar project-level CEQA analyses for future well projects.

The ODS would be responsible for their fair share of infrastructure costs, both on- and off-site improvements for each phase of development within the Plan Area. Under some circumstances, a developer may be asked to oversize or extend infrastructure to serve future developments or phases

within the Plan Area. The initial developer would cover the cost of these facilities and be reimbursed at the time the oversized or extended infrastructure is needed by others. The proposed Lathrop Gateway Business Park project is not anticipated to cause any additional impacts to the City-wide water supply infrastructure beyond those already addressed in the Water Master Plan EIR (2001).

Level of Significance: Less than significant

Mitigation Measures: None required

17.2 WASTEWATER

Environmental Setting

The focus of this section is on the capacity of City systems for collection, conveyance, and treatment of wastewater flows from the Plan Area. Issues associated with local or regional flooding and water quality considerations are evaluated in Chapter 13.0, Hydrology and Water Quality. Information for this section comes from variety of sources, including the preliminary engineering plans for the proposed project, the City of Lathrop Wastewater Collection Master Plan Studies dated November 2004, the City of Lathrop Wastewater Treatment and Disposal Master Plan Studies dated November 2004, and the City of Lathrop Recycled Water Master Plan Studies dated December 2005.

Existing Wastewater Treatment Facilities

Wastewater from the City of Lathrop is currently treated and disposed of at two facilities: a City-owned treatment plant in the Crossroads Commerce Center, and a regional wastewater treatment plant located in the City of Manteca. Most of the wastewater generated in the areas east of Interstate 5 and north of Louise Avenue is conveyed to the Manteca-Lathrop Wastewater Quality Control Facility (WQCF). All of the wastewater generated in the areas west of Interstate 5 and south of Louise Avenue is conveyed to the Water Reclamation Plant No. 1 (WRP-1). Wastewater from a 500-acre commercial and industrial business park, the Crossroads Industrial Park Subdivision, is conveyed and treated at the Crossroads Wastewater Treatment Plant (WWTP), which is part of the WRP-1. Generally, both Crossroads WWTP and WRP-1 are typically referred to as just WRP-1.

The City's original treatment facility (Crossroads WWTP) was constructed in 1996 and is limited by the facility's lot size to a capacity of 0.20 mgd. The existing WRP-1 has a current capacity of 0.75 mgd. The City has plans to increase the treatment capacity to 3.12 mgd, upgrade the treatment technology, and improve operational flexibility of WRP-1. To accommodate anticipated growth, the City plans to construct when needed WRP-2, with a capacity of 3.12 mgd. The City has planned for a total combined treatment capacity at buildout of the sphere of influence of 11.9 mgd. The City's current Waste Discharge Requirement (WDR) permit from the Central Valley Regional Water Quality Control Board (RWQCB) limits the treatment capacity of the City to 6.24 mgd. However, the WDR permit can be negotiated in the future, allowing the City to increase the permitted treatment capacity. The treatment technology described in the WDR permit consists of fine screening, grit removal, flow measurement, influent pumping, influent equalization, emergency storage, nitrification/denitrification activated sludge by means of a membrane bioreactor, ultraviolet

disinfection, and effluent pumping.

Manteca-Lathrop WQCF

The City conveys most of its wastewater to a regional plant in Manteca for treatment and disposal. The City has a contractual relationship with Manteca whereby 14.7 percent of the Manteca-Lathrop WQCF capacity is allocated for Lathrop flows. Currently, City wastewater delivered to the Manteca-Lathrop WQCF is collected from a service area extending from the Southern Pacific Railroad to the east, I-5 to the west, Louise Avenue to the south, and Squires Road to the north. The wastewater is pumped from the O Street lift station through a 12-inch force main to the WQCF.

Treatment at the Manteca-Lathrop WQCF consists of primary sedimentation followed by roughing biotowers and conventional activated sludge. The secondary effluent is disinfected with chlorine, dechlorinated, and discharged to the San Joaquin River. A portion of secondary effluent is not disinfected and is used to irrigate crops on 360 acres of land owned by the City of Manteca and leased during the summer.

The design capacity of the existing Manteca-Lathrop WQCF is 6.95 mgd, providing Lathrop with an available capacity of 1.02 mgd. Flows from Lathrop to Manteca currently average approximately 0.9 mgd. Recently, the WQCF capacity was expanded from 6.95 mgd to 7.50 mgd under the Phase II Expansion, Schedule A project. With completion of the Schedule A project, the available capacity for Lathrop has increased to 1.10 mgd. Upon completion of the balance of the Phase III Expansion Project (Schedules B, C, and D), the WQCF capacity will increase to 9.87 mgd, resulting in an increase for Lathrop's capacity to 1.45 mgd. Beyond Phase III, the City of Manteca has projected a buildout flow for the year 2050 of 22.4 mgd. Lathrop's allotment for the projected buildout design would be 3.8 mgd.

City of Lathrop WRP-1

Approximately 120,000 gallons per day (gpd) of wastewater generated within the City of Lathrop is treated at a City owned and operated plant located south of Louise Avenue. The City's treatment plant was constructed in 1995 and 1996 by the developers of the Crossroads Commerce Center. WRP-1 serves areas west of Interstate 5, including the River Islands, Mossdale Landing, West Central Lathrop, and Stewart Tract developments. A portion of the plant also serves the 500-acre development composed of commercial, warehousing, and light industrial activities within the Crossroads Industrial Park Subdivision. A private contractor, Veolia Water NA, manages the daily operations of the WRP-1. The City has a 20-year agreement with Veolia to perform these services.

The WRP-1 treatment train consists of influent pumping, mechanical screening, grit and grease removal, extended aeration, sedimentation, and chlorine disinfection. Effluent was originally discharged to three 2.4-acre evaporation/percolation ponds for disposal. Solids collected from the mechanical screens, grit, and grease removal processes are hauled to a local landfill for disposal. Waste-activated sludge is dewatered and hauled offsite for landfill disposal.

The WRP-1 was designed to process an average daily flow of 0.6 mgd, the projected flow from the commercial industrial park at buildout. Organic loading, however, assumed typical residential wastewater characteristics. Allowances for doubling the WRP-1 capacity to 1.2 mgd in the event the City should wish to serve a larger area beyond the commercial/industrial park were included in

the initial facility. The trunk sewer pipelines leading to the plant, however, were only designed for the commercial/industrial park's needs of 0.6 mgd. In addition, actual loading to the WRP-1 has been significantly higher than anticipated due to discharges from a major food processing operation (Swiss American Sausage Company) in the industrial park.

In terms of disposal, to meet the average daily design flow of 0.6 mgd, construction of the evaporation/percolation ponds was planned to take place in three phases over 15 years as the service area developed. Three ponds would be constructed in each phase. Initially only the Phase I evaporation/percolation ponds were constructed, limiting the theoretical plant disposal capacity to approximately 0.2 mgd. Actual percolation rates observed in the evaporation/percolation ponds were much lower than originally anticipated. A 1998 geotechnical study of the ponds found that the lower infiltration rates were due to a lower transmissivity of the underlying aquifer than originally reported. The study concluded that the existing ponds could accommodate a maximum discharge of approximately 60,000 gpd, less than one-third of their anticipated capacity. Because this flow was significantly lower than anticipated, the City implemented a remediation project at the plant to increase disposal capacity. The Phase I Remediation Project was completed in 2003 and included construction of three secondary effluent storage ponds and the development of 44 acres of agricultural irrigation sites within the industrial park. These improvements increased the disposal capacity of WRP-1 to 250,000 gpd. However, the WRP-1 has a projected wastewater flow of 5.53 mgd at buildout of development projects west of I-5.

Existing Wastewater Collection System

The existing wastewater collection system is owned and operated by the City of Lathrop. The current collection system is comprised of pipes that range in diameters of 6 inches to 18 inches. Most of the City's existing wastewater is conveyed via gravity sewers and lift stations to a regional pump station. Lift stations are located at Easy Court and J Street. The Easy Court lift station contains two 5-horsepower (hp) pumps and has a capacity of 350 gallons per minute (gpm). The J Street lift station has a capacity of 550 gpm with two 5-hp pumps. The regional facility contains two 47-hp pumps and one 20-hp pump located on O Street west of Halmar Lane. The regional pump station conveys wastewater to a 12-inch force main, which discharges to the Manteca-Lathrop WQCF. Currently the City discharges an average dry weather flow (ADWF) of approximately 0.9 mgd to the Manteca-Lathrop WQCF.

There are currently no public sewage systems in the proposed Plan Area. Existing residences and other development dispose of their wastewater through private septic systems. Figure 3-3 in Chapter 3.0, Project Description, shows the proposed wastewater collection infrastructure for the Plan Area. Wastewater would be treated at the City of Lathrop's WRP-1 and/or future WRP-2. Alternatively, a portion of the Plan Area's wastewater could be routed to the Manteca-Lathrop WQCF located in the City of Manteca, located to the east of the Plan Area.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

For the purposes of this EIR, impacts to wastewater demand are considered significant if the proposed project would:

- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Cause generation of recycled water beyond available disposal capacity.

Estimated Flows and Proposed Improvements

The analysis in this section focuses on the nature and magnitude of the change in levels of capacity to treat wastewater generated from development within the proposed Lathrop Gateway Business Park. The demand for wastewater treatment was calculated for the Plan Area and compared to the available capacity of the Manteca-Lathrop WQCF and Lathrop WRP-1 and/or WRP-2. Wastewater generation factors from engineering consultants for the applicant were used to estimate the total sewer demand from the proposed project (Table 17-3). Proposed Plan Area development would generate approximately 318,891 gpd of wastewater.

TABLE 17-3
ESTIMATED WASTEWATER FLOWS FROM THE
LATHROP GATEWAY BUSINESS PARK

Land Use	Average Sewer Demand Factor (gpd/ac)	Acres	Average Demand (gpd)
Service Commercial	1,200	83.0	99,624
Office/Commercial	1,200	58.1	69,696
Limited Industrial	900	166.2	149,571
Major Road	0	56.5	0
Open Space, Well, Detention	0	20.1	0
Total		383.9	318,891

Note: Water demand based on 2001 Master Plan prepared by Nolte

Recycled Water

The term “recycled water” refers to wastewater that has been treated and purified to tertiary levels. Water treated to this level has been determined by governmental regulations to be acceptable for human contact without cause for concern and is commonly used for irrigation and other purposes. The use of recycled water is regulated by the Regional Water Quality Control Board (RWQCB), which applies stringent water quality, treatment and disinfection standards. Its use for irrigation serves to conserve potable water for other uses. In addition, in the event the potable water supply is limited at any time, such as a “dry year” situation, the use of recycled water ensures a supply for landscaped areas and reduces the likelihood that potable water would be needed for this purpose.

The Lathrop Gateway Business Park Specific Plan proposes to make recycled water available for public irrigation uses. This includes irrigation of landscaped areas within street rights-of-way and landscape corridors and other public facilities. Recycled water not utilized for on-site irrigation

would be piped to two general areas, to be held in ponds or used for sprayfield application. A new recycled water system, consisting of storage ponds, pump stations and distribution system, is being constructed in conjunction with the City's WRP-1 expansion project. Figures 3-4 and 3-5 in Chapter 3.0, Project Description, show the proposed recycled water system.

Ponds and Sprayfields

Recycled water not utilized for on-site irrigation would be routed to off-site ponds or utilized for land application disposal. One or more storage ponds would be required for both daily and seasonal storage of recycled water. It is anticipated that the storage ponds would be constructed partially below and partially above the elevation of the existing ground. This is based on information regarding the depth to groundwater in the area of the off-site ponds and a preliminary estimate of the required storage volume at full buildout. The above-grade portion would likely be constructed with earthen berms not to exceed 12 feet in height. It is expected that the storage ponds would include a synthetic liner to minimize seepage into the ground and possible adverse impacts to groundwater. The required area of the ponds would depend on their depth as well as the amount of recycled water to be stored. The storage volume depends on the amount of recycled water that would be used for irrigation.

As previously mentioned in the Water Supply section, approximately 9 acres of land would require irrigation within the developed portion of the Plan Area. Recycled water would be used for this irrigation, after approval by the RWQCB. Preliminary estimates indicate a minimum overall off-site pond area serving at full buildout of the Plan Area to be approximately 21 acres, which assumes an average pond depth of 14 feet plus two additional feet of freeboard, and assuming 93 acres of off-site irrigated disposal fields. Figure 3-5 in Chapter 3.0 shows the location of ponds and disposal fields in the north Lathrop area previously approved by the RWQCB for the Central Lathrop Specific Plan project, via the City of Lathrop's Report of Waste Discharge (ROWD).

Project Impact on Wastewater Treatment Facilities

The proposed project would increase the amount of developed land uses and population in the City resulting in additional wastewater requiring treatment at the Manteca-Lathrop WQCF, WRP-1 and/or WRP-2 facilities. As shown in Table 17-2, the proposed project would generate an average flow of approximately 318,900 gpd. or approximately 0.32 mgd. The City currently has 1.85 mgd of available wastewater capacity, of which it currently uses 0.9 mgd ADWF.

The City's Wastewater Collection Master Plan, Wastewater Treatment and Disposal Master Plan (prepared in 2000 and updated in 2004) and the 2006 Lathrop 5-Year Plan have identified the requirements anticipated to be necessary for the conveyance and treatment of wastewater. As of the time this document was prepared, all wastewater flows in the City of Lathrop at buildout of the General Plan would be treated at WRP-1, WRP-2, or the Lathrop-Manteca WQCF. However, it is not clearly defined how much wastewater would be allocated to each treatment plant. The City's Wastewater Treatment and Disposal Master Plan has outlined a phased plan to provide treatment capacity for the anticipated buildout condition of the City of Lathrop, whenever it may occur.

Although several disposal options exist, the timing of improvements associated with these facilities is unknown at this time. Construction of WRP-2 would provide sufficient wastewater treatment capacity to serve the Lathrop Gateway Business Park project. However, WRP-2 does not currently

exist, and it cannot be assured that treatment capacity at WRP-2 would be brought into service concurrently with demand generated by the proposed project. In addition, until further phases are constructed at WRP-1, treatment capacity at WRP-1 may not be sufficient to serve the Lathrop Gateway Business Park project and other development in the City. Because sufficient wastewater treatment capacity is not currently available to support the proposed project, this impact is considered significant.

Level of Significance: Significant

Mitigation Measure:

- 17-1. No element of the proposed project shall be occupied until both adequate treatment capacity at WRP-1, WRP-2, Lathrop-Manteca WQCF or another comparable wastewater treatment facility is available and wastewater infrastructure (e.g., pipelines) is in place to serve that portion of the Plan Area.

Significance After Mitigation: Less than significant

Implementation: The ODS will be responsible for providing the City of Lathrop's Public Works Department and Building Division evidence of the availability of treatment capacity for each phase of development within the Plan Area.

Monitoring: The Public Works Department and Building Division will verify the adequacy of the technical information provided by the ODS prior to issuance of building permits.

Project Impact on Wastewater Conveyance Systems

As previously noted, there are no existing sewer lines in the Plan Area. Future development would require the construction or extension of sewer lines into the Plan Area. All backbone sewer infrastructure within the Plan Area would be engineered and constructed according to the City's design criteria for wastewater flows in order to maintain maximum peak flows. The owners, developers and/or successors-in-interest would be responsible for their fair share of infrastructure costs, both on- and off-site improvements for each phase of development within the Plan Area. Under some circumstances, a developer may be asked to oversize or extend infrastructure to serve future developments or phases. The initial developer would cover the cost of these facilities and be reimbursed at the time the oversized or extended infrastructure is needed by others. The proposed Lathrop Gateway Business Park project is not anticipated to cause any adverse impacts to the City-wide wastewater conveyance systems infrastructure beyond those already addressed in the Water Master Plan EIR (2001).

As previously noted, current wastewater disposal in the Plan Area is limited to private septic systems used by existing residences and other development. Since future development in the Plan Area would be connected to the City's wastewater system, the septic systems would no longer be used. In a comment letter on the NOP, the San Joaquin County Environmental Health Department recommends all existing septic systems be destroyed as part of developing the Plan Area and connecting to public sewer. An additional comment letter was received with similar concerns about the affect the proposed project would have on existing septic systems located within the Plan Area. Since leaving septic systems in place could have adverse impacts such as soil and water

contamination, this would be a potentially significant impact if the existing septic systems were not removed prior to development associated with the Specific Plan uses.

Level of Significance: Potentially Significant

Mitigation Measure:

17-2. The ODS shall remove existing septic systems prior to development of the parcel in which the septic system is located. Removal shall be in accordance with the rules and regulations of the San Joaquin County Environmental Health Department.

Significance After Mitigation: Less than significant

Implementation: The ODS will be responsible for implementing the mitigation measures.

Monitoring: The City Public Works Department and Building Division will verify compliance with the sewer line mitigation measure.

Project Impact from Recycled Water Generation

The term "recycled water" refers to wastewater that has been treated and purified to tertiary levels. Water treated to this level has been determined by governmental regulations to be acceptable for human contact without cause for concern and is commonly used for irrigation and other purposes to conserve potable water for other uses. The proposed project would make recycled water available for public irrigation uses. This includes irrigation of landscaped areas within street rights-of-way and landscape corridors and other public facilities. As previously discussed, the proposed project would generate approximately 0.32 mgd of wastewater. The Specific Plan proposes the use of recycled water for irrigation of landscaping. Based on 9 acres of landscaping (see Water Supply section) and the use of a Basic Water Budget Calculator developed by the Irrigation Water Management Society, landscaping in the Plan Area would require approximately 686,383 cubic feet of water per year (April-September), or approximately 15.8 acre-feet. By comparison, the Plan Area at buildout would generate approximately 358 acre-feet of wastewater per year; thus approximately 342 acre-feet of recycled water would need to be disposed of off-site. This additional 342 acre-feet of water would increase the demand for recycled water storage and disposal areas. Since adequate storage and disposal areas are available to accommodate the quality of recycled water to be generated by buildout within the Plan Area, any impact associated with meeting this demand is considered to be less than significant.

Off-site storage (basins) and disposal fields located in the north Lathrop area were approved with previous CEQA documents. See Chapter 1.0, Section 1.3, "Related Projects" for discussions regarding the project and type of CEQA documents that addressed and mitigated impacts to a city-wide recycled water storage and disposal system.

Level of Significance: Less than significant

Mitigation Measures: None required

17.3 ELECTRICITY AND NATURAL GAS

This section describes the existing distribution system for electricity and natural gas in the Lathrop Gateway Business Park Specific Plan area. This section also estimates energy consumption for the proposed project and describes service delivery effects of projected demands. Existing plans and policies relevant to electricity and natural gas are provided. This section also addresses Appendix F of the CEQA Guidelines, which requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on measures to avoid or reduce the inefficient, wasteful, or unnecessary consumption of energy. Information for this analysis was obtained from the City of Lathrop General Plan and the Pacific Gas and Electric Company (PG&E).

ENVIRONMENTAL SETTING

Electricity

Regional Energy Supplies

In the 2005 Energy Policy Report, the California Energy Commission indicated that as the State's demand for electricity increases, California could face severe shortages in the next few years. Of particular concern are the potential impacts of higher-than-average summer temperatures, which can drastically increase the State's electricity demand, as well as shortages resulting from decreased hydroelectric generation in lower-than-average precipitation years. Either of these situations could cause dangerously low reserve margins and potential supply disruptions, particularly in southern California. Reserve margins could also be affected by the retirement of aging natural gas-fired power plants, which remain critical components of California's generation fleet, despite strong policy directives to diversify the State's electricity supplies.

The 2005 Energy Report assessment of electricity supply and demand concludes that maintaining adequate electricity reserves will be difficult over the next few years. The State has made some progress toward resource adequacy for investor-owned utilities by requiring them to maintain year-round, 15 to 17 percent reserve margins. Jurisdictional authority over other load-serving entities is less clear. Until recently, there was no formal mechanism to ensure resource adequacy for publicly owned utilities, which provide up to 30 percent of the State's electricity. In September 2005, the Legislature passed and the Governor signed AB 380, which extends jurisdiction over independent load serving entities and requires publicly owned utilities to report their respective supply circumstances to the Energy Commission so that their resource adequacy progress can be accurately assessed.

The lack of long-term power contracts has stalled development and construction of more than 7,000 megawatts (MW) of permitted plants and sharply curtailed the number of new permit applications. California's dependence on natural gas to generate electricity is also increasing as utilities continue to purchase power from the state's aging stock of natural gas-fired power plants under short-term contracts.

Reducing the demand for energy is the most effective way to conserve energy. Reducing demand also reduces the likelihood of supply shortages that can affect reliability. While California will continue to depend upon petroleum fuels and natural gas to meet its energy needs for the foreseeable future, the use of various energy efficiency measures and renewable resources are top priorities in California's electricity policy.

Demand response programs are the most promising and cost-effective options for reducing peak demand on California's electricity system. The California Public Utilities Commission (CPUC) is currently considering proposals from the investor-owned utilities to purchase and install advanced meters for all their customers. New metering technology is the primary platform for future voluntary and mandatory demand response policies.

Lastly, California's energy infrastructure may be unable to meet the State's energy delivery needs in the near future. The most critical infrastructure issue is the State's electricity transmission system, which has become progressively stressed in recent years. The systematic under-investment in transmission infrastructure is reducing system reliability and increasing operational costs.

Local Energy Supplies and Programs

Electrical service would be provided to the proposed Plan Area by PG&E. PG&E is responsible for the transmission and distribution of electricity to much of northern and central California, serving approximately 15 million people throughout a 70,000 square mile service area from Eureka to Bakersfield. PG&E maintains 123,054 circuit miles of electric distribution lines and 18,610 circuit miles of interconnected transmission lines. PG&E generates power from many hydroelectric powerhouses, a nuclear power plant, and a few small fossil-fired power plants. The company also buys electricity from independent power producers. Their generation sources can range from large fossil power plants to smaller renewable and cogeneration plants.

Existing Facilities

High-voltage, 115-kilovolt (kV) power lines within PG&E power line easements traverse a portion of the Plan Area, running east/west into the site across the Union Pacific Railroad lines. Power lines also run north/south in the Plan Area from the southern portion of the site to Vierra Road, where it turns east and terminates less than a half-mile along the northern Plan Area at an existing electrical substation. Local distribution lines serving residences and businesses are located in the Plan Area and vicinity.

Natural Gas

Regional Gas Supplies

The 2003 Energy Report recommended that the state reduce its natural gas demand by increasing funding for natural gas efficiency programs. California has made progress in this area. The recently enacted SB 1037 requires gas utilities to first meet their unmet resource needs with all available energy efficiency and demand reduction resources that are cost-effective, reliable, and feasible. Another way to increase natural gas efficiency is to increase the role of combined heat and power facilities as a way to meet California's rising electricity supply needs.

In the natural gas sector, California has made infrastructure improvements that will increase the reliability and operational flexibility of the natural gas system, but must still address the need for additional pipeline capacity to meet peak demand. California has improved its natural gas infrastructure by increasing intrastate pipeline capacity and in-state storage. Pipeline expansions completed over the last four years have also helped ensure that the state can access conventional natural gas supply basins outside of the State.

Local Gas Supplies

Natural gas service would be provided to the Plan Area by PG&E. PG&E is responsible for the transmission and distribution of gas to much of northern and central California, serving approximately 15 million people throughout a 70,000 square mile service area from Eureka to Bakersfield. Gas is derived from sources in California; Canada; the Permian, San Juan, and Anadarko Basins in the southwestern states; and from the Rocky Mountain region.

Existing Facilities

The Plan Area ties into existing natural gas lines located in portions of the existing Yosemite Avenue right-of-way. There are no known natural gas wells in the Plan Area.

Regulatory Setting

The Federal Energy Regulatory Commission regulates the transmission and sale of electricity in interstate commerce, licenses hydroelectric projects, and has oversight of related environmental matters.

The CPUC sets forth specific rules that relate to the design, installation, and management of California's public utilities, including electric, natural gas, water and transportation, and telecommunications. CPUC Decisions #77187 and #78500 state that utilities must be underground if the developable lots are less than three acres in size. A formal waiver from the CPUC is required for an exemption from complying with these decisions.

The City of Lathrop General Plan identifies several strategies for energy conservation. Conservation standards established by the California Energy Commission and contained in Title 24 of the California Code of Regulations identify specifications relating to insulation, glazing, heating and cooling systems, water heaters, swimming pool heaters, and several other items. There are additional measures that may further reduce heating, cooling, and lighting loads, and overall energy consumption. While it is not suggested that all possible conservation features be included in every development, there are often a number of economically feasible measures that may result in energy savings in excess of the minimum required by Title 24.

The City of Lathrop General Plan also requires all gas and electrical distribution lines to be placed underground. If overhead transmission line right-of-ways are required, they should be incorporated into open space corridors to minimize their visual impacts on the urban environment.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

To determine whether implementation of the proposed project would result in impacts on electricity and natural gas supplies, the projected increase in energy demand for each utility was analyzed and calculated using a per-square-foot consumption rate. Table 17-4 and Table 17-5 provide electricity and natural gas demand associated with the proposed project.

Significance Thresholds

For the purposes of this EIR, impacts are considered significant if the proposed project would:

- Create demand for electrical or natural gas service that is substantial in relation to existing demands.

TABLE 17-4

ELECTRICITY DEMAND FOR LATHROP GATEWAY BUSINESS PARK SPECIFIC PLAN

Land Use	Max. Square Feet (sf)	Demand Factor (kW-h/day) ¹	Estimated Electrical Demand (kW-h/day)
Office/Commercial	759,251	0.037 per sf	28,092
Service Commercial	1,554,844	0.037 per sf	57,529
Limited Industrial	3,112,684	0.037 per sf	115,169
Total	5,426,779		200,791 kW-h/day

Notes:

Figures do not equal total due to rounding.

¹ Based on the CEQA Air Quality Handbook, South Coast Air Quality Management District, April 1993.

TABLE 17-5

NATURAL GAS DEMAND FOR LATHROP GATEWAY BUSINESS PARK SPECIFIC PLAN

Land Use	Square Feet (sf)	Demand Factor (cubic ft/day) ¹	Estimated Natural Gas Demand (cubic ft/day)
Office/Commercial	759,251	0.097 per sf	73,647
Service Commercial	1,554,844	0.097 per sf	150,820
Limited Industrial	3,112,684	0.097 per sf	301,930
Total	5,426,779		526,398 cubic ft/day

Notes:

Figures do not equal total due to rounding.

¹ Based on the CEQA Air Quality Handbook, South Coast Air Quality Management District, April 1993.

Project Impact on Electrical Service

The Lathrop Gateway Business Park Specific Plan would entail the development of office, commercial, and industrial uses that would create a demand for electricity greater than currently experienced. Using the electricity generation rates in Table 17-3, the estimated electricity demand resulting from the proposed project would be 200,791 kilowatt-hours per day.

