

Manteca General Plan 2023 Draft Environmental Impact Report

(SCH# 2002042088)

**Prepared for the
City of Manteca**

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**Certified
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1. SUMMARY

1.1 INTRODUCTION

This document is an Environmental Impact Report (EIR) for the City of Manteca General Plan 2023. An EIR provides information to the public and to decision-makers regarding the significant or potentially significant environmental impacts of a proposed project. The Guidelines for the California Environmental Quality Act (CEQA), Section 15002(f) define an EIR as:

“...the public document used by the governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage.”

The State Legislature has found that:

“Decisions involving the future growth of the state, most of which are made and will continue to be made at the local level, should be guided by an effective planning process, including the local general plan, and should proceed within the framework of officially approved statewide goals and policies directed to land use, population growth and distribution, development, open space, resource preservation and utilization, air and water quality, and other related physical, social and economic development factors.” (California Government Code Section 65030.1)

The City of Manteca, Lead Agency, has commenced a comprehensive planning and environmental review process for the purpose of updating the following documents: (1) the existing 1988 Manteca General Plan; (2) the Housing Element; (3) any associated revisions to the City of Manteca Municipal Code; and (4) any associated revisions to the Redevelopment Plans for Manteca’s redevelopment project areas resulting from General Plan activities.

The 1988 General Plan constitutes the current policy document relating to the City’s long-term vision for its physical development. The Municipal Code contains the City’s regulations for the implementation of those policies. The Redevelopment Plans present the strategies of the Manteca Redevelopment Agency for the elimination of those blighting conditions within the City that adversely affect the attainment of those policies. Specific plans provide for the systematic implementation of the General Plan, containing standards and criteria by which development can proceed within those areas governed by the specific plans.

The General Plan Steering Committee, in conjunction with the City’s Community Development Department and Consultant, have prepared a set of draft revisions to the 1988 General Plan. The General Plan 2023 identifies those revisions required to describe the current conditions and represent the current policies of the community.

The proposed revisions to the 1988 General Plan and any subsequent amendments to the Municipal Code and/or Redevelopment Plans, as may be required to ensure internal consistency among those documents, constitute a “project” as defined under the California Environmental Quality Act (CEQA) and the Guidelines. A “project” means the whole of an action, which has a potential for resulting in either a direct physical change in the environment or a reasonable foreseeable indirect physical change in the environment and includes:

“...an activity directly undertaken by any public agency including but not limited to public works construction and related activities, clearing or grading of land, improvements to existing public structures, enactment and amendment of local general plans or elements thereof.” (Government Code Sections 65000-66499)

Projects that are so defined are subject to compliance with both CEQA and the Guidelines, notwithstanding whether those activities are sponsored by public agencies or by private parties. Since it is the policy of the State that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, CEQA imposes an obligation on the City to analyze and disclose the potential environmental impacts that may result either directly or ultimately from its actions.

1.1.1 Program EIR and Tiering

This EIR for the City of Manteca General Plan 2023 is a “Program EIR.”

At the community-wide level, when no site-specific development or redevelopment projects and no project-specific capital improvement projects are presented in sufficient detail to allow a site-specific analysis, it may not be possible to fully assess the direct effects associated with the intensification of any individual parcel or parcels within the City. In the absence of a list of pending projects, the description of the physical changes that are assumed to occur within the community are derived from a more generalized assessment of existing land use patterns and proposed land use policies. As indicated in Section 15146 of the Guidelines:

“The degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR.

(a) An EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy.

(b) An EIR on a project such as the adoption of an amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow.”

Although the build-out assumptions presented in this EIR were derived from a detailed assessment of existing conditions and proposed policies, it is not possible at the community-wide level to conduct individual parcel-by-parcel assessments of the direct impacts associated with that development. Under such circumstances, CEQA authorizes public agencies to prepare a “Program EIR” as the environmental basis for the adoption of a new or revised general plan (Section 15168). Although individual development, redevelopment, and capital improvement projects may not be examined at a site-specific and project-specific level of detail, a Program EIR allows agencies to focus on the secondary and cumulative impacts of those activities authorized under the proposed general plan “program” that may otherwise be slighted in a case-by-case analysis of each future project as it comes to fruition.

Throughout this Program EIR, except as otherwise noted, the terms “project” and “program” are assumed to be interchangeable. Although all development and redevelopment activities authorized under the General Plan 2023 constitute a “program” within the meaning of CEQA, those activities collectively constitute the “project” analyzed in this EIR. Similarly, the term “project” may be used in the context of later development or redevelopment activities that may occur within the City and its Sphere of Influence following adoption of the General Plan 2023.

Section 15183 of the Guidelines minimizes the need for future environmental review of residential projects determined to be consistent with the community’s general plan and where an EIR has been certified by the lead agency for that general plan. Should further environmental review for later site-specific activities be required, the Lead Agency is authorized to “tier” those subsequent or supplemental reviews based on the information, analysis, and conclusions presented in the general plan EIR. Section 15152 of the Guidelines explains:

“(a) Tiering” refers to using the analysis of general matters contained in a broad EIR (such as one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.

(b) Agencies are encouraged to tier the environmental analyses which they prepare for separate but related project including general plans, zoning changes, and development projects. This approach can eliminate repetitive discussions of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review.

(c) Where a lead agency is using the tiering process in connection with an EIR for a large-scale planning approval, such as a general plan or component thereof (e.g. an area plan or community plan), the development of detailed, site-specific information may not be feasible but can be deferred, in many instances, until such time as the lead agency prepares a future environmental document in connection with a project of a more limited

geographical scale, as long as deferral does not prevent adequate identification of significant effects of the planning approval at hand.”

In accordance with the provisions of CEQA and the Guidelines, later site-specific and project-specific activities consistent with the General Plan 2023 or subject to rezoning of the pending project to achieve or maintain consistency, may be tiered from this program-level assessment, pursuant to Section 15152(e) of the Guidelines.

1.2 INTENDED USE OF THIS EIR

This EIR is intended to inform the public and decision-makers of the potential significant environmental impacts of the proposed City of Manteca General Plan 2023, to indicate mitigation measures which may reduce or avoid these potential significant environmental impacts, and to identify reasonable alternatives to the proposed project.

1.3 GENERAL PLAN REQUIREMENTS

As required under Section 65300 of the California Government Code:

“Each planning agency shall prepare and the legislative body of each county and city shall adopt a comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries which in the planning agency’s judgement bears relation to its planning.”

The State General Plan Guidelines further discuss the general plan:

“The general plan expresses the community’s development goals and embodies public policies relative to the distribution of future public and private land uses. The general plan serves to bridge the gap between a community’s values, visions, and objectives, and physical decisions, such as subdivisions and public works projects.” (Office of Planning and Research, State of California General Plan Guidelines, page 10)

Preparing, adopting, implementing, and maintaining the general plan serves to:

Identify the community’s land use, circulation, environmental, economic, and social goals and policies as they relate to land use and development;

Provide a basis for local government decision making, including decisions on development approvals and exactions;

Provide citizens the opportunity to participate in the planning and decision making processes of their community;

Inform citizens, developers, decision-makers, and other cities and counties of the ground rules that guide development and redevelopment within the community.

As required under Section 65302 of the California Government Code (CGC), a general plan must include seven “mandatory” elements (i.e., land use, circulation, housing, conservation, open space, noise, and safety) and may include such other “optional” elements as may, in the sole judgement of the agency, be deemed appropriate to address the full range of issues affecting the community. The general plan shall address each of the required elements “to the extent that the subject of the element exists in the planning area. The degree of specificity and level of detail of the discussion of each such element shall reflect local conditions and circumstances.” (CGC Section 65302)

In compliance with that requirement, the City previously adopted, and has periodically revised, a comprehensive General Plan as the primary policy document for the community. Section 65350 et seq. of the CGC authorizes local agencies to amend their general plans in accordance with the policies and procedures outlined therein. This “project” has been initiated in accordance with that authority, and is undertaken to ensure that the adopted plans and policies of the City reflect the current conditions within the community, and the current policy direction of the City of Manteca Planning Commission and City Council, and that they present an implementation program designed to guide the City’s future actions and assist in the Planning Commission’s and City Council’s future deliberations.

The elements of the general plan may, at the discretion of the city or county in whose jurisdiction the general plan applies, be combined in such manner as deemed appropriate by that agency. The format must, however, comply with all applicable requirements regarding the content and adoption of each mandatory general element. As indicated in the 1988 General Plan, it has been the historic policy of the City to combine both mandatory and optional general plan elements in a manner deemed to the best suited to the needs of the City. In accordance with that authority, the 1988 General Plan and this General Plan 2023 have been formatted in a manner that combined individual mandatory and optional elements.

1.4 CEQA PROCESS

1.4.1 Initial Study and Notice of Preparation

During a preliminary review (Initial Study) of the General Plan 2023, the City of Manteca, as Lead Agency, identified potential impacts that might result from implementation of the project, providing cause for the preparation of an EIR. A Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) and Initial Study/Environmental Checklist was distributed to responsible and interested agencies, and other interested parties, on April 17, 2002, for a 30-day review. Copies were also available for public review at Manteca City Hall. A copy of the NOP with the Initial Study/Environmental Checklist and comment letters received are included as Appendix A in the Technical Appendix to this EIR (Volume 2). The distribution list for the NOP and this Draft EIR is included as Appendix B in Volume 2. Comments on the NOP were received from:

Central Valley Regional Water Quality Control Board (May 9, 2002)

Malma M. Nicholson (May 17, 2002)

California Department of Food and Agriculture (May 20, 2002)

Kjeldsen, Sinnock, and Neudeck, Inc., on behalf of Reclamation District No. 17 (May 20, 2002)

San Joaquin County Department of Public Works (May 20, 2002)

City of Stockton, Community Development Department (May 22, 2002)

San Joaquin Valley Air Pollution Control District (May 30, 2002)

U.S. Army Corps of Engineers (July 29, 2002)

1.4.2 Public Comment Period on the Draft EIR

This Draft EIR (DEIR) will be available for public review at the City of Manteca Community Development Department, 1001 W. Center Street, Manteca, and at the Manteca City Library, 320 W. Center Street, Manteca, for a 45-day review period. All documents referenced in the DEIR will also be available for public review at the City of Manteca Community Development Department. The Manteca Planning Commission will hold a public meeting on the DEIR during this comment period to receive comments. The distribution list for the DEIR is included as Appendix B in the Technical Appendix to this EIR (Volume 2). In addition, the public may submit comments in writing to the City of Manteca. All comments should be sent to:

Mr. Kyle Kollar, Community Development Director
City of Manteca
1001 W. Center Street
Manteca, CA 95337

1.4.3 Final EIR

Comments received during the comment period and public hearing will be addressed in the Final Environmental Impact Report (FEIR). The Manteca Planning Commission and City Council will consider the FEIR, with these comments and written responses prior to certification of the EIR.

1.4.4 “Findings” and Certification of the Final EIR

Prior to considering the approval of the General Plan 2023, the City of Manteca must certify that the EIR has been completed in compliance with CEQA, and must make one or more of the following “findings” for each significant impact identified (CEQA Guidelines Section 15091(a)(1-3)):

1. Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the Final EIR.
2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding.
3. Specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

Substantial evidence in the record must support these findings.

1.4.5 “Statement of Overriding Considerations” and Approval of a Project

“CEQA requires the decision-making agency to balance the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If specific economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered “acceptable.” (CEQA Guidelines Section 15093(a))

The Lead Agency must state in writing the specific reasons to support approval of a project that will result in significant environmental effects identified as not avoided or substantially avoided in the certified Final EIR. Substantial evidence in the public record is required to support such a “statement of overriding considerations.” (CEQA Guidelines Section 15093(b))

1.5 EIR FOCUS AND EFFECTS FOUND NOT TO BE SIGNIFICANT

The preliminary environmental assessment concluded that potentially significant impacts could result in the areas of aesthetics, agricultural resources, air quality, biological resources, hazardous materials, ground water resources, land use issues, noise, traffic, population and housing, and public facilities and services.

Although not identified in the preliminary environmental assessment as potentially resulting in significant impacts, this EIR also evaluates issues of cultural resources, geology and soils.

Mineral resources and wildland fire were found not to be significant issues requiring further environmental analysis.

The California Division of Mines and Geology has identified one location within the General Plan Study Area as a Zone MRZ-2, Significant Mineral Resource Zone (1). The designation in this location near the San Joaquin River refers to sand deposits that are considered to be of regional significance. Brown Sand and Gravel, Incorporated, has produced processed sand at

Oakwood Lake Pit, located within the Study Area. These mining operations have ceased. Oakwood Lake Resort has been created from these reclaimed mined lands. A residential project has been approved by San Joaquin County on the site of this former quarry. A second Brown Sand and Gravel, Incorporated, operation (Mossdale Ranch) is located outside the Study Area in the unincorporated County area. Therefore, mineral resources are not further analyzed in this EIR.

The threat to Manteca from wildland fires is extremely low due to the agricultural lands surrounding the City. Therefore, wildland fire is not further analyzed in this EIR.

1.6 LEVELS OF SIGNIFICANCE

CEQA (Section 21068) defines a significant effect on the environment as that which has:

“...a substantial, or potentially substantial, adverse change in the environment.”

CEQA Guidelines (Section 15360) defines “environment” as:

“...the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The “environment” includes both natural and man-made conditions.”

Level of significance varies for each project, depending upon the change in the existing physical conditions of the setting. For each proposed project:

“The lead agency shall determine whether a project may have a significant effect on the environment based on substantial evidence in light of the whole record.” (CEQA, Section 21082.2(a))

Based upon CEQA’s definition of significant effect on the environment, the following levels of significance have been defined for evaluating the impacts that may result from the General Plan 2023:

No Impact: No change from existing environmental conditions.

Less than Significant Impact: No substantial adverse change in existing environmental conditions. Mitigation is not required, although mitigation measures may be applied to further reduce an adverse impact.

Significant Impact: A substantial adverse change in existing environmental conditions that should be mitigated, if feasible.

Significant and Unavoidable Impact: A substantial adverse change in existing environmental conditions that would not be mitigated to a less-than-significant level.

Beneficial Impact: A positive change in the existing environmental conditions.

1.7 POTENTIAL AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Five (5) potential areas of controversy are expected during the review of this General Plan and General Plan EIR:

- land use and agricultural resource conversion
- population increase
- air quality
- domestic water
- open space
- traffic

Land Use and Agricultural Resource Conversion

The General Plan 2023 proposes changes in land use designations. As these changes may result in increased urban development, including areas that are currently adjacent to or designated agricultural land, controversy over development projects and agricultural resource conversion may arise.

Population Increase

The build-out of the proposed General Plan will substantially increase the population of the City of Manteca. Controversy over a perceived loss of Manteca's "small town atmosphere" may arise.

Air Quality

The City of Manteca is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The San Joaquin Valley suffers from serious air pollution, due to long, warm summers and surrounding mountains that trap smog in the valley, not allowing the smog to dissipate. In addition to smog, dry weather conditions and topography allow small particles of man-made compounds, as well as soot, ash, and dust to become suspended in the air, creating particulate matter. While these weather conditions benefit the agricultural uses in the area, they do not promote healthful air quality.

Domestic Water

Water facilities in the City of Manteca consist primarily of water wells and transmission mains. Past development has generally occurred concentrically out from the center of the community. Water distribution facilities in the portion of the City that is generally developed (i.e., from Airport Way to State Route 99, and from Lathrop Road to State Route 120) have the capacity to serve the existing development plus the future infill development. The outlying areas will need water transmission pipelines extended from the existing grid before development can occur.

Open Space

Protection of open space and areas for recreation is fundamental to maintain the quality of life enjoyed by current and future residents. New development will inherently change some aspects of the open space resource through conversion of agricultural land.

Traffic

There has been a significant increase in both population and development in Manteca in recent years. These increases have translated into more intensified use of automobiles and commuting to out-of-area jobs. Manteca's circulation system is addressed in the General Plan as a means of improving traffic conditions in and around the City.

1.8 SCOPING AND CONSULTATION

In the preparation of this EIR, the City has undertaken outreach efforts to solicit comments, suggestions, and recommendations for consideration. In addition to the active participation by the General Plan Steering Committee, the City has consulted with a broad range of public agencies, individuals, and organizations. Formal consultation occurred with those parties potentially affected by the project, those parties possessing information concerning the project site or the resources located on the project site, and those entities from which later discretionary actions may be required.

Pre-circulation consultation included, but was not limited to:

- 1) the preparation and dissemination of environmental notices (as required under Public Resources Code Section 21092(f));
- 2) consultation with other public agencies (as required under Public Resources Code Section 21153 and Section 15086 of the CEQA Guidelines);
- 3) consultation with transportation planning organizations and public agencies with transportation planning facilities within their jurisdictions (as required under Public Resources Code Section 21092.4); and

- 4) consultation with affected water agencies (as required under Public Resources Code Section 21151.9 and Section 15083.5 of the CEQA Guidelines).

Written comments received by the City in response to the NOP are included as Appendix A in the Technical Appendix to this EIR (Volume 2).

1.9 AGENCIES AND ORGANIZATIONS THAT MAY USE THIS EIR IN THEIR DECISION-MAKING

In addition to the City's use of this document as the environmental basis for the adoption of the General Plan 2023, revisions to the City's Municipal Code and Redevelopment Plans, and for the approval or conditional approval of any later actions, other local, regional, State, and/or federal agencies may elect to utilize the information presented as the environmental basis for the later discretionary actions of those agencies. Other agencies and organizations which may use this document in their capacity as responsible agencies or in permitting procedures include, but are not limited to:

Community Development Department, San Joaquin County
 Department of Public Works, San Joaquin County
 San Joaquin Local Agency Formation Commission (LAFCo)
 San Joaquin Council of Governments (SJCOG)
 San Joaquin Valley Unified Air Pollution Control District
 So. San Joaquin Irrigation District
 San Joaquin County Agricultural Commission
 California State Department of Food and Agriculture
 Central Valley Water Quality Control Board
 California Department of Fish and Game
 U.S. Fish and Wildlife Service
 U.S. Army Corps of Engineers

1.10 INCORPORATED BY REFERENCE

Pursuant to Section 15150 (CEQA Guidelines), the Lead Agency is authorized to "incorporate by reference" all or portions of other documents that are a matter of public record and that contain information applicable to the pending project or the impacts associated with the project. The following documents are hereby incorporated by reference:

"City of Manteca General Plan 2023" as adopted by the City of Manteca, 2003.

"Air Quality Guidelines for General Plans." San Joaquin Valley Unified Air Pollution Control District, 1994.

“San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).”
San Joaquin County Council of Governments et al, November 14, 2000.

“Draft Joint EIR/EIS for the Approval and Implementation of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).” San Joaquin County Council of Governments et al, September 23, 1999.

“Final Joint EIR/EIS for the Approval and Implementation of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).” San Joaquin County Council of Governments et al, November 5, 2000.

These documents are available for review at the City of Manteca Community Development Department during the regular business hours of the Department. The Department is the custodian of records for the General Plan 2023 and its accompanying CEQA documentation.

1.11 INDEPENDENT JUDGMENT

The preliminary findings presented in this EIR reflect the independent judgment of the City of Manteca relative to the nature and magnitude of the potential impacts resulting from the adoption of the General Plan 2023, and the subsequent build-out of the City and its Sphere of Influence in accordance with the plans, policies, and programs contained within the General Plan. Additionally, this document presents the independent judgment of the City of Manteca relative to each of the alternatives examined in this EIR, and the efficacy of the recommended actions now proposed by the Lead Agency to reduce or avoid the significant or potentially significant environmental effects as identified.

1.12 ORGANIZATION OF THIS DRAFT EIR DOCUMENT

This Draft EIR for the City of Manteca General Plan 2023 is organized into the following eighteen (18) sections:

SECTION 1 SUMMARY

Summary of the Draft General Plan 2023 EIR and the CEQA Process.

SECTION 2 PROJECT AND ALTERNATIVES DESCRIPTION

Description of the Draft General Plan 2023 and overview of the analyzed alternatives.

SECTIONS 3–15 IMPACT ANALYSIS

Discussion and analysis of potential impacts of the Draft General Plan 2023 upon the following:

Aesthetics and Visual Resources (Section 3)

Agricultural Resources (Section 4)
Air Quality (Section 5)
Biological Resources (Section 6)
Cultural Resources (Section 7)
Geology, Soils, and Seismicity (Section 8)
Hazardous Materials (Section 9)
Hydrology and Water Quality (Section 10)
Land Use and Planning (Section 11)
Noise (Section 12)
Population and Housing (Section 13)
Public Facilities and Services (Section 14)
Traffic and Circulation (Section 15)

SECTION 16 ALTERNATIVES ANALYSIS

Discussion of the alternatives analyzed and the Environmentally Preferred Alternative.

SECTION 17 OTHER CEQA-REQUIRED IMPACT ANALYSIS

Analysis of Growth-Inducing Impacts, Significant Environmental Effects Which Cannot be Avoided, Cumulative Impacts, and Significant Irreversible Environmental Changes.

SECTION 18 REPORT PREPARATION

Listing of Agencies and Organizations that contributed to the preparation of this Draft EIR for the General Plan 2023.

1.13 SUMMARY OF IMPACTS AND MITIGATION MEASURES

The potential impacts, mitigation measures, and the residual level of significance resulting from implementation of the General Plan 2023 and recommended mitigation measures are summarized in Table 1-1. A discussion of each of these impacts can be found in the corresponding Sections of this EIR.

**Table 1-1
Summary of Impacts and Mitigation Measures**

AESTHETICS AND VISUAL RESOURCES

POTENTIAL IMPACT AV-1: **Buildout of the proposed General Plan 2023 would degrade the existing scenic vistas found in the General Plan Study Area.**

Level of Significance: **Significant and Unavoidable**

Buildout of the General Plan Study Area will occur as development at the edge of Manteca, primarily in current agricultural areas. New development will be visible from locations within the community, from the highway overpasses, and from the nearby unincorporated agricultural areas beyond the Study Area boundaries. New development will impact the current views of open space, which are primarily vistas of agricultural fields and orchards.

AV-1.1 The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following policy (P) regarding existing scenic vistas:

RC-P-17 Maximize the potential for open space and visual experiences.

Residual Level of Significance: **Significant and Unavoidable**

POTENTIAL IMPACT AV-2: **The existing visual character or quality of the area will be degraded.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

AV-2.1 The proposed City of Manteca General Plan 2023 provides the following goal, policies (P) and implementation (I) measure to maintain existing visual character:

Resource Conservation Element

RC-P-15 Promote the provision of public and private open space within urbanized parts of Manteca, in order to provide visual contrast

with the built environment and to provide for the recreational needs of residents.

Community Design Element

- Goal CD-11 Retain visual reminders of the agricultural heritage of the community.
- CD-P-47 Allow pockets of agricultural activity to remain within the urban areas of the city where such uses are compatible with the surrounding urban use.
- CD-P-48 Encourage use of small under-utilized parcels of new agricultural activity, such as truck farms, strawberries, and small orchards.
- CD-P-49 In order to establish a visual character that retains the agricultural heritage, the city will permit the use of orchard trees (or similar non-fruiting species) in landscape corridors along major streets adjacent to residential neighborhoods, in-lieu of formalized landscape. In such landscapes, the groundcover may be limited to bare earth and weed control and/or groundcovers compatible with the orchard characteristics.
- CD-I-14: Establish design guidelines for non-residential uses within 200 feet of SR 99 and SR 120. The guidelines should address the following concepts...The landscape along SR 120 and SR 99 will reflect the natural character of the region in the selection of trees and groundcover.

Residual Level of Significance: Significant and Unavoidable

Although conformance with the goal, policies, and implementation measure identified above will lessen the impact to some extent, the impact of development on the existing visual character of the City of Manteca will remain significant. There is no way to fully mitigate the impact of development of agricultural open space.

POTENTIAL IMPACT AV-3: There will be an increased impact of light or glare from buildout of the General Plan 2023.

Level of Significance: Potentially Significant

Mitigation Measures:

The impact of light and glare can be minimized by incorporating design features and operating requirements into new development that limit light and glare on-site.

AV-3.1: The Community Design Element of the Manteca General Plan 2023 provides the following policies which may assist in the mitigation of the degradation of the existing night sky amenity in the City of Manteca:

- CD-P-44: Provide minimal street lighting to meet safety standards and provide direction.
- CD-P-45 Provide directional shielding for street and parking lot lighting.
- CD-P-46 Provide automatic shutoff or motion sensors for lighting features in newly developed areas.

Residual Level of Significance: Less Than Significant With Mitigation

AGRICULTURAL RESOURCES

POTENTIAL IMPACT AG-1: Implementation of the City of Manteca General Plan 2023 (Project) will result in conversion of Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance to non-agricultural use.

Level of Significance: Potentially Significant

Mitigation Measures:

AG-1.1: The Land Use Element of the proposed General Plan 2023 provides the following policy (P) and implementation measure (I) intended to protect important farmland within the Study Area:

- LU-P-41 The City shall encourage the continuation of agricultural uses on lands within the Primary and Secondary Urban Services

Boundary lines pending their development as urban uses consistent with the General Plan.

LU-I-1: The City shall maintain a growth management system that provides a mechanism for the annual allocation of the amount of residential, commercial, and industrial development that may occur. The growth management system shall have the following objectives:

Conserve viable agricultural and open space lands.

The Resource Conservation Element of the proposed General Plan 2023 provides the following goal and policies (P) intended to conserve agricultural resources within the Study Area:

Goal RC-9 To promote the continuation of agricultural uses in the Manteca area and to discourage the premature conversion of agricultural land to nonagricultural uses, while providing for the urban development needs of Manteca.

RC-P-18 The City shall support the continuation of agricultural uses on lands designated for urban use, until urban development is imminent.

RC-P-19 The City shall provide an orderly and phased development pattern so that farmland is not subjected to premature development pressure.

AG-1.2: The Land Use Element of the proposed General Plan 2023 directs the major growth area, as defined by the Primary Urban Service boundary, in a manner that avoids Prime Farmlands where feasible. Some areas of Prime Farmlands are within existing urban areas.

Residual Level of Significance: Significant and Unavoidable

Although conformance with the goal, policies, and implementation measures identified above will lessen the conversion of the agricultural resources to some extent, the impact will remain significant.

POTENTIAL IMPACT AG-2: Implementation of the General Plan 2023 will cause a conflict with existing zoning for agricultural use, or a Williamson Act contract.

Level of Significance: Potentially Significant

Mitigation Measures:

AG-2.1: The Resource Conservation Element of the proposed General Plan 2023 provides the following policies (P) and implementation measure (I) intended to conserve agricultural zoning within the Study Area:

RC-P-22 Protect designated agricultural lands, without placing an undue burden on agricultural landowners.

RC-P-26 The City shall discourage the cancellation of Williamson Act contracts outside the Primary Urban Service Boundary line.

RC-I-31 Work with San Joaquin County on the following issues:

Support the continuation of County agricultural zoning in areas designated for agricultural land use in the Area Plan.

Residual Level of Significance: Significant and Unavoidable

Although conformance with the policies and implementation measure identified above will lessen the conflicts with existing agricultural zoning within the Primary Urban Service Boundary, the impact will remain significant within the Study Area.

POTENTIAL IMPACT AG-3: The location or nature of some proposed General Plan 2023 changes could result in the conversion of farmland to non-agricultural use.

Level of Significance: Potentially Significant

Mitigation Measures:

AG-3.1: The Resource Conservation Element of the proposed General Plan 2023 provides the following policies (P) and implementation measure (I) intended to maintain agricultural use within the Study Area:

RC-P-20 In approving urban development near existing agricultural lands, the City shall act so that such development will not unnecessarily constrain agricultural practices or adversely affect the viability of nearby agricultural operations.

- RC-P-23 Provide buffers at the interface of urban development and farmland in order to minimize conflicts between these uses.
- RC-P-24 The City shall endeavor to ensure, in approving urban development near existing agricultural lands, that such development will not unnecessarily constrain agricultural practices or adversely affect the economic viability of nearby agricultural operations.
- RC-P-25 The City shall restrict the fragmentation of agricultural land parcels into small rural residential parcels except in areas designated for estate type development in the General Plan Land Use Diagram.
- RC-P-27 The City shall not extend water and sewer lines to premature urban development that would adversely affect agricultural operations.
- RC-I-30 Apply the following conditions of approval where urban development occurs next to farmland:
- Require notifications in urban property deeds that agricultural operations are in the vicinity, in keeping with the City's right-to-farm ordinance.
 - Require adequate and secure fencing at the interface of urban and agricultural use.
 - Require phasing of new residential subdivisions so as to include an interim buffer between residential and agricultural use.

Residual Level of Significance: Less Than Significant With Mitigation

AIR QUALITY

POTENTIAL IMPACT AQ-1: Implementation of the General Plan 2023 could conflict with or obstruct implementation of the applicable air quality plan.

Level of Significance: Potentially Significant

Mitigation Measures:

AQ-1.1: The General Plan 2023 includes the following goal, policy (P) and implementation measures (I) to direct cooperation with San Joaquin Valley Air Pollution Control District’s air quality plans, including air toxic plans:

- Goal AQ-1 Improve Manteca’s air quality by:
- Minimizing public exposure to toxic or hazardous air pollutants.
- AQ-P-1 Cooperate with other agencies to develop a consistent and coordinated approach to reduction of air pollution and management of hazardous air pollutants.
- AQ-I-1 Work with the San Joaquin Valley Air Pollution Control District (SJVAPCD) to implement the Air Quality Management Plan (AQMP).
- Cooperate with the APCD to develop consistent and accurate procedures for evaluating project-specific and cumulative air quality impacts.
- Cooperate with the APCD and the California Air Resources Board to develop a local airshed model.
- Cooperate with the APCD in their efforts to develop a cost/benefits analysis of possible control strategies (mitigation measures to minimize short and long-term stationary and area source emissions as part of the development review process, and monitoring measures to ensure that mitigation measures are implemented.
- AQ-I-2 In accordance with CEQA, submit development proposals to the APCD for review and comment prior to decision.

Residual Level of Significance: Less Than Significant with Mitigation

POTENTIAL IMPACT AQ-2: Implementation of the General Plan 2023 could violate air quality standards or contribute substantially to the current nonattainment status for ozone and PM10.

Level of Significance: Significant and Unavoidable

The San Joaquin Valley is currently designated as “severe nonattainment” for the state ozone 1-hour standard, and “serious nonattainment” for the federal 1-hour ozone and 24-hour fine particulate matter (PM10) standards. Any additional sources of these pollutants will contribute to this nonattainment status. Therefore, there are no mitigation measures which will reduce the increase of these air pollutants to a less-than-significant level.

AQ-2.1: The General Plan 2023 includes the following goals, policies (P), and implementation measures (I) to help meet air quality standards and reduce the net contribution to the current ozone and PM10 nonattainment status.

- Goal AQ-1 Improve Manteca’s air quality by:
- Achieving and maintaining ambient air quality standards established by the U.S. Environmental Protection Agency, the California Air Resources Board, and the San Joaquin Valley Air Pollution Control District.
- Goal AQ-2 Integrate air quality planning with land use and transportation planning processes in order to reduce vehicle miles traveled in the City and by commuters.
- Goal AQ-3 Increase opportunities for alternatives to internal combustion automobiles including, but not limited to, public transportation, bicycles, walking and alternative fuel vehicles including hybrid gas-electric, electric and compressed natural gas.
- Goal AQ-4 Reduce air emissions through energy conservation.
- AQ-P-8 Woodburning devices shall meet current standards for controlling particulate air pollution.
- AQ-P-9 Burning of any combustible material within the City will be controlled to minimize particulate air pollution.
- AQ-I-13 All residences built in a new subdivision or housing development shall be equipped with conventional heating devices with sufficient capacity to heat all areas of the building without reliance on woodburning heating devices.
- AQ-I-14 All woodburning-heating devices installed shall meet EPA standards applicable at the time of project approval.

Air quality issues relating to construction activities are also addressed in the Air Quality Section of the General Plan 2023:

AQ-P-7 New construction will be managed to minimize fugitive dust and construction vehicle emissions.

AQ-I-4. Construction activity plans shall include and/or provide for a dust management plan to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard.

Project development applicants shall be responsible for ensuring that all adequate dust control measures are implemented in a timely manner during all phases of project development and construction.

Residual Level of Significance: Significant and Unavoidable

POTENTIAL IMPACT AQ-3: Implementation of the General Plan 2023 would result in a cumulatively considerable net increase in ozone and PM10 air pollutants.

Level of Significance: Significant and Unavoidable

Given that the Valley is nonattainment for ozone and PM10, there are no mitigation measures to reduce the cumulative increase of these air pollutants when proposing additional urban development. There are no mitigation measures which will reduce this impact to a less-than-significant level. However, the following policies (P) and implementation measures (I) are intended to reduce the net increase to the region's cumulative air pollution from the General Plan 2023:

Air Quality and Land Use

AQ-P-2 Develop a land use plan that will help to reduce the need for trips and will facilitate the common use of public transportation, walking, bicycles, and alternative fuel vehicles.

AQ-I-4 Encourage mixed-use development that is conveniently accessible by pedestrians and public transit.

- AQ-I-5 Locate employment, school, and daily shopping destinations near residential areas.
- AQ-I-6 Locate higher density development such as multi-family housing, institutional uses, services, employment centers and retail along existing and proposed transit corridors.
- AQ-I-7 Locate public facilities in areas easily served by current and planned public transportation.

Air Quality and Transportation

- AQ-P-4 Develop and maintain street systems that provide for efficient traffic flow and thereby minimize air pollution from automobile emissions.
- AQ-P-5 Develop and maintain circulation systems that provide alternatives to the automobile for transportation, including bicycles routes, pedestrian paths, bus transit, and carpooling.
- AQ-P-6 Coordinate public transportation networks, including trains, local bus service, regional bus service and rideshare facilities to provide efficient public transit service.
- AQ-I-9 Maintain acceptable traffic levels of service (LOC) as specified in the Circulation Element.
- AQ-I-10 In new subdivisions, require internal street design to include the installation of dedicated pedestrian/bicycle pathways connecting to adjacent residential and commercial areas as well as schools, parks and recreational areas.

Residual Level of Significance: Significant and Unavoidable

POTENTIAL IMPACT AQ-4: Implementation of the General Plan 2023 could expose sensitive receptors to substantial pollutant concentrations.

Level of Significance: Potentially Significant

Mitigation Measures:

AQ-4.1: The General Plan 2023 includes the following implementation measures (I) to help reduce exposure of sensitive receptors to pollutants:

AQ-I-8 Locate air pollution point sources, such as manufacturing and extracting facilities, in areas designated for industrial development and separated from residential areas and sensitive receptors (e.g., homes, schools, and hospitals).

AQ-I-15 Design review criteria shall include the following considerations, at a minimum:

Establish buffer zones (e.g., setbacks, landscaping) within residential and other sensitive receptor site plans to separate those uses from highways, arterial streets, hazardous material locations and other sources of air pollution or odor.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT AQ-5: Implementation of the General Plan 2023 could create objectionable odors affecting a substantial number of people.

Level of Significance: Potentially Significant

Mitigation Measures:

AQ-5.1: The General Plan 2023 includes the following goal and policy (P) to help reduce the possibility of exposing people to objectionable odors:

Goal AQ-1: Improve Manteca’s air quality by:

Minimizing public exposure to pollutants that create a public nuisance, such as unpleasant odors.

AQ-P-3 Segregate and provide buffers between land uses that typically generate hazardous or obnoxious fumes and residential or other sensitive land uses.

Residual Level of Significance: Less Than Significant with Mitigation

BIOLOGICAL RESOURCES

POTENTIAL IMPACT B-1: **Implementation of the General Plan 2023 (proposed project) could result in the loss of identified special status species.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

B-1.1 The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following policies (P) and implementation (I) measures to protect and maintain special status species.

RC-P-32 Protect special status species and other species that are sensitive to human activities.

RC-I-32 Continue to support and comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) when reviewing proposed public and private land use changes.

RC-I-34 Project proponents who opt not to participate in the SJMSCP shall satisfy applicable U.S. Endangered Species Act (ESA), California Endangered Species Act (CESA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and other applicable local, state, and federal laws and regulation provisions through consultations with the Permitting Agencies and local planning agencies.

Residual Level of Significance: **Less Than Significant With Mitigation**

POTENTIAL IMPACT B-2: **Implementation of the City of Manteca General Plan 2023 could result in the loss of riparian habitat or other sensitive natural communities.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

B-2.1: The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following goal, policies (P), and implementation (I) measures to protect and maintain riparian and other sensitive habitats.

- Goal RC-10 Protect sensitive native vegetation and wildlife communities and habitat in Manteca.
- BR-P-30 Condition new development in the vicinity of the San Joaquin River and Walthall Slough to promote and protect riparian habitat, wetlands, and other native vegetation and wildlife community.
- BR-P-34 Consider the development of new drainage channels planted with native vegetation, which would provide habitat as well as drainage.
- RC-I-32 Continue to support and comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) when reviewing proposed public and private land use changes.
- RC-I-33 For project proponents who opt against participation in the SJMSCP, require site-specific research, and ground surveys for proposed development projects. This research must include a detailed inventory of all biological resources onsite, and appropriate mitigation measures for avoiding or reducing impact to these biological resources. This requirement may be waived if determined by the City that the proposed project area is already sufficiently surveyed.
- RC-I-34 Project proponents who opt not to participate in the SJMSCP shall satisfy applicable U.S. Endangered Species Act (ESA), California Endangered Species Act (CESA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and other applicable local, state, and federal laws and regulation provisions through consultations with the Permitting Agencies and local planning agencies.
- BR-I-36 Limit the access of pedestrians and cyclists to wetland areas so that access is compatible with long-term protection of these natural resources.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT B-3: **The General Plan 2023 may have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, or hydrological interruption.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

B-3.1: The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following implementation (I) measure to protect federally protected wetlands.

BR-I-38 Until such time that a Clean Water Act regional general permit or its equivalent is issued for coverage under the SJMSCP, acquisition of a Section 404 permit by project proponents will continue to occur as required by existing regulations. Project proponents shall comply with all requirements for protecting federally protected wetlands.

Residual Level of Significance: **Less Than Significant With Mitigation**

POTENTIAL IMPACT B-4: **Implementation of the General Plan 2023 could substantially interfere with the movement of wildlife species or with established native or migratory wildlife corridors.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

B-4.1: The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following implementation (I) measures to reduce the impact of loss of agricultural lands to foraging migratory birds.

RC-I-32 Continue to support and comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).

RC-I-34 Project proponents who opt not to participate in the SJMSCP shall satisfy applicable U.S. Endangered Species Act (ESA), California Endangered Species Act (CESA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and other applicable local, state, and federal laws and regulation provisions through consultations with the Permitting Agencies and local planning agencies.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT B-5: Impacts on biological resources from the buildout of the General Plan 2023 may be cumulatively significant.

Level of Significance: Potentially Significant

Mitigation Measures:

B-5.1: The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following implementation (I) measure to reduce the impact of expanding urban development on biological resources.

RC-I-32 Continue to support and comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) when reviewing proposed public and private land use changes.

Residual Level of Significance: Significant

Given the voluntary nature of participation in the SJMSCP, the level of significance cannot be mitigated to less than significant. The SJMSCP is, in effect, a plan to mitigate both the site specific and the cumulative impacts of individual projects on biological resources within San Joaquin County. If all project proponents opted to participate in the SJMSCP, cumulative effects of the buildout of the General Plan 2023 could be mitigated to a less than significant level. However, it cannot be assumed that all project proponents will opt to participate in the SJMSCP. Any project proponent who opts against participating in the Plan will be proceeding under the “project-by-project” evaluation and mitigation process with each permitting agency. Since project-by-project evaluation cannot reasonably foresee the overall effects on biological resources of individual projects under multiple agency control, cumulative impacts may result.

CULTURAL RESOURCES

POTENTIAL IMPACT C-1: **Implementation of the General Plan 2023 (proposed project) may cause a substantial adverse change in the significance of known and unknown archaeological or historical resources, or a unique paleontological resource or geologic feature.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

C-1.1 The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following Goals, policies (P) and implementation (I) measures to protect archaeological and historical resources.

Goal RC-11 Preserve and enhance Manteca’s archaeological and historic resources for their aesthetic, educational and cultural values.

Goal RC-12 Protect Manteca’s Native American heritage.

RC-P-35 The City shall not knowingly approve any public or private project that may adversely affect an archaeological site without consulting the California Archaeological Inventory at Stanislaus State University, conducting a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendation of a qualified archaeologist. City implementation of this policy shall be guided by the California Environmental Quality Act (CEQA) and the National Historic Preservation Act (NHPA).

RC-P-36 The City shall refer development proposals that may adversely impact archaeological sites to the California Archaeological Inventory, Stanislaus State University.

RC-P-37 The City shall set as a high priority the protections and enhancement of Manteca’s historically and architecturally significant buildings.

- RC-P-38 The City shall work with property owners in seeking registration of historical structures as State Historic Landmarks or listing on the Federal Register of Historic Sites.
- RC-P-39 The City shall prepare and adopt a Historical Preservation Ordinance.
- RC-P-40 The City and Redevelopment Agency shall support the efforts of property owners to preserve and renovate historic and architecturally significant structures. Where such buildings cannot be preserved in tact, the City shall seek to preserve the building facades.
- RC-I-38 Require a records search for any proposed development project, to determine whether the site contains known archaeological, historic, or cultural resources and/or to determine the potential for discovery of additional cultural resources. This requirement may be waived if determined by the City that the proposed project area is already sufficiently surveyed.
- RC-I-39 Require that sponsors of proposed development projects on sites where probable cause for discovery of archaeological resources (as indicated by records search and where resources have been discovered in the vicinity of the project) retain a consulting archaeologist to survey the project site. If unique resources, as defined by California State law, are found, a qualified archaeologist or historian shall be called to evaluate the find and to recommend proper action. Require a monitoring plan for the project to ensure that mitigation measures are implemented.
- RC-I-40 When feasible, incorporate significant archaeological sites into open space areas.
- RC-I-41 The City should continue its inventory of all historic sites throughout the City. The inventory should contain a narrative of the significant facts regarding the historic events or persons associated with the site, and pictures of the site.
- RC-I-42 The City should maintain an archive of historic information, including photographs, publications, oral histories and other materials.
- RC-I-43 The historic archives will be compiled according to location in the City, and will be maintained in a safe environment to protect it over time.

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| RC-I-44 | The City should develop policies and the means to make the information available to the public for viewing and research. |
| RC-I-45 | All City permits for reconstruction, modification of existing buildings will require submittal of a photograph of the existing structure or site. The intent is to create a record of the buildings in the City over time. A photograph will also be required for vacant sites that will be modified with new construction of new buildings or other above ground improvements. |
| RC-I-46 | Encourage the placement of monuments or plaques that recognize and celebrate historic sites, structures, and events. |
| RC-I-47 | The City shall adopt and implement a historic building code, as authorized by state law. |

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT C-2: Implementation of the General Plan 2023 could disturb human remains, including those interred outside of formal cemeteries.

Level of Significance: Potentially Significant

Mitigation Measures:

C-2.1: The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following implementation (I) measure to reduce disturbance to discovered human remains.

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| RC-I-48 | If human remains are discovered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the coroner determines that no investigation of the cause of death is required and if the remains are of Native American origin, the coroner will notify the Native American Heritage Commission, which in turn will inform a most likely descendant. The descendant will then recommend to the landowner appropriate disposition of the remains and any grave goods. |
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Residual Level of Significance: Less Than Significant With Mitigation

GEOLOGY, SOILS, AND SEISMICITY

POTENTIAL IMPACT GSS-1: **Implementation of the General Plan 2023 may expose people and structures to rupture of a known earthquake, as delineated on the Alquist-Priolo Earthquake Fault Zoning Map.**

Level of Significance: **Less Than Significant Impact**

Manteca is not located within an Alquist-Priolo Fault-Rupture Hazard Zone. There are no known active surface fault ruptures located within or adjacent to the Study Area.

POTENTIAL IMPACT GSS-2: **Implementation of the General Plan 2023 may expose people and structures to ground shaking, ground failure (including liquefaction) or landslides.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

GSS-2.1: The General Plan 2023 Safety Element (Section 7) provides the following goals, policies (P), and implementation measures (I) to lessen the possible exposure of people and structures to ground shaking or ground failure, including liquefaction:

Goal S-1: Prevent loss of lives, injury, and property damage due to seismic activity and geological hazards.

Goal S-2: Prevent loss of lives, injury, and property damage due to the collapse of buildings and critical facilities and to prevent disruption of essential services in the event of an earthquake.

S-P-1 The City shall require preparation of geological reports and/or geological engineering reports for proposed new development located in areas of suspected significant geological hazards, including potential subsidence (collapsible surface soils) due to groundwater extraction.

S-P-2 The City shall require new development to mitigate the potential impacts of geologic hazards through Building Plan review.

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- S-P-3 The City shall avoid potential seismic induced settlement of uncompacted fill and liquefaction (water-saturated soil) due to the presence of a high water table.
- S-P-4 The City shall maintain an inventory of pre-1940 unreinforced masonry buildings within the city. No change in use to a higher occupancy or more intensive use shall be approved in such structures until an engineering evaluation of the structure has been conducted and any structural deficiencies corrected. The Redevelopment Agency shall be encouraged to assist property owners in reinforcing buildings.
- S-P-5 The City should ensure that all public facilities, such as buildings, water tanks, and reservoirs, are structurally sound and able to withstand seismic shaking and the effects of seismically induced ground failure.
- S-P-6 The City shall comply with the California State seismic and building standards in the design and siting of critical facilities, including police and fire stations, school facilities, hospitals, hazardous materials manufacturing and storage facilities, and large public assembly halls.
- SG-I-1 Comply with the current Uniform Building Code (UBC) requirements for Seismic Zone 3, which stipulates building structural material and reinforcement.
- SG-I-2 Comply with California Health and Safety Code Section 19100 et seq. (Earthquake Protection Law), which requires that buildings be designed to resist stresses produced by natural forces caused earthquakes and wind.
- SG-I-3 The City shall inventory potentially hazardous buildings within the City and adopt a mitigation program, including requirements for strengthening buildings, changing the use of the buildings to an acceptable occupancy level, or demolishing the buildings.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT GSS-3: Implementation of the General Plan 2023 may result in substantial soil erosion or loss of topsoil.

Level of Significance: Potentially Significant

Mitigation Measures:

GSS-3.1: The Conservation and Open Space Resource Conservation Element (Section 8) of the City of Manteca General Plan 2023 provides the following goal, policy (P), and implementation measures (I) to mitigate the potential of substantial soil erosion or loss of topsoil.

Goal RC-6 Preserve and maintain Manteca’s soils to avoid pollution of surface waters, decreased air quality, and loss of soil.

RC-P-9 Minimize soil erosion and loss of topsoil from land development activities, wind, and water flow.

RC-I-16 Comply with the Uniform Building Code (UBC) requirements for specific site development and construction standards for specific soils types.

RC-I-17 Comply with the Uniform Building Code (UBC), Chapter 70, regulating grading activities including drainage and erosion control.

RC-I-18 Require site-specific survey and research for proposed development projects, including appropriate mitigation measures for avoiding or reducing erosion, if needed. This requirement may be waived if the City determines that the proposed project area is already sufficiently surveyed.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT GSS-4: Implementation of the General Plan 2023 may expose people and structures to the hazards of expansive soils.

Level of Significance: Potentially Significant

Mitigation Measures:

GSS-4.1: The General Plan 2023 Safety Element (Section 7) provides the following policies (P) to lessen the possible exposure of people and structures to the shrink-swell hazards of expansive soils:

S-P-1 The City shall require preparation of geological reports and/or geological engineering reports for proposed new development located in areas of suspected significant geological hazards, including potential subsidence (collapsible surface soils) due to groundwater extraction.

S-P-2 The City shall require new development to mitigate the potential impacts of geologic hazards through Building Plan review.

The General Plan 2023 Resource Conservation Element (Section 8) provides the following policies implementation measure (I) to lessen the possible exposure of people and structures to the shrink-swell hazards of expansive soils:

RC-I-16 Comply with the Uniform Building Code (UBC) requirements for specific site development and construction standards for specific soil types.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT GSS-5: Septic tanks or alternative waste water systems could be placed in soils incapable of supporting their use.

Level of Significance: No Impact

All proposed development within the Study Area will be served by the City's municipal sewer system. No septic tanks or alternative waste water systems will be used.

HAZARDOUS MATERIALS

POTENTIAL IMPACT HM-1: The existing and future residents of the City of Manteca could be exposed to increased risk resulting from the routine use, transport, or disposal of hazardous materials.

Level of Significance: Potentially Significant

Mitigation Measures:

HM-1.1 The Safety Element of the City of Manteca General Plan (Subsection 7.3) provides the following goal, policy (P), and implementation measures (I) to mitigate the exposure of residents to hazardous materials:

- Goal S-5 Protect the health, safety, natural resources, and property through regulation of use, storage, transport, and disposal of hazardous materials.
- S-P-15 The City shall maintain an awareness of hazardous materials throughout the Manteca region.
- S-I-9 Require businesses that manufacture, store, use, or transport significant quantities of hazardous materials to identify annually such materials and their quantities.
- S-I-10 Require the submittal of lists of hazardous materials used in existing and proposed industrial and commercial businesses within the City of Manteca. The list shall be maintained through the Manteca Fire Department and updated through periodic review.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT HM-2: The existing and future residents of the City of Manteca could be exposed to increased risk of accidental release of hazardous materials.

Level of Significance: Potentially Significant

Mitigation Measures:

HM-2.1 The Safety Element of the City of Manteca General Plan (Subsection 7.3) provides the following policies (P) and implementation measure (I) to reduce the risk of accidental release of hazardous materials:

- S-P-17 Within its authority, the City shall regulate the production, use, storage, and transport of hazardous materials to protect the health of Manteca residents.
- S-I-11 Work with San Joaquin County and other public agencies to inform consumers about household use and disposal of hazardous materials.
- S-I-12 Cooperate fully with Union Pacific Railroad and other public agencies, such as the CHP, in the event of a hazardous material emergency.

HM-2.2 The General Plan Air Quality Element (Section 10) provides the following implementation measure (I) to help reduce the exposure to hazardous materials:

AQ-I-3 Cooperate with San Joaquin County Environmental Health Department in identifying hazardous material users and in developing a hazardous materials management plan.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT HM-3: Use and possible emission of hazardous materials within one-quarter mile of an existing or proposed school could occur.

Level of Significance: Potentially Significant

Mitigation Measures:

HM-3.1 The Safety Element of the City of Manteca General Plan (Subsection 7.3) provides the following policy (P) to mitigate the possible exposure of schools to hazardous materials:

SP-P-16 City approvals of all new development shall consider the potential for the production, use, storage, and transport of hazardous materials and provide for reasonable controls on such hazardous materials.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT HM-4: Placing development on a site which included on the Cortese list of hazardous materials would create a significant impact.

Level of Significance: No Impact

The City of Manteca does not contain sites that are identified on the Cortese List.

POTENTIAL IMPACT HM-5: **The City of Manteca General Plan 2023 could interfere with emergency response or evacuation procedures.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

HM-5.1 The Safety Element of the City of Manteca General Plan (Subsection 7.4) provides the following goal, policy (P), and implementation measures to facilitate emergency procedures.

Goal S-6 Ensure that City emergency procedures are adequate in the event of potential natural or man-made disasters.

S-P-18 The City shall maintain and periodically update the City’s Emergency Plan.

S-I-14 The City shall conduct periodic emergency response exercises to test the effectiveness of City emergency response procedures.

S-I-15 The City shall review County and state emergency response procedures that must be coordinated with City procedures.