As discussed in the Environmental Setting, high-voltage, 115-kV power lines currently traverse a portion of the Plan Area. Electricity from these power lines is distributed to main electrical feeder lines in the vicinity of the project area. Commercial parking would occur under the lines with appropriate separations between buildings and other facilities with power lines.

It is anticipated that all existing overhead power lines 60Kv and under would be relocated or be placed underground as the Lathrop Gateway Business Park develops. A limited number of existing overhead lines, poles, and towers greater than 60Kv would be relocated or placed underground. New power lines constructed to serve the Plan Area, as well as all other utilities, would be installed underground. Electricity would be provided in a timely manner to serve each phase of the project as needed. Development would be responsible for the installation of new electrical lines in the Plan Area, and for the relocation or undergrounding of existing lines.

The energy demands created by the proposed project are not substantial in relation to the total amount of energy supplied by PG&E in its northern and central California service area. In 2000, 81,923 million kilowatts per day of electricity usage was recorded. Therefore, the proposed project would not create a substantial demand in relation to existing demands, and infrastructure would be built as part of the proposed project buildout.

Implementation of Title 24, as encouraged by the Lathrop General Plan, would reduce impacts associated with an increased demand for electricity by implementing energy efficiency standards for non-residential buildings. Recently, the State has adopted a part of Title 24 called the California Green Building Code. The Green Building Code contains specifications for the construction of buildings designed to reduce impacts on the environment. Chapter 5 contains energy efficiency standards. Because future development would be designed in such a way as to conserve energy to the maximum extent feasible and because there is adequate electrical supply, impacts on electrical resources resulting from the proposed project are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Project Impact on Natural Gas Supplies

The Specific Plan would entail the development of office, commercial, and industrial uses that would create a demand for natural gas greater than currently experienced. Using natural gas usage rates in Table 17-4, the estimated natural gas demand resulting from the proposed project would be 526,398 cubic feet per day.

The Plan Area contains existing natural gas lines in portions of the Yosemite right-of-way. New natural gas lines constructed as a result of the proposed project would connect to this existing line.

The new infrastructure would be constructed as part of developments within the Lathrop Gateway Business Park. Development would be responsible for the installation of new gas lines in the Plan Area.

The natural gas demands created by the project are not substantial in relation to the total amount of energy supplied by PG&E in its northern and central California service area. In 2000, 9,142,423 therms per day of natural gas were recorded. The project's natural gas demand would be approximately 5,264 therms per day, or 0.06 percent of the total volume recorded in the year 2000. Therefore, the proposed project would not create a substantial demand in relation to existing demand.

Similar to conservation efforts for electricity usage, implementation of Title 24, including the California Green Building Code, would reduce impacts associated with an increased demand for natural gas by implementing energy efficient standards for non-residential buildings. Because the proposed project would be designed in such a way as to conserve energy to the maximum extent feasible and because there is adequate natural gas supply, impacts to natural gas resources resulting from the proposed project would be considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

18.0 TRANSPORTATION/CIRCULATION

INTRODUCTION

This chapter addresses the potential traffic impacts of the proposed project. The chapter is based on the Lathrop Gateway Business Park Specific Plan Transportation Impact Study, prepared by Wood Rodgers, Inc. (2010). Appendix F contains the Wood Rodgers report, with its analysis assumptions, existing traffic data and analysis data sheets. The Transportation Impact Study was prepared as part of and in support of this EIR, consistent with CEQA requirements. The basis of the analysis in the study was full buildout of the project, as described in the draft Specific Plan.

The Transportation Impact Study focused on traffic operating conditions at key off-site intersections and roadway segments (Figure 18-1) located in the project vicinity, under existing, short-term future and long-term future conditions, both with and without the proposed project. It addressed the traffic impacts of the project and proposed necessary mitigation measures for the following scenarios:

- Existing traffic conditions
- Existing Plus Project (Year 2012/Phase 1) conditions
- Cumulative (Year 2030) traffic conditions
- Cumulative Plus Project conditions

This chapter discusses Existing traffic conditions and analyzes the impacts of Existing plus Project conditions, which describes conditions associated with expected near-term project development. Cumulative traffic conditions and cumulative impacts of the project (under buildout conditions) on transportation are discussed in Chapter 19.0, Cumulative Impacts.

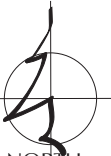
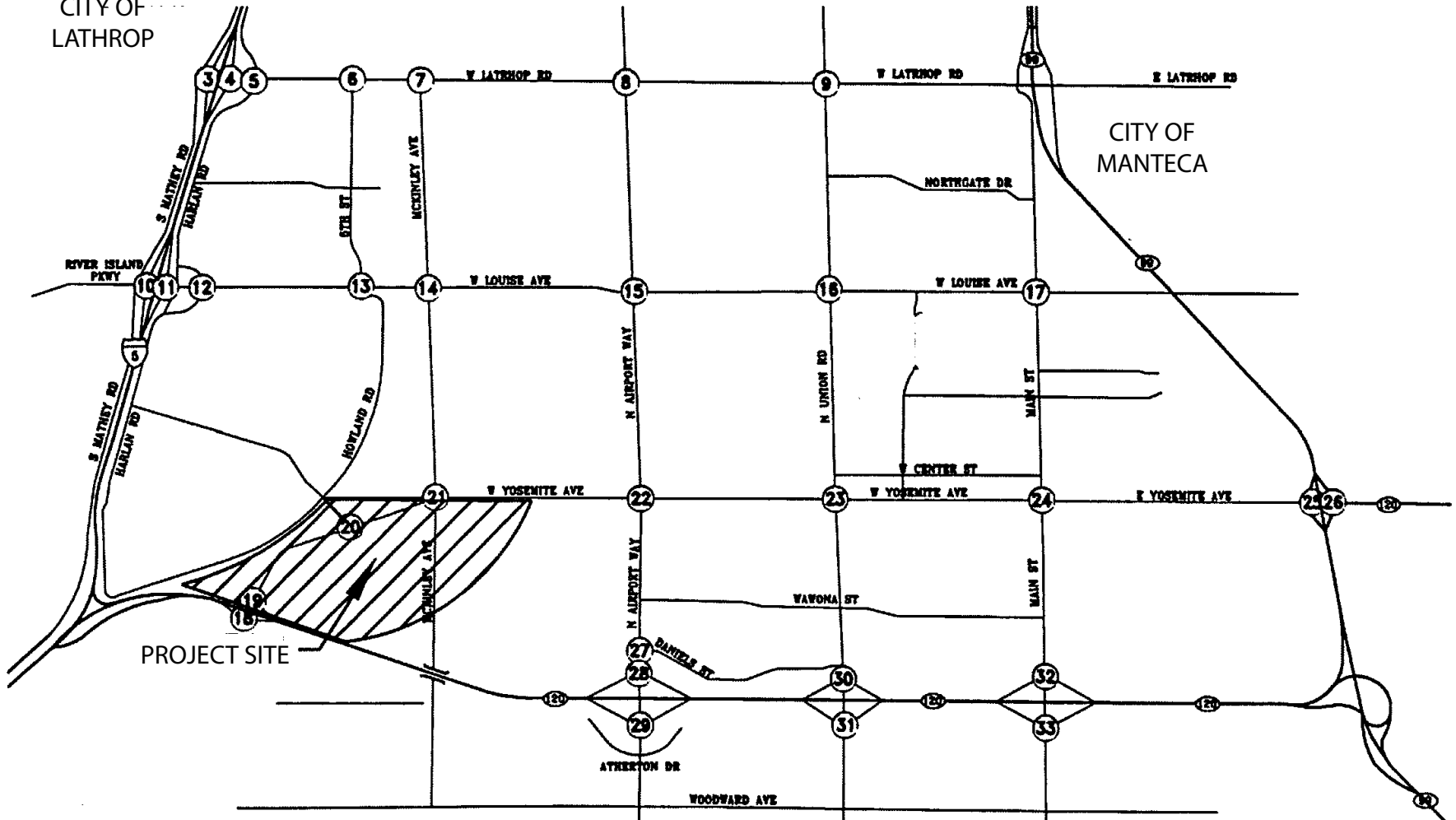
ENVIRONMENTAL SETTING

Existing Transportation Systems

The City of Lathrop is located in San Joaquin County, within the Central Valley region of California. It is regionally located adjacent to and west of the City of Manteca, south of the City of Stockton, and northeast of the City of Tracy. The project site is located in an unincorporated area southeast of Lathrop, bounded on two sides by freeways – Interstate 5 (I-5) and State Route 120 (SR 120). Other local roads are located on or provide access to the project site. Figure 18-1 depicts the intersections and roadways analyzed in the Transportation Impact Study.

CITY OF LATHROP

CITY OF MANTECA



NORTH SOURCE: WOOD RODGERS

INSITE ENVIRONMENTAL, INC.

Figure 18-1
TRAFFIC STUDY AREA

Roadways that currently provide access in or to the project site are as follows:

State Route 120 (SR 120) is an east-west state highway connecting the cities of Lathrop and Manteca. It borders the southern portion of the project site. The westerly segment of SR 120 provides a regional connection between I-5 and SR 99. East of SR 99, SR 120 is generally a two-lane undivided highway through Stanislaus and Tuolumne Counties to Yosemite National Park. In the project vicinity, SR 120 is a four-lane divided freeway and has full-access diamond interchanges with Yosemite Avenue/Guthmiller Road, Airport Way, Union Road and Main Street. Based on Caltrans 2008 annual average daily traffic (AADT) data, SR 120 carries an AADT of 77,000 vehicles per day west of the Yosemite Avenue interchange, 63,000 vehicles per day between Yosemite Avenue and Airport Way, 61,000 between Airport Way and Main Street, and 70,000 between Main Street and the SR 99 interchange. Per Caltrans 2008 truck AADT data, approximately 18% of vehicle traffic on the SR 120 segment east of I-5 is trucks. On the segment between the south and north junctions with SR 99, approximately 6% of all traffic is trucks.

Yosemite Avenue/Guthmiller Road is generally a two- to five-lane, east-west roadway that runs across the center of the project site, connecting with SR 120 to the west and SR 99 to the east. Yosemite Avenue has full-access diamond interchanges with SR 120 and SR 99. West Yosemite Avenue is a two-lane roadway from the SR 120/Guthmiller Road interchange to D'Arcy Parkway, a three- to four-lane roadway between D'Arcy Parkway and Airport Way, and a five-lane roadway east of Airport Way. The two-lane segment of Yosemite Avenue is provided with wide shoulders, but does not currently have curb or sidewalks. Approximately 1,500 feet east of the McKinley Avenue intersection, Yosemite Avenue provides an at-grade crossing of the Union Pacific railroad. Driveways access Yosemite Avenue from a number of industrial/warehouse developments located throughout the area. Yosemite Avenue would be the key roadway supporting local circulation within and through the project site.

McKinley Avenue is a north-south local roadway that provides access to/through the project site. McKinley Avenue connects with Lathrop Road to the north and East Woodward Avenue to the south, traversing SR 120 via an existing undercrossing. The SR 120/McKinley Avenue location is planned for a future full-access interchange. Through the project site and vicinity, McKinley Avenue is a two-lane road with limited shoulders.

D'Arcy Parkway is a two- to four-lane, north-south roadway providing a connection between Harlan Road and Yosemite Avenue. The project proposes to obtain driveway access at the D'Arcy Parkway/Yosemite Avenue intersection. The intersection currently operates as a three-legged signalized intersection and would be modified with addition of a project access driveway as the south leg.

Vierra Road is a two-lane east-west roadway providing access to Yosemite Avenue and McKinley Avenue.

Other roadways do not directly serve the project site but would likely experience impacts generated by project traffic. They include the following:

Interstate 5 (I-5) is a major interregional north-south freeway facility of statewide importance that traverses the entire length of California. Near the proposed project site, I-5 serves as a link

connecting the Sacramento/Stockton urban region to Tracy and other parts of the San Francisco Bay Area. I-5 is extensively used by commuters and for goods movement within and through San Joaquin County. I-5 is generally a six-lane divided freeway through Lathrop. Within the Transportation Impact Study area, I-5 forms three interchanges with local arterials— Louise Avenue, Lathrop Road and Roth Road. Per 2008 Caltrans AADT data, I-5 carries approximately 152,000 vehicles per day southwest of the SR 120 junction, 100,000 vehicles per day between SR 120 and the Lathrop Road interchange, 96,000 vehicles per day between Lathrop Road and the French Camp Road interchange, and 100,000 vehicles per day north of the French Camp Road interchange. The I-5/Louise Avenue interchange is expected to provide regional commuter/truck access to and from the project site. Per Caltrans 2007 truck AADT data, the daily percentage of traffic on the I-5 segment between the SR 120 interchange and the French Camp Road interchange that is trucks is 26%.

State Route 99 (SR 99) is a north-south state highway of interregional significance that is located approximately 3 miles east of the project site. SR 99 is a Central Valley freeway that connects with the Sacramento metropolitan region to the north and the Bakersfield area to the south. SR 99 shares a common segment of approximately one mile with SR 120 east of the City of Manteca. SR 99 is generally a four-lane divided freeway through the City of Manteca. Based on Caltrans 2008 AADT data, SR 99 currently carries an AADT of approximately 88,000 vehicles per day north of the SR 120 interchange, and 70,000 vehicles per day north of the East Yosemite Avenue interchange. Per Caltrans 2007 truck data, approximately 13.5% of the SR 99 traffic north of the Yosemite Avenue interchange and 14.8% of the traffic south of the Yosemite Avenue interchange is trucks.

Louise Avenue is a two- to four-lane, east-west roadway that traverses the central portion of the City of Manteca. It has a full-access diamond interchange with I-5 to the west in the City of Lathrop. West of I-5, Louise Avenue continues as River Island Parkway, which serves recent development in that portion of Lathrop.

Lathrop Road is generally a two-lane, east-west roadway with a median left turn lane. It connects the cities of Lathrop and Manteca, north of the Louise Avenue corridor. Lathrop Road has full-access interchanges with I-5 on the west and with SR 99 on the east.

Roth Road is a two-lane, east-west roadway extending from I-5 to the west to Airport Way to the east, north of the Sharpe Army Depot and Union Pacific Railroad distribution facility. Roth Road forms a full-access diamond interchange with I-5 north of the study area.

Airport Way is a two-lane, north-south roadway with a center left turn lane. It serves western Manteca. Airport Way extends from the City of Stockton to the north to Kasson Road to the south. Airport Way has a full-access diamond interchange with SR 120 approximately one mile east of the project site.

Union Road is a two- to four-lane, north-south roadway that connects SR 120 to the south with Lathrop Road to the north, crossing central Manteca. Union Road has a full-access diamond interchange with SR 120. South of SR 120, Union Road goes through County lands.

Main Street is a two- to four-lane, north-south roadway that provides access to central Manteca. Main Street has a full-access diamond interchange with SR 120 on the south, and connects to SR 99 near the SR 99/Lathrop Road interchange to the north.

Howland Road is a two-lane, north-south local roadway providing a connection between D'Arcy Parkway and Louise Avenue. Howland Road continues north of Louise Avenue as 5th Street.

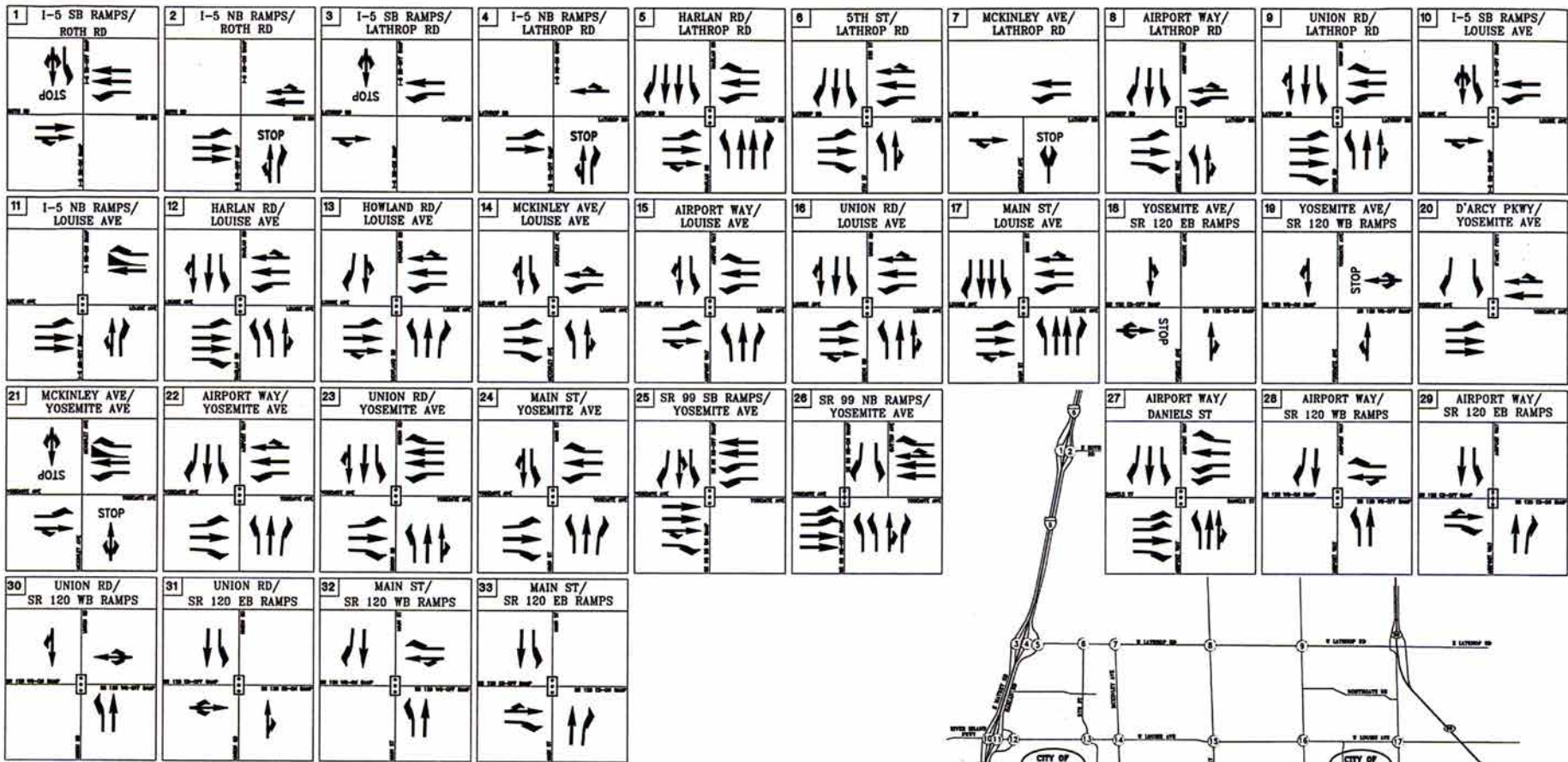
Existing Traffic Volumes

Existing AM and PM peak hour intersection traffic counts for all study intersections were obtained from the preliminary traffic study for the former *South Lathrop Specific Plan ADEIR*, dated March 2008. The traffic counts were originally collected in January 2008. The AM peak hour is defined as the highest one hour of traffic flow counted between 6:30 AM and 8:30 AM on a typical weekday, and the PM peak hour is defined as the highest one hour of traffic flow counted between 4:00 PM and 6:00 PM on a typical weekday. Existing annual average traffic counts on all study area highway/freeway facilities were obtained from Caltrans' 2008 traffic count data publications. Existing intersection lane geometrics and traffic controls are shown in Figure 18-2.

Existing Traffic Operations

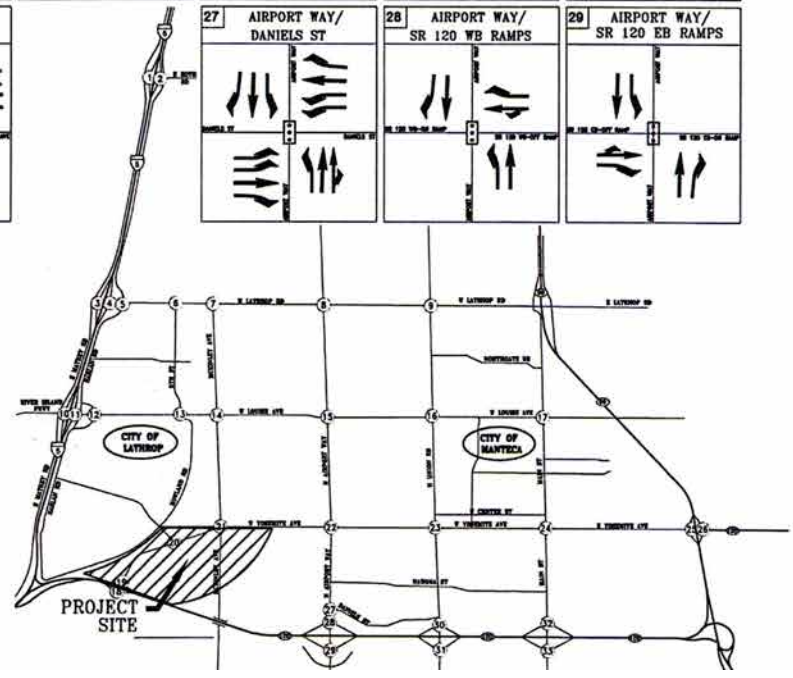
Traffic operations have been quantified through the determination of "Level of Service" (LOS). LOS is a qualitative measure of traffic operating conditions, whereby a letter grade "A" through "F" is assigned to an intersection or roadway segment, representing progressively worsening traffic operations. LOS has been calculated for all intersection control types using methods documented in the Transportation Research Board publication *Highway Capacity Manual, Fourth Edition, 2000* (HCM-2000). For two-way-stop-controlled (TWSC) intersections, both average and the "worst-case" movement delays and LOS have been computed and reported based on HCM-2000. For signalized and all-way-stop-controlled (AWSC) intersections, the intersection delays and LOS reported are the average values for the whole intersection, computed based on HCM-2000.

The delay-based HCM-2000 LOS criteria for different types of intersection controls are outlined in Table 18-1. The roadway segment LOS thresholds, which use the annual average daily traffic (AADT) and are based upon HCM methodologies, are shown in Table 18-2. The delay-based LOS criteria and other details related to the study methodology are described in the Transportation Impact Study found in Appendix F.



LEGEND:

- TRAFFIC SIGNAL
- STOP STOP SIGN CONTROLLED MOVEMENT
- FREE RIGHT TURN
- STUDY INTERSECTION



NORTH SOURCE: WOOD RODGERS

TABLE 18-1
LEVEL OF SERVICE DEFINITIONS AND CRITERIA FOR INTERSECTIONS

Level of Service	Flow Type	Operational Characteristics	Intersection Control Delay (seconds/vehicle)	
			Signal Control	2-Way-Stop or All-Way Stop Control
A	Stable Flow	Free-flow conditions with negligible to minimal delays. Excellent progression with most vehicles arriving during the green phase and not having to stop at all. Nearly all drivers find freedom of operation.	≤ 10	0-10
B	Stable Flow	Good progression with slight delays. Short cycle-lengths typical. Relatively more vehicles stop than under LOS "A". Vehicle platoons are formed. Drivers begin to feel somewhat restricted within groups of vehicles.	> 10-20	> 10-15
C	Stable Flow	Relatively higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant, although many still pass through without stopping. Most drivers feel somewhat restricted.	> 20-35	> 15-25
D	Approaching Unstable Flow	Somewhat congested conditions. Longer but tolerable delays may result from unfavorable progression, long cycle lengths, and/or high volume-to-capacity ratios. Many vehicles are stopped. Individual cycle failures may be noticeable. Drivers feel restricted during short periods due to temporary back-ups.	> 35-55	> 25-35
E	Unstable Flow	Congested conditions. Significant delays result from poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures occur frequently. There are typically long queues of vehicles waiting upstream of the intersection. Driver maneuverability is very restricted.	> 55-80	> 35-50
F	Forced Flow	Jammed or gridlock type operating conditions. Generally considered to be unacceptable for most drivers. Zero or very poor progression, with over-saturation or high volume-to-capacity ratios. Several individual cycle failures occur. Queue spillovers from other locations restrict or prevent movement.	> 80	> 50

Source: HCM-2000, Exhibits 16-2, 17-2 and 17-22

TABLE 18-2
LEVEL OF SERVICE (LOS) CRITERIA FOR ROADWAY SEGMENTS

Roadway Segment Type	Total Two-Way Average Daily Traffic (ADT)				
	LOS A	LOS B	LOS C	LOS D	LOS E
10-Lane Divided Freeway	70,000	100,400	137,200	162,800	174,000
8-Lane Divided Freeway	56,000	86,400	123,200	148,800	160,000
6-Lane Divided Freeway	42,000	64,800	92,400	111,600	120,000
4-Lane Divided Freeway	28,000	43,200	61,600	74,400	80,000
6-Lane Divided Expressway (w/ left-turn lanes)	35,500	42,200	46,200	55,800	60,000
6-Lane Divided Arterial (w/ left-turn lane)	32,000	38,000	43,000	49,000	54,000
4-Lane Divided Arterial (w/ left-turn lane)	22,000	25,000	29,000	32,500	36,000
4-Lane Undivided Arterial (no left-turn lane)	18,000	21,000	24,000	27,000	30,000
2-Lane Arterial (w/ left-turn median lane)	11,000	12,500	14,500	16,000	18,000
2-Lane Arterial (no left-turn median lane)	9,000	10,500	12,000	13,500	15,000
2-Lane Collector/Local Street	6,000	7,500	9,000	10,500	12,000

Notes:

1. Based on "Highway Capacity Manual", Transportation Research Board, Fourth Edition, 2000.
2. All volumes are approximate and assume ideal roadway characteristics. Actual threshold volumes for each Level of Service listed above may vary depending on a variety of factors including (but not limited to) - roadway curvature and grade, intersection or interchange spacing, driveway spacing, percentage of trucks and other heavy vehicles, travel lane widths, signal timing characteristics, on-street parking, volume of cross traffic and pedestrians, pavement conditions, etc.

Intersections

Table 18-3 summarizes existing intersection operations, quantified using the existing traffic volumes and existing intersection lane geometrics and controls (see Figure 18-2). As shown in Table 18-3, the I-5 southbound ramps/Lathrop Road intersection is currently operating at LOS "F" under AM and PM peak hour conditions. The I-5 northbound ramps/Lathrop Road intersection is currently operating at LOS "E" conditions during the PM peak hour with the existing lane geometrics and control. The signalized Main Street/Louise Avenue intersection is currently operating at LOS "E" conditions during the PM peak hour. These intersections are currently operating at conditions considered unacceptable.

At unsignalized intersections, a supplemental traffic signal warrant analysis was completed. The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the need for installation of a traffic signal at an unsignalized intersection. The traffic study generally employed signal warrant criteria presented in the *California Manual on Uniform Traffic Control Devices 2003* (California MUTCD, 2003). The California MUTCD signal warrant criteria are based upon several factors, including volume of vehicular and pedestrian traffic, location of school areas, frequency of accidents, etc. The peak-hour-volume warrant 3 (urban areas) analysis was completed in the Transportation Impact Study as the most indicative type of warrant analysis. Based on this analysis, a signal warrant is currently met at I-5 NB Ramps/Lathrop Road intersection under both AM and PM peak hour traffic volumes. It should be noted that the California MUTCD states "the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal."

TABLE 18-3
EXISTING CONDITIONS: INTERSECTION LEVELS OF SERVICE

#	Intersection:	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (S/V)	LOS	Warrant Met?	Delay (S/V)	LOS	Warrant Met?
1	I-5 SB Ramps/Roth Rd	TWSC	12.0	B	No	11.5	B	No
2	I-5 NB Ramps/Roth Rd	TWSC	11.3	A	No	11.3	B	No
3	I-5 SB Ramps/Lathrop Rd	TWSC	203.2	F	No	139.9	F	No
4	I-5 NB Ramps/Lathrop Rd	TWSC	23.2	C	Yes	46.9	E	Yes
5	Harlan Rd/Lathrop Rd	Signal	26.7	C	-	31.0	C	-
6	5 th St/Lathrop Rd	Signal	20.1	B	-	19.7	B	-
7	McKinley Ave/Lathrop Rd	TWSC	25.7	D	No	25.6	D	No
8	Airport Way/Lathrop Rd	Signal	27.1	C	-	26.7	C	-
9	Union Rd/Lathrop Rd	Signal	29.0	C	-	30.9	C	-
10	I-5 SB Ramps/Louise Ave	Signal	27.7	C	-	25.4	C	-
11	I-5 NB Ramps/Louise Ave	Signal	19.8	B	-	25.5	C	-
12	Harlan Rd/Louise Ave	Signal	22.8	C	-	27.2	C	-
13	Howland Dr/Louise Ave	Signal	16.7	B	-	18.8	B	-
14	McKinley Ave/Louise Ave	Signal	23.5	C	-	21.7	C	-
15	Airport Way/Louise Ave	Signal	29.0	C	-	34.3	C	-
18	Union Rd/Louise Ave	Signal	31.4	C	-	36.0	D	-
17	Main St/Louise Ave	Signal	32.0	C	-	58.0	E	-
18	Guthmiller Rd/ SR 120 EB Ramps	TWSC	9.8	B	No	13.0	B	No
19	Guthmiller Rd/ SR 120 WB Ramps	TWSC	9.5	A	No	10.1	B	No
20	D'Arcy Pkwy/Yosemite Ave	Signal	21.5	C	-	21.6	C	-
21	McKinley Ave/Yosemite Ave	AWSC	9.5	A	No	10.7	B	No
22	Airport Way/Yosemite Ave	Signal	31.6	C	-	35.0	D	-
23	Union Rd/Yosemite Ave	Signal	31.1	C	-	39.3	D	-
24	Main St/Yosemite Ave	Signal	30.5	C	-	35.4	D	-
25	SR 99 SB Ramps/Yosemite Ave	Signal	27.6	C	-	30.6	C	-
26	SR 99 NB Ramps/Yosemite Ave	Signal	28.7	C	-	29.3	C	-
27	Airport Way/Daniels St	Signal	18.9	B	-	19.0	B	-
28	Airport Way/SR 120 WB Ramps	Signal	21.2	C	-	21.0	C	-
29	Airport Way/SR 120 EB Ramps	Signal	17.2	C	-	26.1	C	-
30	Union Rd/SR 120 WB Ramps	Signal	23.0	C	-	19.5	B	-
31	Union Rd/SR 120 EB Ramps	Signal	23.0	C	-	26.1	C	-
32	Main St/SR 120 WB Ramps	Signal	23.0	C	-	19.5	B	-
33	Main St/SR 120 EB Ramps	Signal	25.3	C	-	27.6	C	-

Notes:

1. TWSC = Two-Way Stop Control, AWSC = All-Way-Stop Control, S/V = Seconds / Vehicle
2. For TWSC intersection, "Worst-Case" movement delays (in seconds/vehicle) is indicated. "Average" control delays (in seconds/vehicle) are indicated for AWSC and signal-controlled intersections. Delays reported in above table are from Traffix 7.9 software.
3. Warrant = MUTCD 2003 based Peak-hour-Volume Warrant #3 (Urban Areas).
4. Bold numbers and letters represent condition when intersection does not meet minimum acceptable standards.

Roadway Segments

Existing roadway operations under existing roadway capacity configurations were quantified, using the LOS thresholds presented in Table 18-2. Table 18-4 summarizes the results. As shown in Table 18-4, the mainline segment of I-5 from Interstate 205 (I-205) to the SR 120 interchange is currently operating at LOS “F.” The SR 120 mainline segment between the I-5 interchange and the Yosemite Avenue/Guthmiller Road interchange is currently operating at LOS “E,” which is considered unacceptable. All other study roadway/freeway segments are currently operating at LOS “D” or better conditions.

TABLE 18-4
EXISTING CONDITIONS: ROADWAY LEVELS OF SERVICE

Roadway/Freeway Segment	Existing Functional Capacity Configuration*	AADT	LOS
Interstate 5 mainline - from I-205 I/C to SR 120 I/C	8-Lane Divided Freeway	160,000	F
Interstate 5 mainline - from SR 120 I/C to Lathrop Road I/C	6-Lane Divided Freeway	106,000	D
Interstate 5 mainline - from Lathrop Rd I/C to French Camp I/C	6-Lane Divided Freeway	104,000	D
SR 120 mainline - from I-5 I/C to Yosemite Ave/Guthmiller Rd I/C	4-Lane Divided Freeway	77,000	E
SR 120 mainline - from Yosemite/Guthmiller I/C to Airport Way I/C	4-Lane Divided Freeway	63,000	D
SR 120 mainline - from Airport Way I/C to Main Street I/C	4-Lane Divided Freeway	61,000	C
SR 120 mainline - from Main Street I/C to SR 99 I/C	4-Lane Divided Freeway	70,000	D
SR 99 mainline - south of SR 120 I/C	6-Lane Divided Freeway	108,000	D
SR 99 mainline - from SR 120 I/C to East Yosemite Ave I/C	6-Lane Divided Freeway	88,000	C
SR 99 mainline - north of East Yosemite Ave I/C	4-Lane Divided Freeway	70,000	D
Yosemite Avenue - from SR 120 I/C to D’Arcy Parkway	2-Lane Arterial	5,000	A
Yosemite Avenue - from D’Arcy Parkway to Airport Way	3-Lane Arterial	6,700	A
Yosemite Avenue - from Airport Way to Union Road	5-Lane Arterial	17,200	A
Yosemite Avenue - from Union Road to Main Street	3-Lane Arterial	6,900	A
Yosemite Avenue - from Main Street to SR 99	5-Lane Arterial	13,100	A
Airport Way - from SR 120 I/C to Yosemite Avenue	3-Lane Arterial	10,100	A
Airport Way - from Yosemite Avenue to Louise Avenue	3-Lane Arterial	14,400	A
Airport Way - from Louise Avenue to Lathrop Road	3-Lane Arterial	6,200	A
McKinley Avenue - from Yosemite Avenue to Louise Avenue	2-Lane Arterial	4,300	A
McKinley Avenue - from Louise Avenue to Lathrop Road	2-Lane Arterial	1,400	A
Louise Avenue - from I-5 to 5 th Street	5-Lane Arterial	10,200	A
Louise Avenue - from 5 th Street to Airport Way	3-lane Arterial	9,300	A

Notes: AADT= Annual Average Daily Traffic, LOS=Level of Service, I/C=interchange

Bold letter represents conditions where the segment does not meet the minimum acceptable LOS standards.

* “3-Lane Arterial” refers to a two-lane arterial with left-turn lane channelizations at key intersections or two-way median left- turn lane. “5-Lane Arterial” refers to a four-lane arterial with left-turn lane channelizations at key intersections or two-way median left-turn lane.

Existing Public Transit Facilities

Currently, there are no existing public transit facilities that serve the project site. However, there are several transit services that operate in the vicinity. These services include the San Joaquin Regional Transit District (SJRTD), with fixed-route and flexible-response bus service in San Joaquin County; the Altamont Commuter Express (ACE), which operates a commuter rail service between Stockton and San Jose; and the Modesto Area Express (MAX), which operates fixed-route bus service between Modesto and the Lathrop-Manteca ACE Rail Station. This ACE station is located adjacent to the northeastern corner of the project site, across Yosemite Avenue.

Existing Bikeway and Pedestrian Facilities

Bikeways are divided into three classes:

- Class I Bike Path – bicycle path separated from road
- Class II Bike Lane – bicycle lane painted on road
- Class III Bike Route – no dedicated lane on road, usually designated only by sign

There are currently no bikeways in the Plan Area or its vicinity. There are generally no sidewalks in the Plan Area; however, most of the signalized intersections in the Transportation Impact Study area are provided with pedestrian crosswalks. Also, sidewalks are in place along the frontage of some of the residential, industrial and commercial developments in the area. East of the Plan Area, there is Tidewater Bikeway, a Class I bike trail serving the City of Manteca which extends from Lathrop Road southward to Spreckels Avenue just north of SR 120.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

Effective March 18, 2010, amendments to the CEQA Guidelines have changed how a Lead Agency may determine the significance of transportation impacts. According to the newly revised Appendix G of the CEQA Guidelines, a project would have a significant impact related to transportation if it does any of the following:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads and highways.

- 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.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Regulatory Setting

Specific LOS policies of relevant agencies, as they apply to the Transportation Impact Study facilities, are summarized in Table 18-5.

TABLE 18-5
INTERSECTION AND ROADWAY LOS POLICY STANDARDS

Study Facility	Responsible Jurisdiction(s)	Minimum Acceptable LOS
Signalized Intersections		
I-5 I/C ramp intersections with Louise Ave, Lathrop Rd and Roth Rd	City of Lathrop, Caltrans	D
SR 120 I/C ramp intersections with Yosemite Ave, McKinley Ave	City of Lathrop, Caltrans	D
Yosemite Ave intersections with D'Arcy Parkway, McKinley Ave	City of Lathrop, SJ County	D
Louise Ave intersections with Harlan Rd, Howland Rd, McKinley Ave	City of Lathrop, SJ County	D
Lathrop Rd intersections with Harlan Rd, 5 th Street, McKinley Ave	City of Lathrop	D
SR 120 I/C ramp intersections with Airport Way, Union Rd, Main St	City of Manteca, Caltrans	C
Airport Way intersection with Daniels Street	City of Manteca	D
Yosemite Ave intersections with Airport Way, Union Rd, Main St	City of Manteca	D
Louise Ave intersections with Airport Way, Union Rd, Main St	City of Manteca	D
Lathrop Rd intersections with Airport Way, Union Rd	City of Manteca	D
SR 99 interchange with Yosemite Ave	City of Manteca, Caltrans	C
Roadways and Freeways/Highways		
Mainline segments of I-5, I-205, SR 120 and SR 99	Caltrans	D
Study segments of Louise Ave, Lathrop Rd, Yosemite Ave, McKinley Ave, Airport Way	Lathrop, Manteca, SJ County	C

Notes:

1. The intersection LOS standards mentioned above are for signalized and All Way Stop Controlled intersections on citywide basis.
2. For Two Way Stop controlled intersections, City of Lathrop and Manteca minimum acceptable LOS standard is LOS "E" or better.
3. If existing intersection is operating at less than target LOS, then the existing LOS should be maintained.

The following summarizes the traffic LOS policies of key public agencies likely impacted by the proposed project:

- City of Lathrop – City-maintained intersections are subject to the following minimum acceptable operations criteria:
Signalized and All-way-stop intersections - LOS D or better.
Intersections with side street stop-sign control - LOS E or better.
- Caltrans District 10 – Study freeways and associated ramps (I-5, I-205, SR 99, and SR 120) are subject to the following minimum acceptable operations criterion: LOS D or better. The *Caltrans' Guide for the Preparation of Traffic Impact Studies (dated December 2002)* states the following: “*Caltrans endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” on State highway facilities, however, Caltrans acknowledges that this may not be always feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS*”.
- San Joaquin County – County-maintained intersections are subject to the following minimum acceptable operations criterion:
Signalized, All-way-stop and side street stop sign-controlled intersections - LOS C or better. The County considers LOS E or F on freeways in the County to be unacceptable.
- City of Manteca – City of Manteca maintained intersections are subject to the following minimum acceptable operations criterion:
Signalized and all-way-stop intersections - LOS C or better on a citywide basis, with a minimum acceptable LOS D at individual intersections dependent upon site restraints.
Intersections with side-street stop-sign control - LOS E or better.

Based on policies from General Plans of the Cities of Lathrop and Manteca, Caltrans' 1996 Congestion Management Plan (CMP), Caltrans highway LOS goals/policies, and Appendix G of the CEQA Guidelines, the impacts associated with traffic operations are considered “significant” if the proposed project would have the following system impacts:

Intersections and Roadway/Freeway System

- Worsen the LOS at an intersection in the cities of Lathrop or Manteca from LOS C or better to LOS D or worse. It should be noted that City of Lathrop's LOS C policy is more restrictive than the 1996 CMP policy of LOS D on principal arterials such as Lathrop Road, Louise Avenue and Airport Way.
- Increase the average delay by five or more seconds at an intersection in the cities of Lathrop or Manteca that currently operates (or is projected to operate) at LOS D or worse.
- Worsen LOS at an intersection maintained by Caltrans from LOS D or better to LOS E or F.
- Add traffic to an intersection maintained by Caltrans that currently operates, or is projected to operate, at LOS E or F.

- Worsen operations on a segment or ramp of SR 99, SR 120, or I-5 from LOS D or better to LOS E or worse.
- Worsen operations on a segment of I-205 from LOS E or better to LOS F.
- Add traffic to a freeway segment or ramp that does not currently operate acceptably, according to the above bulleted criteria.
- Cause a substantial reduction in safety on a public street due to a design feature (e.g., sharp curve) or incompatible use (e.g., farm equipment).

Transit System

- Disrupt or preclude transit service and facilities.
- Cause an unmet demand for public transit.

Bicycle/Pedestrian System

- Disrupt or interfere with existing or planned bicycle or pedestrian facilities.

Project Trip Generation

After accounting for trip internalization and pass-by trip adjustments, the Lathrop Gateway Business Park SP project site at full buildout is projected to generate 32,398 “new” daily vehicular trips, with 3,117 AM peak hour vehicular trips (2,606 inbound, 511 outbound) and 3,739 PM peak hour vehicular trips (872 inbound and 2,867 outbound), that could be characterized as incremental “new” vehicular trips on the adjacent off-site street system. See Tables 6 and 7 of the Transportation Impact Study in Appendix F for a detailed breakdown of trips generated by each of the land uses.

Project Trip Types And Purposes

The proposed Specific Plan project would predominantly generate two types of trips – commuter (automobile) trips and commercial-vehicle (heavy truck) trips. The ITE Publication *Trip Generation* offers generic vehicular trip generation rates for all use types, and does not offer a breakdown of automobile and truck trip generation rates. Based on field observation of industrial regions similar to the proposed project and discussions with City of Lathrop Planning and Public Works staff, it is estimated that approximately 10% of project-generated peak hour vehicular trips would be comprised of heavy truck trips. Note that the percentage of project-generated truck trips may likely be higher (up to 20%) during the “off-peak” hours of the day.

Passenger Car Equivalents: The Transportation Impact Study uses 5% background peak hour truck traffic (per assumptions made in the SR 120/McKinley Avenue Interchange PSR, Caltrans Approved June 2008), and 10% project-generated peak hour truck trips (as indicated above). If a “Passenger Car Equivalent” (PCE) of 2.0 cars per heavy truck is used for analysis purposes, then the proposed project site trip generation can be expressed as 35,638 “new” daily PCE trips, with 3,429 AM peak hour PCE trips (2,867 inbound, 562 outbound) and 4,113 PM peak hour PCE trips (959 inbound and 3,154 outbound).

Existing Plus Project (Year 2012/Phase 1) Intersection Operations Impacts

“Existing Plus Project (Year 2012/Phase 1)” conditions are conditions assumed for the year 2012. As indicated by the project proponent, the Limited Industrial component of the Specific Plan is likely to develop first. During Phase 1 of the project, it is assumed that the Limited Industrial component will be fully built out.

Traffic volume forecasts for the Existing Plus Project scenario (Year 2012 plus Project Phase 1) analysis were generated assuming a 5% growth in existing background traffic volumes and superimposing traffic generated by the first phase of the project. The first phase is projected to generate 9,629 daily trips, with 763 AM peak hour trips (581 inbound, 182 outbound) and 889 PM peak hour trips (217 inbound, 672 outbound) that could be characterized as incremental “new” trips on the adjacent off-street system. The estimated directional trip distribution and assignment of project trips was generally used to distribute project Phase 1-generated trips. Please refer to Figure 5 of the Transportation Impact Study in Appendix F for more detailed information. It should be noted that the planned future development of the SR 120/McKinley Avenue interchange is not assumed to be in place under Existing Plus Project (Year 2012/Phase 1) conditions.

Intersection operations were quantified under Existing Plus Project (Year 2012/Phase 1) traffic volumes and existing intersection lane geometrics and controls (see Figure 18-2). Table 18-6 presents the resulting intersection LOS. Most intersections are projected to meet at least minimally acceptable LOS standards. The following significant impacts were identified:

- The unsignalized study intersection at I-5 SB Ramps/Lathrop Road is projected to operate at AM and PM peak hour LOS “F” conditions. While the LOS would be the same as existing conditions, the delay time would increase substantially more than five seconds.
- The unsignalized I-5 NB Ramps/Lathrop Road intersection is projected to operate at PM peak hour LOS “F” condition – a worsening from its existing LOS “E” condition.
- The unsignalized McKinley Avenue/Lathrop Road intersection is projected to operate at PM peak hour LOS “E” condition – a worsening from its existing LOS “D” condition. This intersection is also projected to operate at AM peak hour LOS “D” condition. While this LOS would be the same as existing conditions, the delay time would increase more than five seconds.
- The Louise Avenue signalized intersection with Main Street is projected to operate at PM peak hour LOS “E” condition. While this LOS would be the same as existing conditions, the delay time would increase more than five seconds.

**TABLE 18-6
EXISTING PLUS PROJECT CONDITIONS: INTERSECTION LEVELS OF SERVICE**

#	Intersection:	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (S/V)	LOS	Warrant Met?	Delay (S/V)	LOS	Warrant Met?
1	I-5 SB Ramps/Roth Rd	TWSC	12.3	B	No	11.8	B	No
2	I-5 NB Ramps/Roth Rd	TWSC	11.5	B	No	11.5	B	No
3	I-5 SB Ramps/Lathrop Rd	TWSC	318.4	F	No	199.5	F	No
4	I-5 NB Ramps/Lathrop Rd	TWSC	25.6	D	No	66.5	F	Yes
5	Harlan Rd/Lathrop Rd	Signal	27.1	C	-	31.5	C	-
6	5 th St/Lathrop Rd	Signal	19.8	B	-	19.7	B	-
7	McKinley Ave/Lathrop Rd	TWSC	34.9	D	No	41.1	E	No
8	Airport Way/Lathrop Rd	Signal	28.0	C	-	27.5	C	-
9	Union Rd/Lathrop Rd	Signal	29.3	C	-	31.2	C	-
10	I-5 SB Ramps/Louise Ave	Signal	28.3	C	-	25.6	C	-
11	I-5 NB Ramps/Louise Ave	Signal	20.1	C	-	26.5	C	-
12	Harlan Rd/Louise Ave	Signal	22.9	C	-	27.3	C	-
13	Howland Dr/Louise Ave	Signal	16.9	B	-	18.9	B	-
14	McKinley Ave/Louise Ave	Signal	26.6	C	-	24.3	C	-
15	Airport Way/Louise Ave	Signal	29.5	C	-	36.4	D	-
18	Union Rd/Louise Ave	Signal	31.6	C	-	37.7	D	-
17	Main St/Louise Ave	Signal	32.3	C	-	67.5	E	-
18	Guthmiller Rd/ SR 120 EB Ramps	TWSC	12.7	B	No	21.7	C	No
19	Guthmiller Rd/ SR 120 WB Ramps	TWSC	12.2	B	No	11.4	B	No
20	D'Arcy Pkwy/Yosemite Ave	Signal	15.7	B	-	18.3	B	-
21	McKinley Ave/Yosemite Ave	AWSC	15.5	B	No	44.1	E	Yes
22	Airport Way/Yosemite Ave	Signal	32.2	C	-	38.6	D	-
23	Union Rd/Yosemite Ave	Signal	32.8	C	-	49.7	D	-
24	Main St/Yosemite Ave	Signal	34.7	C	-	43.4	D	-
25	SR 99 SB Ramps/Yosemite Ave	Signal	28.5	C	-	32.0	C	-
26	SR 99 NB Ramps/Yosemite Ave	Signal	29.4	C	-	29.9	C	-
27	Airport Way/Daniels St	Signal	18.9	B	-	19.1	B	-
28	Airport Way/SR 120 WB Ramps	Signal	22.0	C	-	22.1	C	-
29	Airport Way/SR 120 EB Ramps	Signal	18.5	B	-	26.6	C	-
30	Union Rd/SR 120 WB Ramps	Signal	26.1	C	-	25.4	C	-
31	Union Rd/SR 120 EB Ramps	Signal	22.4	C	-	31.4	C	-
32	Main St/SR 120 WB Ramps	Signal	23.4	C	-	20.2	C	-
33	Main St/SR 120 EB Ramps	Signal	25.8	C	-	28.6	C	-

Notes:

1. TWSC = Two-Way Stop Control, AWSC = All-Way-Stop Control, S/V = Seconds / Vehicle
2. For TWSC intersection, "Worst-Case" movement delays (in seconds/vehicle) is indicated. "Average" control delays (in seconds/vehicle) are indicated for AWSC and signal-controlled intersections. Delays reported in above table are from Traffix 7.9 software.
3. Warrant = MUTCD 2003 based Peak-hour-Volume Warrant #3 (Urban Areas).
4. Bold numbers and letters represent condition when intersection does not meet minimum acceptable standards.
5. Project access driveway intersections are not evaluated under Existing plus Project scenario. All project driveway access intersections have been evaluated under ultimate buildout (Cumulative plus Project) conditions.

- The signalized Yosemite Avenue intersection with McKinley Avenue is projected to operate at PM peak hour LOS “E” condition – a worsening from its existing LOS “B” condition.
- The signalized Yosemite Avenue intersections with Union Road and Main Street are projected to operate at PM peak hour LOS “D” conditions. While this LOS would be the same as existing conditions, the delay time would increase more than five seconds.

The Transportation Impact Study recommended several improvements, which are incorporated into the mitigation measures identified below. Some of these improvements are meant to mitigate traffic problems identified under existing traffic conditions without the project.

Level of Significance: Significant

Mitigation Measures:

- 18-1. The ODS of properties within the Plan Area shall pay their “fair share” costs of the improvements identified below, or the costs of the following improvements shall be subject to reimbursement in conjunction with other development projects that contribute vehicle trips to these locations.
- Install a traffic signal at the I-5 SB Ramps/Lathrop Road intersection under existing conditions and in coordination with ramp signalization at the NB ramps intersection. *Projected LOS with mitigation: “C” or better.*
 - Install a traffic signal at the I-5 NB Ramps/Lathrop Road intersection under existing conditions. *Projected LOS with mitigation: “C” or better.*
 - Provide exclusive right-turn lanes/pockets for the eastbound and westbound approaches at the McKinley Avenue/Lathrop Road intersection under Existing Plus Project conditions. *Projected LOS with mitigation: “D” or better.*
 - Install a traffic signal at the McKinley Avenue/Yosemite Avenue intersection under Existing Plus Project conditions. *Projected LOS with mitigation: “D” or better.*
- 18-2. The ODS shall pay their fair share towards the City of Manteca’s traffic impact fee program to cover project responsibilities towards the following improvement:
- Provide exclusive right-turn lanes/pockets for the eastbound and westbound approaches at the Main Street/Louise Avenue intersection. *Projected LOS with mitigation: “D” or better.*

Significance After Mitigation: Significant and unavoidable. LOS at the intersections after implementation of Mitigation Measure 18-1 would meet the appropriate minimally acceptable standards. However, although impact fee payments to the City of Manteca

required under Mitigation Measure 18-2 would discharge project responsibilities toward the proposed improvement, there is no certainty that the improvement would be constructed. Since this improvement is outside the scope of the project (i.e., an improvement located in the City of Manteca), the project would result in significant and unavoidable cumulative traffic impacts at the Main Street/Louise Avenue intersection until necessary improvements are completed by the City of Manteca.

Implementation: The ODS will be responsible for the implementation of the specified intersection improvements and for the costs of any documentation needed to provide for reimbursement.

Monitoring: The Public Works Department will be responsible for ensuring that the specified intersection improvements are included in project improvement plans.

Existing Plus Project Roadway Segment Operations Impacts

Existing plus Project roadway operations were quantified, using roadway AADT-based LOS thresholds presented previously in Table 18-2. Table 18-7 summarizes the results.