Residual Level of Significance: **Less Than Significant With Mitigation**

HYDROLOGY AND WATER QUALITY

POTENTIAL IMPACT HWQ-1: **Planned development in the General Plan 2023 could violate water quality standards or waste discharge requirements.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

HWQ-1.1: Subsection 8.6 of the Resource Conservation Element of the proposed General Plan 2023 addresses water quality. The following implementation measure (I) should be **amended (as shown below in bold)** to meet water quality standards and waste discharge requirements for groundwater and surface water:

RC-I-24 Comply with the Regional Water Control Board's regulations and standards to maintain and improve groundwater **and surface water** quality in Manteca.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT HWQ-2: Planned development in the General Plan 2023 could substantially deplete groundwater supplies or interfere with groundwater recharge.

Level of Significance: Less Than Significant

Continued use of groundwater as the City's primary source of domestic water would be a significant impact. However, the level of significance will be reduced when surface water supplies are available through the SSJID Surface Water Project. Delivery of this water is planned for 2005, well before major new development would occur under the General Plan 2023. Therefore, the impact is less than significant.

In addition, the General Plan 2023 provides the following goals, policies (P), and implementation measures (I) from the Resource Conservation Element (Section 8) will help to lessen the impacts to groundwater supplies:

- Goal RC-1 Minimize the consumption of water to reasonable levels consistent with a high level of amenities and quality of life for City residents and visitors.
- Goal RC-2 Maximize the beneficial uses of water by recycling water for irrigation and other non-potable uses.
- Goal RC-7 To protect water quality in the San Joaquin River and in the area's groundwater basin.
- RC-P-1 The City shall continue to implement water conservation standards for all commercial and industrial development, and for all existing and new residential development.
- RC-P-2 The City shall explore potential uses of treated wastewater when such opportunities become available.

- RC-P-4 The City shall promote water conservation in both City operations and private development to minimize the need for the development of new water sources.

- RC-I-1 Continue to implement standards for water conserving landscape practices, including the use of drought tolerant plants, for both public and private projects.

- RC-I-2 Continue efforts to increase public participation in water conservation.

- RC-I-3 Require large commercial and industrial water users to submit a use and conservation plan as part of the project entitlement review and approval process, and develop a program to monitor compliance with and effectiveness of that plan.

- RC-I-4 Cooperate with other agencies and jurisdictions to expand water conservation programs, and to develop methods of water reuse.

- RC-I-5 Actively pursue the use of treated wastewater in irrigation and industrial applications, including development of appropriate infrastructure.

- RC-P-12 Protect the quality of Manteca’s groundwater.

- RC-P-13 Encourage participation of the County and surrounding communities in a basin-wide groundwater management study.

- RC-I-19 The City shall work with the County and surrounding communities to develop an action plan and/or to create an agency to manage and protect local and regional groundwater resources.

- RC-I-20 The City shall not approve new industrial or commercial development that has a significant potential for adversely affecting water quality in the San Joaquin River or in the area’s groundwater basin.

POTENTIAL IMPACT HWQ-3: Implementation of the General Plan 2023 could alter the existing drainage pattern, or increase the rate of runoff that could result in flooding.

Level of Significance: Potentially Significant

Mitigation Measures:

HWQ-3.1: The Safety Element (Section 7) of the General Plan 2023 addresses the issue of impervious surfaces and flooding potential. The following implementation measures (I) are intended to reduce the amount of impervious surfaces and the subsequent flooding potential:

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| S-I-6 | Discourage large continuous paved areas. |
| S-I-7 | Encourage the use of pervious paving materials, such as brick or stepping stones with sand joints. |
| S-I-8 | Where feasible, maintain natural stream courses and adjacent habitat and combine flood control, recreation, water quality, and open space functions. |

Residual Level of Significance: **Less Than Significant With Mitigation**

POTENTIAL IMPACT HWQ-4: **Runoff from new development and impervious surfaces would contain urban contaminants that could affect receiving water quality.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

HWQ-4.1: The Resource Conservation Element (Section 7) of the proposed General Plan 2023 provides the following policy (P) and implementation measures (I) to help reduce urban contaminants from polluting receiving water bodies:

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| RC-P-11 | Minimize pollution of waterways and other surface water bodies from urban runoff. |
| RC-I-22 | Maintain a buffer areas between waterways and urban development to protect water quality and riparian areas. |

RC-I-23 Utilize cost-effective urban runoff controls, including Best Management Practices (BMPs), to limit urban pollutants from entering the water courses.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT HWQ-5: Implementation of the City of Manteca General Plan 2023 may expose people and structures to the flood hazards of the San Joaquin River 100-year floodplain.

Level of Significance: Potentially Significant

Mitigation Measures:

HWQ-5.1: The Safety Element (Section 7) of the City of Manteca General Plan 2023 provides the following goals, policies (P), and implementation measures (I) to mitigate potential exposure of people and structures to a significant loss of property and life involving flooding from the designated San Joaquin River 100-year floodplain:

- Goal S-3 Prevent loss of lives, injury, and property damage due to flooding.
- Goal S-4 Pursue flood control solutions that minimize environmental impacts.
- S-P-7 Regulate all uses and development in areas subject to potential flooding through zoning and other land use regulations.
- S-P-8 Pursue a regional approach to flood issues.
- S-P-9 Combine flood control, recreation, water quality, and open space functions where feasible.
- S-P-10 Ensure that any existing structures subject to the 100-year flood provide adequate protection from flood hazards.
- S-P-11 Ensure that the impacts of flooding are adequately analyzed when considering areas for future urban expansion.

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| S-P-12 | New residential development, including mobile homes, shall be constructed so that the lowest floor is at least one foot above the 100-year flood level. |
| S-P-13 | Non-residential development shall be anchored and flood-proofed to prevent damage from the 100-year flood or, alternatively, elevated to at least one foot above the 100-year flood level. |
| S-I-4 | The City shall continue to participate in the National Flood Insurance Program. To this end, the City shall ensure that local regulations are in full compliance with standards adopted by the Federal Emergency Management Agency (FEMA). |
| S-I-5 | Provide flood warning and forecasting information to City residents. |

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT HWQ-6: Implementation of the proposed General Plan 2023 could expose people of structures to inundation by seiche, tsunami, or mudflow.

Level of Significance: Less Than Significant

It is highly unlikely that inundation from a seiche (earthquake-induced, tsunami-like flows of water from an inland body of water) will affect the Study Area. The nearest body of inland water is the San Joaquin River, and the Study Area is protected by a levee system.

Given that the Study Area is nearly level in topography (Geology, Soils, and Seismicity, Section 8), it is highly unlikely that the Study Area would be inundated by mudflows. The nearest source of possible mudflow is the San Joaquin River located four miles outside the Study Area boundary, and the Study Area is protected by a levee system.

LAND USE AND PLANNING

POTENTIAL IMPACT LU-1: Proposed land use would divide an existing community.

Level of Significance: Less Than Significant

Manteca has grown outward from the historic core of the City. Continued urbanization as planned would continue this expansion and would seek to reinforce the historic concentric

growth pattern focused on the geographic center of the City. Such expansion would not interfere with any adjacent community. However, the planned urbanization of Manteca would overlap the Ripon Unified School District boundary near Austin Road and Sedan Avenue. This area is currently undeveloped, but is contiguous to the Ripon community.

The Land Use Element (Section 2) of General Plan 2023 establishes specific policies (P) for addressing the potential annexation of an adjacent area.

LU-P-9 The City will consider applications for annexations that:

- are contiguous with city boundaries and provide for a logical expansion of the city;
- create clear and reasonable boundaries;
- ensure the provision of adequate municipal services;
- reflect a long-term fiscal balance to the city and its residents, when reviewed cumulatively with other annexations;
- are consistent with State law and San Joaquin County Local Agency Formation Commission standards; and
- are consistent with the General Plan.

LU-P-10 The City will consider expanding its sphere of influence to incorporate areas that logically should be planned and serviced by Manteca. The City shall consider the following factors when making determinations involving sphere of influence boundaries:

- Present and planned land uses in the area;
- Present and probable need for public facilities and services in the area;
- Present capacity of public facilities and adequacy of public services; and
- Existence of any social or economic communities of interest in the area.

POTENTIAL IMPACT LU-2: **The proposed General Plan 2023 would conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.**

Level of Significance: Less Than Significant

The General Plan 2023 proposes urbanization of land that is currently unincorporated territory of San Joaquin County and is subject to the San Joaquin County General Plan and Zoning Ordinance. The County General Plan designates much of the area surrounding Manteca as Agriculture. Approximately 15,700 acres, or 60 percent of the General Plan Study Area, is in the unincorporated area of San Joaquin County. However, the General Plan 2023 does not propose to urbanize the entire Study Area. The Primary Urban Service Area would affect 4,221 acres outside of the existing City of Manteca Boundary.

The area planned for urbanization is substantially within or contiguous to the Manteca Sphere of Influence and is therefore designated for urban use. The procedures and standards for annexation of unincorporated areas are established by the San Joaquin County Local Agency Formation Commission. The General Plan 2023 policies LU-P-5, LU-P-6, LU-P-7, and LU-P-9 establish the City policies for proceeding with annexations that would convert the current County land use designations to City of Manteca land use designations.

The General Plan 2023 proposes land uses that differ from the 1988 General Plan and the Manteca South Area Plan. It is the purpose of the General Plan 2023 to update the 1988 General Plan and the South Area Plan. Therefore, although different land use policies and a new land use map will apply, the General Plan 2023 does not conflict with existing plans.

POTENTIAL IMPACT LU-3: The proposed General Plan 2023 would conflict with any applicable habitat conservation plan or natural community conservation plan.

Level of Significance: Less Than Significant

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) identifies the location of sensitive species habitat within the General Plan Study Area, and establishes the procedures for compensating for the loss of such habitat. Through the compensation methods described in Section 6 of this EIR, the development of such habitat is allowed.

NOISE

POTENTIAL IMPACT N-1: Planned development in the General Plan 2023 could result in exposure of persons to noise levels in excess of established standards.

Level of Significance: Potentially Significant

Mitigation Measures:

- N-1.1:** The Noise Element (Section 9) of the General Plan 2023 provides the following policies (P) to mitigate the effects of increased noise levels in excess of established standards:
- N-P-2: New development of residential or other noise-sensitive land uses will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to satisfy the performance standards in Table 9-1.
- N-P-3 The City may permit the development of new noise-sensitive uses only where the noise level due to fixed (non-transportation) noise sources satisfies the noise level standards of Table 9-2. Noise mitigation may be required to meet Table 9-2 performance standards.
- N-P-4 The City shall require stationary noise sources proposed adjacent to noise sensitive uses to be mitigated so as to not exceed the noise level performance standards in Table 9-2.
- N-P-6 Where the development of residential or other noise-sensitive land use is proposed for a noise-impacted area, an acoustical analysis is required as part of the environmental review process so that noise mitigation may be considered in the project design. The acoustical analysis shall:
- Be the responsibility of the applicant.
 - Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.
 - Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
 - Estimate existing and projected (20 years) noise levels in terms of the standards of Table 9-1 or Table 9-2, and compare those levels to the adopted policies of the Noise Element.
 - Recommend appropriate mitigation measures to achieve compliance with the adopted policies and standards of the Noise Element.
 - Estimate noise exposure after the prescribed mitigation measures have been implemented.

Describe a post-project assessment program that could be used to monitor the effectiveness of the proposed mitigation measures.

- N-P-8 The City shall enforce the Sound Transmission Control Standards of the California Building Code concerning the construction of new multiple occupancy dwellings such as hotels, apartments, and condominiums.
- N-P-10 The Manteca Police Department shall actively enforce requirements of the California Vehicle Code relating to vehicle mufflers and modified exhaust systems.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT N-2: Implementation of the General Plan 2023 could expose people to the impacts of construction noise.

Level of Significance: Potentially Significant

Mitigation Measures:

- N-2.1:** The Noise Element of the General Plan 2023 (Section 9) provides the following policy (P) to mitigate the levels of construction noise on ambient noise levels throughout the General Plan Study Area.
- N-P-5 The City shall regulate construction-related noise to reduce impacts on adjacent uses.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT N-3: Implementation of the General Plan 2023 could expose residents to the impact of future roadway traffic noise.

Level of Significance: Potentially Significant

Mitigation Measures:

N-3.1 The Noise Element of the General Plan 2023 (Section 9) provides the following policies (P) to mitigate the levels of roadway traffic noise levels throughout the General Plan Study Area:

N-P-11 In residential subdivisions backing on to a freeway or railroad right-of-way, the developer shall be required to build a sound barrier wall, and provide for other appropriate mitigation measures, in accordance with City development standards.

N-P-12 The City shall require new roadways to be mitigated so as to not exceed the noise levels specified in Table 9-1. Widening or other improvement projects of existing roadways shall be mitigated to the most practical extent.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT N-4: Implementation of the General Plan 2023 could expose residents to the impact of railroad noise.

Level of Significance: Potentially Significant

Mitigation Measures:

N-4.1 The Noise Element of the General Plan 2023 (Section 9) provides the following implementation measure (I) to mitigate the levels of railroad noise within the Study Area:

N-I-8 Work in cooperation with Caltrans and the Union Pacific Railroad to maintain noise level standards for both new and existing projects in compliance with Table 9-1.

Residual Level of Significance: Less Than Significant With Mitigation

Potential Impact N-5: Implementation of the General Plan 2023 could expose residents to the impacts of future industrial/commercial, emergency, and outdoor activity noise.

Level of Significance: Potentially Significant

Mitigation Measures:

N-5.1 The Noise Element of the General Plan 2023 (Section 9) provides the following policies (P) and implementation measures (I) to mitigate the noise levels from industrial/commercial, emergency, and outdoor activities throughout the General Plan 2023 Study Area:

- N-P-2: New development of residential or other noise-sensitive land uses will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to satisfy the performance standards in Table 9-1.
- N-P-4 The City shall require stationary noise sources proposed adjacent to noise sensitive uses to be mitigated so as to not exceed the noise level performance standards in Table 9-2.
- N-P-7 Noise level criteria applied to land uses other than residential or other noise-sensitive uses shall be consistent with recommendations of the *Guidelines for the Preparation and Content of Noise Element of the General Plan*.
- N-P-13 The City shall carefully review and shall give potentially affected residents an opportunity to fully review any proposals for the establishment of helipads or heliports.
- N-I-1 New development in residential areas with an actual or projected exterior noise level of greater than 60 dB Ldn will be conditioned to use mitigation measures to reduce exterior noise levels to less than or equal to 60 dB Ldn.
- N-I-14 Control noise at the source through use of insulation, berms, building design and orientation, buffer space, staggered operating hours and other techniques. Use noise barriers to attenuate noise to acceptable levels.

Residual Level of Significance: Less Than Significant With Mitigation

POPULATION AND HOUSING

POTENTIAL IMPACT H-1: Implementation of the General Plan 2023 would increase the City's population over existing conditions.

Level of Significance: Significant and Unavoidable

There are no specific mitigation measures that will reduce or eliminate the impact of increased population on Manteca and the surrounding area. However, monitoring and regulating growth to a responsible level will maintain the integrity of the community.

POTENTIAL IMPACT H-2: The number and type of dwellings will exacerbate the existing jobs and housing imbalance in the Study Area.

Level of Significance: Potentially Significant

Mitigation Measures:

The General Plan Land Use Element establishes the mix of land uses designed to sustain a balance of jobs and housing over a period of twenty years. Implementation of goals, policies, and implementation measures as identified in the General Plan 2023 would lessen the significance of the impact.

H-2.1: The General Plan 2023 provides the following policies (P) and implementation measures (I) to assist in the mitigation of a jobs/housing imbalance by encouraging employment development in the City.

LU-P-1: The City shall promote, cooperate in, and assist in the maintenance and expansion of Manteca's industrial sector employment development within the City of Manteca and in the south San Joaquin County area that will help reduce the home-to-work commute distance for Manteca residents.

LU-P-2: New employment centers that may include office, business-professional, research and development, and light industrial or industrial development and shall be located in areas served by full City services or served by suitable facilities approved by the City. Employment centers should be located along major arterials with easy freeway access and with access from public transit, and accessible to bicyclists and pedestrians.

-
- LU-P-3: The City shall continue to support full development of its existing industrial park.
- LU-P-4: The City shall promote the development of “clean” industries that do not create problems or pose health risks associated with water and air pollution or potential leaks or spills. However, the City will designate appropriate locations that accommodate light industrial and heavy industrial uses.
- LU-P-5: Redevelopment incentives shall be used judiciously to promote industrial employment development in approved Project Areas and for projects benefiting approved Project Areas.
- LU-P-6: The City shall monitor employment development to maintain the balance of residential, commercial, and industrial development.
- LU-P-7: The City shall promote and plan for at least one Primary Employment Center to accommodate a variety of employment opportunities compatible with the employment skills of the Manteca resident labor force.
- LU-I-1 The City shall maintain a growth management system that provides a mechanism for the annual allocation of the amount of residential, commercial, and industrial development that may occur.
- LU-I-7 The City will continue to cooperate with planning efforts among local jurisdictions to minimize the impacts of growth to Manteca and in the south San Joaquin County area.
- H-2.2:** The General Plan 2023 Land Use designations provide an expanded range of housing densities to encourage development of a diverse mix of housing types and prices.

Residual Level of Significance: Less Than Significant With Mitigation

PUBLIC FACILITIES AND SERVICES

POTENTIAL IMPACT PFS-1: The General Plan 2023 would create a demand for domestic water beyond current entitlements, resulting in significant adverse effects upon the environment.

Level of Significance: Potentially Significant

Mitigation Measures:

PFS-1.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses domestic water supply through the following goal, policies (P), and implementation measures (I):

Goal PF-7 Maintain an adequate level of service in the City’s water system to meet the needs of existing and project development.

PF-P-4 Secure sufficient sources of water to meet the needs of the existing community and planned residential and commercial growth.

PF-P-5 The City will continue to rely principally on groundwater resources for its municipal water in the near term, but will participate in the regional improvements to deliver surface water to augment the City’s groundwater supply.

PF-P-6 The City shall develop new water sources as necessary to serve new development.

PF-P-7 The City shall develop new water storage and major distribution lines as necessary to serve new development.

PF-P-9 City water services shall not be extended to unincorporated areas except in extraordinary circumstances. Existing commitments for City water service outside the City limits shall continue to be honored.

PF-P-11 The City will develop and implement water conservation measures as necessary elements of the water system.

PF-I-2 The City shall update the Public Facilities Implementation Plan regarding water supply and distribution, every five years. The update shall be reviewed annually for adequacy and consistency with the General Plan.

PF-I-3 The City shall require, as a condition of project approval, dedication of land and easements, or payment of appropriate

fees and exactions, to help offset municipal costs of expansion of water treatment facilities and delivery systems.

PF-I-7 The City will encourage the use of recycled water for landscape irrigation where feasible, within the parameters of State and County Health Code and standards.

PFS-1.2: The City of Manteca Water Service Master Plan (1998) defines the future water supply, storage and delivery system for the City. The Master Plan recommends a conjunctive use of surface water from the South San Joaquin Irrigation District (SSJID) Surface Water Project to meet the future water needs of the City. SSJID plans to commence surface water supply deliveries to the City in 2005. Based on limiting average groundwater supplies to the safe yield of 1.0 acre-foot per acre per year, it is estimated that under a conjunctive use program groundwater could meet 48 percent of the City's annual water needs and surface water would meet the remaining 52 percent.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT PFS-2: The General Plan 2023 would create a demand for wastewater (sewer) treatment beyond capacity of current facilities, resulting in significant adverse effects upon the environment.

Level of Significance: Potentially Significant

Mitigation Measures:

PFS-2.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses wastewater (sewer) treatment through the following goal, policies (P), and implementation measures (I):

Goal PF-8 Maintain an adequate level of service in the City's sewage collection and disposal system to meet the needs of existing and projected development.

PF-P-16 Ensure wastewater collection and treatment for all development in the City and the safe disposal of wastes.

- PF-P-17 The City will maintain capacity to process combined residential, commercial, and industrial flow.
- PF-P-18 The City shall develop new sewage treatment and trunk line capacity as necessary to serve new development.
- PF-P-19 City sewer services will not be extended to unincorporated areas, except in extraordinary circumstances. Existing commitments for sewer service outside the City limits shall continue to be honored.
- PF-P-23 The City will maintain the ability to handle peak discharge flow while meeting State Regional Water Quality Control Board Standards as established in the current NPDES Permit.
- PF-I-8 The City shall update the Public Facilities Implementation Plan regarding wastewater collection and treatment. The update shall be reviewed annually for adequacy and consistency with the General Plan.
- PF-I-10 The City will encourage and permit an industrial pretreatment program for business parks and other industrial uses in accordance with state and federal requirements.
- PF-I-12 The City will promote reduced wastewater system demand through efficient water use by:
- requiring water conserving design and equipment in new construction,
- encouraging retrofitting with water conserving devices;
- designing wastewater systems to minimize inflow and infiltration to the extent economically feasible; and
- maintaining a Citywide map of all sewer collection system components and monitoring the condition of the system on a regular basis.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT PFS-3: The General Plan 2023 would create a demand for stormwater drainage beyond capacity of current facilities, resulting in significant adverse effects upon the environment.

Level of Significance: Potentially Significant

Mitigation Measures:

PFS-3.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses stormwater drainage through the following goal, policies (P), and implementation measure (I):

- | | |
|-----------|---|
| Goal PF-9 | Maintain an adequate level of service in the City's drainage system to accommodate runoff from existing and projected development and to prevent property damage due to flooding. |
| PF-P-24 | The City shall continue to complete gaps in the drainage system in areas of existing development. |
| PF-P-25 | The City shall require the dedication and improvement of drainage detention basins as a condition of development approval according to the standards of the Drainage Master Plan. The responsibility for the dedication and improvement of detention basins shall be based on the prorated share of stormwater runoff resulting from each development. |
| PF-P-26 | Storm drainage systems within new development areas shall include open drainage corridors where feasible to supplement or replace an underground piped drainage system. The drainage systems would provide for short-term stormwater detention, stormwater conveyance for stormwaters exceeding a 10-year event, stormwater quality treatment, bike and pedestrian paths, and visual open space within neighborhoods. |
| PF-I-13 | The City shall update the Storm Drainage Master Plan and Public Facilities Implementation Plan, regarding stormwater drainage, every five years. The update shall |

be reviewed annually for adequacy and consistency with the General Plan.

PFS-3.2: The Public Facilities Implementation Plan (PFIP) 1993 addresses additional drainage capacity made necessary by development occurring through June 30, 2020.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT PFS-4: The General Plan 2023 would create a demand for solid waste services beyond the capacity of current landfill facilities, resulting in significant adverse effects upon the environment.

Level of Significance: Potentially Significant

Mitigation Measures:

PFS-4.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses solid waste handling and disposal through the following goals, and policies (P):

- Goal PF-11 Provide for the implementation and enforcement of the provisions for the Source Reduction and Recycling Element, as mandated by the State.
- Goal PF-12 Maintain efficient, effective and economical solid waste services for the residents, businesses and visitors to Manteca.
- PF-P-30 The City shall support the continued use of the Lovelace Transfer Station on Lovelace Road, between Union Road and Airport Way, for the processing and shipping of solid waste materials.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT PFS-5: The General Plan 2023 would not comply with statutes and regulations related to solid waste.

Level of Significance: Potentially Significant

Mitigation Measures:

PFS-5.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses compliance with statutes and regulations related to solid waste through the following goal and policy (P):

Goal PF-11 Provide for the implementation and enforcement of the provisions for the Source Reduction and Recycling Element, as mandated by the State.

PF-P-29 The City will implement and enforce the provisions of its Source Reduction and Recycling Element.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT PFS-6: Implementation of the General Plan 2023 would require additional facilities and LOS for police protection, fire protection, schools, and parks.

Level of Significance: Potentially Significant

Mitigation Measures:

PFS-6.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses police protection, fire protection, schools, and parks and recreation through the following goals, policies (P), and implementation measures (I):

Police Protection

PF-P-39 The City shall endeavor through adequate staffing and patrol arrangements to maintain the minimum feasible police response times for police calls.

PF-P-40 The City shall provide police services to serve the existing and projected population.

PF-P-41 The City will establish the criteria for determining the circumstances under which police service will be enhanced.

PF-I-22 The Police Department shall continuously monitor response times and report annually on the results of the monitoring.

PF-I-23 The Planning Commission and City Engineer will review proposed residential street patterns to evaluate the accessibility for police patrols and emergency response.

Fire Protection

PF-P-42 The City shall endeavor to maintain an overall fire insurance (ISO) rating of 4 or better.

PF-P-43 The City shall endeavor through adequate staffing and station locations to maintain the minimum feasible response time for fire and emergency calls.

PF-P-45 The City shall establish the criteria for determining the circumstances under which fire service will be enhanced.

PF-I-24 The Fire Department shall continuously monitor response times and report annually on the results of the monitoring.

PF-I-25 The Planning Commission and City Engineer will review proposed residential street patterns to evaluate the accessibility for fire engines and emergency response.

Education (Schools)

Goal PF-13 Provide for the educational needs of the Manteca residents.

PF-P-33 The City shall cooperate with the Manteca Unified School District and others in locating and reserving appropriate sites for new schools. Adequate facilities shall be planned to accommodate new residential development.

PF-P-34 The City shall cooperate with the Manteca Unified School District in their collection of school facility development fees from new development.

PF-P-35 Financing of new school facilities will be planned concurrent with new development.

PF-P-36 The City and Manteca Unified School District will work together to develop criteria for the designation of school sites and consider opportunities for reducing the cost of land for school facilities. The City will encourage the school district to

comply with City standards in the design and landscaping of school facilities.

- PF-P-37 The City will consider opportunities for joint-use of facilities the school district. When feasible, a joint-use agreement will be pursued to maximize public use of facilities, minimizing duplication of services provided, and facilitate shared financial and operational responsibilities.
- PF-P-38 When feasible, schools will be located away from hazards of sensitive resource conservation areas, except where the proximity of resources may be of educational value and the protection of resources is reasonably assured.
- PF-I-18 The City will maintain an inventory of all public lands to identify opportunities for joint-use facilities.
- PF-I-19 The City shall cooperate with the Manteca Unified School District to select a suitable location for a high school south of SR-120.
- PF-I-20 The City will request an annual meeting with the Administrator and the Board of Trustees of the Manteca Unified School District to review development issues and opportunities for cooperation between the school district and the City.
- PF-I-21 The City will encourage the expansion of higher education program offerings and opportunities in Manteca.

Parks and Recreation

- Goal PF-14 Establish and maintain a park system and recreation facilities that support economic development and residential growth in the City.
- Goal PF-15 Establish and maintain a park system and recreation facilities that are suited to the needs of Manteca residents and visitors.
- Goal PF-16 Promote the provision of private recreational facilities and opportunities.
- Goal PF-17 Establish a recreation program that is suited to the needs and interests of all Manteca residents.

- Goal PF-18 Provide a network of pedestrian and bicycle routes connecting Manteca’s major open space areas and destination points.
- PF-P-46 The City shall expand the community and neighborhood park system with the goal of providing neighborhood park facilities within reasonable walking distance of all City residential areas.
- PF-P-47 The City shall use joint development of park and drainage detention basins in the development of neighborhood parks.
- PF-P-48 The City shall cooperate with the Manteca Unified School District in opportunities for joint-use of school and park and recreation facilities.
- PF-P-49 City park acquisition efforts shall be based on a goal of 5 acres of developed neighborhood and community parkland per 1,000 residents within the City limits.
- PF-P-50 Neighborhood parks shall conform to the following general guidelines (specific detail and standards to be determined within the Parks and Recreation Master Plan):
- The typical minimum size shall be set to support active and passive recreation activities.
 - The typical service areas for a neighborhood park is approximately ¼ mile walking distance.
 - Neighborhood parks shall include a turf area above the basin flood line of sufficient area to be used for playgrounds, sports, picnic areas, and other recreational facilities.
- PF-P-51 The City shall aggressively pursue State and County funding to supplement City revenues to the extent such funding is available.
- PF-P-52 The City shall endeavor to identify, acquire, and develop one or more community parks as defined in the Parks and Recreation Master Plan.
- PF-P-53 All new residential development will be required to pay a park acquisition and improvement fee, based on providing 5 acres per 1,000 residents, to fund system-wide improvements.

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- PF-P-54 The City shall promote the provision of private open space and recreational facilities as part of new residential developments.
- PF-P-55 The City shall not discourage the expansion of private commercial recreational facilities.
- PF-P-56 The City shall consider cooperative agreements with the Manteca Unified School District for the use of school facilities for City-sponsored recreation programs on a case-by-case basis.
- PF-P-57 The City should develop a convenient system of pedestrian sidewalks and pathways linking City parks, major open space areas, and the downtown core.
- PF-P-58 The City shall develop a bicycle route system linking open space areas, schools, public facilities, the downtown core, and neighborhoods. Bicycle lanes shall be included in new street widenings where the street falls within the adopted Bicycle Route Master Plan.
- PF-I-26 The City shall update the Parks and Recreation Master Plan, setting out goals, policies, and standards for the location, size, and level of development of all existing and proposed parks. The Plan will establish specific development criteria for the use of neighborhood and community parks. The master plan shall cover at least the succeeding 10-year period, with greater detail devoted to improvements planned for the first five-year period.
- PF-I-27 The City shall periodically review projected park development needs and plans, update cost estimates for park acquisition and development, and remaining development potential based on the General Plan.
- PF-I-28 The City will coordinate with the school district and other public agencies to seek joint-use of public use facilities.

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT PFS-7: The General Plan 2023 would require expanded energy sources and infrastructure for expanded urban development.

Level of Significance: Potentially Significant

Mitigation Measures:

PFS-7.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses electricity through the following goal, policy (P), and implementation measures (I):

Goal PF-10 Ensure adequate, reliable electric service is available to all users in the City.

PF-P-28 Cooperate with and encourage efforts to expand the opportunities for electric power service in the City.

PF-I-14 The City will consider participating on generating and/or distributing electric service within the City.

FP-I-15 The City will encourage energy conservation measures and innovative uses of solar energy, heat recovery, and co-generation in all structural and industrial processes.

PF-I-16 The City will communicate its major development plans with utility companies and coordinate planning extension of these utilities.

Residual Level of Significance: Significant and Unavoidable

The need for expanded energy sources and infrastructure is a significant impact with expanded urban development. Implementation of the above goal, policy and implementation measures will help reduce the amount of energy and infrastructure needed to serve new urban development in the City of Manteca, but not to a less-than-significant level.

TRAFFIC AND CIRCULATION

POTENTIAL IMPACT TC-1: **Planned development in the General Plan 2023 may not meet City of Manteca LOS standards for local roadways.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

TC-1.1: The Circulation Element (Section 4) of the General Plan 2023 includes, among others, the following policies (P) to meet the standards for local roadways:

C-P-1: The City shall strive to attain the highest possible traffic levels of service (LOS) consistent with the financial resources available and the limits of technical feasibility. The impact of new development and land use proposals on LOS should be considered in the review process.

C-P-2 Manteca’s target for transportation LOS is to provide (“**citywide average**” **removed**) LOS of C or better, and a minimum of LOS D at any individual location. LOS C, LOS D and the other Level of Service ratings as defined in current traffic engineering standards. This “LOS C average, LOS D minimum” shall be accomplished by attempting to provide LOS C at all locations, but accepting LOS D under the following circumstances:

- Where constructing facilities with enough capacity to provide LOS C is found to be unreasonably expensive. This applies to facilities, for example, on which it would cost significantly more per dwelling unit equivalent (DUE) to provide LOS C than to provide LOS D.
- Where it is difficult or impossible to maintain LOS C because surrounding facilities in other jurisdictions operate at LOS D or worse.
- Where free-flowing roadways or interchange ramps would discourage use of alternate travel modes.
- Where maintaining LOS C will be a disincentive to use of existing alternative modes or to the implementation of new transportation modes that would reduce vehicle travel.

Residual Level of Significance: **Less Than Significant With Mitigation**

POTENTIAL IMPACT TC-2: **Planned development in the General Plan 2023 may not meet City of Manteca LOS standards for local intersections.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

TC-2.1: The Circulation Element policies (P) listed above in Potential Impact TC-1 address LOC standards, which also apply to local intersections.

TC-2.2: Improvements to the impacted intersections can allow LOS D operations or better.

Residual Level of Significance: **Less Than Significant With Mitigation**

POTENTIAL IMPACT TC-3: **Planned development in the General Plan 2023 may not meet SJCOG LOS standards for regional roadways.**

Level of Significance: **Potentially Significant**

Mitigation Measures:

TC-3.1: **Travel Demand Management:** The Circulation Element includes several policies (P) and implementation measures (I) aimed at encouraging alternate modes. These include:

C-I-15 The City shall establish a requirement for a transportation demand management program in any business park, industrial or commercial land use that employs more than 50 full time equivalent employees.

Transit Use: The Circulation Element encourages transit use, including the following policies (P):

C-P-49 The City shall encourage the use of local transportation services, such as jitneys, local shuttles and commuter buses.

C-P-52 The City shall promote the development of park-and-ride facilities near I-5, SR 120, and SR 99.

Bicycle/Pedestrian Use- The Circulation Element encourages bicycle/pedestrian use, including the following policy (P):

C-P-33 The City should establish a safe and convenient network of identified bicycle routes connecting residential areas with recreation, shopping, and employment areas within the city”. By establishing this network, the City of Manteca is encouraging bicycle use in the City. This policy is currently being implemented through the update of the City’s Bicycle Master Plan.

Participation Regional Cost-Sharing Program: SJCOG is conducting a study regarding the implementation of a region wide traffic fee. The City of Manteca has supported this effort by participating in the study regarding this fee. The City should continue to support similar efforts to develop a mechanism to share the cost of regional transportation improvements when such an effort fairly allocates the costs and benefits of projects through an appropriate nexus-based study. These cost-sharing efforts could be addressed through both region-wide efforts and sub-regional efforts. A sub-regional cost sharing approach could consist of a program to allocate improvement costs to only a limited number of adjacent cities (Tracy, Lathrop, Manteca only) or cities utilizing a particular corridor (I-205).

Residual Level of Significance: Less Than Significant With Mitigation

POTENTIAL IMPACT TC-4: Planned development in the General Plan 2023 could conflict with regionally adopted transportation goals and policies.

Level of Significance: Less Than Significant

As judged by the four major policies contained in the SJCOG RTP, the proposed General Plan 2023 does not conflict with the regional transportation goals and policies.

POTENTIAL IMPACT TC-5: **Planned development in the General Plan 2023 could impede the operations of alternate travel modes including transit, bicycles, and pedestrians.**

Level of Significance: **Less Than Significant**

A review of the goals, policies, and implementation measures indicates that the General Plan 2023 promotes the use of bicycles and walking to the extent possible; therefore there is no significant impact.

References:

(1) Mines and Mineral Producers Active in California (1997-1998). Special Publication 103. California Department of Conservation, Division of Mines and Geology. Revised 1999.

2. PROJECT AND ALTERNATIVES DESCRIPTION

The General Plan 2023 is a comprehensive update to the General Plan adopted by the City of Manteca in 1988. In 2001, the City Council recognized the need for a new General Plan that anticipates new development in the City and surrounding areas. The City Council established a General Plan Steering Committee to serve as the advisory committee for development of the Plan concepts and principles. A consultant team was selected in mid-2001, and preparation of the General Plan 2023 commenced with the Steering Committee and the City's Community Development Department.

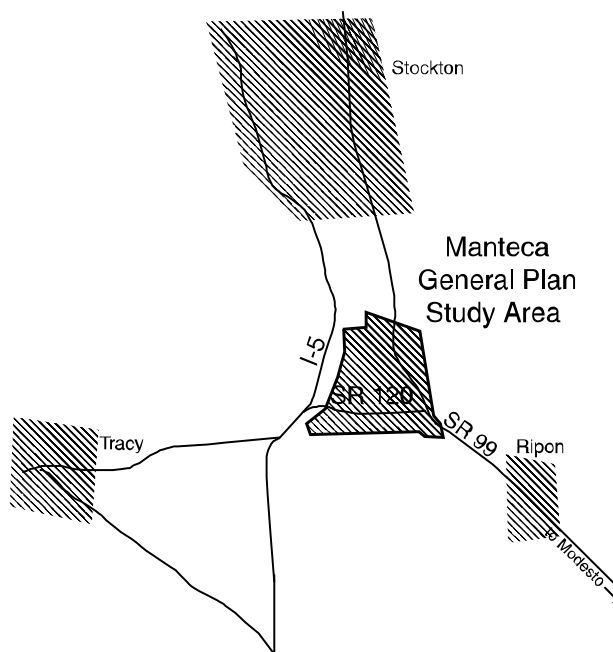
2.1 PLAN AREA CONTEXT

2.1.1 Regional Setting

The City of Manteca, incorporated May 28, 1918, is located in the "heartland" of California's Great Central Valley, with historical roots as an important agricultural center. Due to excellent soil, great climate, and access to clean water, Manteca was predominantly an agricultural area for much of the early 20th century. However, the community has transformed from an agricultural base to an urbanized base. The economic growth in south San Joaquin County has been powered by the area's advanced transportation infrastructure.

Manteca is located near the northern end of the San Joaquin Valley of central California at the junction of State Route 99 and State Route 120, approximately 75 miles east of San Francisco and 55 miles south of Sacramento. The area between Manteca and Stockton brings State Route 99 and Interstate 5 to their closest point in California, with State Route 120 connecting them through Manteca. Manteca is located approximately 12 miles south of downtown Stockton, and 14 miles northwest of the City of Modesto.

**Figure 2-1
Regional Location Map**



2.1.2 General Plan Study Area

The General Plan must cover all territory within the General Plan boundaries as well as “any land outside its boundaries, which in the planning agency’s judgement bears relation to its planning” (Government Code Section 65300). A local government can formally communicate its concerns for the future of lands under its neighbors’ jurisdiction by this means:

“Cooperative ‘extraterritorial’ planning can be used to guide the orderly and efficient extension of services and utilities, ensure the preservation of open space, agriculture, and resource conservation lands, and establish consistent standards for development in the plans of adjoining jurisdictions.”

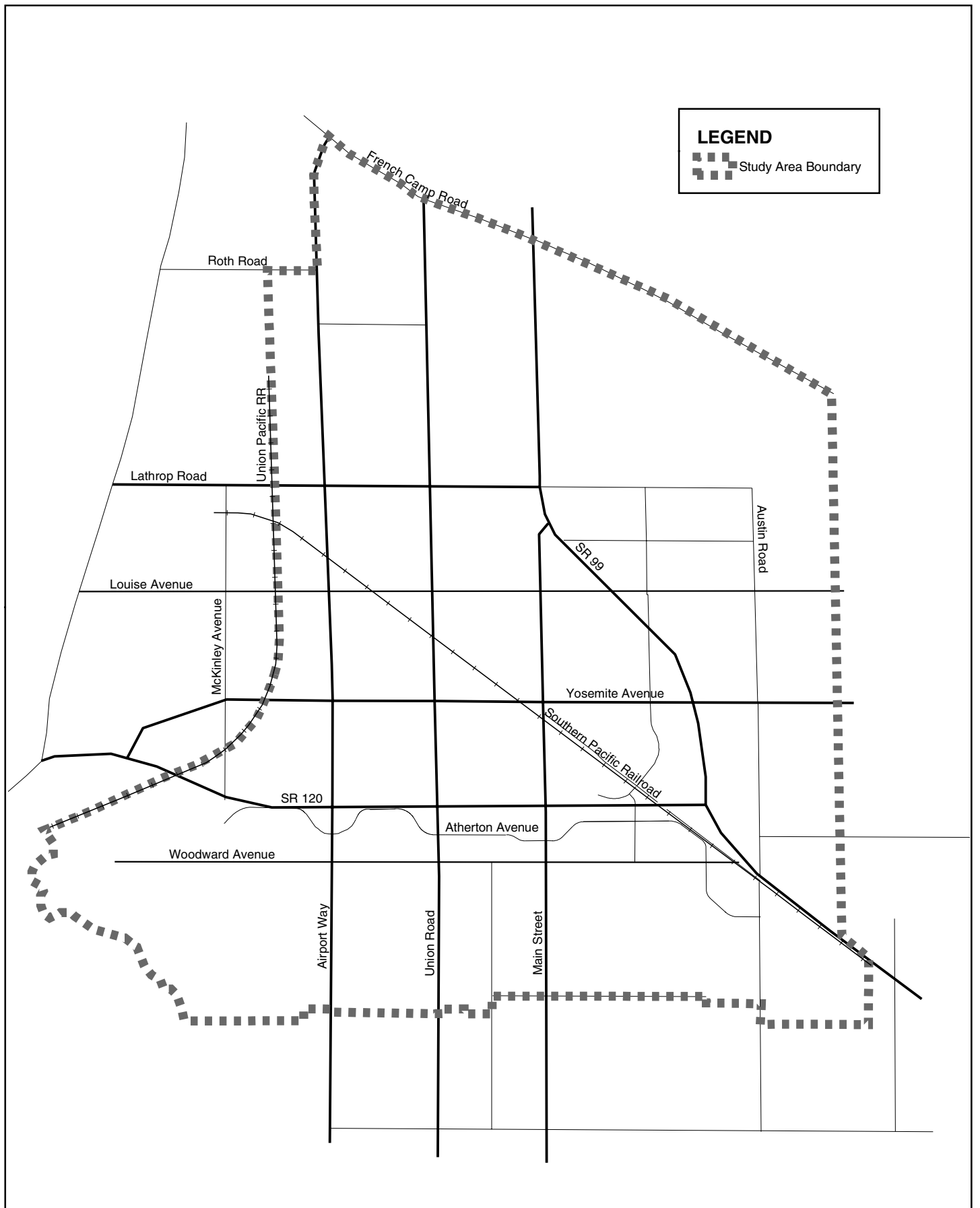
In order to consider the Sphere of Influence of adjacent jurisdictions and the potential impacts of development in the surrounding area, the General Plan Study Area boundary encompasses more land than is required to accommodate the projected growth of the City. Land use is not allocated to all land within the General Plan Study Area. The areas not addressed in the Study Area are within the unincorporated area of San Joaquin County and the land use in these areas will continue to be regulated by San Joaquin County. The City may include in its General Plan any land outside its boundaries which relates to its planning. The General Plan Study Area encompasses approximately 25,975 acres within and outside of the existing City limits. The purpose in establishing the Study Area boundary larger than the existing City is to identify and evaluate the areas surrounding the City that may affect the future economic viability, traffic, services, and aesthetic quality of the City.

In addition, since many issues such as air quality, traffic and economic development, extend beyond political boundaries, the law provides for planning outside of the jurisdiction’s territory.

The Study Area boundary follows French Camp Road on the north, the Union Pacific Railroad on the west, Walthall Slough and a line contiguous to Sedan Avenue on the south, and a line approximately one-half mile east of Austin Road on the east. The General Plan Study Area is shown in Figure 2-2.

Figure 2-3 illustrates the location of the Study Area boundary relative to the current municipal boundaries and Spheres of Influence of the adjacent municipalities: the City of Stockton to the north, the City of Lathrop to the west, and the City of Ripon to the southeast.

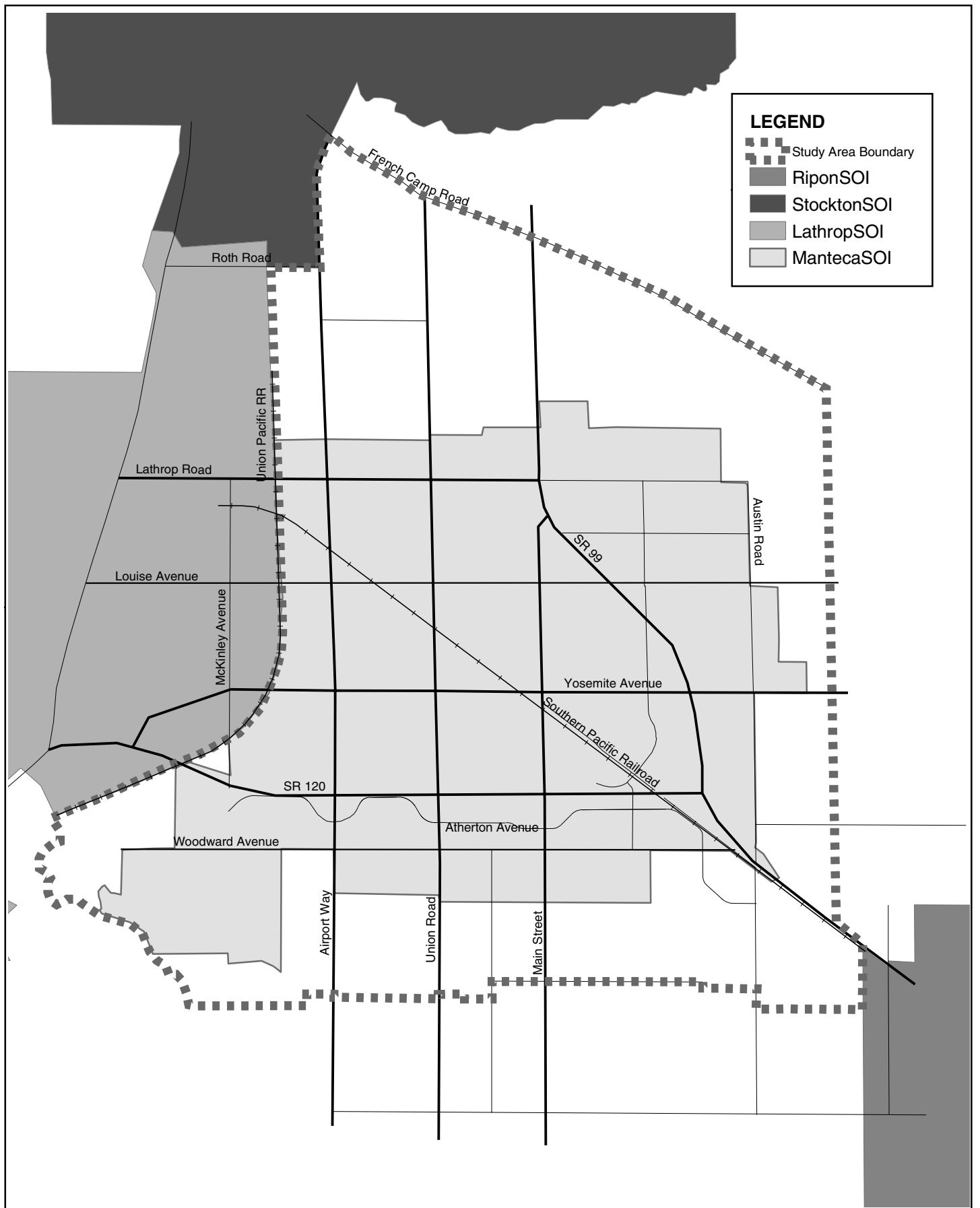
The General Plan Study Area boundary is generally within the boundaries of the Manteca Unified School District, but overlaps the Ripon Unified School District boundary in the area of Austin Road and Sedan Avenue as shown in Figure 2-4.








LEGEND

■ ■ ■ ■ Study Area Boundary

Manteca General Plan



LEGEND

-  Study Area Boundary
-  RiponSOI
-  StocktonSOI
-  LathropSOI
-  MantecaSOI

Manteca General Plan



GENERAL PLAN STUDY AREA AND ADJACENT MUNICIPALITIES
FIGURE 2-3

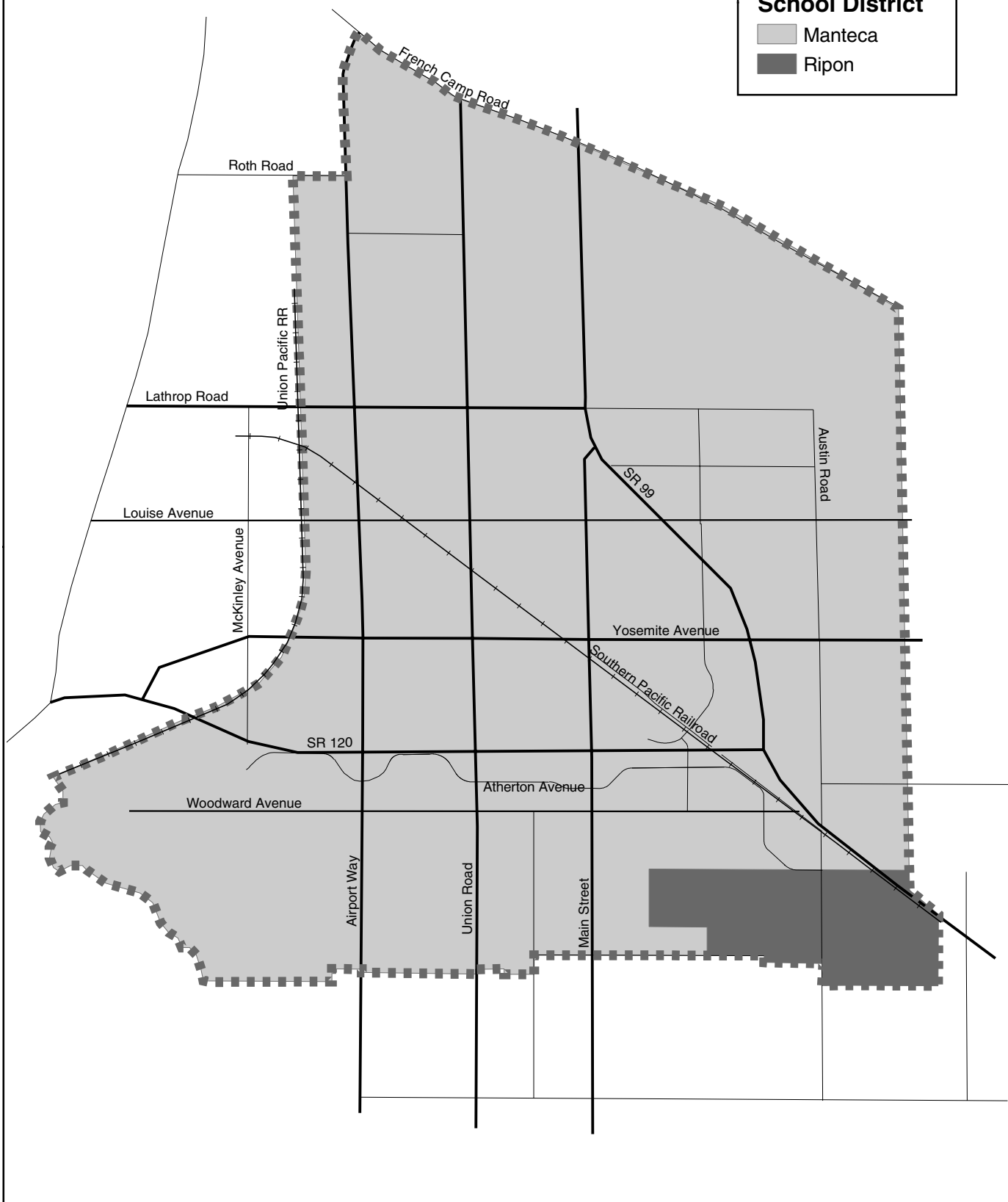
LEGEND

 Study Area Boundary

School District

 Manteca

 Ripon



Manteca General Plan

2.2 GENERAL PLAN DESCRIPTION

The General Plan includes a policy document and a background report, supplemented by technical reports on cultural resources, traffic, and noise. The Draft background report and technical reports are available for review at the City of Manteca Community Development Department, 1001 W. Center Street, Manteca.