TABLE 18-7
EXISTING PLUS PROJECT CONDITIONS: ROADWAY LEVELS OF SERVICE

Roadway/Freeway Segment	Existing Functional Capacity Configuration*	AADT	LOS
Interstate 5 mainline - from I-205 I/C to SR 120 I/C	8-Lane Divided Freeway	169,300	F
Interstate 5 mainline - from SR 120 I/C to Lathrop Road I/C	6-Lane Divided Freeway	112,200	E
Interstate 5 mainline - from Lathrop Rd I/C to French Camp I/C	6-Lane Divided Freeway	110,200	D
SR 120 mainline - from I-5 I/C to Yosemite Ave/Guthmiller Rd I/C	4-Lane Divided Freeway	82,200	F
SR 120 mainline - from Yosemite/Guthmiller I/C to Airport Way I/C	4-Lane Divided Freeway	67,200	D
SR 120 mainline - from Airport Way I/C to Main Street I/C	4-Lane Divided Freeway	65,000	D
SR 120 mainline - from Main Street I/C to SR 99 I/C	4-Lane Divided Freeway	74,300	D
SR 99 mainline - south of SR 120 I/C	6-Lane Divided Freeway	114,500	E
SR 99 mainline - from SR 120 I/C to East Yosemite Ave I/C	6-Lane Divided Freeway	93,200	D
SR 99 mainline - north of East Yosemite Ave I/C	4-Lane Divided Freeway	73,800	D
Yosemite Avenue - from SR 120 I/C to D'Arcy Parkway	2-Lane Arterial	9,100	A
Yosemite Avenue - from D'Arcy Parkway to Airport Way	3-Lane Arterial	10,800	A
Yosemite Avenue - from Airport Way to Union Road	4-Lane Arterial	20,800	A
Yosemite Avenue - from Union Road to Main Street	4-Lane Arterial	9,200	A
Yosemite Avenue - from Main Street to SR 99	4-Lane Arterial	15,100	A
Airport Way - from SR 120 I/C to Yosemite Avenue	3-Lane Arterial	10,800	A
Airport Way - from Yosemite Avenue to Louise Avenue	3-Lane Arterial	11,000	A
Airport Way - from Louise Avenue to Lathrop Road	3-Lane Arterial	6,600	A
McKinley Avenue - from Yosemite Avenue to Louise Avenue	2-Lane Arterial	5,700	A
McKinley Avenue - from Louise Avenue to Lathrop Road	2-Lane Arterial	2,200	A
Louise Avenue - from I-5 to 5 th Street	5-Lane Arterial	10,900	A
Louise Avenue - from 5 th Street to Airport Way	3-lane Arterial	10,100	A

Notes: AADT= Annual Average Daily Traffic, LOS=Level of Service, I/C=interchange

Bold letter represents conditions where the segment does not meet the minimum acceptable LOS standards.

"3-Lane Arterial" refers to a two-lane arterial with left-turn lane channelizations at key intersections or two-way median left-turn lane. "5-Lane Arterial" refers to a four-lane arterial with left-turn lane channelizations at key intersections or two-way median left-turn lane.

Most roadway segments are projected to meet at least minimally acceptable LOS standards. The significant impacts identified are as follows:

- The segment of I-5 from the I-205 interchange to the SR 120 interchange is projected to operate at LOS "F" condition. While the LOS would be the same as existing conditions, the project would add traffic to a freeway segment that does not currently operate at an acceptable LOS.
- The segment of I-5 from the SR 120 interchange to the Lathrop Road interchange is projected to operate at LOS "E" condition – a worsening from its existing LOS "D" condition.
- The segment of SR 120 from the I-5 interchange to the Yosemite Avenue/Guthmiller Road interchange is projected to operate at LOS "F" condition – a worsening from its existing LOS "E" condition which already does not meet minimally acceptable standards.
- The segment of SR 99 south of the SR 120 interchange is projected to operate at LOS "E" condition – a worsening from its existing LOS "D" condition.

The Transportation Impact Study identified regional improvements, which are incorporated into the mitigation measure identified below.

Level of Significance: Significant

Mitigation Measures:

- 18-3. The City of Lathrop shall ensure that the ODS pay their applicable Transportation Impact Fees for their "fair share" costs for the following freeway improvements.
- Add northbound lanes on Interstate 5 from I-205 to the SR 120 interchange, and widen Interstate 5 from the SR 120 interchange to the Lathrop Road interchange, as identified in the San Joaquin Regional Transportation Plan 2007. Project contribution towards regional traffic impact fees covers project responsibility for this freeway segment.
 - Widen the segment of SR 120 from I-5 to Yosemite Avenue from four to six lanes, as identified in the San Joaquin Regional Transportation Plan 2007. Project contribution towards regional traffic impact fees covers project responsibility for this freeway segment.
 - Widen the segment of SR 99 from SR 120 to Arch Road from four to six lanes along with interchange modifications, as identified in the San Joaquin Regional Transportation Plan 2007. Project contribution towards regional traffic impact fees covers project responsibility for this freeway segment.

Significance After Mitigation: Significant and unavoidable. Because the needed improvements are not scheduled to be completed by Caltrans by the time demand is anticipated under Existing Plus Project (Year 2012/Phase 1) conditions, and because the development of these improvements is outside the scope of the project (i.e., these are regional improvements), the project would result in significant and unavoidable traffic impacts at the identified freeway segments until necessary improvements are completed by Caltrans. Since project contribution towards regional traffic impact fees would cover project responsibility for these improvements, no further project mitigation measures would be required once the improvements are completed.

Implementation: The ODS will be responsible for payment of their “fair share” costs for the identified freeway improvements.

Monitoring: The Public Works Department will be responsible for ensuring that the regional traffic impact fees have been paid.

Traffic Safety Impacts

The Transportation Impact Study did not identify any specific traffic safety issues with the project. As previously described, some intersections would have LOS that does not meet the applicable criteria. Under such conditions, traffic safety hazards may increase. However, implementation of the mitigation measures for intersection impacts would improve the LOS, thereby improving traffic flow and safety. A few roadway segments in the vicinity would also experience unacceptable LOS, which could increase safety hazards. However, these roadway segments are on freeways, on which traffic conditions are more controlled and therefore less likely to lead to increased safety hazards than on streets or other roadways. Future improvements on these roadway segments would further reduce potential safety hazards. Internal streets on the project site would be constructed in accordance with City of Lathrop street standards, established in part to make the traffic flow safer.

Level of Significance: Less than significant

Mitigation Measure: None required.

Public Transit Impacts

The project is a largely industrial type development that is anticipated to be served by limited levels of public transit. Most project commuter trips would be automobile-based. A small number of employee carpool/vanpool trips to and from office/industrial work sites within the project site are likely, but the overall proportion of such trips is expected to be negligible.

The nearest SJRTD bus stop is within a mile of the project site, near the Airport Way/Yosemite Avenue intersection. An extension of this intercity SJRTD Route 95 is proposed to serve the project site. The project is not anticipated to disrupt any existing transit facilities, including the ACE train station, or preclude any planned new transit facilities.

In a comment letter, the transit branch of Caltrans requested that transit and pedestrian-friendly designs and amenities in the Plan Area be used to encourage the use of public transit and alternative modes of transportation. Regarding public transit specifically, Caltrans suggested that roadways should be designed to provide for bus stops at major intersections. The following mitigation measure incorporates this suggestion from Caltrans.

Level of Significance: Potentially significant

Mitigation Measure:

18-4. In coordination with the SJRTD, the ODS shall provide for the extension of a bus route to the project site, either the existing Route 95 or another route, and shall provide at least one on-site bus stop for this route.

Significance After Mitigation: Less than significant

Implementation: The ODS will be responsible for the implementation of the specified public transit improvement.

Monitoring: The Public Works Department, in coordination with the SJRTD, will be responsible for ensuring that the specified improvements are included in project improvement plans.

Impacts on Bicycle and Pedestrian Facilities

The Specific Plan proposes an extensive bicycle and pedestrian network. Plans include the provision of new multi-use paths along Guthmiller Road, Yosemite Avenue, McKinley Avenue, and D'Arcy Parkway within the Plan Area. The Yosemite Avenue segment would be provided with a separated bikeway/pedestrian shared-use facility. The internal roadways would be provided with on-street bike routes. All internal collector streets would have sidewalks that would connect to the paths along the major streets. As with other Plan Area development, these facilities would be constructed in an area that currently has little urban development. However, the bicycle and pedestrian facilities would encourage the use of alternatives to motor vehicle travel, thereby reducing the impacts of additional traffic generated by Plan Area development.

The project is not projected to increase "off-site" bikeway/pedestrian traffic demands in a significant manner, given the predominantly industrial character of the proposed development. Most pedestrian traffic would be within the Plan Area, and the volume of bicycle traffic generated by Plan Area development is not expected to exceed the capacity of off-site streets and bike routes. Therefore, no new or expanded off-site facilities would be required.

Level of Significance: Less than significant

Mitigation Measure: None required.

19.0 CUMULATIVE IMPACTS

A cumulative impact is an environmental effect that may result from the combination of two or more environmental effects associated with the proposed Lathrop Gateway Business Park Specific Plan, or from the combination of one or more project environmental effects with related environmental effects caused by other closely related projects. Cumulative impacts may also result when a project's environmental effects compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (CEQA Guidelines 15355).

CEQA Guidelines 15130 provides that an EIR must discuss the cumulative environmental impacts of a project "when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" effects occur when the incremental effects of an individual project are significant when viewed in connection with the effects of other closely related projects, including past projects, current projects and probable future projects (CEQA Guidelines 15065 [a][3]).

If the project does not involve a "cumulatively considerable" contribution to a significant cumulative effect, the project's effect need not be considered significant, and discussion in the EIR can be limited to the basis for that conclusion. Projects that do involve cumulatively considerable contributions may involve significant cumulative impacts. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. As provided in *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus (1996)* a project's cumulatively considerable contribution to a significant cumulative impact can be reduced to a less than considerable level with mitigation measures; mitigation measures may include contribution of a project's fair share toward an established mitigation program designed to mitigate the cumulative effect, such as the payment of traffic mitigation fees and habitat conservation fees.

The analysis of cumulative impacts may be based on either 1) a list of past, present, and probable future projects producing related or cumulative impacts, or 2) on a summary of projections contained in an adopted general plan or related planning document, or in a prior certified environmental document which described or evaluated regional or area-wide conditions contributing to the cumulative impact (CEQA Guidelines 15130[b][1]). Where significant cumulative impacts are identified, the EIR must examine reasonable, feasible options for mitigating or avoiding the project's contribution to a less than considerable level. In some cases, the only feasible mitigation may involve the adoption of ordinances or regulations.

When using a project list, the cumulative impact analysis should account for the nature of each environmental resource to be impacted as well as the location of the project and its type. This reflects the fact that the context for cumulative impacts varies from one environmental discipline to another. For example, cumulative ozone impacts are reasonably considered in the context of an air basin; in contrast, cumulative hydrologic impacts would be meaningfully addressed at a watershed level, and aesthetic impacts would ordinarily be addressed on only a local level.

The potential cumulative impacts of the proposed project have been examined pursuant to the direction provided by the CEQA Guidelines. The potential cumulative impacts of the project are

addressed using both the list and the plan approach, which have been combined to generate the most reliable future projections possible. A list approach is used to define the local project environment and includes projects within the City of Lathrop. Because the proposed project is large and directly influences, and is influenced by, regional development activities, the plan approach is also used, to allow a cumulative analysis on this regional scale. Projects and plans included in these two approaches are described below.

List of Related Projects

The list of past, present, and probable future projects used for this cumulative analysis is restricted to those projects that are planned to occur within the City of Lathrop. In general, the City has large areas of undeveloped land previously used for agriculture but that have been rezoned for future residential, commercial and industrial uses. There are several large development projects planned by the City. For the purposes of this discussion, these projects that may have a cumulative effect on the resources in the project area will often be referred to as the “related projects.” These related projects are identified in Figure 19-1 and are described below. These approved and/or pending projects include:

1. River Islands: The 4,995-acre River Islands development would be located west of the San Joaquin River on Stewart Tract and Paradise Cut. The development proposes a mixture of low-, medium- and high-density residential units. In total, River Islands would consist of 11,000 homes. The development also proposes a 260-acre employment center, a 47-acre town center, 265 acres of parks and two schools. The completion date for this project is 2030.
2. Mossdale Landing: Mossdale Landing is a mixed-use master planned community that is anticipated to be completed by 2015. Construction at Mossdale Landing began in 2003 and approximately 1,300 residential units have been constructed thus far. An additional 1,236 low density and 409 medium density units are anticipated by project completion. In addition, the development is allocating approximately thirty-five acres of land for two schools, 40 acres for parks, and 25 acres for commercial development.
3. Mossdale Landing East: Mossdale Landing East (formerly referred to as Lathrop Station) is proposed to be completed by 2015. The proposed development includes 100 existing low-density residential units and will add 151 low-density, 293 medium-density and 82 high-density units. The development will include 6.5 acres of village commercial, 13.2 acres of service commercial and 27.5 acres of highway commercial land uses.
4. Mossdale Landing South: Mossdale Landing South is a proposed 104-acre development that was to be completed by 2030. The development will consist of 297 medium-density residential units. In addition, the project proposes 28 acres of commercial, 25 acres of open space and 9.5 acres of parks.
5. Historic Lathrop Infill and Other Developments East of I-5: The portion of the City east of Interstate (I-5) is anticipated to expand and add density in the future. Currently, this area consists of approximately 2,886 low density and 78 medium density units, commercial and industrial areas, and a few public parks. Future residential growth of this area is expected on undeveloped/underutilized and redeveloped parcels consolidated from large lots where low-

density residential units would be demolished. All new residential projects are projected to consist of medium density residential units (i.e., small lot sizes). By General Plan buildout, the area will consist of 2,746 low-density and 894 medium-density residential units increasing the total existing residential unit count by 1,112 total units.

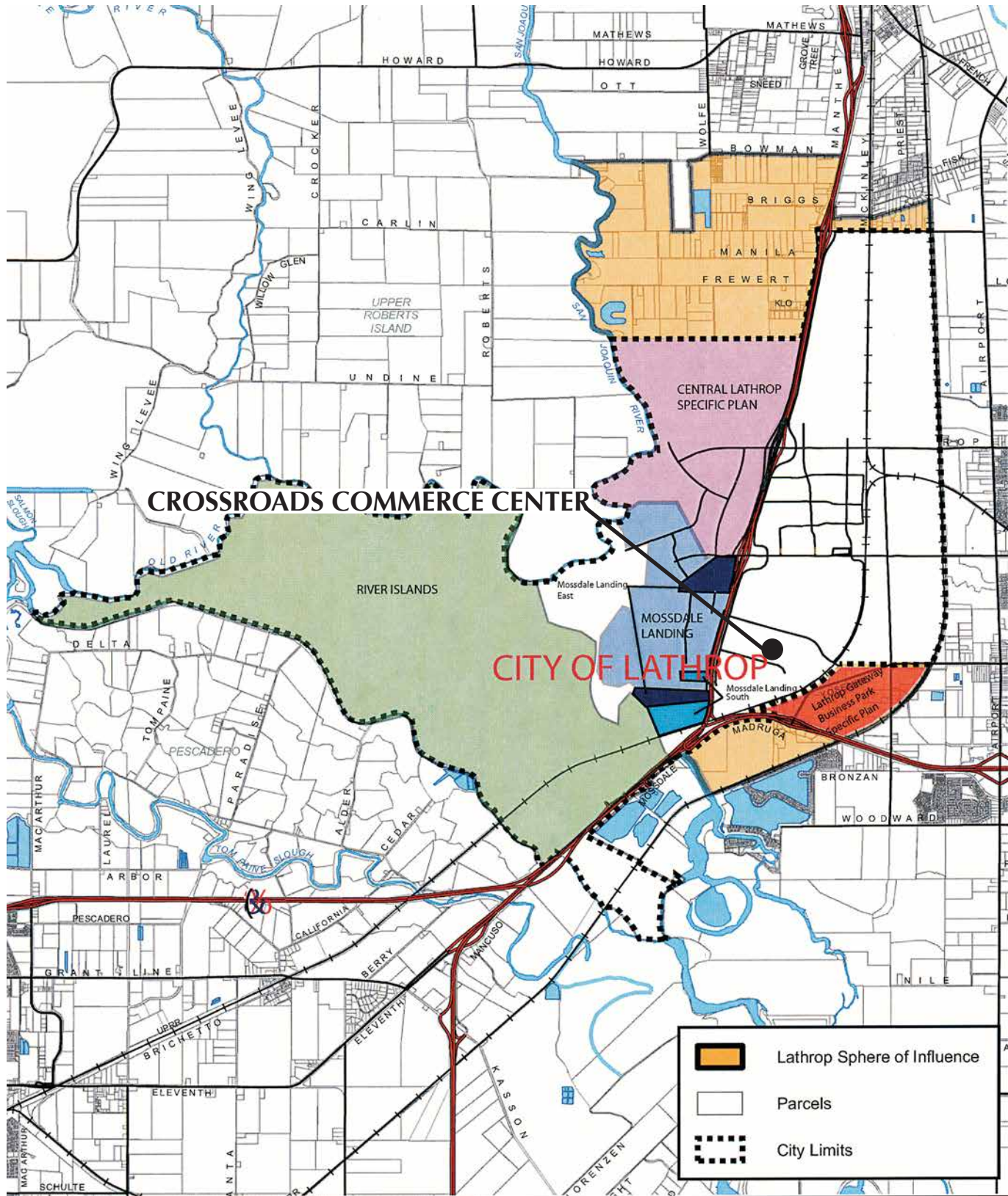
6. Central Lathrop Specific Plan: The Central Lathrop Specific Plan proposes development of 1,520 acres located west of Interstate 5. Project completion was anticipated by 2025. The Specific Plan proposes approximately 6,790 low-, medium- and high-density residential units and 11.5 acres of office/commercial land uses. The project also includes two schools and 200 acres of recreational land use and open space.
7. Crossroads Commerce Center and Industrial Park: Located on a site south of Louise Avenue between Howland and Harlan Roads in East Lathrop, Crossroads is an industrial/commercial area comprising 450 acres of Industrial and 48 acres of Highway Commercial-designated land. The industrial area includes an existing 750,000-square-foot Del Monte distribution warehouse, a 430,770-square-foot Daimler Chrysler facility, three 250,000-square-foot warehouses, a 435,000-square-foot Longs Drugs warehouse, a plastic extrusion plant for Fuel Total Systems, a sausage-making company (Swiss American), a cross dock and warehouse for Home Depot, and a trucking terminal for Swift Trucking. The Freeway Commercial area contains the existing 138,000-square-foot Lathrop Business Park, four fast-food restaurants, a sit-down restaurant, and a 31,886-square-foot hotel.

Regional Planning Documents

Because the proposed project is large and directly influences, and is influenced by, regional development activities, the “plan” approach was used to evaluate cumulative impacts on a regional scale. The regional cumulative analysis area covers San Joaquin County and included an evaluation of the following plans:

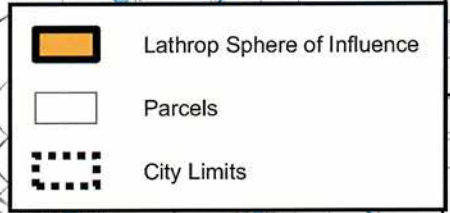
- San Joaquin County General Plan 2010, adopted in 1992 and as amended;
- San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMHCPC) (2000);
- City of Lodi General Plan, adopted in 1990;
- City of Stockton 2035 General Plan, adopted in 2007;
- City of Lathrop General Plan, adopted in 1991 and as amended through December 19, 2006;
- Manteca General Plan, adopted in 1988 and as amended through December 20, 1993;
- City of Tracy Urban Management Plan/General Plan and Urban Management Plan, adopted in 1993; and
- Draft General Plan, City of Ripon, 1996.

Much of the information on the overall planning and project environment in the County was found in the SJMHCP, which evaluated current conditions and anticipated future development throughout the County based on the individual City and County General Plan documents listed above. Additional information on conditions in the County was obtained from the San Joaquin Council of Governments (SJCOG) Research and Forecasting Center (RFC).



CROSSROADS COMMERCE CENTER

CITY OF LATHROP



NORTH SOURCE: RBF

San Joaquin County covers approximately 909,000 acres, with approximately 808,000 acres, or nearly 90% of the County, used or available for agriculture (row and field crops, orchards, vineyards, and grazing lands). The remaining lands are dominated by various types of development (approximately 60,000 acres), natural habitats (woodlands, riparian), and open water (lakes, rivers, Delta waterways). The County population in 2000 was approximately 563,600 (U.S. Census Bureau 2000), with most County residents and development located in the incorporated cities (Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy).

As stated in the SJMSCP, it is anticipated that 147,000 acres of various categories of open space lands (including agriculture, range lands, and natural areas) in the County (including Lathrop) will be converted to non-open space uses between 2001 and 2051, based on full buildout of each of the general plans in the County and construction of all anticipated transportation and other public projects. In addition, approximately 59,000 acres of infill of urban lands would occur in this 50-year timeframe. Population in the County is expected to more than double by 2040, increasing to 1.26 million (California Department of Finance 1998).

Residential development constitutes the majority of planned future developed uses in the County. New residential development is expected to occur in four primary areas in the County: the incorporated cities, the unincorporated areas near the cities where services are available, new communities (e.g., Mountain House), and existing unincorporated communities (e.g., Acampo, Banta, Chrisman, Glennwood, French Camp, Lockeford, Linden, Thornton, Vernalis). Commercial development would be concentrated in these same areas as well as along major transportation routes.

The following cumulative impact analysis determines for each environmental discipline 1) the geographic context for the analysis, 2) whether there exists the potential for a significant cumulative impact in that environmental discipline, 3) whether the project would make a cumulatively considerable contribution to a significant cumulative impact, or make significant an impact that was otherwise less than significant, and 4) whether and how a significant cumulative impact or a considerable contribution can feasibly be reduced to a less than significant or less than considerable level.

19.1 AESTHETICS

As discussed in Chapter 4.0, the Lathrop Gateway Business Park Specific Plan has been designed, and includes substantial design control features, that would produce an aesthetically pleasing project. Potential aesthetic effects are characterized as less than significant on a project level.

For the purposes of this analysis, the geographic context for cumulative aesthetic analysis is defined as the "Lathrop Gateway Business Park Specific Plan Vicinity," or the area within approximately one mile of the Plan Area. The proposed Lathrop Gateway Business Park, through planned urbanization of the Plan Area, would contribute to the significant aesthetic impacts of urban development in the southeast Lathrop area. Although the Plan Area is among the smaller specific plan projects currently being processed by the City, the Lathrop Gateway Business Park Specific Plan would involve more than 380 acres of urban development that would involve nearly a mile of frontage on two major existing transportation routes: SR 120 and Yosemite Avenue. In addition to its "standalone"

impacts, the aesthetic impacts of the Lathrop Gateway Business Park Specific Plan would also combine with the approved Crossroads Commerce Center and Industrial Park, future development directly north of the Plan Area, and future projects located in west Manteca, in aesthetic impacts along the SR 120 and I-5 corridors. As a result, the Lathrop Gateway Business Park Specific Plan's contribution to this significant effect is deemed "considerable."

Planned urban development in the Lathrop area, as envisioned in the General Plan, would result in extensive changes in viewsheds as lands surrounding the existing urban area are converted from rural agricultural to urban use. Both the Specific Plan and General Plan include policies that would influence the appearance and design of future development, and which would address the related community design issues. However, these measures do not address the basic effect of urbanization on the aesthetic values of existing open space; consequently, the aesthetic effects associated with urbanization of rural agricultural lands were considered significant and unavoidable. The Lathrop Gateway Business Park Specific Plan would, cumulatively contribute to the impact of converting agricultural open space land to urban development; there is no known mitigation for this effect, which is therefore considered unavoidable.

Contribution to Significant Cumulative Impacts: Considerable

Mitigation Measures: None available

19.2 AGRICULTURE

Potential cumulative impacts on agricultural resources may be appropriately addressed at the regional or community level. The significance of project contributions would be potentially higher in a local context. For the purposes of this EIR, the geographic context for cumulative analysis of agricultural resource impacts is defined as the City of Lathrop and vicinity. This analysis focuses on the conversion of agricultural land to urban uses; other agriculture-related impacts are generally localized and do not tend to be cumulative in nature.

Development of the proposed project and additional development within the Cities of Lathrop and Manteca would result in the conversion of Important Farmland. The conversion of Important Farmland as a result of the proposed project is considered cumulatively considerable when considered in connection with the significant cumulative losses that will occur as a result of planned future development proposed in the City of Lathrop, surrounding cities, and the County as a whole, as well as past farmland conversion.

Although Mitigation Measure 5-1 in Chapter 5.0 would set aside Important Farmland elsewhere, it would not prevent the direct, net loss of Prime Farmland in San Joaquin County. Therefore cumulative impacts are significant and the project's incremental contribution to them is significant as well resulting in a significant cumulative impact.

Contribution to Significant Cumulative Impacts: Considerable

Mitigation Measures: None available

19.3 AIR QUALITY

Cumulative impacts on air resources may be assessed at both a regional and local level. The Lathrop Gateway Business Park Specific Plan would involve contributions to potential air quality impacts at the regional level (San Joaquin Valley Air Basin), and at the local level (immediate vicinity).

The potential air quality impacts of planned urbanization in the City of Lathrop, including ozone precursor emissions, were addressed in the General Plan EIR and found to be significant. The General Plan EIR identified mitigation measures, including source controls and transportation management systems. Even with the adopted mitigation measures, the General Plan EIR found that the cumulative impact of planned urbanization on ozone precursor emissions would be significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact in conjunction with the certification of the General Plan EIR.

As noted in Chapter 6.0, the proposed Specific Plan would have a significant impact on ozone precursor and particulate matter emissions. These would result from increases in motor vehicle use as well as emissions from area-wide sources associated with development in the Plan Area.

The Specific Plan includes a detailed Air Quality Mitigation Plan that sets forth a range of mitigation measures that would reduce the potential air quality impacts of the Lathrop Gateway Business Park development. In addition, as a result of required conformance with Rule 9510, developments within the Plan Area will either include air quality mitigation measures that will substantially reduce air emissions to the levels specified in the Rule or they will be required to pay a fee that will be used to accomplish the same end. As such, the Specific Plan would include all feasible mitigation measures, or their equivalent as a fee. Participation in the Indirect Source Rule program would constitute the Specific Plan's fair share contribution to regional air quality impact mitigation.

Despite these mitigation measures, it cannot be stated with certainty that they would reduce the Specific Plan's cumulative contribution to ozone and particulate matter emissions to a less than considerable level. This is especially the case when related projects are considered, since they can be expected to contribute significant amounts of these pollutants. Therefore, the Lathrop Gateway Business Park Specific Plan would likely make a considerable contribution to a significant cumulative air quality impact.

Contribution to Significant Cumulative Impacts: Considerable

Mitigation Measures: None available

19.4 BIOLOGICAL RESOURCES

The cumulative context for the biological resources analysis for the proposed project is the Cities of Lathrop, Manteca, and Tracy, and the proposed Plan Area, which is within the City's sphere of influence. The proposed project in combination with other current and proposed projects in the vicinity could result in a regional loss of habitat for both common and special-status species.

As development in the cities of Lathrop, Manteca and Tracy, and in the San Joaquin County region continues, habitat for plant and wildlife species native to the region is lost through conversion to urban development. Although more mobile species may be able to survive these changes in their environment by moving to new areas, less mobile species would simply be extirpated. With continued conversion of natural habitat to human use, the availability and accessibility of remaining foraging and natural habitats in this ecosystem would dwindle and those remaining natural areas would not be able to support additional plant or animal populations above their current carrying capacities through increased competition for resources, displacement and development-induced introduction of non-native species. The conversion of plant and wildlife habitat on a regional level would therefore result in a cumulatively significant impact to biological resources.

The Plan Area supports agricultural land which provides suitable foraging habitat for Swainson's hawk and other raptors, some potential raptor nesting trees (though no raptor nest structures are currently known to occur within the project boundaries), and a limited amount of potential jurisdictional waters of the United States. Construction of the proposed project could result in the loss and/or degradation of potential Waters of the U.S., loss or degradation of special status species and their potential habitat, and loss of foraging and nesting habitat for Swainson's hawk and other raptors.

Construction of the proposed project, in combination with other development projects in the region, could therefore contribute to a fragmentation and loss of regional biodiversity through the incremental conversion of foraging habitat for special-status species to human use, and thus limits the availability and accessibility of remaining natural habitats to regional wildlife. However, plant and wildlife habitat in the Plan Area is highly disturbed and of generally low quality, and supports only those special-status species that are fairly widespread in the region.

Since the Plan Area represents relatively low habitat value and consists of habitat types that are wide spread in the region, the proposed project's contribution to the loss of plant and wildlife habitat in the region would be less than considerable. In addition, the Specific Plan would require future development to comply with the SJMSCP, provisions of which would help offset any cumulative effect of the project. These provisions include Incidental Take Minimization Measures for special-status species and compensation for loss of specific habitats. With the SJMSCP provisions, the cumulative impacts of the project on biological resources would not be considerable.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

19.5 CULTURAL RESOURCES

The geography of cultural resources impact can be defined by region, by political subdivision or by the geography of the cultural resources present in an area, where sufficient inventory data is available to define it. Cultural resource information, however, is ordinarily available only for small percentages of a given area, i.e. those areas that have been intensively surveyed, and this is true for the Lathrop Gateway Business Park Specific Plan area as well. The Plan Area, however, has geomorphology, land use and agricultural history in common with other lands in the vicinity of the City of Lathrop. For the purposes of this EIR, then the geographic context for cumulative analysis of cultural resources is defined as the vicinity of the City of Lathrop.

Potential cumulative impacts have been considered at a city-wide level; the General Plan EIR considered the potential cumulative impacts of planned urban development on cultural resources and identified mitigation measures in the form of requirements for pre-project archaeological investigations and surveys. The General Plan EIR found that these measures, which are now implemented with each proposed development project, would avoid significant cultural resource impacts. With the ongoing implementation of these measures, urban development in Lathrop does not involve significant cumulative cultural resource impacts.

The proposed Lathrop Gateway Business Park Specific Plan, like other development projects, has the potential for inadvertent effects on undiscovered or subsurface resources, but the mitigation measures identified in Chapter 8.0 would prevent the occurrence of these impacts. As a result, the Lathrop Gateway Business Park Specific Plan alone would not result in a considerable contribution to a significant cumulative impact.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

19.6 GEOLOGY AND SOILS

Impacts related to geology and soils are not inherently cumulative. Geology and soils concerns are related to risks, hazards or development constraints that are largely site-specific. However, seismic hazards are regional, and management of seismic hazards is vested with the local planning and building authority. For this reasons, the potential for cumulative geology and soils impacts are considered in the context of the City of Lathrop and vicinity.

The proposed project would increase the number of people and structures that could be exposed to seismic hazards, such as ground shaking, settlement, lurch cracking, or lateral spreading. Development within the Plan Area also would increase the number of structures that could be subject to the effects of expansive soils that could affect structural integrity, roadways, or underground utilities. Site preparation and development would also result in temporary and permanent topographic changes that could affect erosion rates or patterns.

Potentially adverse environmental effects associated with seismic hazards, expansive soils, topographic alteration, and erosion usually are site-specific and generally would not combine with

similar effects that could occur with other projects in Lathrop or the vicinity of the Plan Area. Implementation of mitigation measures in Chapter 9.0 would ensure that site-specific impacts related to geology and soils are reduced to levels that are less than significant. Consequently, impacts would not be cumulatively considerable.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

19.7 GLOBAL CLIMATE CHANGE

As mentioned in Chapter 10.0, global climate change associated with land development is considered a potential cumulative effect under CEQA. Therefore, the discussion in that chapter is essentially an evaluation of the cumulative impacts of the project on climate change.

As documented in Chapter 10.0, development under the proposed Lathrop Gateway Business Park Specific Plan would result in increased emissions of greenhouse gases (GHGs), and therefore potentially contribute to global climate change. Features of the Specific Plan plus the mitigation measures set forth in Chapter 10.0 would reduce GHG emissions. However, the emission reduction cannot be determined to meet the significance threshold set in the APCD's Climate Change Action Plan – a reduction of GHG emissions by at least 29% below business-as-usual conditions. As noted in Chapter 10.0, this percentage reduction is consistent with the goal set in the CARB's Climate Change Scoping Plan, which calls for a reduction from 2020 business-as-usual emissions to 1990 emission levels. Projects meeting this threshold are considered to have a cumulative impact that is less than significant. Since cannot demonstrate that it has met this reduction target, it is considered to have a cumulatively considerable impact on global climate change.

Contribution to Significant Cumulative Impacts: Considerable

Mitigation Measures: None available

19.8 HAZARDS AND HUMAN HEALTH

The cumulative context for the analysis of cumulative hazards and human health impacts is the City of Lathrop, including all cumulative growth therein, as represented by full implementation of the City of Lathrop General Plan.

The proposed project, in conjunction with cumulative development in the City, would include areas designated for commercial and light- or heavy-industrial uses. Cumulative development would also include continued operation of or development of new commercial or industrial uses, or public/quasi-public facilities. These types of development would increase the use of hazardous materials within the area, resulting in potential health and safety effects related to hazardous materials use. For the most part, potential impacts associated with project development would be confined to commercial and industrial areas and would not involve the use of hazardous substances in large quantities or that would be particularly hazardous. Incidents, if any, would typically be site-specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the

immediate vicinity of the materials and would not combine with similar effects elsewhere (i.e., construction workers). For a discussion of cumulative effects related to airborne toxic air contaminant emissions from commercial and industrial sources, please see Section 6.0, Air Quality. Implementation of applicable hazardous materials management laws and regulations adopted at the federal, State, and local level would ensure cumulative impacts related to hazardous materials use would not be cumulatively significant.

For any projects in the City of Lathrop that would involve development or redevelopment of an existing site in which soil or groundwater contamination may have occurred, the potential exists for release of hazardous materials during construction and/or remediation of those sites, similar to the proposed project. For individuals not involved in construction activities, the greatest potential source of exposure to contaminants would be airborne emissions, primarily through construction-generated dust. Other potential pathways, such as direct contact with contaminated soils or groundwater would not pose as great a risk to the public because such exposure scenarios would typically be confined to the construction zones. If soil or water contamination is subsequently identified in the Plan Area, in combination with other remediation projects in Lathrop, it would not result in cumulative significant effects. This assumption is based on implementation of site-specific risk management controls and compliance with applicable laws and regulations pertaining to site cleanup and hazardous materials management at the other locations. Moreover, an individual who is directly outside the construction zone of one source would be unlikely to be exposed to maximum levels from another source. This cumulative impact, therefore, is not considered cumulatively considerable. Implementation of applicable hazardous materials management laws and regulations adopted at the federal, State, and local level would ensure cumulative impacts related to development of known or potentially contaminated sites remains less than significant.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

19.9 HYDROLOGY AND WATER QUALITY

Potential cumulative issues associated with surface waters can be addressed on a watershed basis, or in the case of groundwater in the context of a groundwater basin. With respect to surface waters, the Plan Area is located near a leveed section of the San Joaquin River, at the downstream end of its relatively large watershed. The Lathrop Gateway Business Park Specific Plan would involve a minimal effect on the hydrology of this river; therefore, the geographic context for cumulative surface hydrology impacts is defined as the vicinity of the Lathrop Gateway Business Park Specific Plan.

Surface Water Quality

The proposed project, along with several of the related projects (e.g., River Islands, Mossdale Landing, Mossdale Landing East, Central Lathrop) would discharge stormwater runoff to the nearby Delta waterways and would potentially degrade water quality of the system. Under the proposed project, implementation of structural and nonstructural best management practices (BMPs) (described in Chapter 13.0) would substantially improve runoff water quality compared with existing agricultural runoff.

While there are no assurances that the related projects would incorporate the same degree or methods of treatment as the Lathrop Gateway Business Park project, several of the related projects would phase out existing agricultural runoff discharges from their respective sites and, similar to the proposed project, could provide some level of water quality improvement. Also, each related project that would discharge stormwater runoff would be required to comply with National Pollutant Discharge Elimination System (NPDES) discharge permits from the Regional Water Quality Control Board (RWQCB), which adjusts requirements on a case-by-case basis to avoid significant degradation of water quality. Therefore, while a greater quantity of urban runoff may be discharged to the Delta system with implementation of the related projects because of an increase in impervious surfaces, the associated surface water quality impacts would be expected to be less than significant because of improved or similar quality of runoff compared to existing conditions.

The proposed project along with several of the related projects (e.g., Mossdale Landing, Mossdale Landing East, River Islands, Central Lathrop) would, or may, require construction activities and facilities, such as, stormwater outfalls, utility crossings under the river, discharges into the river from storm drains, and accidental overflows, that could result in sediment or contaminant releases in the San Joaquin River. Mitigation measures are included in Chapter 13.0, Hydrology and Water Quality, of this DEIR to reduce or eliminate the potential for releases of sediment and contaminants as well as specific requirements to be included in stormwater pollution prevention plans prepared for project development. These measures would reduce impacts on water quality from construction activities associated with the proposed project to less-than-significant levels by reducing releases of contaminants below applicable water quality protection standards. Thus, the proposed project would not result in a cumulatively considerable incremental contribution to any significant cumulative impacts.

While there are no assurances that the related projects would incorporate the same degree of mitigation as the Lathrop Gateway Business Park project, each related project that would include construction within the levees of the San Joaquin River would, at a minimum, be required to obtain and comply with permits from the USACE, RWQCB, the California Department of Fish and Game (DFG), the State Lands Commission, and the appropriate reclamation district (RD). Permits would likely be required from these same agencies for utilities bored under the river. Each permit would include measures to protect water quality in the San Joaquin River during construction. Therefore, any potential for construction-related sedimentation or contamination would be reduced, for each individual project, to below the applicable water quality protection standards and the cumulative effect would be considered less than significant.

Surface Drainage

The proposed drainage facilities identified as part of the Lathrop Gateway Business Park project would be constructed to safely control and convey stormwater runoff. In summary, the drainage plan designates two separate drainage sub-basins within the Plan Area. Each sub-basin would be served by gravity conveyance of stormwater drainage to detention basins (and/or other appropriate detention facilities), and pump stations and a force main that would collect and pump stormwater to an outfall structure along the bank of the San Joaquin River for discharge to the river. Therefore, the proposed project would not divert runoff to adjacent properties or result in drainage impacts on such properties. In other words, the Lathrop Gateway Business Park project would not contribute at all to any significant cumulative impacts that might be caused by related projects outside the City that are

not subject to the same drainage requirements.

Flood Control

The proposed project is located outside the 100-year floodplain. Therefore, the proposed project could not contribute to a cumulative increase in flood elevations through the removal of areas from the 100-year floodplain. However, several related projects would result in additional discharges of stormwater into the San Joaquin River during storm events (e.g., Mossdale Landing, Mossdale Landing East, Central Lathrop). In theory, this could lead to an incremental increase in peak stormwater runoff to the San Joaquin River and potential increases in downstream flood elevations. However, the City requires that the maximum allowable discharge into the San Joaquin River must not exceed 30% of the estimated 100-year peak developed-condition runoff rate. In addition, when water levels in the San Joaquin River exceed a design elevation of 21.0 feet, discharges must be restricted to predevelopment rates. To meet this requirement, new development must be designed to accommodate excess runoff from a 48-hour, 100-year storm while river discharges are limited to predevelopment rates. Therefore, the Lathrop Gateway Business Park project would not create any incremental addition of stormwater to the San Joaquin River during flood events. In other words, the Lathrop Gateway Business Park project would not contribute at all to any significant cumulative impacts that might be caused by related projects outside the City that are not subject to the same regulatory limitations.

Groundwater Quality

The proposed project would include construction activities that could affect shallow groundwater, would generate urban runoff that could come into contact with groundwater, and would dispose of recycled water on land. Each of these elements would represent a potential source of groundwater quality degradation. However, the proposed project would implement multiple measures to prevent contaminants from reaching the groundwater. These include implementation of BMPs to reduce potential contamination during construction, tertiary treatment of wastewater to Title 22 standards for unrestricted use to avoid potential contamination of the environment, application of recycled water at agronomic rates to minimize percolation of recycled water below the root zone, and compliance with discharge and application regulations and permits. Therefore, percolation of pollutants to potable groundwater used for local private or municipal wells would not occur.

The related projects would be developed at multiple locations with varying depths to groundwater, would generate varying degrees of construction and urban runoff, would likely implement varying levels of application rates for the land disposal of recycled water, and would likely implement varying levels of BMPs to protect groundwater. The Crossroads Industrial Park would include industrial components that could potentially involve the use and/or storage of untreated wastewater and/or hazardous materials that, if allowed to percolate to the groundwater, could result in groundwater quality degradation. Although there would likely be considerable variation among the related projects, and thus potentially varying levels of possible groundwater impacts, there are a considerable number of regulatory safeguards in place to ensure that groundwater contamination does not occur. These include, but are not limited to, treated wastewater discharge requirements, separation distance requirements between wastewater storage ponds and groundwater, storage pond lining requirements, and hazardous materials handling requirements. Furthermore, most of the related projects would replace existing agricultural operations that use pesticides, herbicides, and fertilizers over large areas. Therefore, it is anticipated that less-than-significant cumulative impacts

would occur, and if such impacts were to occur, the proposed project would not contribute to them. Since cumulative impacts from the Lathrop Gateway Business Park and related projects are not significant, the Lathrop Gateway Business Park project, by itself, cannot cause a cumulatively considerable incremental impact.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

19.10 LAND USE AND PLANNING

The Land Use analysis in an EIR does not typically include a discussion of cumulative impacts because impacts involving land use plans or policies and zoning generally would not combine to result in cumulative impacts. The determination of significance for impacts related to these issues, as considered in Appendix G of the State CEQA Guidelines, is whether a project would conflict with any applicable land use plan or policy adopted for the purpose of reducing or avoiding environmental impacts. Such a conflict is site-specific; it is addressed on a project-by-project basis. Because the project-specific analysis considers both existing and future planned land uses, impacts resulting from the additive effect of other proposed or speculative land use plans would not differ from those identified in the above impact discussions. Similarly, because the analysis of applicable land use goals and policies considers both existing and planned land uses, cumulative land use compatibility impacts are not considered independently.

As described in Chapter 12.0, Land Use and Planning, of this DEIR, implementing the proposed project would not result in significant land use planning impacts, and the project's ultimate consistency with local land use plans, policies, and zoning is ensured through entitlements to amend the City General Plan. The project is also consistent with the SJMHCP, a regional-scale planning document. Further, related projects in the City are, to the extent that proposed land uses have been identified, apparently consistent with environmental plans and policies. Because no land use impacts would occur on a project-specific basis, the project would not contribute to any potential cumulative land use impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

19.11 NOISE

Noise impacts are assumed to be localized. The impacts of noise are reduced with distance, and the potential for cumulative noise impacts will ordinarily be limited to a few hundred yards from the source, unless there is a very significant existing or proposed noise source. Other than the Union Pacific Railroad line and State Route 120, there are no major noise sources in the immediate Plan Area. Proposed noise sources would be subject to project review and must comply with the City's noise standards. Future traffic associated with the project would extend out to the local and state roads serving the Plan Area and vicinity. For the purposes of this EIR, the geographic context for cumulative noise analysis is defined as the Plan Area and vicinity, as well as the elements of the local street system impacted by Specific Plan-generated traffic.

The City's noise regulations limit construction activities to daytime hours. For the Specific Plan, it was determined that adherence to these noise regulations would be sufficient to avoid significant construction noise impacts. No related projects would be under construction in the immediate vicinity of the project site, nor would they be constructed concurrently with the proposed project. Since mitigation would lead to no significant construction noise impacts after mitigation, the proposed project would not make a cumulatively considerable incremental contribution to any cumulative construction noise impacts.

While construction noise can be controlled onsite at the point of origin, traffic noise may extend beyond a project site along existing offsite roadways and result in significant traffic noise impacts on sensitive uses along these roadways. Cumulative traffic noise was evaluated under Cumulative Base plus Project conditions, which are described in Section 19.15, Transportation. Under Cumulative Base plus Project conditions, along both McKinley Avenue (south of the Plan Area's southern boundary) and Yosemite Avenue (east of the Plan Area's eastern boundary), an increase in traffic due to the proposed project will adversely impact sensitive offsite noise receptors (i.e., residential uses). Mitigation identified in Chapter 14.0, Noise, would reduce the Cumulative Base plus Project noise levels on both roadways to a level that is less than significant. Specifically, Mitigation Measure 14-1 identifies the need to use noise-reducing paving materials along these sections of roadways to reduce traffic noise to acceptable levels. As a result, the Lathrop Gateway Business Park project would not cause a cumulatively considerable contribution to any such significant cumulative noise impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

19.12 POPULATION AND HOUSING

By itself, population growth is not considered a significant cumulative effect, because it is not an environmental impact. However, supporting population growth with related housing and infrastructure does lead to conversion of land to other uses. The project-level impacts of this land conversion are considered in the appropriate technical chapters of this document, and the cumulative impacts are discussed elsewhere in this chapter.

Regionally, the proposed project is anticipated to contribute jobs to an area with more housing units than jobs. As such, the project would have a beneficial effect on the jobs-housing balance of San Joaquin County, in which there are more housing units than jobs. This indicates that many County residents are commuting to jobs elsewhere, with attendant impacts on roadway levels of service, air quality and noise. Therefore, the proposed project would help work toward alleviating a countywide cumulative impact.

Locally, related projects are currently and will be adding thousands of housing units within the City. As a result, overall housing opportunities in the City are anticipated to increase significantly, thereby creating a greater imbalance between housing and jobs in Lathrop. The creation of jobs associated with the proposed project, along with the project not including any housing, would move the City toward a better jobs-housing balance. This would reduce adverse jobs-housing balance impacts

both at the city and county levels. Therefore, the cumulative population and housing impacts would be less than considerable.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

19.13 PUBLIC SERVICES

The proposed project would generate an increase in demand for fire, police, and solid waste services. Potentially significant project impacts associated with fire and police services would be mitigated to less-than-significant levels through implementation of mitigation measures identified in Chapter 16.0, Public Services, of this DEIR. These mitigation measures include, but are not limited to, limiting occupancy of structures until fire stations are available to provide three to four minute emergency response times to the structures; limiting occupancy of structures until adequate minimum fire flows have been confirmed; and requiring payment by the applicant of facility fees.

Project impacts related to increased generation of solid waste would be considered less than significant. The receiving landfill, the Foothill Sanitary Landfill, has approximately 40 million tons of capacity remaining and is expected to remain open until 2054. Because this landfill would have adequate capacity to serve the project and other development in its service area, impacts from the proposed Lathrop Gateway Business Park and related projects are not cumulatively significant.

At this time, it is unclear whether sufficient police, fire, animal control, and school facilities are planned to serve all of the related projects identified earlier in this chapter. It is a City policy to ensure that balanced fiscal resources are available to fund public services for new development. While some of the related projects include proposals for the construction of service facilities, others do not.

A cumulative shortage of public services and facilities would not by itself represent a significant environmental impact because these are not, strictly speaking, "environmental effects." However, such a shortage would lead to the need to develop additional public services facilities, which could lead to significant environment effects related to their construction and operation. It is assumed that the development of the related projects, and/or development of the additional public service facilities required to serve them, would be preceded by the required CEQA review. However, conducting the required CEQA review would not necessarily guarantee that significant environmental effects associated with construction of new fire, police, animal control, and school facilities would not occur. Hence, significant cumulative environmental effects associated with the development of new fire, police, animal control, and school facilities could potentially occur. Although the proposed project would not create a significant demand for public services after implementation of the mitigation measures identified above, it is considered to make a cumulatively considerable incremental contribution to significant cumulative public services impacts.

Contribution to Significant Cumulative Impacts: Considerable

Mitigation Measures: None available

19.14 PUBLIC UTILITIES

Cumulative utility impacts are appropriately considered at the level of the service area of the potentially affected utilities, which for the major utilities is the City of Lathrop. Therefore, the geographic context for the analysis of utility impacts is the City of Lathrop.

As indicated in Chapter 17.0, the proposed project would generate less-than-significant impacts associated with construction of recycled water storage and disposal capacity, stormwater/surface runoff management, and demand for electricity and natural gas. Without mitigation, however, significant impacts could occur with respect to demand for potable water and demand for wastewater treatment capacity. These potential impacts, however, can be reduced to less-than-significant levels with implementation of recommended mitigation measures. Mitigation for significant impacts involves limiting the amount of project development that would generate demand for these services until such time as the service is made available, including adequate water infrastructure and wastewater treatment capacity.

In terms of cumulative impacts, the City is responsible for ensuring that water, wastewater, and recycled water services are adequately provided within its jurisdictional boundaries and that development within the City can be adequately served by electrical and natural gas providers. The City General Plan identifies goals, policies, and mitigation measures associated with providing water, wastewater, recycled water, stormwater conveyance, electricity, and natural gas to new development, including many of the related projects identified in this chapter.

Water, Wastewater, and Recycled Water

As discussed in Chapter 17.0 of this DEIR, a water supply assessment report has been prepared for the proposed project in accordance with SB 610 (Appendix G of this DEIR). The assessment evaluates the adequacy of existing and future water supplies to meet the water demand created by the Lathrop Gateway Business Park project in conjunction with existing development in the City and future related projects listed in this chapter. The Water Master Plan addresses provision of water for full buildout of the City.

As indicated in the water supply assessment, future water supply for the City would consist of groundwater from the City's existing and planned municipal wells and surface water deliveries from the SCSWSP. It is projected that future water demand (i.e., proposed project plus future cumulative development) would range from 9,884 AFY in 2010 to 20,876 in 2030. As indicated in Table 10 of the Water Supply Assessment, future water supply available to the City during normal precipitation years, as well as multiple-dry years, would be adequate to meet future water demand during all horizon (2010, 2015, 2020, 2025, and 2030) years. In addition, the SSJID SCSWSP provides a dependable water supply for Lathrop and the other participating cities in the region. Therefore, the proposed Lathrop Gateway Business Park and related projects would not result in cumulative impacts related to water supply.

In 2001, the City completed the Water Master Plan, which programmatically plans for the provision of adequate water and wastewater treatment/disposal capacity to serve City growth through 2030. The Water Master Plan provides for all the water and wastewater needs for cumulative City development. Needed facilities are included in the Water Master Plan to meet the needs of buildout

of the City, and the Water Master Plan EIR evaluates related impacts of constructing and operating these facilities. It is assumed that the development of related projects, and/or the development of the additional utility systems required to serve them, would be preceded by the required CEQA review. However, it cannot be assumed that all potential environmental impacts associated with the development of the additional water and wastewater capacity and infrastructure required to serve these related projects would necessarily be mitigated to less than significant levels. Therefore, potentially significant cumulative utilities impacts could occur related to water and wastewater treatment/disposal capacity.

Contribution to Significant Cumulative Impacts: Considerable

Mitigation Measures: None available

Stormwater Conveyance

As evaluated in Chapter 13.0, the project's planned stormwater system is sufficient to prevent flooding through detention, and pumping when necessary. As a result, no adverse project-specific impacts, significant or otherwise, would occur. Therefore, the proposed project would not incrementally contribute to any cumulative impacts relating to the provision of stormwater conveyance. In other new developments within the City, stormwater conveyance would also consist of surface runoff to detention ponds or other detention facilities, with subsequent conveyance to the San Joaquin River. Such new development, like the proposed Lathrop Gateway Business Park, would be required to comply with the policies of the City's drainage master plans. In addition, cumulative impacts of related projects would undergo separate environmental review to ensure that adequate conveyance facilities are included as part of those projects. As such, it is expected that future development would result in less-than-significant cumulative stormwater conveyance impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

19.15 TRANSPORTATION/CIRCULATION

The potential cumulative traffic impacts of the proposed Lathrop Gateway Business Park Specific Plan were considered in the Transportation Impact Study prepared by Wood Rodgers (2010). The Transportation Impact Study is contained in Appendix F of this DEIR. The Transportation Impact Study evaluated a "Cumulative Base (Current Project Site)" condition that considers a long-term development scenario throughout the project vicinity, and a "Cumulative Base plus Project" condition that evaluates operations with traffic generated by the full buildout of the proposed Specific Plan superimposed on top of the cumulative base. Both conditions are described in more detail below. Assumed roadway configurations under the two conditions are described in Appendix F. For the analysis of the Specific Plan's cumulative effect on transportation, the "Cumulative Base plus Project" condition is used.

Mitigation for projected traffic impacts, where feasible, would consist of long-term intersection and roadway improvements. In these cases, the project's responsibility would be the payment of its

proportionate share costs of these improvements. The City of Lathrop has adopted the Capital Facility Fees to finance street improvements required to mitigate the impacts of new development; some of the improvements required by the project may be covered by the fee system. If the necessary future intersection and roadway segment improvements are currently included in the calculations for Capital Facility Fees, the payment of the current fee constitutes the project's proportionate share of the future improvements. For improvements not included in the Capital Facility Fees calculation - including interim street improvements - the project would be responsible for payment of the proportionate share for these improvements, based on traffic loadings. Proportionate share costs are determined and paid prior to recordation of Final Maps.

Cumulative Traffic Forecasts

Cumulative (Year 2030) traffic forecasts were developed based on a review of long-range traffic forecasts contained in agency-approved prior traffic studies completed as part of recently completed EIRs. These include, but are not limited to, the Central Lathrop Specific Plan DEIR (July 2004), River Island EIR (dated January 2003), and the West Lathrop Specific Plan EIR (dated November 1995) in the City of Lathrop. They also include the Evans-Pillsbury EIR (April 2009) and the Union Crossing EIR (May 2009) in the City of Manteca. Additional cumulative traffic forecasts along the SR 120 study corridor and interchanges were available from the *SR 120/McKinley Avenue Interchange Project Study Report (PSR)*, approved by Caltrans in June 2008.

The SJCOG Year 2030 regional travel demand model also provides long-range traffic growth rates for regional freeway corridors and key arterial segments within and through the Plan Area and vicinity. For study facilities where the cumulative traffic forecasts were not readily available from prior studies or models, cumulative base traffic forecasts were developed by applying general traffic growth factors obtained from the above-noted studies and models.