The Manteca General Plan includes the seven state-mandated elements and four optional elements. The eleven total elements that comprise the General Plan are as follows:

- Land Use- establishes land use designations with types and intensities of use and sets policies and programs regarding future development of the City.
- Community Design- establishes urban design guidelines to ensure that new development is attractive and contributes to the sense of Manteca as a location.
- Circulation- contains policies for the City's roadway system, transit, pedestrian and bicycle circulation, and methods of managing transportation demand, accounting for the relationship between land use and circulation.
- Economic Development- addresses the need for Manteca to broaden its employment base to maintain the high quality of life currently enjoyed, and to implement an economic development strategy.
- Housing- includes policies and programs to increase the variety and types of housing in the City, emphasizing infill sites, increased density, and mixed uses downtown, and also includes a discussion of housing needs and programs to provide additional housing for special needs populations.
- Public Facilities and Services- discusses public facilities including domestic water, sewer, storm drainage, electricity services, solid waste, education, police protection, fire protection, and parks and recreation.
- Safety- contains policies and programs to protect the community from injury, loss of life, and property damage resulting from natural disasters and hazardous conditions.
- Resource Conservation- emphasizes the accommodation of population growth while conserving and protecting the area's natural resources and quality of life.
- Noise- identifies policies that will protect the community from noise hazards.

- Air Quality- addresses the community's need to cooperate regionally so that increased development does not further degrade the air quality.
- Administration

2.3 KEY LAND USE ISSUES AND DEVELOPMENT CONCEPTS

The General Plan reflects community vision and values, and the conditions that influence development of the community.

2.3.1 Logical Growth of the City

Manteca has generally grown in a compact pattern around the historic center of the City at the crossroads of Yosemite Avenue and Main Street. Residential neighborhoods have developed within boundaries established by the major streets spaced one mile apart. This General Plan directs land use to continue the historic pattern of compact urbanization. The developed portion of the City should retain its distinct, compact form with clear, well-defined edges.

The expansion of the urbanized area is enabled by the extension of basic public services, notably sewer, drainage and streets. The City plans the extension of these services through periodic preparation of various public facility master plans, such as water, sewer and drainage. These master plans are coordinated through a Public Facilities Implementation Plan (PFIP) that identifies and establishes the funding mechanism for specific capital improvements. The PFIP is a key to implementing the land use goals (Land Use Element) and public facilities goals (Public Services and Facilities Element) of the General Plan.

2.3.2 Community Form, Scale and Identity

The community identity is established by important visual characteristics that provide cues for travelers, as well as residents. Among these are:

- the scale or size of the City
- well-defined edges and gateways
- an identifiable pattern of streets and land uses
- attractive streetscapes and public places
- notable landmarks, both natural and man-made

Attractive new land uses along the major highways, new landmarks visible from several vantage points throughout the City, and new gateway features along the highways and other major roads at City boundaries can contribute significantly to establishing a strong positive identity for Manteca.

The existing commercial core area should be retained and reinforced as the functional and social center of the City for residents. Urbanization should generally extend outward from this center.

In the future, population increases and a growing regional role for Manteca may generate the need for a second commercial, office, residential, institutional and entertainment core area east of the existing downtown. The Land Use Map identifies such a site designated as Commercial Mixed Use along Austin Road between Yosemite Avenue and the future extension of SR 120. This site would provide a new town center complex that would include employment, high-density residential use, entertainment, and regional retail use under a comprehensive master plan.

2.3.3 Attractive, Sustainable Neighborhoods

Neighborhoods are the fundamental organizing concept for residential land use. The neighborhoods are typically not more than one mile in any dimension to provide a reasonable walking distance from any part of the neighborhood to the schools, parks, and commercial centers.

The land use in each neighborhood is predominantly residential, but will typically include a neighborhood school, parks, and a mixed-use commercial area that includes retail or commercial goods or service facilities.

Preservation of the existing housing and enhancement of existing neighborhoods is important to maintaining the quality of life in the City.

2.3.4 Support of Public Transit and Bicycle and Pedestrian Circulation

High activity areas should be located to facilitate the use of public transit.

The organization of land use and circulation networks should permit and encourage walking and bicycling to major activity centers such as shopping, recreation facilities, and schools. Commercial, employment, recreational and institutional land uses should be conveniently located near the residential neighborhoods.

2.3.5 Housing Opportunity

The General Plan responds to the need for diversity in housing opportunity and changes in market demand for housing types in two primary ways. First, the residential density (dwelling units per acre) categories are broadened to provide more flexibility and diversity in the types of dwelling units in each neighborhood. Second, the Land Use Map identifies more sites distributed throughout the community for specific residential categories in order to ensure more diversity in the housing supply. The Land Use Map is available at the Community Development Department, City of Manteca.

2.3.6 Employment and Economic Development

During the twenty-year horizon of this General Plan, Manteca will experience economic development that will add to and diversify the local economy. This will consist of additional growth in warehousing and distribution, but should also include significant new components, such as office and service sectors, research and development, and manufacturing.

Increases in population have the potential to drive a demand for new retail establishments and local-serving professional office uses. The range of commercial and professional services will expand as Manteca reaches threshold populations.

The General Plan responds to the needs of economic development by designating locations for:

- warehouse, distribution and manufacturing;
- business park;
- research and development and light manufacturing, and
- a major mixed-use regional retail and service center.

The General Plan also provides two new land use categories not previously used in the General Plan. The newly-established Commercial Mixed Use (CMU) and Business Industrial Park (BIP) categories are intended to expand the opportunities for economic development by providing opportunities to integrate high density residential, office and retail/service uses on a single site.

2.3.7 Live/Work Housing

It is anticipated that the percentage of individuals working at home will increase over the next twenty years. At home workers may include telecommuters, professional services, small service businesses, mail order, and any number of other entrepreneurial endeavors. It is the intent of this General Plan to support such activities. The residential design policies provide the flexibility to include most types of small business within the premises, and the mixed use commercial sites are intended to include services and facilities that would support workers in the neighborhood. Such support services include technical services, such as copy and secretarial services, teleconferencing centers and day care. The commercial sites will also typically contain coffee shops and plazas that provide a social setting for people who work at home.

2.3.8 Public Services and Fiscal Stability

Growth will provide additional revenue sources, but will also place additional service burdens on the City of Manteca. The challenge is to balance growth with funds for required new services. The Land Use Element provides a mix of land use categories and implementation measures to ensure that the overall balance of land use is sustained over time.

The City will monitor the mix of land use in order to gauge future decisions on land use, public service levels and capital investments.

2.3.9 Access to Open Space

Existing open space is found in the neighborhood parks, a few agricultural areas within and on the perimeter of the urban area, and the utility corridors.

The City is surrounded by agricultural land that provides visual open space on the north, east and south. Agricultural activity has significantly altered most of the natural features that predated the urban development of the area. Consequently, there are no natural drainage ways, significant stands of trees, or other natural features that would guide or provide the core of an open space network within the City.

In the absence of natural features that could define an open space network, the General Plan encourages the creation of a network of open spaces in the storm drainage channels, and naturalized landscaping along major thoroughfares and bike paths. The open drainage systems would provide a pedestrian connection between parks and access to open space from residential neighborhoods. The neighborhoods would be designed with homes oriented to, rather than backing on the open space corridor.

2.3.10 Agricultural Productivity

Agricultural productivity will remain a significant element of the economy in San Joaquin County. The General Plan supports the existing level of agricultural production by directing development in a compact, concentric form in order to reduce the demand for new development areas. Existing agricultural activities will be retained within the City where practical.

2.4 LAND USE SUMMARY

The General Plan 2023 provides a range of residential, commercial, industrial, business-professional and public land uses, as summarized in Table 2-1.

Table 2-1
General Plan 2023 Land Use

	Proposed Developable Land Use	Existing Urbanized Land Use	Total 2023 Land Use
LAND USE	Acres	Acres	Acres
AG Agriculture	3960.0		3960.0
GC General Commercial	518.0	154	672.0
NCC Neighborhood Commercial	111.8	380	491.8
CMU Commercial Mixed Use	255.0		255.0
HI Heavy Industrial	715.0	194.9	909.9
LI Light Industrial	798.1	226	1024.1
BIP Business Industrial Park	258.0		258.0
BP Business Professional	133.0		133.0
HDR High Density Residential (15.1 to 25 du/ac)	251.0	191	442.0
MDR Medium Density Residential (8.1to 15 du/ac)	359.0	187.6	546.6
LDR Low Density Residential (2.1 to 8 du/ac)	3685.9	2741.7	6427.6
VLDR Very Low Density Residential (0.5 to 2 du/ac)	248.0	109.8	357.8
P/QP/ Public/Quasi-public Schools/Utilities	317.6	788.3	1105.9
OS Open Space	516.0	27	543.0
P Park	175.7	342.4	518.1
Total	12302.1	5342.7	17644.8

Source: Wade Associates May 2003

2.5 ASSUMPTIONS REGARDING POPULATION GROWTH AS A BASIS FOR ENVIRONMENTAL IMPACT EVALUATION

Many environmental impacts are related directly or indirectly to population increase. Notably, traffic, public service demands, and land required for urban uses can be directly correlated to increases in population.

The General Plan land use is designed to achieve an adequate supply of land to accommodate the projected population through the General Plan horizon, within the City's Growth Management Ordinance.

The projected population is derived from the General Plan land use through assumptions relating to residential density, the average density, the efficiency of the land use, vacancy factors, and a market reserve for each residential land use type. The General Plan Steering Committee reviewed and affirmed these assumptions for use in the General Plan process.

Residential Density

Residential density is the number of dwelling units per developed acre allowed in each residential land use category in the General Plan. The General Plan provides for a wide range of residential densities in each category, and the General Plan 2023 provides for higher densities in the residential land use category compared to the 1988 General Plan, in order to allow for diversity in residential development.

Average Density

Average density is the estimate of actual residential density in each residential land use category. The actual land use will vary from one development to another. For planning purposes an average density is assumed that reflects the cumulative development of all residential land use within a land use category.

Efficiency

The General Plan land use categories in new growth areas apply to undeveloped or "raw" ground. The land area in each category does not account fully for land required for streets, parks, schools and other uses. Consequently, the actual area available for use depends on the efficiency of the land use development. For planning purposes average land use efficiency is assumed for each residential development category.

Vacancy Factor

Even at full development a small percentage of residential units will be vacant. A vacancy factor is assumed for each residential land use category.

Market Reserve

The market reserve allows for a surplus of residential land use to account for the varying demand for housing supply. If the residential land available for development were limited to only the amount required at any time, the resulting price pressure would increase the cost of housing. The market reserve factor provides an excess supply to ensure that there will be competitive land prices and more affordable housing.

Each of these factors has the effect of translating the gross land area designated in the General Plan to the net land area actually available to accommodate increases in population.

Table 2-2 identifies the assumptions that affect the actual land area available for urban use.

Table 2-2
Residential Land Use Assumptions

Land Use Category	Dwelling Units per Acre	Average Dwellings per Acre	% Efficiency	% Vacancy	Market Reserve
Very Low Density Residential	0 to 2	1	80%	0.04	120%
Low Density Residential	2.1 to 8	5	80%	0.04	120%
Medium Density Residential	8.1 to 15	8	80%	0.04	120%
High Density Residential	15.1 to 25	20	90%	0.04	120%
Commercial Mixed Use	15.1 to 25	20	90%	0.04	120%

Source: Wade Associates, May 2003

Average Household Population

The level of population accommodated by a given number of dwelling units also depends on the average number of residents in each dwelling. The 2000 Census indicates that the average household size in Manteca is 2.98 persons per household. This is a slight decrease from the 1990 Census. For planning purposes it is assumed that the household size will remain constant through the time horizon of the General Plan. However, the average household population will vary depending on the dwelling unit type. Generally, single family dwellings will have a slightly larger average household population than an apartment.

Table 2-3 provides the assumed household size and the estimate of total population based on the land use summarized in Table 2-1 and the land use assumptions summarized in Table 2-2.

Table 2-3
Estimate of Population at Full Development of the 2023 General Plan

	Net Acres Available	Average Housing Units per Acre	Dwellings	% of Dwelling Units by Type	Average Household Size	Total Estimated Population
Very Low Density Residential	825.6	1	826	2.6%	3.06	2,526
Low Density Residential	4,129.3	5	20,646	65.0%	3.06	63,178
Medium Density Residential	358.4	8	2,867	9.0%	3.00	8,602
High Density Residential	324.0	20	6,480	20.4%	2.70	17,496
Commercial Mixed Use	47.7	20	954	3.0%	2.70	2,576
Total	5,685.0		31,773	100%	2.97	94,378
Average Residential Net Density	5.59					

Source: Wade Associates, May 2003

2.6 ASSUMPTIONS REGARDING NON-RESIDENTIAL AND CUMULATIVE LAND USES

In addition to providing residential land use to accommodate the projected population, the General Plan seeks to enhance the opportunities for increasing employment opportunities within the City. Therefore, the land area requirements for development of the City also include the non-residential land uses, as well as public facilities. The General Plan also must provide adequate land area for public services, and should maintain a balance of uses so that there is adequate revenue to sustain public services over time.

2.6.1 Land Area Required for Jobs/Housing Balance

Employment and economic development is identified as one of the Key Land Use Issues and Development Concepts in the General Plan. The General Plan includes policies designed to significantly increase the opportunity for residents to find local employment by providing substantial land area for employment land uses. The land area required for commercial, industrial, and business-professional land uses can be estimated on the basis of the number of resident workers per dwelling unit, or an average jobs/housing ratio. The jobs/housing ratio depends on:

- the number of resident workers,

- the mix of employment types likely to comprise the local economy,
- the average commercial or industrial space required per employee, and
- the average number of employees per dwelling.

The assumptions include a jobs/housing surplus factor that corresponds to the objective of providing employment opportunities for the resident work force. The surplus factor would ensure that there is adequate land area available to provide a surplus of job opportunities, that is, Manteca would become a net importer of workers. The allocation of land does not alone, of course, ensure any growth in employment opportunities. However, suitably located and served land is necessary to accommodate any growth in employment, and the General Plan emphasizes the goals of economic development and new job creation in the City.

Table 2-4 summarizes the employment assumptions used in estimating the total land area required to accommodate the full, local employment of the population estimated in Table 2-3.

Table 2-4
Employment Assumptions

	Average Employees per Dwelling	Total Employees	Job/Housing Surplus % Factor
	1.35	42,894	120%
	% of Employment	Employees by Industry	Employees plus Surplus by Industry
Agriculture and Mining	0.1%	47	57
Manufacture/ Wholesale	1.1%	471	566
Retail	22.0%	9,427	11,313
Services	30.8%	13,198	15,838
Other (Trans. & Utilities, FIRE)	46.2%	19,797	23,757
	100.1%	42,941	51,529

Source: Wade Associates 2003

2.6.2 Land Area Required for Institutional Uses and Public Services

In addition to residential and employment land uses, the City will require land designated for public facilities, including schools, parks, hospitals, civic centers and fire stations, among other

public uses. The assumptions used to estimate the facilities and land area required for each public service are provided in Section 14, Public Facilities and Services.

2.7 PERMITS AND OTHER APPROVALS REQUIRED TO IMPLEMENT THE GENERAL PLAN 2023

The permits and approvals required in order to implement the proposed General Plan 2023 include the following:

- Approval of the General Plan 2023

- Possible amendments to the City of Manteca Municipal Code, including the Zoning and Subdivision Ordinances

- Possible rezoning for consistency with the General Plan 2023

- Revisions in the City of Manteca Redevelopment Plans for consistency with the General Plan 2023.

- Certification of environmental review documentation under the California Environmental Quality Act (CEQA).

2.8 PROJECT ALTERNATIVES

CEQA Guidelines require EIRs to analyze alternatives to a proposed project, in this case the General Plan 2023 (CEQA Guidelines Section 15126.6(f)). The range of alternatives is governed by a “rule of reason,” requiring the EIR to evaluate only those alternatives necessary to permit a reasoned choice. Furthermore, the EIR need examine only those alternatives that the lead agency determines could feasibly attain most of the basic objectives of the project. Among the factors that may be taken into account when addressing the feasibility of alternatives are (CEQA Guidelines Section 15126.6(f)(1)):

- Site suitability

- Economic viability

- Availability of infrastructure

- General plan consistency

- Other plans or regulatory limitations

- Jurisdictional boundaries

- Whether the project proponent can reasonably acquire, control or otherwise have access to alternative site.

Defining a range of reasonable alternatives is guided by the “feasibility” of those alternatives. CEQA defines feasible as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.” (CEQA Guidelines, Section 15364)

The alternatives to the General Plan 2023 include:

No Project Alternative No. 1: No Development

Under this scenario, no additional dwelling units are constructed, and no additional square footage of non-residential uses is added to the City. The City would not develop beyond the current urban area.

No Project Alternative No. 2: Build-Out of 1988 General Plan

Under this second “no project” scenario, build-out of the Study Area occurs in accordance with the land use map and policies contained in the 1988 City of Manteca General Plan.

Higher Density Alternative

This alternative allows the same population projection as the proposed project, but allocates less land area to residential land use. This alternative would result in higher density residential development.

Reduced Development Alternative

This alternative allocates the land use types and policies in the General Plan 2023 to the land area defined as the Primary Urban Service Area in the 1988 General Plan. These new policies would result in reduced development of the Study Area.

Section 16, Alternatives Analysis, provides a description and comparative analysis of these alternatives to the General Plan 2023.

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3. AESTHETICS AND VISUAL RESOURCES

3.1 EXISTING CONDITIONS

Manteca is located at the center of California's Central Valley and near the north end of the San Joaquin Valley. Typical of the Central Valley, the Manteca area is virtually flat, a quality that determines how the city is perceived. With the exception of views from highway overpasses that provide brief panoramic views, the entire cityscape and surrounding landscape are viewed from the ground level perspective.

On particularly clear days, however, there are distant views of the Sierra Nevada Mountains to the east and the ~~Coast Range Mt. Diablo Range~~ 25 miles to the west and southwest. Mount Boardman and Eagle Mountain located to the southwest are the most prominent of these background features.

Manteca is surrounded by agricultural uses, primarily orchards and field crops. Although no major watercourse lies within or contiguous to Manteca, the San Joaquin River flows ~~approximately four miles to~~ along the west side of the Study Area and Walthall Slough is located along the southwest boundary of the Study Area.

The residential neighborhoods are typically composed of single family dwellings in a mix of one and two story structures. Many neighborhoods include a small park and detention basin (approximately 5 acres or larger) that serves the local neighborhood.

Although the distance between northern Manteca and southern Stockton is only four miles, the rural agricultural character of these four miles is critically important to the scenic and open space qualities that define the city. Only the southern two miles of this buffer area is located in

Figure 3-1

Agriculture in the Study Area



Figure 3-1

Existing Neighborhood



the Study Area.

3.1.1 Downtown

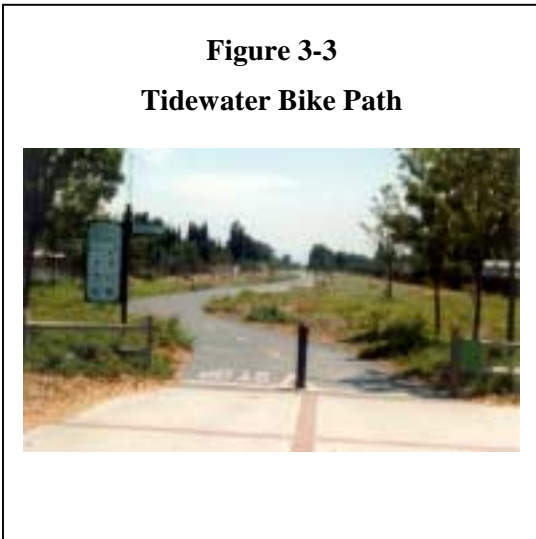
The Manteca Downtown area has undergone revitalization efforts in recent years. Projects have included the addition of packing facilities, benches and other pedestrian amenities, vehicular and pedestrian lighting, and signage. The City and the Redevelopment Agency have also established programs to enhance the economic viability of downtown, in an effort to encourage both visitors and residents to use the area.

The City's goal is to foster an authentic downtown. Factors that contribute to the authenticity of downtown include rehabilitation activities to restore the character of older buildings that have architectural details not ordinarily found in contemporary buildings. Pedestrian traffic has been encouraged by designing areas that are protected from winter and summer weather, and that have landscaping to the rear of stores. Pedestrian-scale parking lots, thoughtful signage, and street lighting also enhance this ambience.



3.1.2 Tidewater Bikeway and Pedestrian Path

A prominent visual feature of the city is the Tidewater Bike Path. It is a 3½ mile Class I bikeway and pedestrian path. The trail runs from the south end of the city along Moffat Boulevard to the north end at Lathrop Road. The path passes through Downtown, Library Park, and many residential neighborhoods.



3.1.3 Railroad

The Union Pacific Railroad running generally north-south through Manteca is another prominent visual feature.

3.2 REGULATORY SETTING

3.2.1 Applicable Federal Regulation

A number of federal, state, and local agencies establish policies and programs relative to visual resources and impacts on those resources as follows:

National Environmental Policy Act (NEPA). Provides information on potential impacts to the environment, including aesthetic resources (Section 101 [b]). NEPA is implemented by regulations included in the Code of Federal Regulations (40CFR6), which require careful consideration of the environmental effects of federal actions or plans, including projects that receive federal funds, if they may have a significant adverse affect on the environment. Impacts on scenic resources (40CFR6, Section 6.108 [f]) and conflicts with state, regional, or local plans and policies (40CFR6, Section 6.108 [b]) are among the considerations included in the regulations. The regulations also require that projects requiring NEPA review seek to avoid or minimize adverse effects of proposed actions, and restore and enhance environmental quality as much as possible.

Transportation Equity Act for the 21st Century (TEA-21). The reauthorization legislation that closely follows the intent of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), which had earlier made major changes in federal transportation policy and programs. TEA-21 includes numerous provisions for improvements and changes to the implementation of transportation enhancement activities, which are funded by a ten percent set aside of Surface Transportation Program funds that is earmarked for transportation enhancement projects. TEA-21 includes a list of qualifying transportation enhancement activities which include several items supportive of visual quality enhancement such as acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping or other scenic beautification, and control and removal of outdoor advertising, among others.

Transportation enhancement activities are no longer required to have a direct link to surface transportation, and they are sufficiently qualified if they merely relate to surface transportation.

Federal Highway Administration (FHWA) – National Scenic Byways Program. Designates selected highways as an “All American Road” (a roadway that is a destination unto itself) or “National Scenic Byway” (a roadway that possesses outstanding qualities that exemplify regional characteristics). However, no roadway within the SJCOG region currently has either of these designations.

3.2.2 Applicable State Regulations

California Environmental Quality Act (CEQA). Similar to the NEPA, CEQA affords protection for the environment, including aesthetic resources. The CEQA Guidelines provide four criteria that may be used to evaluate the significance of visual quality impacts: negative effects on a scenic vista, damage to scenic resources within a state scenic highway, degradation of the visual character or quality of a site and its surroundings, and creation of a new source of substantial light or glare affecting views.

California Department of Transportation (Caltrans) – California Scenic Highways Program. Created by the State legislature in 1963 to preserve and protect scenic highway

corridors from change that would reduce the aesthetic value of lands adjacent to highways. To be included in the State program, the highways proposed for designation must meet Caltrans' eligibility requirements and have visual merit.

3.2.3 Applicable Local Regulations

County and City Controls. Most local planning guidelines to preserve and enhance the visual quality and aesthetic resources of urban and natural areas are established in the jurisdiction's General Plan. The value attributed to a visual resource generally is based on the characteristics and distinctiveness of the resource and the number of persons who view it. Vistas of undisturbed natural areas, unique or unusual features forming an important or dominant portion of a viewshed, and distant vistas offering relief from less attractive nearby features are frequently considered to be scenic resources. In some instances, a case-by-case determination of scenic value may be needed, but often there is agreement within the relevant community about which features are valued as scenic resources.

In addition to federal and State designations, counties and cities have their own scenic highway designations, which are intended to preserve and enhance existing scenic resources. Criteria for designation are commonly included in the conservation/open space element of the city or County General Plan.

Cities and counties can use open space easements as a mechanism to preserve scenic resources, if they have adopted open-space plans, as provided by the Open Space Easement Act of 1974 and codified in California Government Code (Section 51070 et seq.) According to the Act, a city or County may acquire or approve an open-space easement through a variety of means, including use of public money.

3.3 IMPACT EVALUATION CRITERIA

In accordance with CEQA Guidelines, Appendix G, the proposed project would have a significant adverse impact on the environment if the project would:

1. have a substantial adverse effect on a scenic vista;
2. substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;
3. substantially degrade the existing visual character or quality of the site and its surroundings;
4. create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

3.4 IMPACTS AND MITIGATION

POTENTIAL IMPACT AV-1: Buildout of the proposed General Plan 2023 would degrade the existing scenic vistas found in the General Plan Study Area.

Buildout of the General Plan Study Area will occur as development at the edge of Manteca, primarily in current agricultural areas. New development will be visible from locations within the community, from the highway overpasses, and from the nearby unincorporated agricultural areas beyond the Study Area boundaries. New development will impact the current views of open space, which are primarily vistas of agricultural fields and orchards.

Level of Significance: Significant and Unavoidable

Mitigation Measures:

AV-1.1 The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following policy (P) regarding existing scenic vistas:

RC-P-17 New development shall maximize the potential for open space and visual experiences.

Residual Level of Significance: Significant and Unavoidable

The level of significance will remain significant and unavoidable, even after implementation of the above policy.

POTENTIAL IMPACT AV-2: The existing visual character or quality of the area will be degraded.

The visual character and quality of agricultural open space will be impacted if the proposed development occurs. Residential development will be similar in character to any existing residences in the immediate vicinity. However, commercial uses and higher-density residential will be different in character from any existing nearby residential, and therefore may be considered a degradation of the existing visual character and quality of the area.

Level of Significance: Potentially Significant

Mitigation Measures:

AV-2.1 The proposed City of Manteca General Plan 2023 provides the following goal, policies (P) and implementation (I) measures to minimize effects to ~~maintain~~ existing visual character:

Resource Conservation Element

RC-P-15 ~~Provide~~ ~~Promote the provision of~~ public and private open space within urbanized parts of Manteca, in order to provide visual contrast with the built environment and to provide for the recreational needs of residents.

Community Design Element

Goal CD-11 To the extent possible, new development shall retain or incorporate ~~Retain~~ visual reminders of the agricultural heritage of the community.

CD-P-47 Allow pockets of agricultural activity to remain within the urban areas of the city where such uses are compatible with the surrounding urban use.

CD-P-48 Allow ~~Encourage~~ use of small under-utilized or undeveloped portions of parcels for temporary, seasonal ~~of new~~ agricultural activity, such as truck farms, strawberries, and small orchards.

CD-P-49 In order to establish a visual character that retains the agricultural heritage, the city will permit the use of orchard trees (or similar non-fruiting species) in landscape corridors along major streets adjacent to residential neighborhoods, in-lieu of formalized landscape. In such landscapes, the groundcover may be limited to bare earth and weed control and/or groundcovers compatible with the orchard characteristics.

CD-I-14: Establish design guidelines for non-residential uses within 200 feet of SR 99 and SR 120. The guidelines should address the following concepts...The landscape along SR 120 and SR 99 will reflect the natural character of the region in the selection of trees and groundcover.

Residual Level of Significance: Significant and Unavoidable

Although conformance with the goal, policies, and implementation measure identified above will lessen the impact to some extent, the impact of development on the existing visual character of the City of Manteca will remain significant. There is no way to fully mitigate the impact of development of agricultural open space.

POTENTIAL IMPACT AV-3: There will be an increased impact of light or glare from buildout of the General Plan 2023.

Proposed development in the current agricultural open space areas will constitute new sources of light and glare. Impacts associated with nighttime light and glare are directly related to the level of development.

Level of Significance: Potentially Significant

Mitigation Measures:

The impact of light and glare can be minimized by incorporating design features and operating requirements into new development that limit light and glare on-site.

AV-3.1: The Community Design Element of the Manteca General Plan 2023 provides the following policies ~~which may assist in the mitigation of~~ to mitigate the degradation of the existing night sky amenity in the City of Manteca:

CD-P-44: Provide minimal levels of street, parking, building, site, and public area lighting to meet safety standards and provide direction.

CD-P-45 Provide directional shielding for ~~street and parking lot~~ all exterior lighting to minimize the annoyance of direct or indirect glare.

CD-P-46 Provide automatic shutoff or motion sensors for lighting features in newly developed areas. The City shall adopt light and glare standards that minimize the creation of new light source and the annoyance of direct and indirect glare.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above listed policies and are implemented. Given that the areas proposed for new development are contiguous with existing development, some nighttime light and glare already exist in the area.

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4. AGRICULTURE RESOURCES

The City of Manteca is located in an area of rich agricultural resources, including orchards, dairies, vineyards, row crops, and pasture land. Due to excellent soil, great climate, and access to clean water, Manteca was predominantly an agricultural area for much of the early 20th century.

4.1 EXISTING CONDITIONS

4.1.1 Soils Suitable for Agriculture

San Joaquin County includes some of the best agriculture resources in the world.

Suitability for agricultural use is evaluated using the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation. The model considers six factors in determining the level of significance of potential impacts of converting agriculture use to urban use. These include:

- Natural Resources Conservation Service (NRCS) Land Capability Classification
- Storie Index
- Project Size Rating
- Water Resources Availability Rating
- Surrounding Agriculture Rating
- Surrounding Protected Resources Rating

The General Plan encompasses such a large area of similar land uses that the project size, water resources availability, surrounding agriculture and surrounding protected resources would be comparable for all areas of the Study Area. The significant factors are the Land Capability Classification and the Storie Index. Both the Storie Index and the Land Capability Classification are provided in the Soil Survey of San Joaquin County, California, USDA Soil Conservation Service (now Natural Resources Conservation Service). (1)

The Storie Index expresses numerically the relative degree of suitability of a soil for general intensive agricultural uses. Four general factors are used in determining the index rating, which ranges from 1-100: (A) permeability, available water capacity, and depth of the soil; (B) texture of surface soil; (C) dominant slope of soils body; and (X) other conditions more readily subject to management or modification by land user. The Storie Index is incorporated into the farmland category systems discussed below under Important Farmland Inventory, and Farmland Mapping and Monitoring Program.

Land Capability Classification Systems

The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) is a primary source of information concerning the suitability of soils for agricultural use. The NRCS Land Capability Classification System organizes soils into eight categories designated by Roman numerals (Class I-VIII). Generally, soils receiving a Class I or II rating are designated Prime Farmland. The eight categories are defined as:

- Class I Soils have few limitations that restrict their use.
- Class II Soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.
- Class III Soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.
- Class IV Soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.
- Class V Soils are not likely to erode but have other limitations, impractical to remove, that limit their use.
- Class VI Soils have severe limitations that make them generally unsuitable for cultivation.
- Class VII Soils have very severe limitations that make them unsuitable for cultivation.

Table 4-1 shows the Study Area soils Land Capability Classifications. One (1) Study Area soil series, the Honcut series, is a Class I soil (few limitations), and is considered prime farmland where irrigated. Nine (9) of the Study Area Soil Series are Class II soils (moderate limitations), and are considered prime farmland where irrigated. The remainder of the soils in the Study Area are Class III soils where irrigated (severe limitations, and are not considered prime farmland).

**Table 4-1
Study Area Soils**

Soil (Map Symbol & Series)	Prime Farmland	Land Capability Classification	Expansive (Shrink Swell Potential)
108 Arents	No	III irrigated; IV non-irrigated	Information not available.
109 Bisgani	No	III irrigated; IV non-irrigated	low
130 Columbia	Yes (where irrigated)	II irrigated; IV non-irrigated	low
131 Columbia	Yes (where irrigated)	II irrigated; IV non-irrigated	low
141 Delhi	No	III irrigated; IV non-irrigated	low
142 Delhi	No	III irrigated; IV non-irrigated	low
143 Delhi-Urban	No	III irrigated; IV non-irrigated	low
144 Dello	No	III irrigated; IV non-irrigated	low
145 Dello	No	III irrigated; IV non-irrigated	low
152 Egbert	Yes (where irrigated)	II irrigated; IV non-irrigated	moderate-high
153 Egbert	Yes (where irrigated)	II irrigated; IV non-irrigated	moderate-high
160 Galt	No	III irrigated; IV non-irrigated	high
166 Grangeville	Yes (where irrigated)	II irrigated; IV non-irrigated	low
169 Guard	Yes (where irrigated)	II irrigated; IV non-irrigated	moderate
175 Honcut	Yes (where irrigated)	I irrigated; IV non-irrigated	low
196 Manteca	No	III irrigated; IV non-irrigated	low
197 Merritt	Yes (where irrigated)	II irrigated; IV non-irrigated	low
254 Timor	No	III irrigated; IV non-irrigated	low
255 Tinnin	No	III irrigated; IV non-irrigated	low
260 Urban Land	-	-	-
265 Veritas	Yes (where irrigated)	II irrigated; IV non-irrigated	low
266 Veritas	Yes (where irrigated)	II irrigated; IV non-irrigated	low

Source: Extracted from Soil Survey of San Joaquin County, California. October 1992. U.S. Department of Agriculture, Soil Conservation Service.

Important Farmland Inventory

The NRCS also implements another soils classification system: the “Important Farmland Inventory” (IFI). The program provides a source of information for state and local agencies concerned with agricultural land conversion. The IFI identifies four farmland categories: Prime Land, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance.

Farmland Mapping and Monitoring Program

The California Department of Conservation, Office of Land Conservation, utilizing NRCS data discussed above, has developed a Farmland Mapping and Monitoring Program (FMMP). The FMMP maps agricultural products, as well as acreage statistics from the Farmland Conversion Report. These maps are used for many projects associated with assessment of agricultural land resources. Prime Farmland qualifications include a requirement that the area must have been in production of irrigated crops at some time during the four years prior to the Important Farmland Map date. In addition, the soil must meet the physical and chemical criteria for Prime Farmland or Farmland of Statewide Importance as determined by the NRCS. As discussed above, the NRCS compiles lists of which soils in each survey area meet the quality criteria.

Table 4-2 defines the farmland categories applied in the Farmland Mapping and Monitoring Program.

Table 4-2**Important Farmland Inventory Definitions**

Category	Definition
Prime Farmland (P)	Farmland with the best combination of physical and chemical features able to sustain long term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. 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 (S)	Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.
Unique Farmland (U)	Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
Farmland of Local Importance (L)	Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
Grazing Land (G)	Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
Urban and Built-up Land (D)	Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
Other Land (X)	Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; vacant and nonagricultural land surrounded on all sides by urban development; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres.
Water (W)	Perennial water bodies with an extent of at least 40 acres.

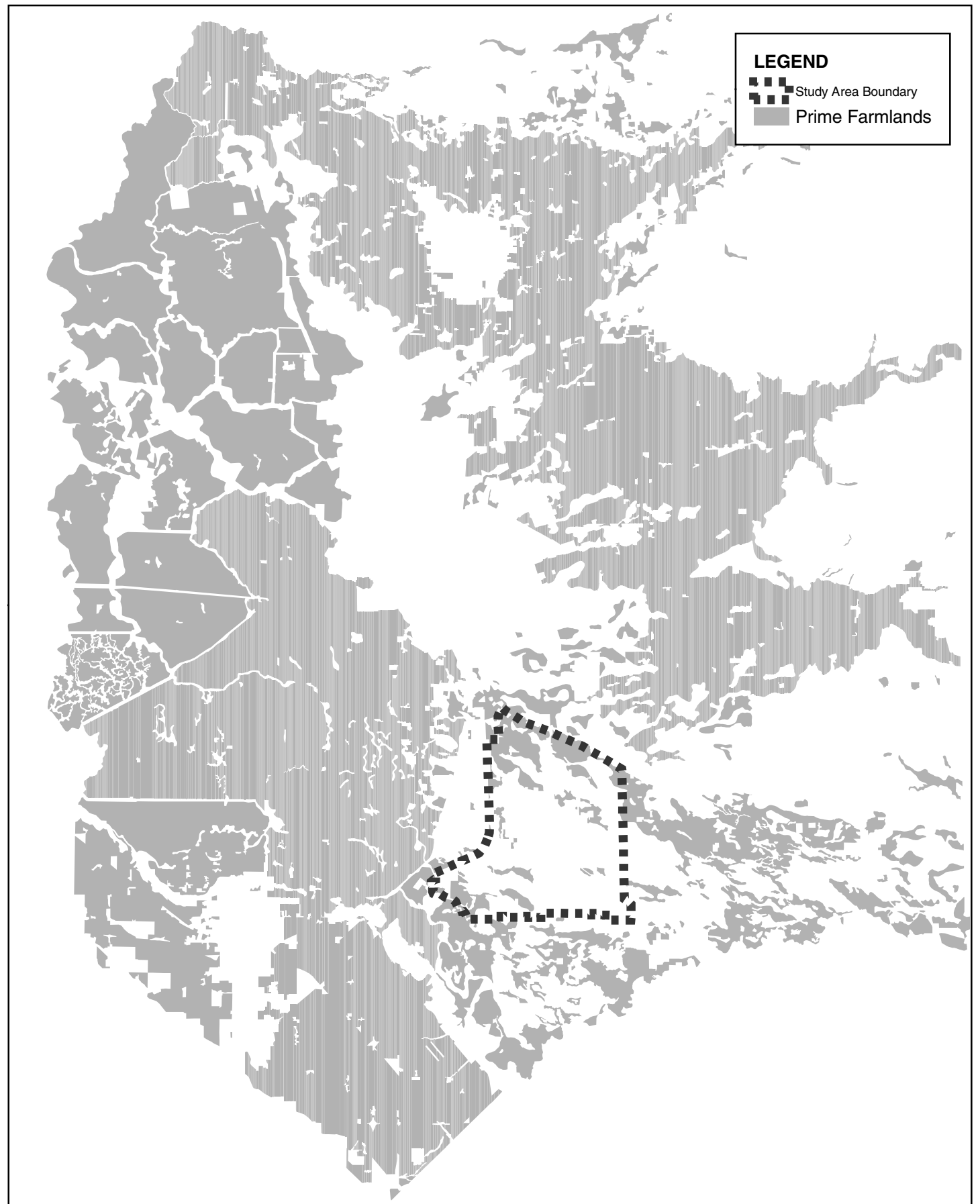
Source: California Department of Conservation, Office of Land Conservation. Farmland Mapping and Monitoring Program. www.conservation.ca.gov. April 2003.

Table 4-3 summarizes the prime farmlands in San Joaquin County and in the General Plan Study Area. Figure 4-1 shows the distribution of these farmland categories within the County, and Figure 4-2 shows the distribution of these farmland categories within the Manteca General Plan 2023 Study Area. Table 4-4 summarizes the conversion of important farmlands to urban uses in San Joaquin County from 1992 to 2000.

Table 4-3**Summary of Prime Farmlands in San Joaquin County and the Study Area**




Land Use Category	San Joaquin County	Percent of San Joaquin County as of 2002	Total Study Area As of 2002	Percent of Total Study Area as of 2002
	Acres	Percent	Acres	Percent
D Developed	74,148.7	8.1%	7,556.3	29.1%
G Grazing	150,332.1	16.5%	0.0	0.0%
L Farmland of Local Importance	56,008.8	6.1%	273.5	1.1%
P Prime Farmland	423,158.4	46.4%	5,265.1	20.2%
S Farmland of Statewide Importance	93,846.2	10.3%	11,863.2	45.6%
U Unique Farmland	57,977.4	6.4%	0.0	0.0%
W Water	11,648.2	1.3%	51.8	0.2%
X Other Land	45,479.9	5.0%	998.9	3.8%
Total	912,599.8	100.0%	26,008.8	100.0%

Source: California Department of Conservation, Office of Land Conservation. Farmland Mapping and Monitoring Program. www.conservation.ca.gov. April 2003.



Manteca General Plan

LEGEND

-  Study Area Boundary
- Farmland Category**
-  Primary Importance
-  Statewide Importance



Manteca General Plan

Table 4-4
San Joaquin County Land Use Conversion

Land Use Category	1992	1994	1996	1998	2000	Net Change
Prime Farmland	436,003	434,328	433,134	429,168	429,179	-6,824
Farmland of Statewide Importance	99,548	33,132	98,163	96,795	96,800	-2,748
Unique Farmland	47,084	47,202	48,759	52,715	52,719	+5,635
Farmland of Local Importance	53,020	54,252	53,479	53,682	53,677	+657
IMP. FARMLAND SUBTOTAL	635,655	634,914	633,535	632,360	632,369	-3,286
Grazing Land	157,708	157,391	156,185	152,699	152,699	-5,009
AG. LAND SUBTOTAL	793,363	792,305	789,720	785,059	785,068	-8,295
Urban and Built-up Land	66,297	67,621	69,739	71,596	71,595	+5,298
Other Land	42,509	42,243	42,905	44,297	44,289	+1,780
Water Area	10,159	10,159	10,236	11,648	11,648	+1,489
TOTAL AREA INVENTORIED	912,328	912,328	912,600	912,600	912,600	+272

Source: California Department of Conservation, Office of Land Conservation. Farmland Conversion Reports. www.conservation.ca.gov. April 2003.



4.1.2 Land Conservation Act (Williamson Act)

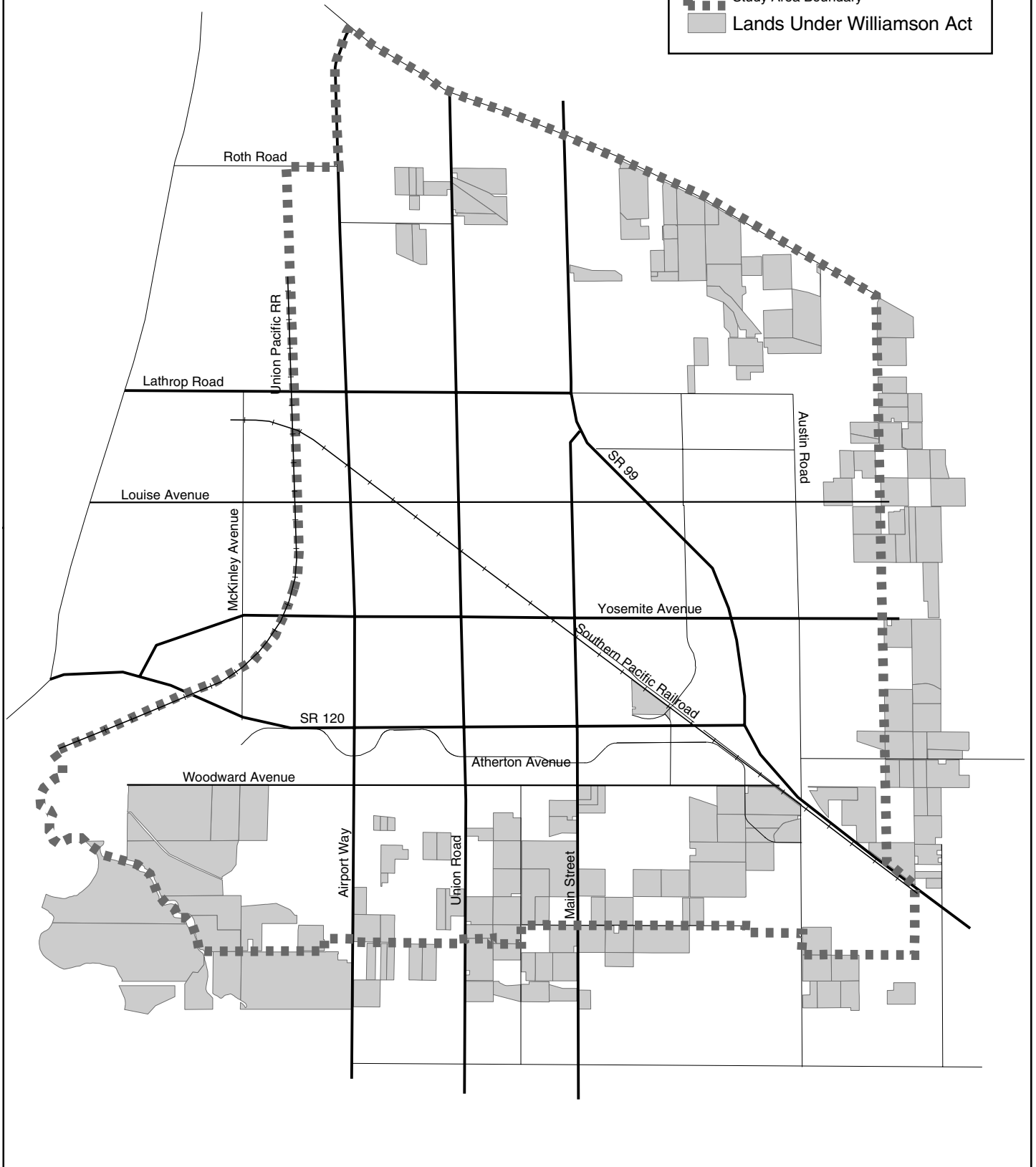
More than 16 million of the State's 30 million acres of farm and ranch land are currently protected under the Williamson Act.

Under a Williamson Act contract, the property owner is guaranteed that the property will be taxed according to its potential agricultural income, as opposed to the maximum valued use of the property. Contracts have a 10-year term that is renewed annually. Contracts can be terminated by cancellation or nonrenewal.

A local government, or landowner, can initiate the non-renewal process to terminate the Williamson Act contract. A "notice of non-renewal" starts the nine-year non-renewal period. During the non-renewal process, the annual tax assessment gradually increases and the property continues to be limited to Williamson Act allowed uses. At the end of the nine-year non-renewal period, the contract is terminated.

LEGEND

-  Study Area Boundary
-  Lands Under Williamson Act



Manteca General Plan



LANDS UNDER WILLIAMSON ACT CONTRACTS WITHIN THE GENERAL PLAN STUDY AREA
FIGURE 4-3

The precise number of acres subject to a Williamson Act varies from year-to-year as individual contracts are added or removed through the non-renewal process. As of the end of 2002, there were approximately 3,861 acres subject to Williamson Act contracts within the Study Area. An undetermined number of the contracts had filed for non-renewal. Figure 4-3 illustrates the location of the lands under contract in 2002.

4.2 REGULATORY SETTING

4.2.1 Applicable Federal Regulation

U.S. Land Evaluation and Site Assessment (LESA) System

The Land Evaluation and Site Assessment (LESA) system ranks lands for suitability and inclusion in the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Farmland Protection Program (FPP). The FPP is a voluntary program aimed at keeping productive farmland in agricultural uses. LESA evaluates several factors that are used to numerically rank the suitability of parcels based on local resource evaluation and site considerations. These factors include soils potential for agricultural use, location, market access, and adjacent land use.

4.2.2 Applicable State Regulation

California Land Evaluation and Site Assessment (LESA)

The California Land Evaluation and Site Assessment (LESA) model was based on the U.S. LESA system, and can be used to rank the relative importance of farmland, including the potential significance of its conversion on a site-by-site basis. The evaluation factors are discussed above in Subsection 4.1.1.

Farmland Mapping and Monitoring Program (FMMP)

The California Department of Conservation began the Farmland Mapping and Monitoring Program (FMMP) in 1980 to document how much agricultural land in the State was being converted to nonagricultural land or transferred into Williamson Act contracts. The requirements to be shown on the FMMP Important Farmland Maps as Prime Farmland or Farmland of Statewide Importance are discussed above in Subsection 4.1.1.

California Land Conservation Act (Williamson Act)

The California Land Conservation Act (Williamson Act), California Government Code Sections 51290 et seq., encourages the conservation of agricultural lands by providing tax incentives to

land owners who contract with the County to restrict land uses to agriculture and compatible uses. Although most Williamson Act contracts protect land in agricultural production, the Act also provides for contracts to preserve open space areas (recreational, scenic, and natural resources).

The vehicle for Williamson Act agreements is a rolling term ten-year contract (i.e., unless either party files a "notice of non-renewal," the contract is automatically renewed for an additional year). In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than their potential market value. An agricultural preserve, consisting of no less than 100 acres, defines the boundary of an area within which a city or county will enter into contracts with landowners. Only land located within an agricultural preserve is eligible for a Williamson Act contract. Preserves are regulated by rules and restrictions designated in the resolution to ensure that the land within the preserve is maintained for agricultural or open space use.

Although the State Department of Conservation coordinates and monitors implementation of the Williamson Act, each county regulates the criteria for participation and administers the program.

4.2.3 San Joaquin County

San Joaquin County Zoning

The General Plan Study Area surrounding the City of Manteca to the north, east and south is within the unincorporated area of San Joaquin County, and is subject to the County General Plan and zoning. Agriculture 40-acre minimum parcel area (AG-40) is the predominant County zone in the Study Area, and accounts for 11,667 acres. Agriculture Urban (AU-20), 20-acre minimum, accounts for 2,930 acres. The AU-20 zone designation is found adjacent to the existing City boundary east of SR 99, north of Lathrop Road, and along the south side of SR 120.

4.2.4 City of Manteca Right to Farm Ordinance

Chapter 8.24 of the Manteca Municipal Code is a "Right to Farm" Ordinance intended to protect agricultural productivity in the City. The Ordinance states:

"It is the policy of this City to preserve, protect and encourage the use of viable agricultural lands for the production of food and other agricultural products. When nonagricultural land-uses extend into or approach agricultural areas, conflicts often arise between such land-uses and agricultural operations. Such conflicts often result in the involuntary curtailment or cessation of agricultural operations, and discourage investment in such operations. This chapter is intended to reduce the occurrence of conflicts between nonagricultural and agricultural land uses within the City."

4.2.5 City of Manteca 1988 General Plan

The Natural Resources Element (Section VI) of the existing 1988 General Plan includes the following goal, policies, and implementation measure to protect agricultural resources in the City of Manteca:

- Goal B To promote the continuation of agricultural uses in the Manteca area and to discourage the premature conversion of agricultural land to nonagricultural uses, while providing for the urban development needs of Manteca.
- Policy B-1 The City shall support the continuation of agricultural uses on lands designated for urban uses until urban development is imminent.
- Policy B-2 The City shall discourage the cancellation of Williamson Act contracts within the Primary Urban Service Boundary line until it is demonstrated that the lands with such contracts will be needed for urban development in the immediate future.
- Policy B-3 The City shall endeavor to ensure, in approving urban development near existing agricultural lands, that such development will not unnecessarily constrain agricultural practices or adversely affect the economic viability of nearby agricultural operations.

4.3 IMPACT EVALUATION CRITERIA

In accordance with CEQA Guidelines, Appendix G, the proposed project would have a significant adverse impact on the environment if the project would:

1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract.
3. Involve other changes in the existing environmental which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

4.4 IMPACTS AND MITIGATION

POTENTIAL IMPACT AG-1: Implementation of the City of Manteca General Plan 2023 (Project) will result in conversion of Prime Farmland, Farmland of Statewide Importance, and

Farmland of Local Importance to non-agricultural use.

Table 4-5 summarizes the potential conversion of important farmland to urban use at full development of the land uses within the Primary Urban Services Area boundary.

Table 4-5

Summary of Farmland Conversion in the Primary Service Area

	Land Use Category	Agricultural Lands in the Study Area as of 2002	Agricultural Lands as a Percent of Study Area (26,008.8 ac) as of 2002	Acres <u>Converted</u> in the General Plan Proposed Growth Area	Agricultural Lands <u>Remaining</u> at Full Development of the General Plan
		Acres	Percent	Acres	Acres
L	Farmland of Local Importance	273.5	1.1%	79.7	193.8
P	Prime Farmland	5,265.1	20.2%	1,052.2	4,212.9
S	Farmland of Statewide Importance	11,863.2	45.6%	4,780.9	7,082.3
U	Unique Farmland	0.0	0.0%	0.0	0.0
	TOTAL	17,401.8	66.9%	5,912.8	11,489.0

Source: Wade Associates, May 2003

As shown in Table 4-5, a total of 5,912.8 acres (34%) of the total 17,401.8 acres of important farmland existing in 2002 would be converted to nonagricultural uses at full buildout of the General Plan 2023. A total of 11,489.0 acres (66%) of existing important farmland would remain in agricultural use.