Two types of cumulative base conditions were evaluated in the traffic study, which are defined as follows:

- Cumulative Base (Current Project Site) – The base condition assumes anticipated year 2030 levels of development consistent with Lathrop, Manteca and San Joaquin County General Plans throughout the local and regional vicinity, while assuming no new development on the project site. This scenario essentially retains the project site at current development levels.
- Cumulative Base (City General Plan Land Uses on Project Site) – This base condition assumes anticipated 2030 levels of development consistent with the Lathrop, Manteca and San Joaquin County General Plans throughout the local and regional vicinity, while assuming buildout of the Plan Area under current Lathrop General Plan land use designations. Since impacts and potential mitigation measures under this scenario are the same as those under Cumulative Base (Current Project Site), this scenario will not be discussed in this analysis. Further information on this scenario is available in the Transportation Impact Study in Appendix F.

The "Cumulative Base" conditions noted above are discussed in detail in the traffic study contained in Appendix F of this DEIR. Level of service for both intersections and roadway segments under both conditions are identified.

“Cumulative Base plus Project” traffic volumes were developed by incrementally superimposing proposed Specific Plan-generated trips at full buildout on top of “Cumulative Base (Current Project Site)” traffic volumes. It should be noted that, being an SJRTP *Tier 1* (funded) improvement, the planned SR 120/McKinley Avenue interchange is assumed constructed under all cumulative scenarios evaluated in the traffic study.

Cumulative Intersection Lane Geometrics and Control

The traffic study generally assumed recommended long-term improvements identified in prior studies (identified above) to be “in place” under cumulative baseline conditions, if such improvements are included in existing local or regional traffic impact mitigation fee programs. The cumulative base lane geometrics and control for all study intersections are illustrated in Figure 9 of the traffic study contained in Appendix F of this EIR. The following lists the cumulative baseline improvements assumed to be “in place” under Cumulative Base conditions:

Intersections/Interchanges

- Reconstruction of SR 120/Airport Way Interchange
- Reconstruction of SR 120/Union Road Interchange
- Reconstruction of SR 120/Main Street Interchange
- Construction of SR 120/McKinley Avenue Interchange
- Modification/Reconstruction of I-5 interchanges with Louise Avenue and Lathrop Road
- Louise Avenue/McKinley Avenue Improvements

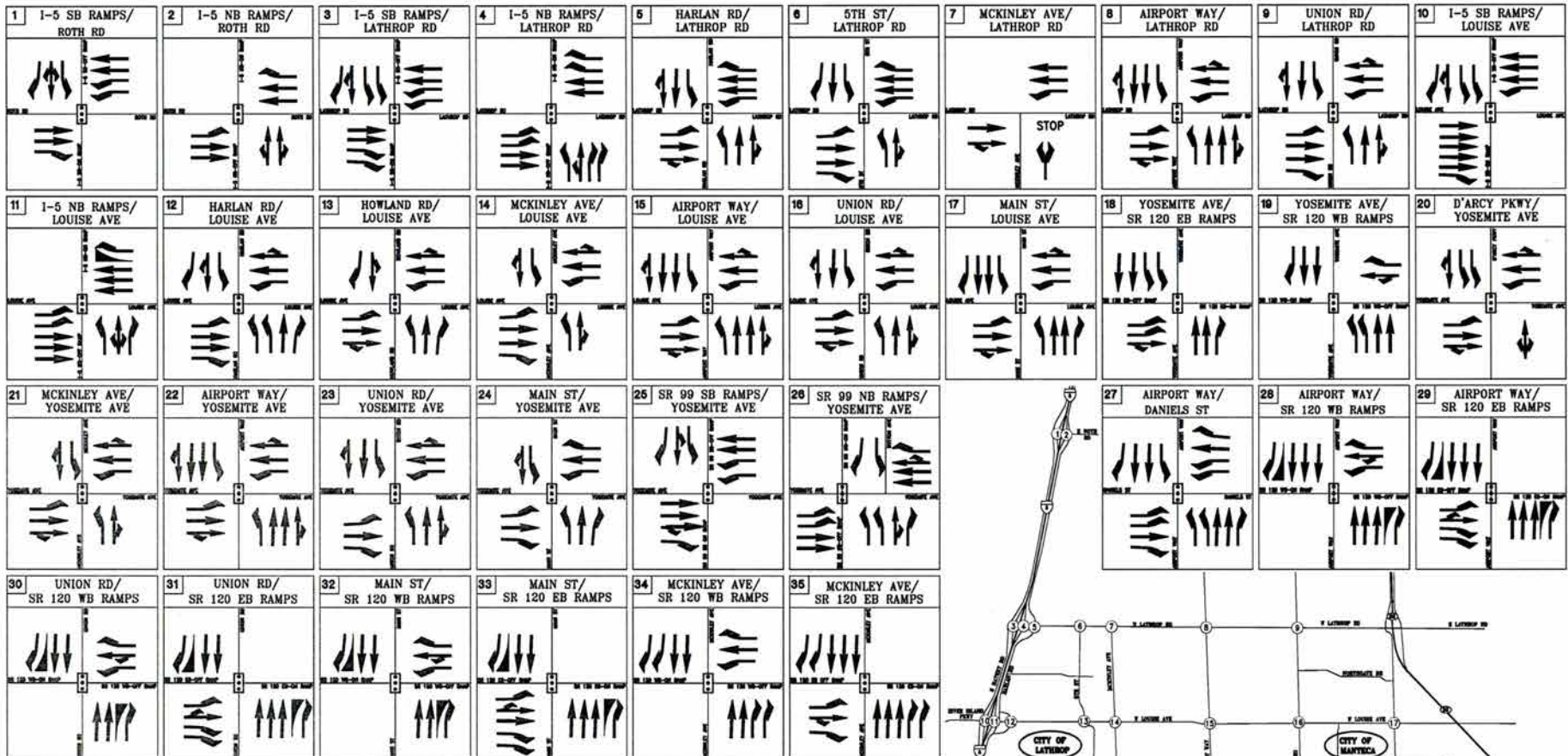
Roadway/Freeway Segments

- Widening of I-5 mainline between SR 120 and Roth Road interchange
- Widening of SR 120 segment between I-5 and SR 99
- Widening of Lathrop Road
- Widening of Louise Avenue
- Widening of Union Road
- Widening of Airport Way between SR 120 and Lathrop Road
- Widening of Harlan Road
- Widening of Yosemite Avenue/Guthmiller Road from SR 120 overpass to D’Arcy Parkway

Planned Cumulative Base Improvements Assumed Not Constructed by 2030

The following planned improvements have been identified in prior agency planning documents, but do not necessarily have known funding sources at this time. Therefore, these improvements were not assumed to be in place under cumulative baseline conditions.

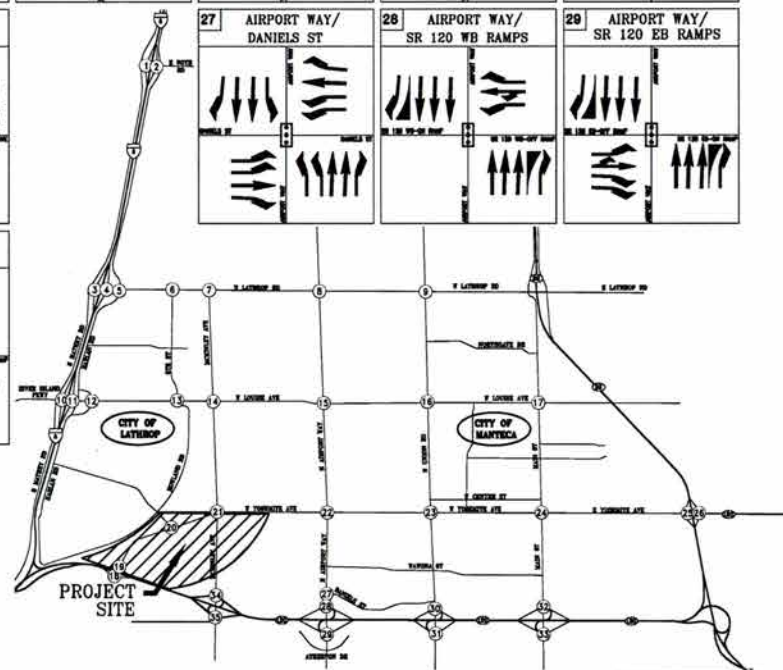
- Reconstruction of SR 120 Interchange with Yosemite Avenue/Guthmiller Road
- Reconstruction of SR 120/I-5 Interchange
- Reconstruction of I-5 Interchange with Roth Road
- Widening of Roth Road between I-5 and Airport Way



LEGEND:

- TRAFFIC SIGNAL
- STOP STOP CONTROLLED MOVEMENT
- FREE
- STUDY INTERSECTION

NOTE: ONLY FUNDED/ PROGRAMMED 2030 BASELINE IMPROVEMENTS ARE ASSUMED IN THIS EXHIBIT.



NORTH SOURCE: WOOD RODGERS

TABLE 19-1
CUMULATIVE BASE (CURRENT PROJECT SITE CONDITION): INTERSECTION LEVELS OF SERVICE

#	Intersection:	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (S/V)	LOS	Warrant Met?	Delay (S/V)	LOS	Warrant Met?
1	I-5 SB Ramps / Roth Rd	Signal	15.3	B	-	20.6	C	-
2	I-5 NB Ramps / Roth Rd	Signal	15.3	B	-	24.6	C	-
3	I-5 SB Ramps / Lathrop Rd	Signal	93.9	F	-	319.7	F	-
4	I-5 NB Ramps / Lathrop Rd	Signal	169.9	F	-	256.9	F	-
5	Harlan Rd / Lathrop Rd	Signal	307.0	F	-	342.3	F	-
6	5th St / Lathrop Rd	Signal	85.4	F	-	65.0	E	-
7	McKinley Ave / Lathrop Rd	TWSC	439.9	F	Yes	OVFL	F	Yes
8	Airport Way / Lathrop Rd	Signal	85.2	F	-	119.2	F	-
9	Union Rd / Lathrop Rd	Signal	33.9	C	-	96.4	F	-
10	I-5 SB Ramps / Louise Ave	Signal	151.1	F	-	58.1	E	-
11	I-5 NB Ramps / Louise Ave	Signal	43.6	D	-	63.0	E	-
12	Harlan Rd / Louise Ave	Signal	124.2	F	-	66.7	E	-
13	Howland Dr / Louise Ave	Signal	74.0	E	-	67.0	E	-
14	McKinley Ave / Louise Ave	Signal	60.1	E	-	35.4	D	-
15	Airport Way / Louise Ave	Signal	73.3	E	-	189.4	F	-
16	Union Rd / Louise Ave	Signal	40.9	D	-	57.7	E	-
17	Main St / Louise Ave	Signal	41.1	D	-	120.1	F	-
18	Guthmiller Rd / SR 120 EB Ramps	Signal	14.3	B	-	23.5	C	-
19	Guthmiller Rd / SR 120 WB Ramps	Signal	13.7	B	-	18.0	B	-
20	D'Arcy Pkwy / Yosemite Ave	Signal	15.0	B	-	30.5	C	-
21	McKinley Ave / Yosemite Ave	Signal	25.7	C	-	25.1	C	-
22	Airport Way / Yosemite Ave	Signal	29.6	C	-	96.5	F	-
23	Union Rd / Yosemite Ave	Signal	39.7	D	-	102.5	F	-
24	Main St / Yosemite Ave	Signal	29.3	C	-	61.6	E	-
25	SR 99 SB Ramps / Yosemite Ave	Signal	14.4	B	-	25.6	C	-
26	SR 99 NB Ramps / Yosemite Ave	Signal	27.6	C	-	33.6	C	-
27	Airport Way / Daniels St	Signal	18.0	B	-	27.1	C	-
28	Airport Way / SR 120 WB Ramps	Signal	23.8	C	-	16.0	B	-
29	Airport Way / SR 120 EB Ramps	Signal	10.0	A	-	23.3	C	-
30	Union Rd / SR 120 WB Ramps	Signal	9.5	A	-	16.2	B	-
31	Union Rd / SR 120 EB Ramps	Signal	7.6	A	-	24.0	C	-
32	Main St / SR 120 WB Ramps	Signal	6.2	A	-	13.0	B	-
33	Main St / SR 120 EB Ramps	Signal	10.4	B	-	21.4	C	-
34	McKinley Ave / SR 120 WB Ramps	Signal	18.6	B	-	13.3	B	-
35	McKinley Ave / SR 120 EB Ramps	Signal	36.0	D	-	55.0	D	-

Notes:

1. TWSC = Two-Way-Stop Control, AWSC = All-Way-Stop Control, OVFL = Overflow
2. For TWSC intersection, worst-case movement delays (in seconds/vehicle) is indicated. "Average" control delays (in seconds/vehicle) are indicated for signal-controlled intersections. Delays reported in above table are from Synchro 7 software.
3. Warrant = California MUTCD 2006 based Peak-hour-Volume Warrant #3 (Urban Areas).
4. Bold numbers and letters represent condition when intersection does not meet minimum acceptable standards.

**TABLE 19-2
CUMULATIVE BASE (CURRENT PROJECT SITE CONDITION): ROADWAY LEVELS OF SERVICE**

Roadway/Freeway Segment	Existing Functional Capacity Configuration*	AADT	LOS
Interstate 5 mainline – from I-205 I/C to SR 120 I/C	8-Lane Divided Freeway	334,100	F
Interstate 5 mainline – from SR 120 I/C to Lathrop Road I/C	8-Lane Divided Freeway	265,800	F
Interstate 5 mainline – from Lathrop Rd I/C to French Camp Rd I/C	8-Lane Divided Freeway	260,800	F
SR 120 mainline – from I-5 I/C to Yosemite Ave/Guthmiller Rd I/C	6-Lane Divided Freeway	172,900	F
SR 120 mainline – from Yosemite/Guthmiller I/C to Airport Way I/C	6-Lane Divided Freeway	141,500	F
SR 120 mainline – from Airport Way I/C to Main Street I/C	6-Lane Divided Freeway	137,000	F
SR 120 mainline – from Main Street I/C to SR 99 I/C	6-Lane Divided Freeway	157,200	F
SR 99 mainline – south of SR 120 I/C	6-Lane Divided Freeway	169,100	F
SR 99 mainline – from SR 120 I/C to East Yosemite Avenue I/C	6-Lane Divided Freeway	137,800	F
SR 99 mainline – north of East Yosemite Avenue I/C	6-Lane Divided Freeway	109,600	E
Yosemite Avenue – from SR 120 I/C to D’Arcy Parkway	Two-Lane Arterial	16,700	A
Yosemite Avenue – from D’Arcy Parkway to Airport Way	Four-Lane Arterial	25,300	D
Yosemite Avenue – from Airport Way to Union Road	Five-Lane Arterial	27,300	C
Yosemite Avenue – from Union Road to Main Street	Four-Lane Arterial	13,000	A
Yosemite Avenue – from Main Street to SR 99	Four-Lane Arterial	18,300	B
Airport Way – from SR 120 I/C to Yosemite Avenue	Six-Lane Arterial	22,500	A
Airport Way – from Yosemite Avenue to Louise Avenue	Six-Lane Arterial	32,800	B
Airport Way – from Louise Avenue to Lathrop Road	Six-Lane Arterial	23,700	A
McKinley Avenue – from Yosemite Avenue to Louise Avenue	Two-Lane Arterial	10,200	B
McKinley Avenue – from Louise Avenue to Lathrop Road	Two-Lane Arterial	6,100	A
Louise Avenue – from I-5 to 5 th Street	Five-Lane Arterial	29,300	D
Louise Avenue – from 5 th Street to Airport Way	Five-Lane Arterial	33,100	E

Notes: AADT = Annual Average Daily Traffic, LOS = Level of Service

* “Three lane arterial” refers to a two-lane arterial with left-turn lane channelizations at key intersections.

“Five lane arterial” refers to a four-lane arterial with left-turn lane channelizations at key intersections or two-way median left-turn lane.

Traffic Conditions and Necessary Improvements under Cumulative Base (Current Project Site) Conditions

Based on the improvements assumed above, the Transportation Impact Study projected operating conditions at the study intersections and roadway segments by applying projected traffic volumes under the Cumulative Base (Current Project Site Condition) scenario onto Year 2030 intersection lane geometrics and controls, shown in Figure 19-2. Table 19-1 shows the resulting LOS at the study intersections, and Table 19-2 shows the resulting LOS at the study roadway segments. As shown in these tables, 18 intersections and 11 roadway segments would have deficient LOS under the Cumulative Base (Current Project Site Condition) scenario.

The Transportation Impact Study identified incremental improvements projected to be necessary above and beyond those planned and funded improvements already identified in prior studies. These are improvements identified as necessary even without implementation of the proposed Specific Plan. All proposed improvements would have the affected facilities operating at least at minimally acceptable LOS standards.

Intersection Improvements

- Widen I-5 southbound off-ramp approach at Lathrop Road to provide for two left-turn lanes and one shared left-through lane. Additionally, the eastbound approach to this intersection shall be provided with a right-turn lane and four through lanes, and the westbound approach shall be provided with two left-turn lanes and four through lanes.
- Widen I-5 northbound off-ramp approach at Lathrop Road to provide for one left-turn lanes, one shared left-through lane, and one free right-turn lane. Additionally, the eastbound approach to this intersection shall each be provided with a through lane, and the westbound approach shall be provided with two through lanes.
- The Harlan Road/Lathrop Road intersection shall have the following lane geometrics:
 - Northbound Approach – Three left-turn lanes, and one shared through-right lane.
 - Southbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
 - Eastbound Approach – Two left-turn lanes, four through lanes, and one right-turn lane.
 - Westbound Approach – One left-turn lane, three through lanes, and one shared through-right lane.
- The 5th Street/Lathrop Road intersection shall have the following lane geometrics:
 - Northbound Approach – One left-turn lane, and one shared through-right lane.
 - Southbound Approach – Two left-turn lanes, one through lane, and one right-turn lane.
 - Eastbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
 - Westbound Approach – One left-turn lane, two through lanes, and one shared through-right lane.
- The McKinley Avenue/Lathrop Road intersection shall have the following lane geometrics:
 - Northbound Approach – One left-turn lane, and one right-turn lane.
 - Eastbound Approach – One through lane, and one shared through-right lane.
 - Westbound Approach – One left-turn lane, and two through lanes.
- The Airport Way/Lathrop Road intersection shall have the following lane geometrics:
 - Northbound Approach – Two left-turn lanes, three through lanes, and one right-turn lane.
 - Southbound Approach – One left-turn lane, three through lanes, and one right-turn lane.
 - Eastbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
 - Westbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
- The Union Road/Lathrop Road intersection shall have the following lane geometrics:
 - Northbound Approach – Two left-turn lanes, two through lanes, and one right-turn lane.
 - Southbound Approach – One left-turn lane, one through lane, and one shared through-right lane.
 - Eastbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
 - Westbound Approach – Two left-turn lanes, one through lane, and one shared through-right lane.
- The I-5 SB Ramps/Louise Avenue intersection shall have the following lane geometrics:
 - Southbound Approach – One left-turn lane, one shared left-through lane, and one right-turn lane.

Eastbound Approach – Five through lanes, and one right-turn lane.
Westbound Approach – Two left-turn lanes, and three through lanes.

- The I-5 NB Ramps/Louise Avenue intersection shall have the following lane geometrics:
Northbound Approach – Two left-turn lanes, one shared left-through lane, and one right-turn lane.
Eastbound Approach – Two left-turn lanes, and three through lanes.
Westbound Approach – Three through lanes, and one right-turn lane.
- The Harlan Road/Louise Avenue intersection shall have the following lane geometrics:
Northbound Approach – Two left-turn lanes, one through lane, and one shared through-right lane.
Southbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
Eastbound Approach – Two left-turn lanes, two through lanes, and one right-turn lane.
Westbound Approach – Two left-turn lanes, two through lanes, and one shared through-right lane.
- The Howland Road/Louise Avenue intersection shall have the following lane geometrics:
Northbound Approach – One left-turn lane, one through lane, and one right-turn lane.
Southbound Approach – Two left-turn lanes, and one shared through-right lane.
Eastbound Approach – One left-turn lane, one through lane, and one shared through-right lane.
Westbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
- The McKinley Avenue/Louise Avenue intersection shall have the following lane geometrics:
Northbound Approach – One left-turn lane, one through lane, and one shared through-right lane.
Southbound Approach – One left-turn lane, one through lane, and one shared through-right lane.
Eastbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
Westbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
- The Airport Way/Louise Avenue intersection shall have the following lane geometrics:
Northbound Approach – Two left-turn lanes, two through lanes, and one shared through-right lane.
Southbound Approach – One left-turn lane, two through lanes, and one shared through-right lane.
Eastbound Approach – Two left-turn lanes, two through lanes, and one right-turn lane.
Westbound Approach – One left-turn lane, one through lane, and one shared through-right lane.
- The Union Road/Louise Avenue intersection shall have the following lane geometrics:
Northbound Approach – One left-turn lane, one through lane, and one shared through-right lane.
Southbound Approach – Two left-turn lanes, one through lane, and one shared through-right lane.

Eastbound Approach – One left-turn lane, one through lane, and one shared through-right lane.

Westbound Approach – One left-turn lane, one through lane, and one shared through-right lane.

- The Main Street/Louise Avenue intersection shall have the following lane geometrics:
 - Northbound Approach – Two left-turn lanes, two through lanes, and one right-turn lane.
 - Southbound Approach – Two left-turn lanes, two through lanes, and one right-turn lane.
 - Eastbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
 - Westbound Approach – Two left-turn lanes, two through lanes, and one right-turn lane.
- The D'Arcy Parkway/Yosemite Avenue intersection shall have the following lane geometrics:
 - Northbound Approach – One left-turn lane, and one shared through-right lane.
 - Southbound Approach – Two left-turn lanes, and one shared through-right lane.
 - Eastbound Approach – One left-turn lane, one through lane, and one shared through-right lane.
 - Westbound Approach – One left-turn lane, one through lane, and one shared through-right lane.
- The McKinley Avenue/Yosemite Avenue intersection shall have the following lane geometrics:
 - Northbound Approach – One left-turn lane, one through lane, and one shared through-right lane.
 - Southbound Approach – Two left-turn lanes, one through lane, and one shared through-right lane.
 - Eastbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
 - Westbound Approach – Two left-turn lanes, one through lane, and one shared through-right lane.
- The Airport Way/Yosemite Avenue intersection shall have the following lane geometrics:
 - Northbound Approach – Two left-turn lanes, three through lanes and one right-turn lane.
 - Southbound Approach – Two left-turn lanes, three through lanes, and one right-turn lane.
 - Eastbound Approach – Two left-turn lanes, three through lanes, and one right-turn lane.
 - Westbound Approach – Two left-turn lanes, three through lanes, and one right-turn lane.
- The Union Road/Yosemite Avenue intersection shall have the following lane geometrics:
 - Northbound Approach – Two left-turn lanes, two through lanes, and one right-turn lane.
 - Southbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
 - Eastbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
 - Westbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
- The Main Street/Yosemite Avenue intersection shall have the following lane geometrics:
 - Northbound Approach – One left-turn lane, two through lanes, and one right-turn lane.
 - Southbound Approach – One left-turn lane, one through lane, and one shared through-right lane.
 - Eastbound Approach – One left-turn lane, one through lane, and one right-turn lane.
 - Westbound Approach – One left-turn lane, one through lane, and one right-turn lane.

- Modify the SR 120/Yosemite Avenue interchange to a partial cloverleaf design. Due to weaving issues on the SR 120 segment from the Yosemite Avenue interchange to the I-5 interchange, it is recommended that the SR 120/Yosemite Avenue westbound on-ramp be eliminated.

Roadway Segment Improvements

- Widen Interstate 5 segment from I-205 to French Camp Road to ten lanes.
- Widen SR 120 segment from I-5 interchange to SR 99 interchange to eight lanes.
- Improve SR 120 westbound mainline/off-ramp junctions at Guthmiller Avenue, McKinley Avenue and I-5.
- Widen SR 99 segment from SR 120 interchange to Arch Road to six lanes, along with interchange modifications.
- Widen Louise Avenue from 5th Street to Airport Way to six lanes.

Cumulative Impacts on Intersection Operations

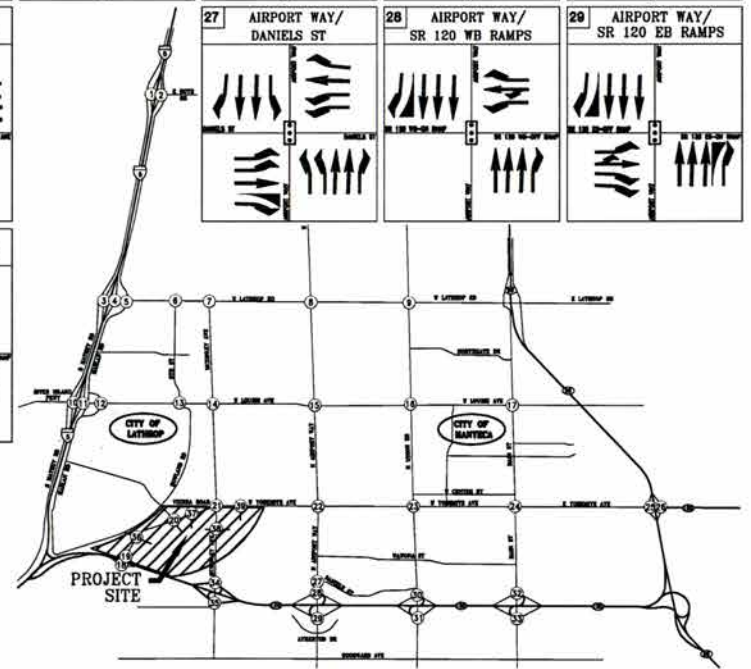
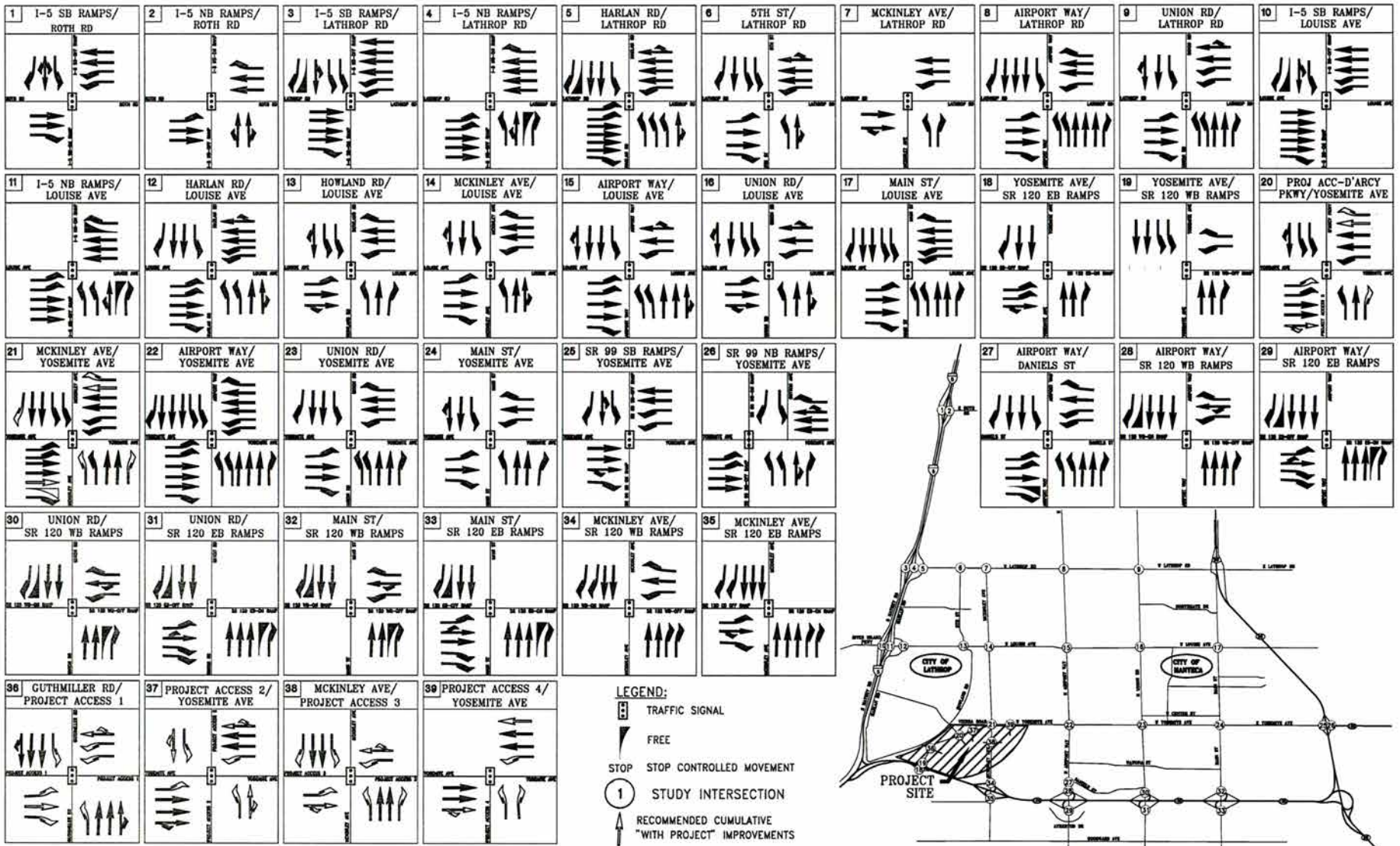
As noted above, “Cumulative Base Plus Project” traffic volumes were developed by incrementally superimposing proposed Specific Plan-generated trips at full buildout on top of “Cumulative Base (Current Project Site Condition)” traffic volumes. Figure 19-3 shows the lane geometrics under the Cumulative Base Plus Project condition. Table 19-3 shows the resulting LOS at the study intersections, along with an indication if the intersection would meet a warrant for a traffic signal. As shown in Table 19-3, 10 signalized and one unsignalized study intersections are projected to operate at AM and PM peak hour LOS “E” or worse under the Cumulative Base Plus Project condition. Another seven signalized intersections are projected to operate at PM peak hour LOS “E” or worse. Therefore, the project would have cumulatively considerable impacts on LOS at specific intersections.

The following mitigation measures specifically address cumulative conditions. They are not related to, nor influenced by, the mitigation measures addressing Existing Plus Project (Year 2012) conditions described in Chapter 18.0, Transportation.

Contribution to Significant Cumulative Impacts: Considerable

Mitigation Measures:

- 19-1. If the necessary intersection improvements identified under the Cumulative Base (Current Project Site Condition) scenario have not been constructed by the time construction in the Specific Plan area begins, the ODS of properties within the Plan Area shall pay their “fair share” costs of these improvements once the City has identified and programmed them in the appropriate funding plan.



NORTH SOURCE: WOOD RODGERS

Figure 19-3
CUMULATIVE BASE PLUS PROJECT LANE GEOMETRICS

TABLE 19-3
CUMULATIVE BASE PLUS PROJECT CONDITION: INTERSECTION LEVELS OF SERVICE

#	Intersection:	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (S/V)	LOS	Warrant Met?	Delay (S/V)	LOS	Warrant Met?
1	I-5 SB Ramps/Roth Rd	Signal	15.2	B	-	20.5	C	-
2	I-5 NB Ramps/Roth Rd	Signal	15.3	B	-	24.6	C	-
3	I-5 SB Ramps/Lathrop Rd	Signal	107.9	F	-	323.3	F	-
4	I-5 NB Ramps/Lathrop Rd	Signal	189.1	F	-	264.7	F	-
5	Harlan Rd/Lathrop Rd	Signal	355.9	F	-	348.2	F	-
6	5 th St/Lathrop Rd	Signal	85.0	F	-	65.4	E	-
7	McKinley Ave/Lathrop Rd	TWSC	907.6	F	Yes	OVFL	F	Yes
8	Airport Way/Lathrop Rd	Signal	90.8	F	-	128.5	F	-
9	Union Rd/Lathrop Rd	Signal	34.8	D	-	102.7	F	-
10	I-5 SB Ramps/Louise Ave	Signal	140.6	F	-	64.9	E	-
11	I-5 NB Ramps/Louise Ave	Signal	44.0	D	-	68.1	E	-
12	Harlan Rd/Louise Ave	Signal	125.6	F	-	67.9	E	-
13	Howland Dr/Louise Ave	Signal	79.4	E	-	70.4	E	-
14	McKinley Ave/Louise Ave	Signal	63.8	E	-	81.7	F	-
15	Airport Way/Louise Ave	Signal	82.6	F	-	204.1	F	-
16	Union Rd/Louise Ave	Signal	43.8	D	-	71.9	E	-
17	Main St/Louise Ave	Signal	41.4	D	-	122.0	F	-
18	Guthmiller Rd/ SR 120 EB Ramps	Signal	20.0	B	-	33.1	C	-
19	Guthmiller Rd/ SR 120 WB Ramps	Signal	21.7	C	-	21.0	C	-
20	D'Arcy Pkwy/Yosemite Ave/Proj. Acc. 5	Signal	11.9	B	-	34.8	C	-
21	McKinley Ave/Yosemite Ave	Signal	28.8	C	-	50.6	D	-
22	Airport Way/Yosemite Ave	Signal	51.2	D	-	194.0	F	-
23	Union Rd/Yosemite Ave	Signal	47.2	D	-	192.9	F	-
24	Main St/Yosemite Ave	Signal	47.0	D	-	78.9	E	-
25	SR 99 SB Ramps/Yosemite Ave	Signal	16.6	B	-	22.1	C	-
26	SR 99 NB Ramps/Yosemite Ave	Signal	31.6	C	-	38.3	D	-
27	Airport Way/Daniels St	Signal	26.9	C	-	27.5	C	-
28	Airport Way/SR 120 WB Ramps	Signal	24.5	C	-	15.9	B	-
29	Airport Way/SR 120 EB Ramps	Signal	9.6	A	-	24.8	C	-
30	Union Rd/SR 120 WB Ramps	Signal	9.6	A	-	15.7	B	-
31	Union Rd/SR 120 EB Ramps	Signal	7.7	A	-	23.5	C	-
32	Main St/SR 120 WB Ramps	Signal	6.1	A	-	13.4	C	-
33	Main St/SR 120 EB Ramps	Signal	10.5	B	-	22.5	C	-
34	McKinley Ave/SR 120 WB Ramps	Signal	20.0	C	-	17.9	B	-
35	McKinley Ave/SR120 EB Ramps	Signal	34.5	D	-	50.9	D	-
36	Guthmiller Road / Project Access 1	Signal	18.3	B	-	26.6	C	-
37	Yosemite Ave / Project Access 2	Signal	27.4	C	-	24.4	C	-
38	McKinley Ave / Project Access 3	Signal	20.3	C	-	20.8	C	-
39	Yosemite Ave / Project Access 4	Signal	7.9	A	-	14.3	B	-

Notes:

1. TWSC = Two-Way Stop Control, OVFL = Overflow
2. For TWSC intersection, "Worst-Case" movement delays (in seconds/vehicle) is indicated. "Average" control delays (in seconds/vehicle) are indicated for signal-controlled intersections. Delays reported in above table are from Synchro 7 software.
3. Warrant = California, MUTCD 2003 based Peak-hour-Volume Warrant #3 (Urban Areas).
4. Bold numbers and letters represent condition when intersection does not meet minimum acceptable standards.

19-2. The ODS shall construct the following intersection improvements:

- Install a traffic signal at the Guthmiller Road/Project Access 1 intersection and construct the intersection with the following lane geometrics:
Northbound Approach – One left-turn lane, two through lanes, and one shared through-right lane.
Southbound Approach – One left-turn lane, two through lanes, and one shared through-right lane.
Eastbound Approach – One left-turn lane, one through lane, and one right lane.
Westbound Approach – Two left turn lanes, and one shared through-right lane.

Due to this intersection's close proximity to the Yosemite Avenue/SR 120 interchange ramp intersections, appropriate signal interconnect/coordination between the two intersections shall be implemented. *Projected LOS after mitigation: "D" or better.*

- Install a traffic signal at the Yosemite Avenue/Project Access 2 intersection and construct the intersection with the following lane geometrics:
Northbound Approach – One left-turn lanes, and one shared through-right lane.
Southbound Approach – One left-turn lanes, and one shared through-right lane.
Eastbound Approach – One left-turn lane, two through lanes, and one shared through-right lane.
Westbound Approach – One left-turn lane, two through lanes, and one shared through-right lane.
Projected LOS after mitigation: "D" or better.
- Install a traffic signal at the McKinley Avenue/Project Access 3 intersection and construct the intersection with the following lane geometrics:
Northbound Approach – One left-turn lane, two through lanes and one right lane.
Southbound Approach – One left-turn lane, two through lanes and one right lane.
Eastbound Approach – One left-turn lane, and one shared through-right lane.
Westbound Approach – One left-turn lane, and one shared through-right lane.
Projected LOS after mitigation: "C" or better.
- Install a traffic signal at the Yosemite Avenue/Project Access 4 intersection and construct the intersection with the following lane geometrics:
Northbound Approach – One left-turn lane, and one right-turn lane.
Eastbound Approach – One left-turn lane, two through lanes, and one shared through-right lane.
Westbound Approach – One left-turn lane, and three through lanes.
Projected LOS after mitigation: "C" or better.
- Construct the D'Arcy Parkway/Yosemite Avenue/Project Access 5 intersection with the following lane geometrics:

Northbound Approach – One left-turn lane, one through lane, and one right-turn lane.

Southbound Approach – Two left-turn lanes, and one shared through-right lane.

Eastbound Approach – Two left-turn lanes, two through lanes, and one shared through-right lane.

Westbound Approach – One left-turn lane, three through lanes, and one right-turn lane.

Projected LOS after mitigation: “D” or better.

- Install a traffic signal at the McKinley Avenue/Yosemite Avenue intersection and construct the intersection with these additions to the geometrics required under Cumulative Base conditions:

Northbound Approach – Add one left-turn lane and one right-turn lane.

Southbound Approach – Add one right-turn lane.

Eastbound Approach – Add one through lane and one right-turn lane.

Westbound Approach – Add one through lane and one right-turn lane.

Projected LOS after mitigation: “D” or better.

Contribution After Mitigation: Less than considerable. LOS at the intersections after mitigation would at least meet the appropriate minimally acceptable standards.

Implementation: The ODS will be responsible for the contribution of “fair share” costs and for the costs of any documentation needed to provide for reimbursement, and for the construction of improvements specific to the Plan Area.

Monitoring: The Community Development Department – Planning Division Department will verify the payment of “fair share” costs. The Public Works Department will be responsible for ensuring that the specified Plan Area intersection improvements are included in project improvement plans.

Cumulative Impacts on Roadway Segment Operations

Cumulative Base Plus Project roadway operations were quantified utilizing roadway AADT-based LOS thresholds presented previously in Table 18-2 in Chapter 18.0. Table 19-4 shows the resulting LOS at the study roadway segments. As shown in Table 19-4, 11 study segments are projected to operate at LOS “E” or worse under the Cumulative Base Plus Project condition. Therefore, the project would have cumulatively considerable impacts on LOS at specific roadway segments.

The following mitigation measures specifically address cumulative conditions. They are not related to, nor influenced by, the mitigation measures addressing Existing plus Project (Year 2012) conditions described in Chapter 18.0, Transportation. In addition, implementation of Mitigation Measure 19-1 would mitigate impacts on roadway segments that would be affected by the project.

**TABLE 19-4
CUMULATIVE BASE PLUS PROJECT CONDITION: ROADWAY LEVELS OF SERVICE**

Roadway/Freeway Segment	Existing Functional Capacity Configuration*	AADT	LOS
Interstate 5 mainline - from I-205 I/C to SR 120 I/C	8-Lane Divided Freeway	342,020	F
Interstate 5 mainline - from SR 120 I/C to Lathrop Road I/C	8-Lane Divided Freeway	271,500	F
Interstate 5 mainline - from Lathrop Rd I/C to French Camp I/C	8-Lane Divided Freeway	266,150	F
SR 120 mainline - from I-5 I/C to Yosemite Ave/Guthmiller Rd I/C	6-Lane Divided Freeway	187,040	F
SR 120 mainline - from Yosemite/Guthmiller I/C to Airport Way I/C	6-Lane Divided Freeway	153,040	F
SR 120 mainline - from Airport Way I/C to Main Street I/C	6-Lane Divided Freeway	146,430	F
SR 120 mainline - from Main Street I/C to SR 99 I/C	6-Lane Divided Freeway	165,210	F
SR 99 mainline - south of SR 120 I/C	6-Lane Divided Freeway	175,750	F
SR 99 mainline - from SR 120 I/C to East Yosemite Ave I/C	6-Lane Divided Freeway	141,010	F
SR 99 mainline - north of East Yosemite Ave I/C	6-Lane Divided Freeway	111,160	D
Yosemite Avenue - from SR 120 I/C to D'Arcy Parkway	6-Lane Arterial	27,250	A
Yosemite Avenue - from D'Arcy Parkway to Airport Way	6-Lane Arterial	37,710	B
Yosemite Avenue - from Airport Way to Union Road	5-Lane Arterial	35,220	E
Yosemite Avenue - from Union Road to Main Street	5-Lane Arterial	17,570	C
Yosemite Avenue - from Main Street to SR 99	5-Lane Arterial	21,210	A
Airport Way - from SR 120 I/C to Yosemite Avenue	6-Lane Arterial	28,190	C
Airport Way - from Yosemite Avenue to Louise Avenue	6-Lane Arterial	34,400	B
Airport Way - from Louise Avenue to Lathrop Road	6-Lane Arterial	24,460	A
McKinley Avenue - from Yosemite Avenue to Louise Avenue	4-Lane Arterial	14,190	A
McKinley Avenue - from Louise Avenue to Lathrop Road	2-Lane Arterial	7,910	A
Louise Avenue - from I-5 to 5 th Street	5-Lane Arterial	30,050	D
Louise Avenue - from 5 th Street to Airport Way	5-lane Arterial	34,390	E

Notes: AADT= Annual Average Daily Traffic, LOS=Level of Service, I/C=interchange

Bold letter represents conditions where the segment does not meet the minimum acceptable LOS standards.

** "3-Lane Arterial" refers to a two-lane arterial with left-turn lane channelizations at key intersections or two-way median left-turn lane. "5-Lane Arterial" refers to a four-lane arterial with left-turn lane channelizations at key intersections or two-way median left-turn lane.*

Contribution to Significant Cumulative Impacts: Considerable

Mitigation Measures:

- 19-3. The ODS shall widen Guthmiller Road/Yosemite Avenue from two to six lanes from the SR 120 interchange to the eastern boundary of the Specific Plan area, prior to cumulative full buildout (year 2030).
- 19-4. The ODS shall pay "fair share" costs towards the reconstruction of the SR 120/Yosemite Avenue-Guthmiller Road interchange.
- 19-5. The ODS shall pay towards the City of Manteca's traffic impact fee to cover project responsibilities towards the following improvement:
 - The Main Street/Yosemite Avenue intersection shall have the following lane geometrics:
Northbound Approach – Two left-turn lanes, and one shared through-right lane.

Southbound Approach – One left-turn lane, one through lane, and one shared through-right lane.

Eastbound Approach – One left-turn lane, two through lanes, and one right-turn lane.

Westbound Approach – One left-turn lane, one through lane, and one shared through-right lane.

Significance After Mitigation: Significant and unavoidable. Implementation of Mitigation Measure 19-3 would reduce the cumulative impacts of the project to a level that is less than cumulatively considerable. However, because the interchange improvements named in Mitigation Measure 19-4 and the roadway segment improvements on I-5, SR 120 and SR 99 described previously are outside the scope of the project (i.e., these are regional improvements), the project would result in significant and unavoidable cumulative traffic impacts at the identified freeway segments until necessary improvements are completed by Caltrans. In addition, although impact fee payments to the City of Manteca required under Mitigation Measure 19-5 would discharge project responsibilities toward the proposed improvement, there is no certainty that the improvement would be constructed. Since this improvement is outside the scope of the project (i.e., this is an improvement located in the City of Manteca), the project would result in significant and unavoidable cumulative traffic impacts at the Main Street/Yosemite Avenue intersection until necessary improvements are completed by the City of Manteca.

Implementation: The ODS will be responsible for payment of impact fees and proportionate share costs, and for the construction of projects specific to the Plan Area.

Monitoring: The Community Development Department, Planning and Building Divisions, and will be responsible for ensuring that City of Lathrop impact fees and proportionate share costs are paid as required. The Public Works Department shall ensure that project-specific construction is completed to City standards. The City of Manteca shall be responsible for collecting impact fees and proportionate share costs for projects in the City of Manteca.

Cumulative Impacts on Public Transit, Bicycle and Pedestrian Transportation

Specific Plan development, along with development from related projects, may lead to an increase in demand for public transit services and related facilities. However, the mitigation measure for public transit impacts in Chapter 18.0 would reduce potential cumulative impacts to a level that is not cumulatively considerable. As discussed in Chapter 18.0, proposed bicycle and pedestrian facilities would have no significant impacts on off-site facilities. Therefore, the cumulative impacts on bicycle and pedestrian facilities would be less than cumulatively considerable. Moreover, these alternatives to motor vehicle travel would assist in reducing both project-specific and cumulative impacts of increased traffic generated by Specific Plan development.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

20.0 ALTERNATIVES TO THE PROPOSED PROJECT

CEQA requires that an Environmental Impact Report (EIR) describe and analyze the relative environmental effects of alternatives to the proposed Lathrop Gateway Business Park Specific Plan and evaluate their comparative merits. The EIR must consider a range of reasonable alternatives that can feasibly attain most of the basic objectives of the Lathrop Gateway Business Park Specific Plan, and that would avoid or substantially lessen one or more of the significant effects of the project, even if the alternative would impede to some degree the attainment of the project objectives, or would be more costly. The environmentally superior alternative must be identified among the alternatives considered.

The alternatives analysis must identify the potential alternatives and include sufficient information about each one to allow meaningful evaluation, analysis, and comparison with the proposed project. The discussion must focus on feasible alternatives that can avoid or substantially reduce the significant effects of the project. However, if an alternative is not feasible, or does not provide an opportunity to avoid or substantially reduce environmental effects, the alternative need not be analyzed in detail; if this is the case, the reasons for limiting the analysis should be identified.

Measures of alternative feasibility may include site suitability, economic viability, availability of infrastructure, general plan consistency, consistency or conflict with other plans or regulatory limitations, jurisdictional boundaries, and whether the applicant can reasonably acquire control or otherwise have access to the alternative site. Similarly, if an alternative would cause one or more significant effects, in addition to those that would be caused by the project, the significant effects of the alternative shall still be discussed, but in less detail than the analysis of the project.

The alternatives analysis must always include evaluation of the "no project" alternative. "No project" is defined as no action with respect to the proposed project and continuation of existing circumstances without approval of the project; as a result, the "no project" alternative may also consider what could reasonably occur on or near the project site if existing development trends continue, to the degree that current general plans, zoning, infrastructure, services or other relevant conditions permit.

The following sections describe the process used to select alternatives for evaluation in this chapter; the sections identify the alternatives to the project that were considered but that were not subjected to detailed analysis as well as the alternatives to the project that were analyzed in detail. The alternatives considered in this chapter include:

Alternatives Not Addressed In Detail

Development Under Lathrop General Plan Land Use Designations

Alternate Land Uses

Alternative Locations for the Lathrop Gateway Business Park Specific Plan

Alternatives Addressed in Detail

No Lathrop Gateway Business Park Project

Site Development Under San Joaquin County Jurisdiction with Low Intensity Use Under Agricultural-Urban Reserve Designation

No Development East of McKinley Avenue

It should also be noted that the proposed Lathrop Gateway Business Park Specific Plan is the result of a multi-year planning and analysis process that has culminated in the proposed specific plan. This process involved ongoing generation, analysis, rejection and refinement of potential urban development alternatives for the Plan Area by the applicant and their planning consultants as well as periodic interaction with City planning staff during which direct feedback was obtained from this public agency.

The analysis of alternatives conforms to the guidelines of CEQA and the CEQA Guidelines and represents the best professional opinion of the EIR preparer, City of Lathrop staff and their technical reviewers. However, it must be recognized that the authority for the approval of the proposed Lathrop Gateway Business Park Specific Plan, the selection of or rejection of alternatives, and the feasibility or infeasibility of alternatives rests with the decision-makers of the City of Lathrop.

20.1 SELECTION OF ALTERNATIVES

Alternatives to the Lathrop Gateway Business Park Specific Plan were selected for evaluation in this EIR based on the criteria set forth in the CEQA Guidelines (Section 15126.6). These criteria include: 1) ability of the alternative to meet most of the basic objectives of the project, 2) feasibility of the alternative, and 3) ability of the alternative to avoid or substantially reduce one or more of the significant environmental effects of the project. These criteria are discussed in more detail below.

Ability of the Alternative to Meet Most Project Objectives

Potential alternatives to the Lathrop Gateway Business Park were evaluated with respect to the objectives identified within the Lathrop Gateway Business Park Specific Plan, as identified and discussed in Section 3.3 of this EIR. The quantifiable objectives of the proposed project include the development of up to 85.9 net acres of office commercial uses, 154.5 net acres of limited industrial uses and 66.2 net acres of service commercial uses at ultimate buildout. The Lathrop Gateway Business Park Specific Plan sets forth the overall objectives for the Plan Area. The objectives are summarized as follows:

- A New Vision for South Lathrop – Establish a new vision for South Lathrop supporting the development of industrial/commercial uses that capitalize on the Plan Area’s location attributes, and take advantage of market opportunities.

- Office and Commercial Core – Establish a core of regional and local serving business and commercial uses that capitalize upon the visibility and access provided by SR 120, and augment City sales tax revenues.
- Employment Opportunities – Provide for local and regional employment opportunities in a business park setting that take advantage of the Plan Area’s high level of accessibility, allow for expansion of the City’s economic base, and reduce the need to commute to more distant services and jobs.
- Transportation Choices – Provide an efficient circulation system that satisfies public safety access standards and maximizes alternatives to the car including walking, biking, and public transit.
- Public Facilities and Services – Provide infrastructure and services that meet City standards, integrate with existing and planned facilities and connections, and do not diminish services to existing residents of the City.
- Phasing – Establish a logical phasing plan designed to ensure that each phase of development would include all necessary public improvements required to meet City standards.
- Environmental Mitigation – Create a “self mitigating” plan that, to the extent practical, incorporates environmental mitigation measures into project design.
- Economic Contribution – Strengthen the City’s economic base through Lathrop Gateway Business Park job creation; development related investment; disposable income from future employees; and increased property, sales, and transient occupancy taxes.

Feasibility of the Alternative

Alternatives to the Lathrop Gateway Business Park were evaluated with respect to the “rule of reason” and general feasibility criteria suggested by the CEQA Guidelines, including such criteria as the suitability of the site or alternative site, the economic viability of the alternative, the availability of infrastructure, the consistency of the alternative with general plan designations, zoning or other plans or regulatory limitations, the effect of applicable jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to an alternative site, including consideration of whether or not the site is already owned by the applicant. The application of these criteria to potential alternatives to the proposed Lathrop Gateway Business Park Specific Plan is described in Sections 20.2 and 20.3, below.

Avoidance or Substantial Reduction of Significant Effects

The evaluation of alternatives must also take into account the potential of the alternative to avoid or substantially lessen any of the significant effects of the Lathrop Gateway Business Park project, as identified in Chapters 4.0 through 19.0 of this EIR. The potential environmental effects of the Lathrop Gateway Business Park Specific Plan are summarized in Chapter 2.0 Summary of this EIR, and very briefly highlighted below.

The alternatives analysis accounts for the potentially significant environmental effects of the alternatives as compared to the proposed Lathrop Gateway Business Park Specific Plan. Some of the potential environmental effects of the Lathrop Gateway Business Park Specific Plan, and the alternatives, are common to virtually all development in the Lathrop vicinity and would not vary from alternative to alternative; similarly, certain environmental effects are addressed by routine requirements that would apply uniformly to any alternative. Since the focus of the alternatives analysis is comparison to the proposed Lathrop Gateway Business Park Specific Plan, issues that do not vary between the alternatives are not analyzed.

Aesthetic Effects. The Lathrop Gateway Business Park Specific Plan would result in a significant alteration of the site; however, implementation of development standards and design guidelines would ensure that the general visual quality and character of development is consistent and results in less than significant impacts.

Agriculture. The Lathrop Gateway Business Park Specific Plan would involve significant and unavoidable agricultural land conversion impacts. Potential agricultural/urban land use conflicts and impacts on irrigation systems would be less than significant. The agricultural land conversion issue is considered in detail in the alternatives analysis.

Air Quality. The Lathrop Gateway Business Park Specific Plan would involve significant ozone and other air emissions. This issue is considered in detail in the alternatives analysis. Mitigation of air quality impacts is required by existing construction regulations and the Indirect Source Rule of the San Joaquin Valley APCD.