Level of Significance: Potentially Significant

Mitigation Measures:

AG-1.1: The Land Use Element of the proposed General Plan 2023 provides the following policy (P) and implementation measure (I) intended to protect important farmland within the Study Area:

-
- LU-P-41 The City shall encourage the continuation of agricultural uses on lands within the Primary and Secondary Urban Services Boundary lines pending their development as urban uses consistent with the General Plan.
- LU-I-1: The City shall maintain a growth management system that provides a mechanism for the annual allocation of the amount of residential, commercial, and industrial development that may occur. The growth management system shall have the following objectives:
- Conserve viable agricultural and open space lands.

The Resource Conservation Element of the proposed General Plan 2023 provides the following goal and policies (P) intended to conserve agricultural resources within the Study Area:




- Goal RC-9 To promote the continuation of agricultural uses in the Manteca area and to discourage the premature conversion of agricultural land to nonagricultural uses, while providing for the urban development needs of Manteca.
- RC-P-18 The City shall support the continuation of agricultural uses on lands designated for urban use, until urban development is imminent.
- RC-P-19 The City shall provide an orderly and phased development pattern so that farmland is not subjected to premature development pressure.

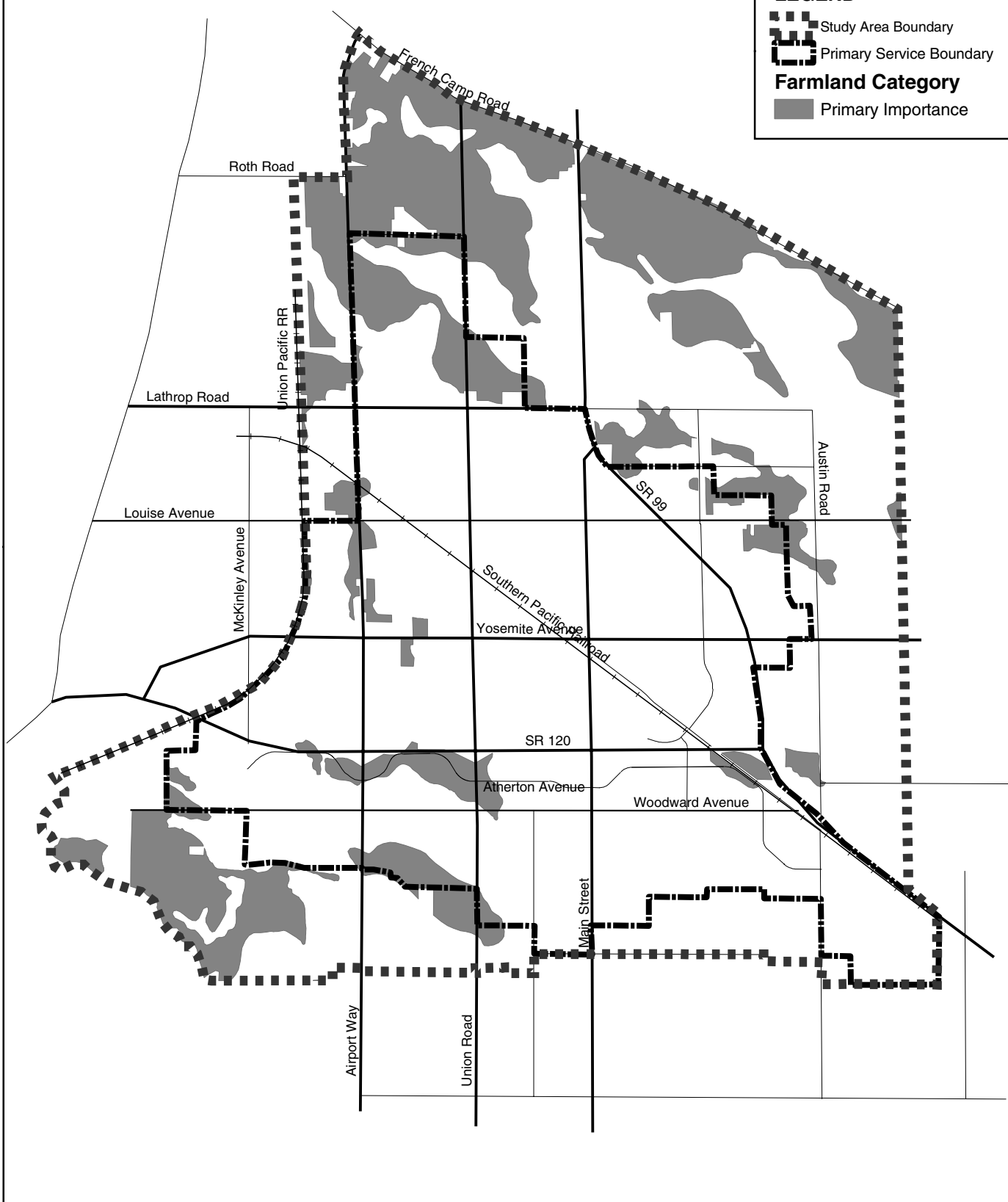
AG-1.2: The Land Use Element of the proposed General Plan 2023 directs the major growth area, as defined by the Primary Urban Service boundary, in a manner that avoids Prime Farmlands where feasible. Some areas of Prime Farmlands are within existing urban areas. Figure 4-4 illustrates the location of Prime Farmlands relative to the Primary Urban Service boundary.

Residual Level of Significance: Significant and Unavoidable

Although conformance with the goal, policies, and implementation measures identified above will lessen the conversion of the agricultural resources to some extent, the impact will remain significant.

LEGEND

-  Study Area Boundary
-  Primary Service Boundary
- Farmland Category**
-  Primary Importance



Manteca General Plan

POTENTIAL IMPACT AG-2: Implementation of the General Plan 2023 will cause a conflict with existing zoning for agricultural use, or a Williamson Act contract.

The precise number of acres subject to a Williamson Act varies from year-to-year as individual contracts are added or removed through the non-renewal process. As of the end of 2002, there were approximately 3,861 acres subject to Williamson Act contracts within the Study Area. An undetermined number of the contracts had filed for non-renewal.

Level of Significance: Potentially Significant

Mitigation Measures:

AG-2.1: The Resource Conservation Element of the proposed General Plan 2023 provides the following policies (P) and implementation (I) measures intended to conserve agricultural zoning within the Study Area:

RC-P-22 Protect designated agricultural lands, without placing an undue burden on agricultural landowners.

RC-P-26 The City shall discourage the cancellation of Williamson Act contracts outside the Primary Urban Service Boundary line. The City will not accept for processing any application for annexation of land under Williamson Act contract when there is more than two years remaining on the contract term.

RC-I-31 Work with San Joaquin County on the following issues:
Support the continuation of County agricultural zoning in areas designated for agricultural land use in the Area Plan.

Residual Level of Significance: Significant and Unavoidable

Although conformance with the policies and implementation measure identified above will lessen the conflicts with existing agricultural zoning within the Primary Urban Service Boundary, the impact will remain significant within the Study Area.

POTENTIAL IMPACT AG-3: The location or nature of some proposed General Plan 2023 changes could result in the conversion of farmland to non-agricultural use.

Level of Significance: Potentially Significant

Mitigation Measures:

AG-3.1: The Resource Conservation Element of the proposed General Plan 2023 provides the following policies (P) and implementation measures (I) intended to maintain agricultural use within the Study Area:

- RC-P-20 In approving urban development near existing agricultural lands, the City shall act so that such development will not unnecessarily constrain agricultural practices or adversely affect the viability of nearby agricultural operations.
- RC-P-23 Provide buffers at the interface of urban development and farmland in order to minimize conflicts between these uses.
- RC-P-24 The City shall ~~endeavor to~~ ensure, in approving urban development near existing agricultural lands, that such development will not unnecessarily constrain agricultural practices or adversely affect the economic viability of nearby agricultural operations.
- RC-P-25 The City shall restrict the fragmentation of agricultural land parcels into small rural residential parcels except in areas designated for estate type development in the General Plan Land Use Diagram.
- RC-P-27 The City shall not extend water and sewer lines to premature urban development that would adversely affect agricultural operations.
- RC-I-30 Apply the following conditions of approval where urban development occurs next to farmland:
- Require notifications in urban property deeds that agricultural operations are in the vicinity, in keeping with the City's right-to-farm ordinance.
 - Require adequate and secure fencing at the interface of urban and agricultural use.

- Require phasing of new residential subdivisions so as to include an interim buffer between residential and agricultural use.

Residual Level of Significance: Less than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above policies and implementation measures are implemented to maintain agricultural use adjacent to nonagricultural uses.

References:

- (1) U.S. Department of Agriculture, Soil Conservation Service. Soil Survey of San Joaquin County, California, October 1992.

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5. AIR QUALITY

The Air Quality Section of this EIR evaluates potential impacts on air quality resulting from the implementation of the proposed General Plan 2023. This Section incorporates guidance and air quality data from the San Joaquin Valley Air Pollution Control District (SJVAPCD). (1)

5.1 EXISTING CONDITIONS

5.1.1 San Joaquin Air Quality Designation

The San Joaquin Valley is currently designated as “severe nonattainment” for the state ozone 1-hour standard, and “serious nonattainment” for the federal 1-hour ozone and 24-hour fine particulate matter (PM10) standards, as shown in Table 5-1. (1)

Table 5-1
Attainment Status for San Joaquin County

Pollutant	Designation	
	National Standards	State Standards
Ozone- One hour	Nonattainment/Serious	Nonattainment/Severe
Ozone- Eight hour	Designation to be Determined	No State Standard
PM10	Nonattainment/Serious	Nonattainment
PM2.5	Designation to be Determined	No State Standard
CO (San Joaquin County)	Unclassified/Attainment	Attainment
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified/Attainment	Attainment
Lead (Particulate)	No designation	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

Source: San Joaquin Valley Air Pollution Control District (SJVAPCD)

5.1.2 Setting

Ironically, the long, warm summers that make the area especially suited for agriculture are the same conditions that contribute to the Valley's air quality problems. Heat and sunlight transform volatile organic compounds and nitrogen oxides from vehicle exhaust, industrial processes, and other operations into ground-level ozone, also known as smog. The surrounding mountain ranges pose an additional challenge, as they trap smog in the Valley, not allowing it to dissipate.

In addition to smog, dry weather conditions and topography allow small particles of man-made compounds, as well as soot, ash and dust to become suspended in the air, creating another harmful pollutant -- particulate matter.

The Valley does not currently meet health-based standards set by the United States Environmental Protection Agency (EPA) for ozone and particulate matter, nor the state standards for ozone. These health standards have been established to protect public health, as both smog and particulate matter can cause or aggravate respiratory and cardiac conditions. Research indicates that long-term exposure to either pollutant can contribute to the premature death of people and animals.

In addition to grave health concerns, these pollutants also have a significant impact on other quality of life issues. Ozone damages crops, ornamental vegetation, and man-made materials, affecting the Valley's economy. Particulates obscure visibility, notably distant views, and diminish the natural beauty of the area.

Topography

Air quality in the northern San Joaquin Valley is significantly influenced by topography. The City of Manteca lies within the northern portion of the San Joaquin Valley Air Basin, which in turn occupies the southern half of the Great Central Valley of California. The San Joaquin Valley is bounded by the coastal mountain ranges on the west, rising to an average elevation of 3,000 feet, and the Sierra Nevada mountain range on the east. The Carquinez Strait is 55 miles northwest of the Study Area and the intervening terrain is flat. The Strait is a sea level gap in the coastal range where the San Joaquin-Sacramento Delta empties into San Francisco Bay. Prevailing winds from the ocean blow through the Carquinez Strait, carrying pollutants from the more populous Bay Area.

Climate

The winters in the San Joaquin Valley are usually mild and fairly humid, and the summers are hot, dry, and nearly cloudless. This climate is the result of both the topography and the mean position of the seasonal mid-latitude storm track.

Temperature

In winter, the storm systems moving in from the Pacific Ocean bring a decidedly maritime influence to the San Joaquin Valley. The Sierra Nevada mountain range on the east prevents the cold, continental air masses from influencing the Valley. Temperatures below freezing are unusual. Average high temperatures in the winter are in the 50's (F), but highs in the 30's and 40's can occur with persistent fog and low cloudiness.

In summer, high temperatures often exceed 100 degrees, with averages in the low 90's in the northern valley and the high 90's in the southern valley. Summer low temperatures average in the high 50's in the northern valley and the upper 60's in the southern valley.

Precipitation

Precipitation in the San Joaquin Valley is strongly influenced by the position of the semi-permanent subtropical high pressure belt located off the Pacific coast (referred to as the Pacific High). In the winter, this high pressure system moves southward, allowing Pacific storms to move through the Valley. The majority of the precipitation in the Valley is winter rain produced by these storms. Snowstorms, hailstorms, and icestorms occur infrequently in the Valley, and severe occurrences are very rare. Precipitation during the summer is in the form of convective rain showers, and is rare.

Precipitation on the Valley floor and in the Sierra Nevada decreases from north-to-south. This is primarily because the Pacific storm track often passes through the northern part of the state, while the southern part of the state remains protected by the Pacific High.

The northern end of the Valley (Manteca and Stockton area) receives approximately 20 inches of rain per year. The central portion of the Valley (Fresno area) receives approximately 10 inches of rain per year. The southern end of the Valley (Bakersfield area) receives less than 6 inches of rain per year.

Wind Patterns

The topography of the San Joaquin Valley has a dominating effect on wind patterns. Winds tend to blow somewhat parallel to the Valley and mountain range orientation. In spring and early summer, thermal low-pressure systems develop over the interior basins east of the Sierra Nevada mountain range, and the Pacific High moves northward. These developments and the topography produce the high incidence of relatively strong northwesterly winds in the spring and early summer.

The San Joaquin Valley receives a combination of sea breeze-land breeze and mountain-valley regimes. The sea breeze-land breeze regime has a sea breeze flowing into the Valley from the north during the day, and a land breeze flowing out of the Valley at night.

The prevailing wind direction in the City of Manteca is from the northwest, resulting from marine breezes through the Carquinez Strait. During the winter, the sea breeze diminishes.

Tule Fog

Between winter storms, high pressure and light winds allow cold moist air to pool on the Valley floor. This creates strong low-level temperature inversions and very stable air conditions. The Valley's well-known Tule Fog is the result of these conditions.

5.1.3 Sensitive Receptors

Sensitive receptors located in or near the vicinity of known air emissions sources, including freeways and intersections, are of particular concern. Sensitive receptors are located throughout the City of Manteca, and typically include the following: residences, athletic facilities, schools, health care facilities, playgrounds, convalescent centers, child care centers, and rehabilitation centers.

Land use compatibility issues relative to siting of pollution-emitting sources or siting of sensitive receptors must also be considered. In the case of schools, state law requires that siting decisions consider potential for toxic or harmful air emissions in the surrounding area.

5.2 REGULATORY SETTING AND STANDARDS

5.2.1 Applicable Federal Regulation

U. S. Environmental Protection Agency National Ambient Air Quality Standards

Pursuant to the Federal Clean Air Act of 1970 and subsequent amendments, the Environmental Protection Agency (EPA) has established ambient air pollutant concentration standards and maximum allowable emission rates (National Ambient Air Quality Standards (NAAQS)), for certain individual sources of air pollutants. Air quality is managed through the attainment and maintenance of these ambient standards and enforcement of the emission limits.

There are six Primary NAAQS "criteria" air pollutants (so called because they were established on the basis of health criteria):

- Ozone (O3)
- Carbon Monoxide (CO)
- Nitrogen Dioxide (NO2)
- Sulfur Dioxide (SO2)
- Fine Particulate Matter (PM10)
- Lead (Pb)

The U.S. Environmental Protection Agency (EPA) also recently adopted standards for fine particulate matter (PM2.5).

These air pollutants are further discussed below in Subsection 5.2.3

5.2.2 Applicable State Regulation

California Air Resources Board

The California Air Resources Board (CARB) coordinates and oversees the air pollution control activities performed in California by the local air districts. One of their tasks is to compile data from the numerous air quality monitoring stations throughout the state. Data collected at those stations are used to classify areas and air basins as attainment or nonattainment for each criteria air pollutant based on whether the federal ambient air quality standards have been achieved. CARB has established state ambient air quality standards, many of which are more stringent than the corresponding federal standard. State standards attempt to protect “sensitive” people. Children, the elderly, athletes, and people with existing respiratory ailments (e.g. asthma, emphysema), and heart disease are much more sensitive to air pollution than the average citizen.

Central California Air Quality Studies (CCAQS) (2)

CARB’s Central California Air Quality Studies (CCAQS) comprise two (2) studies: the California Regional Particulate Air Quality Study (CRPAQS), and the Central California Ozone Study (CCOS).

The CCAQS is a multi-year effort of meteorological and PM10/PM2.5 air quality monitoring, emission inventory development, data analysis, and air quality simulation modeling. The objectives of the study are to: 1) provide an improved understanding of emissions, PM10 and PM2.5 composition, and dynamic atmospheric processes; 2) establish a strong scientific foundation for informed decisions making; and 3) develop methods to identify the most efficient and cost-effective emission control strategies to achieve the PM10 and PM2.5 standards in Central California. The concept for the plan was initiated in 1991 by the agricultural community when they approached the U.S. EPA for funding. Government entities and industries endorsed the study, and full-scale planning began in 1992. Large-scale field monitoring programs were begun in 1999.

The CCOS consists of a field program, data analysis, emission inventory development, and modeling. The field program of the CCOS was conducted during the summer of 2000. Emission inventory development, data analysis and modeling are on-going projects. The entire effort is expected to be completed by 2005. The CARD and Air Pollution Control Districts plan to use the results of the CCOS to prepare the demonstration of attainment for the ozone standard for non-attainment areas in central California.

5.2.3 Ambient Air Quality Standards

The federal (national) and California State ambient air quality standards are shown below in Table 5-2.

Ozone (O3)

As shown in Table 5-2, the one-hour California Ambient Air Quality Standard for ozone is 0.09 part per million (PPM), and is not to be exceeded. The one-hour National (Federal) Ambient Air Quality Standard for ozone is 0.12 ppm (measured at the highest hour during the day), and is not to be exceeded more than three (3) times in any three-year period.

Ground-level ozone (the primary constituent of smog) is the most complex, difficult to control, and pervasive in the six principal pollutants. Unlike other pollutants, ozone is not emitted directly into the air by specific sources. Ozone is a “photochemical” pollutant, created by a complex series of chemical reactions between reactive organic gases (ROG), nitrogen oxides (NOx), and sunlight.

Scientific evidence indicates that ground-level ozone not only affects people with impaired respiratory systems (such as asthmatics), but healthy adults and children as well. Exposure to ozone for six to seven hours, even at relatively low concentrations, significantly reduces lung function and induces respiratory inflammation in normal, healthy people during periods of moderate exercise. It can be accompanied by symptoms such as chest pain, coughing, nausea, and pulmonary congestion. Recent studies provide evidence of an association between elevated ozone levels and increases in hospital admissions for respiratory problems in several U.S. cities. Ozone is also responsible for several billion dollars of agricultural crop yield loss in the U.S. each year. Ozone damages natural ecosystems such as forests and foothill communities, as well as some man-made materials such as rubber, paint, and plastics.

The Valley’s long, hot summers, stagnant weather conditions, frequent inversions, and bowl shape with surrounding mountain barriers, create the perfect conditions to form and trap ground-level ozone. A fast growing population driving approximately 90 million miles per day compounds the problem.

There are literally thousands of sources of the reactive organic gases (ROG) and nitrogen oxides (NOx) which react with sunlight to form ozone. ROG and NOx are emitted from fuel combustion, and agricultural and industrial processes. Some of the more common sources include gasoline vapors, chemical solvents, combustion products of various fuels, and consumer products. They can originate from large industrial facilities, gas stations, and small businesses such as bakeries and dry cleaners. Often these "precursor" gases are emitted in one area, but the actual chemical reactions, stimulated by sunlight and temperature, take place in another.

Table 5-2
Ambient Air Quality Standards

Pollutant	Averaging Time	Concentration	
		National Standards	California Standards
Ozone (O3)	8-hour	0.08 ppm	N/A
	1-hour	0.12 ppm	0.09 ppm
Carbon Monoxide (CO)	8-hour	9 ppm	9 ppm
	1-hour	35 ppm	20 ppm
Nitrogen Dioxide (NO2)	Annual Avg.	0.053 ppm	N/A
	1-hour	N/A	20 ppm
Sulfur Dioxide (SO2)	Annual Avg.	0.03 ppm	N/A
	24-hour	0.14 ppm	0.04 ppm
	1-hour	N/A	0.25 ppm
Particulate Matter (PM10)	24-hour	150 micrograms/ cubic meter	50 micrograms/ cubic meter
Lead (Pb)	30-day average	N/A	1.5 micrograms/ cubic meter
	Calendar Quarter	1.5 micrograms/ cubic meter	N/A
Particulate Matter (PM2.5)	24-hour	65 micrograms/ cubic meter	N/A

Source: CARB and San Joaquin Valley Unified Air Pollution Control District

Combined emissions from motor vehicles and stationary sources can be transported and spread by wind hundreds of miles from their origins, forming high ozone concentrations over very large regions.

Approximately 60 percent of the Valley's smog problems come from cars, diesel trucks, and other internal combustion engines such as lawnmowers and boats. These are collectively called "mobile sources." The other 40 percent comes from business and industrial sources.

Carbon Monoxide (CO)

State and federal CO standards have been set for both 1-hour and 8-hour averaging periods. The state 1-hour CO standard is 20 parts per million (ppm) by volume, while federal 1-hour standards are 35 ppm. Both state and federal standards are 9 ppm for the 8-hour averaging period. State CO standards are phrased as values not to be exceeded; federal CO standards are phrased as values not to be exceeded more than once per year.

Nitrogen Dioxide (NO₂)

Nitrogen dioxide belongs to a family of highly reactive gases called nitrogen oxides (NO_x). These gases form when fuel is burned at high temperatures, and come principally from motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A suffocating, brownish gas, nitrogen dioxide is a strong oxidizing agent that reacts in the air to form corrosive nitric acid, as well as toxic organic nitrates. It also plays a major role in the atmospheric reactions that produce ground-level ozone (or smog).

Nitrogen dioxide can irritate the lungs and lower resistance to respiratory infections such as influenza. The effects of short-term exposure are still unclear, but continued or frequent exposure to concentrations that are typically much higher than those normally found in the ambient air may cause increased incidence of acute respiratory illness in children. EPA's health-based national air quality standard for NO₂ is 0.053 ppm (measured as an annual average). Nitrogen oxides are important in forming ozone and may affect both terrestrial and aquatic ecosystems.

Sulfur Dioxide (SO₂)

Sulfur dioxide belongs to the family of sulfur oxide gases (SO_x). These gases are formed when fuel containing sulfur (mainly coal and oil) is burned, and during metal smelting and other industrial processes.

The major health concerns associated with exposure to high concentrations of SO₂ include effects on breathing, respiratory illness, alterations in pulmonary defenses, and aggravation of existing cardiovascular disease. Major subgroups of the population that are most sensitive to SO₂ include asthmatics and individuals with cardiovascular disease or chronic lung disease (such

as bronchitis or emphysema) as well as children and the elderly. EPA's health-based national air quality standard for SO₂ is 0.03 ppm (measured on an annual average) and 0.14 ppm (measured over 24 hours). Emissions of SO₂ also can damage the foliage of trees and agricultural crops. Together, SO₂ and NO_x are the major precursors to acid rain, which is associated with the acidification of lakes and streams, accelerated corrosion of buildings and monuments, and reduced visibility.

Particulate Matter (PM₁₀)

Particulate matter is the term for solid or liquid particles found in the air. Some particles are large or dark enough to be seen as soot or smoke. Others are so small they can be detected only with an electron microscope. Because particles originate from a variety of mobile and stationary sources (diesel trucks, wood stoves, power plants, etc.), their chemical and physical compositions vary widely.

Also shown in Table 5-2, the 24-hour California Ambient Air Quality Standard for PM₁₀ is 50 micrograms per cubic meter, and is not to be exceeded. The 24-hour National Ambient Air Quality Standard for PM₁₀ is 150 micrograms per cubic meter, and is not to be exceeded more than once per year.

In 1987, EPA replaced the earlier Total Suspended Particulate (TSP) air quality standard with a PM₁₀ standard. The newer standard focuses on smaller particles that are likely to result in adverse health effects because of their ability to reach the lower regions of the respiratory tract. The PM₁₀ standard includes particles with a diameter of 10 micrometers or less (0.0004 inches or one-seventh the width of a human hair).

Major concerns for human health from exposure to PM₁₀ are effects on breathing and respiratory systems, damage to lung tissue, cancer, and premature death. The elderly, children, and people with chronic lung disease, influenza, or asthma, tend to be especially sensitive to the effects of particulate matter. Acidic PM₁₀ can also damage manmade materials and is a major cause of reduced visibility in many parts of the U.S.

Primary man-made sources of PM₁₀ in the San Joaquin Valley are agricultural operations, agricultural burning, demolition and construction activities, entrainment of dust by motor vehicles on paved and unpaved roads, and residential wood burning. Wind erosion of agricultural land also represents a significant source of airborne dust in the Valley.

Approximately 58% of the Valley's PM₁₀ pollution comes from man-made sources and activities. Approximately 38% comes from natural causes, and approximately 4% can be attributable to unplanned fires.

Lead (Pb)

Smelters and battery plants are the major sources of the pollutant "lead" in the air. The highest concentrations of lead are found in the vicinity of nonferrous smelters and other stationary sources of lead emissions.

Exposure to lead mainly occurs through inhalation of air and ingestion of lead in food, paint, water, soil, or dust. Lead accumulates in the body in blood, bone, and soft tissue. Because it is not readily excreted, lead can also affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause anemia, kidney disease, reproductive disorders, and neurological impairments such as seizures, mental retardation, and/or behavioral disorders. Even at low doses, lead exposure is associated with changes in fundamental enzymatic, energy transfer, and other processes in the body. Fetuses and children are especially susceptible to low doses of lead, often suffering central nervous system damage or slowed growth. Recent studies show that lead may be a factor in high blood pressure and subsequent heart disease in middle-aged white males. Lead may also contribute to osteoporosis in postmenopausal women. EPA's health-based national air quality standard for lead is 1.5 micrograms per cubic meter (measured as a quarterly average).