Biological Resources. The Lathrop Gateway Business Park Specific Plan would involve large-scale habitat conversion and impacts on associated sensitive species use; these impacts are common to “green field” development in the Lathrop area and are addressed through implementation of the San Joaquin County Multi-Species Habitat Conservation Plan or equivalent measures. However, it should be noted that the Lathrop Gateway Business Park Specific Plan has the potential for significant effects on existing California Tiger Salamander potential habitat. These potential impacts are addressed in the alternatives analysis. The Lathrop Gateway Business Park Specific Plan would involve potential for minor impacts on wetlands and Waters of the U.S.; these issues are not considered in detail in the alternatives analysis.

Cultural Resources. Planned development has the potential to impact existing structures within the Plan Area that may be historic in nature. These potential impacts can be avoided through proper surveys and documentation of known structures. The Lathrop Gateway Business Park Specific Plan would not impact any known archaeological sites or resources of significance. This issue is not considered in detail in the alternatives analysis.

Geology and Soils. The Lathrop Gateway Business Park Specific Plan involves soils constraints that are common in the Lathrop area and would be addressed through routine soils engineering, which is required by the Lathrop Gateway Business Park Specific Plan. This issue is not considered in detail in the alternatives analysis.

Hazards and Hazardous Materials. Portions of the Lathrop Gateway Business Park Specific Plan are near the SR 120, a regional transportation route used to haul hazardous waste, and some portions of the Plan Area containing structures may have minor amounts of hazardous material contamination (i.e., asbestos and lead); these concerns would be addressed by mitigation measures, and are not considered in detail in the alternatives analysis.

Hydrology and Water Quality. The Plan Area is not exposed to flooding. The Lathrop Gateway Business Park Specific Plan would not involve significant impacts on groundwater quantity or quality. The Lathrop Gateway Business Park Specific Plan would involve potentially significant urban runoff impacts to water quality, but the specific plan and all development in the City of Lathrop is subject to the requirements of the City's storm water quality management plans, which would reduce water quality impacts to less than significant; water quality issues are not considered in detail in the alternatives analysis.

Land Use. Other than large-scale land use change addressed in the Aesthetics and Agriculture analyses, the Lathrop Gateway Business Park Specific Plan would not involve significant land use effects or general plan inconsistency. Land use issues are not considered in detail in the alternatives analysis.

Noise. The Lathrop Gateway Business Park Specific Plan would involve exposure of new sensitive land uses adjacent to the Plan Area to noise increase along the existing circulation system. Noise exposure is considered in detail in the alternatives analysis. The Lathrop Gateway Business Park Specific Plan would also involve exposure of new development to traffic noise and construction noise impacts; these potential impacts are common to development activity and routinely mitigated by city ordinances restricting the hours and days construction can occur; construction noise issues are not addressed in the alternatives analysis.

Population, Housing and Employment. The Lathrop Gateway Business Park Specific Plan would not involve significant population, housing or employment effects. These issues are not considered in detail in the alternatives analysis.

Public Services. The Lathrop Gateway Business Park Specific Plan would generate increased demands for public services and potential impacts that are common to new land development in the City of Lathrop. Application of routine mitigation measures, including the payment of required Public Facilities Fees would reduce these potential effects to less than significant. Public service issues are not considered in detail in the alternatives analysis.

Transportation and Circulation. The Lathrop Gateway Business Park Specific Plan will involve significant traffic generation, impacts on local roads and highways, and new transportation improvement requirements. These issues are considered in detail in the alternatives analysis.

Utilities. The Lathrop Gateway Business Park Specific Plan would involve new demands for sewer, water, storm drainage and other utilities. The Lathrop Gateway Business Park Specific Plan site is located within defined service areas for these utilities, and capacity is available to serve the Lathrop Gateway Business Park Specific Plan. Issues identified in the EIR are routine matters that would be addressed in the process of design and City review of development improvements. Utility issues are not considered in detail in the alternatives analysis.

Several of the potential significant environmental effects of the Lathrop Gateway Business Park Specific Plan are related to the quantity of proposed development, including ozone, traffic and roadway noise. Other effects are related to the land area of the Lathrop Gateway Business Park Specific Plan rather than the quantity of development; these include potential impacts on agriculture and sensitive species potential habitat. Some impacts are related to the location of development including exposure to traffic noise and loss of biological habitat areas.

Most of the significant environmental effects of the Lathrop Gateway Business Park Specific Plan can be reduced to a less than significant level with mitigation measures, as documented in Chapters 4.0 through 18.0. The proposed Lathrop Gateway Business Park Specific Plan would involve four significant environmental effects that would not be addressed by mitigation measures:

- Agricultural Land Conversion
- Ozone Precursor Emissions
- Loss of Potential Biological Habitat
- Increase in Off-Site Noise

20.2 ALTERNATIVES NOT CONSIDERED IN DETAIL

The following alternatives were not addressed in detail, as they clearly did not meet the criteria for detailed analysis defined above. That is, the following alternatives 1) would not meet most of the basic objectives of the Lathrop Gateway Business Park Specific Plan, or 2) were clearly infeasible, or 3) did not have the ability to avoid or substantially lessen the significant environmental effects of the Lathrop Gateway Business Park Specific Plan. Alternatives that might conceivably meet the analysis criteria were subject to detailed analysis, as documented in Section 20.3. The “No Project” alternative is not among the following alternatives, as CEQA requires that this alternative be addressed in detail.

Development Under Lathrop General Plan Land Use Designations

This alternative would involve the development of the proposed Lathrop Gateway Business Park Specific Plan pursuant to the land use designations and policy provisions of Lathrop’s General Plan for the Plan Area (see Figure 3-2). Under this alternative, the Plan Area would be annexed to the City of Lathrop, but the planned urban land uses would conform to the designations of Lathrop’s General Plan. The City’s General Plan designates the Plan Area as primarily General Industrial (GI) in the central portion of the Plan Area; Service Commercial (SC) adjacent to and along the entire length of the northern boundary; and 12 acres of Freeway Commercial (FC) adjacent to the SR120 and Yosemite Avenue interchange. This alternative would introduce the Freeway Commercial designation, eliminate the Office Commercial designation under the proposed project and increase the Service Commercial area. General Industrial under this alternative is similar to the Limited Industrial under the proposed project.

Potential urban development under this alternative, based on allowable development intensities under the City’s General Plan designations, would result in similar unit counts and commercial square footage as shown in the proposed project. Development would also include a more intensive retail component. This alternative would meet many of the basic objectives of the Lathrop Gateway Business Park Specific Plan, and there is no reason why many of the community design qualities of the proposed specific plan could not be accommodated as a part of such an alternative. There is no evidence to suggest that this alternative is not feasible.

This alternative would not, however, involve an overall opportunity to substantially lessen the potential environmental effects of the Lathrop Gateway Business Park Specific Plan. This alternative would involve essentially the same aesthetic, noise, agricultural land, biological habitat conversion and hydrologic impacts equal to the proposed Lathrop Gateway Business Park Specific Plan with potentially greater impacts on circulation due to the more intense retail component.

This alternative would meet some of the basic objectives of the Lathrop Gateway Business Park Specific Plan and is assumed in the absence of evidence to the contrary to be feasible. However, as this alternative cannot be expected to result in lessening of the Lathrop Gateway Business Park Specific Plan’s environmental effects, it was not subjected to

detailed analysis. This alternative is an element of the No Lathrop Gateway Business Park Alternative discussed in Section 20.3.

Alternate Land Uses

This alternative would involve an urban development proposal or proposals for the Plan Area that would potentially result in reductions in the environmental effects of the Lathrop Gateway Business Park Specific Plan. For the purposes of this analysis, an alternative land use plan is conceived as one that would occupy generally the same overall footprint as the proposed Plan Area and could include non-industrial type uses (i.e., residential, office, passive and active parks, and retail commercial) that could be part of a mixed-use type development.

It was contemplated that a combination of office type uses, residential, passive and active parks, as well as commercial could be laid out in such a way as to address the environmental effects of the proposed Lathrop Gateway Business Park project. Active and passive parks could be used to create buffers between residential and non-residential uses and areas within potential biologically sensitive areas could be maintained as open space. The commercial and/or office uses could be located to capitalize on the location of the Yosemite Avenue and SR 120 interchange.

Under this alternative, traffic generation is anticipated to be greater due to the trips associated with residential and commercial type uses, as compared to the proposed project and trips generated by limited industrial uses. Impacts to aesthetics and agricultural conversion would be comparable to the proposed project. However, impacts to biological resources could be marginally reduced but not avoided by placing open space areas over sensitive resources found within the Plan Area.

The significant environmental effects of the Lathrop Gateway Business Park Specific Plan would not necessarily be substantially lessened by this alternative. Effects on open space, agricultural land and biological habitat conversion would not be significantly reduced. Although under some development scenarios the biological impacts might be reduced, and although this reduction has not been quantified, the reduction would not be expected to be substantial. As this alternative cannot be expected to result in lessening of the Lathrop Gateway Business Park Specific Plan's environmental effects, it was not subjected to detailed analysis.

Alternative Locations For The Project

The CEQA Guidelines (Section 15126.6[f][2]) indicate that alternative locations for the proposed project should be considered if any of the significant effects of the project would be avoided or substantially lessened at an alternative location. Only locations that have the potential to avoid or substantially reduce any of the significant effects of the project need be considered for inclusion in the EIR. As with all potential alternatives, project location alternatives must be reasonable, feasible and able to meet most of the basic objectives of the project. The analysis may also consider the fact that the proposed Plan Area is currently owned or controlled by the project developer.

The availability of an alternative site that would support the approximate quantities of development at a commercially viable location sought by the Lathrop Gateway Business Park developers were considered (i.e., a site in the range of 300 to 400 acres or larger, located in the City of Lathrop area and adjacent to a major arterial and freeway). The project developers have obtained control of a significant amount of the proposed Plan Area and have prepared the proposed Lathrop Gateway Business Park project in specific relationship to the proposed location. That said, there are no other sites in the vicinity of the City of Lathrop, particularly along SR 120 or Interstate 5 that are of the necessary size and location to major infrastructure that are suitably situated, available and reasonably feasible for urban development. As a result, acquisition of an alternative site of comparable size is not considered feasible.

It is acknowledged, for discussion purposes, that two large areas immediately north and south of the proposed project are currently under agricultural production. Both are smaller in size to the proposed Plan Area and are controlled by other development interests. At one time, developers/land owners of the southern area were seeking urban development approvals from the City. These two areas could accommodate a portion of the proposed uses and meet the majority of the project objectives, however, due to their close proximity to the proposed Plan Area, they would not avoid or substantially reduce any of the significant effects of the project; especially those issues associated with biological and traffic related impacts.

As this alternative cannot be expected to result in lessening of the Lathrop Gateway Business Park Specific Plan's environmental effects, it was not subjected to detailed analysis.

20.3 ALTERNATIVES CONSIDERED IN DETAIL

The alternatives to the proposed Lathrop Gateway Business Park Specific Plan that have been considered in detail are addressed in the following sections. The overall analysis is summarized in Table 20-1.

No Lathrop Gateway Business Park Project Alternative

The No Lathrop Gateway Business Park Project Alternative is defined as the continuation of existing conditions and trends in the project area. This alternative would involve no action on the part of the City of Lathrop, LAFCO or other agencies to approve the proposed specific plan, annexation, general plan amendment, pre-zoning, future tentative maps, development agreement or other approvals required for development of the Lathrop Gateway Business Park. Under the No Lathrop Gateway Business Park Project Alternative development of the proposed industrial, office and service commercial uses, as well as planned infrastructure and other improvements, would not occur.

TABLE 20-1
PROJECT/NO PROJECT IMPACTS

	Proposed Lathrop Gateway Business Park Specific Plan	No Lathrop Gateway Business Park Project	County GP – Low Intense Use Under A/UR	No Development East of McKinley Avenue
Loss of open space	Significant	Avoided	No reduction	Minor reduction
Agricultural land conversion	Significant	Avoided	No reduction	Minor reduction
Ozone precursor emissions	Significant	Avoided	No reduction	Minor reduction
Biological habitat conversion	Significant	Avoided	Minor reduction	Minor reduction
Increase in Off-Site Noise	Significant	Avoided	Minor reduction	Minor reduction

The primary scenario considered in the analysis of the No Lathrop Gateway Business Park Alternative is the continuation of the existing predominantly agricultural land uses currently occurring within the Plan Area. The analysis also considers other options for future use of lands within the Plan Area given the existing development market, existing County general plan designations and zoning, and the City’s General Plan.

The continuation of the existing agricultural and other land uses within the Plan Area does not fulfill any of the basic objectives of the proposed Lathrop Gateway Business Park Specific Plan, although this usage of the land is, in the absence of evidence to the contrary, feasible.

The continuation of existing uses would not result in any substantial change to existing physical environmental conditions within or near the Plan Area; existing earth, water, biological and cultural resources would be unchanged. This alternative would involve no change in land use, no loss of open space, no impacts on biological resources and no increase in population or new demand for public services and utilities. This alternative would not result in any increased traffic, or related air pollution or noise, and the alternative would result in no new demands for urban utilities and services.

Selection of the No Lathrop Gateway Business Park Alternative would eliminate all of the significant environmental effects described in Section 20.1, including:

- Agricultural land conversion
- Ozone precursor emissions

Biological habitat conversion
Increase in Off-Site Noise

The Plan Area is located adjacent to the Lathrop city limits and within the existing Lathrop General Plan planning area. Urban development, and proposals for additional development, along the urban fringe are continuing. If the Lathrop Gateway Business Park Specific Plan is not approved by the City of Lathrop, it is probable that other proposals for urban development of the Plan Area or portions of the Plan Area would be brought forward for approval. Alternative urban development projects proposed for the Plan Area would involve a range of potential environmental effects that could result in lesser or greater environmental effects than the proposed Lathrop Gateway Business Park Specific Plan. As a result, avoidance of the significant environmental effects associated with the primary alternative analysis scenario may be temporary rather than permanent.

Site Development Under San Joaquin County Jurisdiction with Low Intensity Use Under Agricultural-Urban Reserve Designation

This alternative would involve an urban development proposal or proposals for the Plan Area that would be guided by the land uses identified under the San Joaquin County General Plan. The County General Plan identifies General Commercial (C/G) north of Yosemite Avenue and Limited Industrial (I/L) on the western half of the Plan Area. The eastern half of the Plan Area is designated Agricultural-Urban Reserve (A/UR). This designation is applicable in areas expected to become urban, but most likely beyond the planning period of the General Plan. Under this alternative, low intensity land uses would be proposed on the A/UR designation. Such uses would include open space in areas east of McKinley Avenue in the vicinity of known biological resources. Other uses could include high cube type warehouse uses and light industrial office uses to minimize trip generation. Park buffers consisting of linear trails would be developed in the vicinity of the open space features that preserve the known biological resources (i.e., wetland habitat).

Under this alternative, traffic generation is anticipated to be less due to the trips associated with additional high cube warehouse uses as compared to the proposed project. However, impacts to aesthetics and agricultural conversion would be comparable to the proposed project. Impacts to biological resources could be marginally reduced but not avoided by placing open space areas over sensitive resources found within the Plan Area. By preserving the wetland features and developing around them will only further isolate them.

The significant environmental effects of the Lathrop Gateway Business Park Specific Plan would not necessarily be avoided or substantially lessened by this alternative. Effects on open space, agricultural land, noise, air quality and potential biological habitat would not be significantly reduced.

This alternative would eliminate the office commercial and service commercial designations. This would significantly impede this alternative from achieving the majority of the proposed project objectives. Some design modifications could introduce these uses to the western portion of the Plan Area. Regardless of these potential modifications, this alternative is considered feasible but falls short of avoiding or reducing significant environmental effects.

No Development East of McKinley Avenue

This alternative would involve maintaining the approximate proposed development intensity/density but doing so within a reduced overall geographic area. The area east of McKinley Avenue would be removed from the overall Specific Plan for the Lathrop Gateway Business Park. This would equate to a 13% or 49-acre reduction in the overall Lathrop Gateway Business Park Specific Plan footprint. The rationale to remove this area from the overall Specific Plan is based on location and presence of a known biological resource (i.e., wetland area and potential CTS breeding habitat). The location of the 49 acres has logical boundaries, McKinley Avenue to the west, Yosemite Avenue to the north and the UP Railroad tracks to the southeast. In addition, an agricultural pond identified as a potential wetland resource is located along the railroad tracks. The area also contains several residential units and the majority of the 49 acres is under agricultural production.

For purposes of analysis, this alternative would eliminate approximately 910,000 square feet of Service Commercial uses, resulting in a total of 4,345,000 square feet of building space to be developed under this alternative. In addition, elimination of the area east of McKinley Avenue would involve generally proportional reductions in infrastructure and service demands. It should also be noted that the remaining undeveloped portion of the Plan Area would remain available for urban development; as a result, the potential reductions in environmental impact associated with this alternative may not be achieved permanently.

The No Development East of McKinley Avenue Alternative would involve some lessening of the direct physical effects of the Lathrop Gateway Business Park Specific Plan. The reduction in the land area of the Lathrop Gateway Business Park Specific Plan under this alternative would result in proportional reductions in its effects on loss of open space, conversion of agricultural land increase in noise levels and biological resources. Also, reduction of the footprint and corresponding reductions in the development yield of the Lathrop Gateway Business Park Specific Plan would result in minor reductions in the traffic and air pollution effects of the proposed project.

- Agricultural land conversion
- Ozone precursor emissions
- Biological habitat conversion

This alternative is considered feasible but falls short of avoiding or reducing significant environmental effects.

20.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The “No Lathrop Gateway Business Park Project” Alternative would involve the least environmental effects of the alternatives considered in detail. This would be considered the “Environmentally Superior Alternative”. This alternative does not meet any of the principal objectives of the Lathrop Gateway Business Park Specific Plan project.

Implementation of this alternative would only delay potential development of the Plan Area. In the event that the “No Lathrop Gateway Business Park Project” Alternative is considered the environmentally superior alternative, the CEQA Guidelines (15126[d][3]) require the identification of an environmentally superior “build alternative”. The “No Development East of McKinley Avenue” Alternative would be the Environmentally Superior Build Alternative.

21.0 GROWTH-INDUCING IMPACTS

The CEQA Guidelines require that an EIR discuss the ways in which a project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this required discussion are projects that would remove obstacles to economic or population growth. These impacts are called "growth-inducing" impacts..

Growth can be induced in a variety of ways. Some new development may create demands for other types of development - a large new industrial facility that creates numerous new jobs may increase or accelerate demands for housing. In an area with a relative housing shortage, this could have a growth-inducing effect. However, the same project in a labor surplus area may have no growth-inducing effect at all. Development of significant new amenities may also encourage development of other land uses nearby. An example would be the development of major new shopping or entertainment facilities that spur development of new residential areas.

Growth can also be induced by removing obstacles to development or by reducing development costs. New or additional development can result from new infrastructure (e.g., a new sewage treatment facility or potable water system) or the extension of street or utility infrastructure or other facilities. These facilities may stimulate development of previously unserved or underserved areas. However, the construction of new infrastructure in conjunction with proposed development that would be served by the new facilities may not have a distinguishable growth-inducing effect, other than supporting the proposed development.

Government actions that permit or promote additional development may induce growth. Such actions may include general plan amendments or rezonings that favor additional development, issuance of permits or approvals that establish new precedents for land development, and changes in policy that have the same result.

This chapter analyzes the potential growth-inducing impacts of the Lathrop Gateway Business Park Specific Plan. This analysis includes discussion of the characteristics of the Specific Plan that potentially may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. The CEQA Guidelines note that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

GROWTH INDUCEMENT ANALYSIS

On-Site Growth Inducement

The Specific Plan involves a request for City approval of the Specific Plan, together with other associated approvals. If approved, the requested actions would be inherently growth-inducing, in that they would promote the urban development of the Plan Area. As

described in Chapter 12.0, Land Use, the Plan Area is currently used for agriculture, primarily orchards and row crops. It also contains residences, industrial uses, and a church. The Specific Plan would convert agricultural lands to urban uses, and intensify existing urbanization. Such development is the objective of the Specific Plan. However, this development would be consistent with the 1991 Lathrop General Plan, which has designated the entire Plan Area for urban development. The Plan Area is within the City's Sphere of Influence, which indicates the City's ultimate service area.

One of the actions associated with the Specific Plan is approval of a general plan amendment and rezoning that would alter the previously planned land uses for the Plan Area. These approvals would eliminate the existing Freeway Commercial land use designation, and convert the current designation of land in the western portion of the Plan Area from Service Commercial to a new Office/Commercial designation. These actions would not be growth-inducing, as the affected lands already have been designated for a form of urban development, as previously noted.

The Plan Area involves undeveloped land adjacent to and south of the existing City boundary. Adjacent industrial and public works development has occurred to the north and west of the Plan Area, with proposed development occurring in the city of Manteca to the east. Therefore, the Specific Plan would not involve "leap-frog" development, or development that occurs at a distance from an existing urban area, bypassing vacant parcels located closer to a city.

The Plan Area already contains existing roads and streets, most notably Yosemite Avenue. The project would involve the improvement of existing roadways and the construction of new streets. Construction of these new streets would not be growth-inducing, as they would serve only land uses in the Plan Area itself. Improvement of Yosemite Avenue would make this arterial more appealing to motorists. However, Yosemite Avenue would not extend any farther than its current endpoint at the SR 120 interchange. Therefore, Yosemite Avenue would serve existing and approved development in Lathrop and Manteca, and would not affect development outside these cities. Improvements on McKinley Avenue would serve already approved development in southwestern Manteca and land designated for future urban development south of SR 120.

The Specific Plan would require the extension or construction of potable water, sewer, and storm drainage infrastructure to serve planned development. Most of this infrastructure would serve only on-site development, and would not present opportunities to provide services to currently undeveloped lands. The sewer system would connect to either the City's wastewater treatment plant or Manteca's plant. Both plants are located in close proximity to the Plan Area, and connections to either plant would not require the installation of sewer lines in areas where development is not planned.

Off-Site Growth Inducement

The Specific Plan as proposed would ultimately result in the construction of approximately 741,000 square feet of commercial office space, 1,555,000 square feet of service commercial space, and 3,139,000 square feet of industrial space. To the extent that new office and industrial activities may attract new residents, the Specific Plan could contribute

to the inducement of additional off-site population growth, since the Specific Plan does not propose any residential development. Most of this growth, if it occurs, would occur off-site in other areas planned for such development, most likely in Lathrop and Manteca. Both cities have planned for additional residential growth in their respective General Plans. Lathrop, in particular, has accounted for office/commercial and industrial development in the Plan Area in its adopted General Plan. Therefore, the project would have a minimal growth-inducing impact in the Lathrop-Manteca area.

As described in Chapter 12.0, Land Use, land uses surrounding the Plan Area include large industrial, manufacturing and distribution buildings, retail and commercial buildings, the City of Lathrop Waste Water Treatment Plant, and agricultural fields. North of the Plan Area are a variety of land uses, from agriculture (primarily row crops) to large warehouse type buildings. A PG&E substation is also located to the north of the Plan Area. The Lathrop Industrial Park (LIP) and the ACE Station are located adjacent to the Plan Area's northeast corner. It is possible that development of the Plan Area may encourage further urban development of the area to the north, particularly the agricultural lands. However, it should be noted that this area is within the City's Sphere of Influence, and has been designated for primarily industrial development by the General Plan.

The UPRR tracks border the site to the west and east. Beyond the east UPRR tracks are agricultural uses (primarily row crops), rural residences, the City of Manteca Wastewater Treatment Plant and vacant land. Approval of the Specific Plan would result in the expansion of approved urban development along these tracks. This development may increase growth pressure on the agricultural and vacant parcels through increased land values, the availability of urban infrastructure and urban/agricultural land conflicts. Many of these lands are already in the City of Manteca, which has designated these lands for primarily residential development. Therefore, the Specific Plan would provide at most incremental growth-inducing effects on these lands.

Beyond the west UPRR tracks are industrial uses and the City of Lathrop Wastewater Recycling Plant No. 1. The San Joaquin River is located approximately three quarters of a mile to the west of the Plan Area's westernmost point, west of Interstate 5. The river is lined and contained within a levee system and at certain locations contains trees and other riparian vegetation. Since this area is significantly developed, Specific Plan development is unlikely to have a growth-inducing impact.

The Plan Area's southern boundary is SR 120. South of SR 120 are primarily agricultural uses, some rural residential uses, and the UPRR tracks. South of the UPRR tracks is the Lakes residential subdivision, consisting of single-family detached lots around a man-made lake. The potential for development of the agricultural lands could be influenced by City action with respect to the Specific Plan. As with the properties to the east, increased land values and urban/agricultural land conflicts may increase development pressures. In addition, the Specific Plan proposes the placement of a storm drainage pipe through this area, which may provide a storm drainage facility for future development. However, this area is located within the City's Sphere of Influence, and the City's General Plan has designated it for industrial development.

22.0 IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA requires that an EIR address any significant irreversible environmental changes that would be involved in the Lathrop Gateway Business Park Specific Plan if it were implemented. Significant irreversible environmental changes could include conversion or use of substantial amounts of nonrenewable resources during the construction or operation of the project, or the commitment of resources to other uses, or to their permanent non-use. Resources that may be considered subject to irreversible change may include materials, land, energy or state of development/non-development. Consumption, use or commitment of resources is considered irreversible when it is likely that future generations will be committed to similar uses. Irreversible damage can also result from environmental accidents associated with the project. CEQA suggests that irretrievable commitments of resources be evaluated to assure that such current consumption is justified.

The Specific Plan would involve the irreversible commitment of construction materials and energy consumption to construction of proposed commercial, office and industrial buildings and associated infrastructure. Construction materials would involve sand and gravel, concrete, asphalt, plastics and metals, along with various renewable resources. Energy use would occur as a result of operation of equipment used in construction of individual projects in the Plan Area. These materials would not be used in highly significant or unusual quantities and would be obtained from existing commercial sources.

Implementation of the Specific Plan would involve significant irreversible environmental changes. The Specific Plan would involve the conversion of land presently in agricultural production to proposed urban development. This would involve an irreversible commitment of the Plan Area to developed uses. Subdivision of the Plan Area, dispersion of ownership and investment in streets and utilities would likely prohibit any future return to agricultural use. Chapter 5.0, Agriculture Resources, provides additional information on agricultural land conversion associated with the Specific Plan.

Commitment of the Plan Area to urban uses would involve an essentially irreversible loss of open space and the biological resource values that current exist there. These losses would be mitigated to a less than significant level, as documented in Chapter 7.0, Biological Resources. Development of the Plan Area would involve an essentially irreversible reduction in groundwater recharge and increases in runoff during rainfall events. Groundwater recharge losses are not considered significant, and potential increases in runoff would be mitigated to a less than significant level, as documented in Chapter 13.0, Hydrology and Water Quality.

There are no other changes associated with the Specific Plan, or resources impacted by the Specific Plan, which are irreversible.

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