Particulate Matter (PM2.5)

The recently adopted 24-hour National Ambient Air Quality Standard for PM2.5 (particles 2.5 micrometers or less in size) is 65 micrograms per cubic meter within a 24-hour period. California has not yet set a standard for PM2.5. However, the California Air Resources Board (CARB) has developed a PM2.5 monitoring network to implement the national standard. The San Joaquin Valley Air Pollution Control District (SJVAPCD) is participating in collection of the PM2.5 data as required by the EPA.

Toxic Air Pollutants

Toxic air pollutants, such as asbestos, can be emitted during demolition of buildings containing toxic contaminants, and during operation of industries that utilize toxic substances. The Federal and State governments have implemented a number of programs to control toxic air emissions.

The Federal Clean Air Act provides a program for the control of hazardous air pollutants. The California legislature has enacted programs including the Tanner Toxics Act (AB1807), the Air Toxics Hot Spot Assessment Program (AB2588), the Toxics Emissions Near Schools Program (AB3205), and the Disposal Site Air Monitoring Program (AB3374).

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has developed an Integrated Air Toxic Program. This program integrates both state and federal requirements and is aimed at protecting public health. The District is implementing rules to control emissions from specific

sources of toxic air pollutants. As part of the District's Risk Management Policy, certain businesses are required to obtain a permit to emit toxic air pollutants.

In 1998, the California Air Resources Board (CARB), in conjunction with the California EPA, classified diesel particulate as a toxic air contaminant. Particulate matter and other gases including nitrogen oxides (NO_x) are air pollutants emitted by diesel engines. Heavy-duty trucks, buses, and heavy off-road engines are key sources of nitrogen oxides (NO_x) emissions within the Valley. In addition to nitrogen oxides, particulate matter, and other gases from diesel exhaust contain potential cancer-causing substances such as arsenic, benzene, formaldehyde, nickel, and polycyclic aromatic hydrocarbons.

In order to reduce the particulate matter, nitrogen oxide (NO_x), and sulfur oxide (SO_x) emissions from diesel engines, the CARB has adopted many important regulations. These include:

- Low sulfur/low diesel fuel requirement that reduces particulate matter, NO_x, and SO_x emissions.
- Emission standards that restrict the amount of particulate matter emitted by new diesel trucks, buses, cars, and heavy-duty trucks.
- Emission standards for NO_x emissions from diesel cars, trucks and buses.
- Roadside testing of heavy-duty on-road vehicles for excessive particulate emissions.
- Fleet inspection and maintenance of heavy-duty vehicles.
- Emission standards that restrict the amount of particulate matter and that can be emitted from many diesel utility engines built after 1995.
- Provision of funds for Carl Moyer Memorial Air Quality Standards Attainment Program, which provides grants for the incremental cost of lower-emission diesel engines for heavy-duty vehicles.

5.2.4 San Joaquin Valley Air Pollution Control District (SJVAPCD)

Manteca falls under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The District was formed in 1991, and maintains its headquarters in Fresno.

The SJVAPCD is responsible for regulating stationary, indirect, and area sources of air pollution in the Valley. The eight counties that comprise the District are divided into three regions. These include the Northern Region, (Merced, San Joaquin, and Stanislaus Counties), the Central Region (Madera, Fresno, and Kings Counties), and the Southern Region (Tulare County and the Valley portion of Kern County).

Air districts have the primary responsibility for control of air pollution from all sources other than emissions directly from motor vehicles, which are the responsibility of the California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA). Air districts

adopt and enforce rules and regulations to achieve state and federal ambient air quality standards, and enforce applicable state and federal law.

Air districts are charged with controlling stationary sources of pollution, including industrial processes and equipment. Air districts are also required to implement transportation control measures.

Nearly all pollution control programs developed to date have relied on development and application of cleaner technology and add-on emission control devices to clean up vehicular and industrial sources, such as catalytic converters for automobiles. Only recently have efforts been directed at better use of existing emission sources (e.g. through inspection and maintenance programs, heavy-duty engine emission reduction programs, High Occupancy Vehicle or HOV Lanes, and maintenance procedures on industrial sources).

The SJVAPCD has entered into a Memorandum of Understanding (MOU) with the transportation planning agencies of the eight counties in the San Joaquin Valley Air Basin. This MOU will ensure a coordinated approach in the development and implementation of transportation plans throughout the Valley. This action will help the Regional Transportation Planning Agencies comply with pertinent provisions of the federal and State Clean Air Acts, as well as related transportation legislation.

The SJVAPCD has adopted two Attainment Plans in an attempt to achieve state and federal air quality standards:

1. 1991 California Clean Air Act Air Quality Attainment Plan (AQAP) for ozone and carbon monoxide.
2. 1991 and 1992 PM10 Nonattainment Area Plan

After the area was re-designated as “serious nonattainment” for PM10 by the EPA, the SJVAPCD submitted a Serious Area PM10 Nonattainment Plan in September 1994.

However, the SJVAPCD is considering voluntarily seeking the federal government's worst air quality designation for ground-level ozone. There has been a 45 percent reduction since 1980 in the number of days the Valley's air violates health-based levels for ground-level ozone. However, improvements have not come quickly enough to meet clean air deadlines, prompting the EPA's serious nonattainment designation. This means that the Valley must now meet the ozone standard by 2005 by reducing total emissions inventory by an additional 30- percent or 300 tons per day.

The SJVAPCD has not been able to submit an implementation plan demonstrating such drastic reductions. The District is exploring an option of requesting an “extreme” non-attainment

designation. With this designation, the new attainment date for the Valley would be 2010, instead of 2005.

5.3 IMPACT EVALUATION CRITERIA

In accordance with CEQA Guidelines, Appendix G, the proposed project would have a significant adverse impact on the environment if the project would:

- 1) conflict with or obstruct implementation of the applicable air quality plan;
- 2) violate any air quality standard or substantially contribute to an existing or projected air quality violation;
- 3) result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- 4) expose sensitive receptors to substantial pollutant concentrations; or
- 5) create objectionable odors affecting a substantial number of people.

URBEMIS Emissions Model

The California Air Resources Board (CARB) URBEMIS 2001 for Windows, Version 6.2.2, Emissions Estimation for Land Use Development Project Modeling Program, was used to derive emissions from construction, area sources, and operational (vehicle) emissions. The estimate of air quality impact is based on the land use assumptions established in Section 2 and Section 11 of this EIR, shown in Table 5-3 below.

The effects of development anticipated in the General Plan will occur incrementally over twenty years or more. Therefore, the methods of analysis typically applied to evaluate new development proposals provide only broad, generic indicators of future impacts. The cumulative effect of each increment of new development over a twenty year horizon creates significant impacts that can only be approximated. The actual mix of land use that will occur over time are very difficult to predict. Commercial, business professional and industrial uses, in particular, provide a broad range of development opportunities and characteristics.

Table 5-3
Projected Land Use Mix at Full Development of the
Primary Urban Service Area in the General Plan 2023

LAND USE	Proposed New Land Use	Existing Urbanized Land Use	Total 2023 Land Use
	Acres	Acres	Acres
AG Agriculture	3960.0		3960.0
GC General Commercial	518.0	154	672.0
NCC Neighborhood Commercial	111.8	380	491.8
CMU Commercial Mixed Use	255.0		255.0
HI Heavy Industrial	715.0	194.9	909.9
LI Light Industrial	798.1	226	1024.1
BIP Business Industrial Park	258.0		258.0
BP Business Professional	133.0		133.0
HDR High Density Residential (15.1 to 25 du/ac)	251.0	191	442.0
MDR Medium Density Residential (8.1 to 15 du/ac)	359.0	187.6	546.6
LDR Low Density Residential (2.1 to 8 du/ac)	3685.9	2741.7	6427.6
VLDR Very Low Density Residential (0.5 to 2 du/ac)	1181.0	109.8	1290.8
P/QP/ Public/Quasi-public Schools/Utilities	317.6	788.3	1105.9
OS Open Space	516.0	27	543.0
P Park	175.7	342.4	518.1
Subtotal	12302.1	5342.7	18577.8

Source: DRAFT Manteca General Plan 2023, Table 2-1.

Construction Emissions

Emissions caused during construction would be due to site preparation and construction of the proposed uses. During construction, emissions would be generated by tailpipe emissions of particulate, carbon monoxide and nitrous oxide from diesel-powered earth moving equipment, particulate emissions from vehicular traffic on unpaved roads, and particulates emissions from soil disturbance (actual amount depends on total acreage disturbed). These impacts will not be sustained over time, but rather will occur sporadically over a period of years as the project is developed. Grading and other earth disturbance will occur in discrete periods as new phases of the project are developed.

Area Source Emissions

Area source emissions were estimated for wood stoves, fireplaces, landscaping and consumer products. Landscape maintenance includes emissions from fuel-powered maintenance equipment. Consumer products include reactive organic compound emissions released through the use of products such as hair sprays and deodorants.

Vehicle Source Emissions

The precursor emissions for vehicle sources is evaluated by the URBEMIS 2001 program based on the target year, trip characteristics, temperature data, variable starts, vehicle fleet percentages, road dust, and pass-by trips. The URBEMIS 2001 default settings for vehicle mix, variable starts and other factors are used in the evaluation. Both summer and winter conditions were evaluated. Summer conditions create the worst case scenario for precursor emissions.

Table 5-4
Summary of Winter Emissions (Pounds/Day)

<i>Construction Emission Estimates</i>	ROG	NOx	CO	PM10
Totals (lbs/day, unmitigated)	173,438.78	381.04	722.14	73.05
Totals (lbs/day, mitigated)	173,438.78	381.04	722.14	73.05
<i>Area Source Emission Estimates</i>	ROG	NOx	CO	PM10
Totals (lbs/day, unmitigated)	2430.32	582.64	246.2	1.11
Totals (lbs/day, mitigated)	2430.14	580.23	245.24	1.10
<i>Operational (Vehicle) Emission Estimates</i>	ROG	NOx	CO	PM10
Totals (lbs/day, unmitigated)	4338.05	4520.73	50887.04	347.84
Totals (lbs/day, mitigated)	3690.92	3839.92	43238.72	295.40

Source: URBEMIS 2001 for Windows v. 6.2.2 (Detailed Report Included in DRAFT EIR FOR GENERAL PLAN 2023, Volume 2, Technical Appendix.)

**Table 5-5
Summary of Summer Emissions (Pounds/Day)**

<i>Construction Emission Estimates</i>	ROG	NOx	CO	PM10
Totals (lbs/day, unmitigated)	173,438.78	381.04	722.14	73.05
Totals (lbs/day, mitigated)	173,438.78	381.04	722.14	73.05
<i>Area Source Emission Estimates</i>	ROG	NOx	CO	PM10
Totals (lbs/day, unmitigated)	2448.76	587.31	440.74	1.28
Totals (lbs/day, mitigated)	2448.59	584.89	439.77	1.28
<i>Operational (Vehicle) Emission Estimates</i>	ROG	NOx	CO	PM10
Totals (lbs/day, unmitigated)	4838.42	2986.06	52559.58	347.84
Totals (lbs/day, mitigated)	4301.01	2536.54	44652.11	295.40

Source: URBEMIS 2001 for Windows v. 6.2.2 (Detailed Report Included in DRAFT EIR FOR GENERAL PLAN 2023, Volume 2, Technical Appendix)

5.4 IMPACTS AND MITIGATION

POTENTIAL IMPACT AQ-1: **Implementation of the General Plan 2023 could conflict with or obstruct implementation of the applicable air quality plan.**

Level of Significance: **Potentially Significant**

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has adopted an Air Quality Management Plan and an Integrated Air Toxic Program. The SJVAPCD has also adopted two Attainment Plans and a Serious Area PM10 Nonattainment Plan.

Mitigation Measures:

AQ-1.1: The General Plan 2023 includes the following goal, policy (P) and implementation measures (I) to direct cooperation with San Joaquin Valley Air Pollution Control District’s air quality plans, including air toxic plans:

-
- Goal AQ-1 Improve Manteca’s air quality by:
- Minimizing public exposure to toxic or hazardous air pollutants.
- AQ-P-1 Cooperate with other agencies to develop a consistent and coordinated approach to reduction of air pollution and management of hazardous air pollutants.
- AQ-I-1 Work with the San Joaquin Valley Air Pollution Control District (SJVAPCD) to implement the Air Quality Management Plan (AQMP).
- Cooperate with the APCD to develop consistent and accurate procedures for evaluating project-specific and cumulative air quality impacts.
 - Cooperate with the APCD and the California Air Resources Board to develop a local airshed model.
 - Cooperate with the APCD in their efforts to develop a cost/benefits analysis of possible control strategies (mitigation measures to minimize short and long-term stationary and area source emissions as part of the development review process, and monitoring measures to ensure that mitigation measures are implemented.
- AQ-I-2 In accordance with CEQA, submit development proposals to the APCD for review and comment prior to decision.

Residual Level of Significance: Less Than Significant with Mitigation

The above goal, policy and implementation measures are intended to reduce conflicts between the proposed General Plan 2023 and applicable air quality plans. The cooperation required in the above goal, policy and implementation measures will help achieve the SJVAPCD’s Air Quality Management Plan, Integrated Air Toxic Program, Attainment Plans, as well as any future air quality plans.

POTENTIAL IMPACT AQ-2: Implementation of the General Plan 2023 could violate air quality standards or contribute substantially to the current nonattainment status for ozone and PM10.

Level of Significance: Significant and Unavoidable

The San Joaquin Valley is currently designated as “severe nonattainment” for the state ozone 1-hour standard, and “serious nonattainment” for the federal 1-hour ozone and 24-hour fine particulate matter (PM10) standards. Table 5-6 shows the ozone trends summary from 1993 –

2002 for the San Joaquin Valley Air Basin. Table 5-7 gives the PM10 trends summary for the same period.

Any additional sources of these pollutants will contribute to this nonattainment status. Therefore, there are no mitigation measures which will reduce the increase of these air pollutants to a less-than-significant level. However, the policies (P) and implementation measures (I) listed below are intended to reduce the net increase from implementation of the General Plan 2023.

**Table 5-6
Ozone Trends Study
San Joaquin Valley Air Basin**

YEAR	DAYS > STANDARDS FOR OZONE			1-HOUR MAX	8-HOUR MAX
	1-Hour State	1-Hour National	8-Hour National	(ppm)	AVG (ppm)
2002	127	31	125	0.164	0.132
2001	123	32	109	0.149	0.120
2000	114	30	103	0.165	0.131
1999	123	28	117	0.155	0.123
1998	90	39	84	0.169	0.136
1997	110	16	95	0.147	0.127
1996	120	56	114	0.165	0.137
1995	124	44	109	0.173	0.134
1994	118	43	108	0.175	0.129
1993	125	43	104	0.160	0.125

Source: Extracted from California Air Resources Board (CARB), Air Quality and Emissions/Air Quality Data, www.arb.ca.gov.

Table 5-7
PM10 Trends Study
San Joaquin Valley Air Basin

YEAR	DAYS > STANDARDS FOR PM10		Annual Average	Maximum
	State	National	(micrograms/m3)	(micrograms/m3)
2002	267	8	59.2	189
2001	236	12	57.4	205
2000	237	0	53.1	145
1999	216	12	59.5	183
1998	185	6	39.9	160
1997	188	3	48.2	199
1996	225	0	54.1	153
1995	246	8	58.2	279
1994	253	8	50.1	190
1993	233	11	56.3	239

Source: Extracted from California Air Resources Board (CARB), Air Quality and Emissions/Air Quality Data, www.arb.ca.gov.

AQ-2.1: The General Plan 2023 includes the following goals, policies (P), and implementation measures (I) to help meet air quality standards and reduce the net contribution to the current ozone and PM10 nonattainment status.

Goal AQ-1 Improve Manteca's air quality by:

Achieving and maintaining ambient air quality standards established by the U.S. Environmental Protection Agency, the California Air Resources Board, and the San Joaquin Valley Air Pollution Control District.

Goal AQ-2 Integrate air quality planning with land use and transportation planning processes in order to reduce vehicle miles traveled in the City and by commuters.

Goal AQ-3 Increase opportunities for alternatives to internal combustion automobiles including, but not limited to, public transportation, bicycles, walking and alternative fuel vehicles including hybrid gas-electric, electric and compressed natural gas.

Goal AQ-4 Reduce air emissions through energy conservation.

- AQ-P-8 Woodburning devices shall meet current standards for controlling particulate air pollution.
- AQ-P-9 Burning of any combustible material within the City will be controlled to minimize particulate air pollution.
- AQ-I-13 All residences built in a new subdivision or housing development shall be equipped with conventional heating devices with sufficient capacity to heat all areas of the building without reliance on woodburning heating devices.
- AQ-I-14 All woodburning-heating devices installed shall meet EPA standards applicable at the time of project approval.

Air quality issues relating to construction activities are also addressed in the Air Quality Section of the General Plan 2023:

- AQ-P-7 New construction will be managed to minimize fugitive dust and construction vehicle emissions.
- AQ-I-4. Construction activity plans shall include and/or provide for a dust management plan to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard.
- Project development applicants shall be responsible for ensuring that all adequate dust control measures are implemented in a timely manner during all phases of project development and construction.

POTENTIAL IMPACT AQ-3: Implementation of the General Plan 2023 would result in a cumulatively considerable net increase in ozone and PM10 air pollutants.

Given that the Valley is nonattainment for ozone and PM10, there are no mitigation measures to reduce the cumulative increase of these air pollutants when proposing additional urban development. However, the following policies (P) and implementation measures (I) are intended to reduce the net increase to the region's cumulative air pollution from the proposed General Plan 2023. The Air Quality Element works with the Circulation Element and the Land Use Element to provide measures to reduce air pollution.

Air Quality and Land Use

- AQ-P-2 Develop a land use plan that will help to reduce the need for trips and will facilitate the common use of public transportation, walking, bicycles, and alternative fuel vehicles.
- AQ-I-4 Encourage mixed-use development that is conveniently accessible by pedestrians and public transit.
- AQ-I-5 Locate employment, school, and daily shopping destinations near residential areas.
- AQ-I-6 Locate higher density development such as multi-family housing, institutional uses, services, employment centers and retail along existing and proposed transit corridors.
- AQ-I-7 Locate public facilities in areas easily served by current and planned public transportation.

Air Quality and Transportation

- AQ-P-4 Develop and maintain street systems that provide for efficient traffic flow and thereby minimize air pollution from automobile emissions.
- AQ-P-5 Develop and maintain circulation systems that provide alternatives to the automobile for transportation, including bicycles routes, pedestrian paths, bus transit, and carpooling.
- AQ-P-6 Coordinate public transportation networks, including trains, local bus service, regional bus service and rideshare facilities to provide efficient public transit service.
- AQ-I-9 Maintain acceptable traffic levels of service (LOS~~E~~) as specified in the Circulation Element.
- AQ-I-10 In new subdivisions, require the internal street system design to include the installation of dedicated pedestrian/bicycle pathways connecting to adjacent residential and commercial areas as well as schools, parks and recreational areas.

POTENTIAL IMPACT AQ-4: **Implementation of the General Plan 2023 could expose sensitive receptors to substantial pollutant concentrations.**

Level of Significance: **Potentially Significant**

Sensitive receptors located in or near the vicinity of known air emissions sources, including freeways and intersections, are of particular concern. Sensitive receptors are located throughout the City of Manteca, and typically include the following: residences, athletic facilities, schools, health care facilities, playgrounds, convalescent centers, child care centers, and rehabilitation centers. In the case of schools, state law requires that siting decisions consider potential for toxic or harmful air emissions in the surrounding area.

Mitigation Measures:

AQ-4.1: The General Plan 2023 includes the following implementation measures (I) to help reduce exposure of sensitive receptors to pollutants:

AQ-I-8 Prior to entitlement of a project that may be an air pollution point source, such as a manufacturing and extracting facility, the developer shall provide documentation that the use is located and appropriately separated from residential areas and sensitive receptors ~~Locate air pollution point sources, such as manufacturing and extracting facilities, in areas designated for industrial development and separated from residential areas and sensitive receptors (e.g., homes, schools, and hospitals).~~

AQ-I-15 Design review criteria shall include the following considerations, at a minimum:

The developer of a sensitive air pollution point receptor shall submit documentation that the project design includes appropriate buffering ~~Establish buffer zones (e.g., distance, setbacks, landscaping) within residential and other sensitive receptor site plans~~ to separate the use ~~those uses~~ from highways, arterial streets, hazardous material locations and other sources of air pollution or odor.

Residual Level of Significance: **Less Than Significant With Mitigation**

Implementation of the above implementation measures will help protect sensitive receptors from exposure to air pollutants. These measures require land use siting and separation, and the use of buffers to protect sensitive receptors.

POTENTIAL IMPACT AQ-5: **Implementation of the General Plan 2023 could create objectionable odors affecting a substantial number of people.**

Level of Significance: **Potentially Significant**

There are no proposed land uses in the General Plan 2023 which are expected to create objectionable odors that would affect a substantial number of people. However, it may be a possibility that odors could be produced by the proposed heavy industrial land uses.

Mitigation Measures:

AQ-5.1: The General Plan 2023 includes the following goal and policy (P) to help reduce the possibility of exposing people to objectionable odors:

Goal AQ-1: Improve Manteca's air quality by:

Minimizing public exposure to pollutants that create a public nuisance, such as unpleasant odors.

AQ-P-3 Segregate and provide buffers between land uses that typically generate hazardous or obnoxious fumes and residential or other sensitive land uses.

Residual Level of Significance: **Less Than Significant with Mitigation**

Implementation of the above goal will help reduce the possibility of exposing people to objectionable odors. ~~If odors do result from the proposed heavy industrial land uses, it is required that these odors be minimized.~~ While exposure to objectionable odor pollutants can be minimized through design and separation to a less than significant level, there is no way to fully mitigate the impact due to prevailing winds, atmospheric conditions, and peripheral pollutant point sources.

References:

- (1) San Joaquin Valley Air Pollution Control District. Air Quality Guidelines for General Plans. 1994.
- (2) California Air Resources Board. Air Quality and Emissions/Air Quality Data, www.arb.ca.gov.

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6. BIOLOGICAL RESOURCES

This biological resources section discusses impacts to wildlife and habitat in the area within and adjacent to the General Plan Study Area boundary. Existing habitat types are identified, as well as an inventory of special status plant and animal species that are known to occur, or may potentially occur, in the area.

6.1 EXISTING CONDITIONS

The Study Area outside the urbanized center and surrounding residential areas is predominantly farmland, including alfalfa, orchards, row crops, and pasture. Agriculture lands have become important foraging resources for a number of species, including Swainson's Hawk, which is a California State and federally protected species.

Although no major watercourse lies within the Study Area, the San Joaquin River flows ~~approximately four (4) miles to~~ along the west side of the Study Area boundary. Walthall Slough is a tributary to the river. The Slough's northern boundary is contiguous with the southwestern boundary of the Study Area.

Riparian woodland is found mainly along the San Joaquin River and Walthall Slough. Wetlands have also been identified along ~~Highway I-20~~ State Route 120 in the western portion of the Study Area. These are irrigation runoff impoundments which function as seasonal wetlands. Some of the numerous Study Area irrigation and drainage ditches and canals also support riparian vegetation.

6.1.1 Special Status Biological Resources

Special status biological resources include California State or federal listed, candidate, or proposed rare, threatened, and endangered, and sensitive animals, plants, and natural communities that have been afforded special status by public agencies or major conservation organizations.

California Department of Fish and Game

A computerized search of the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB) was requested for the Manteca area 7.5 minute USGS topographic quadrangles (1). This search was conducted to determine if there are any known occurrences, or potential occurrences, of special status federal, California State, and California Native Plant Society (CNPS) listings. The database included a total of six (6) species (four wildlife and two plant species) that have been identified as occurring, or potentially occurring, within or adjacent to the Study Area, shown in Table 6-1. The general locations of these Special

Status Species are shown on Figure 6-1. The results of this search are included as Appendix D in the Technical Appendix to this EIR (Volume 2).

Table 6-1

Special Status Species Potentially Occurring Within or Adjacent to the Study Area

<p>1.</p>	<p>Swainson’s Hawk (<i>Buteo swainsoni</i>)</p> <p>State “Threatened Species”^a; Federal “Species of Concern”^b; MBTA^c</p>
<p>2.</p>	<p>California Tiger Salamander (<i>Ambystoma californiense</i>)</p> <p>State “Species of Special Concern”^d; Federal “Candidate Species”^e</p>
<p>3.</p>	<p>Tricolored Blackbird (<i>Agelaius tricolor</i>)</p> <p>State “Species of Special Concern”; Federal “Species of Concern”; MBTA</p>
<p>4.</p>	<p>Burrowing Owl (<i>Athene cunicularia</i>)</p> <p>State “Species of Special Concern”; No Federal Status; MBTA</p>
<p>5.</p>	<p>Delta Button-Celery (<i>Eryngium racemosum</i>)</p> <p>State “Endangered Species”^f; Federal “Species of Concern”</p>
<p>6.</p>	<p>Wright’s Trichocoronis (<i>Trichocoronis wrightii</i> var <i>wrightii</i>)</p> <p>CNPS 2^g; No State or Federal Status</p>

Notes:

State Threatened Species: Likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

b) Federal Species of Concern: (Former Category 2) Informal term that refers to those species which might be in need of concentrated conservation actions, which may range from periodic monitoring to listing as Federal Threatened or Endangered. Species of Concern receive no legal protection, and the use of the term does not necessarily mean that the species will eventually be proposed for listing.

c) MBTA: Birds protected under the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), which implements treaties with Great Britain (for Canada), Mexico, Japan and Russia for protection of migratory birds whose welfare is a federal responsibility.

d) State Species of Special Concern: Considered to be indicators of regional habitat changes, or are considered to be potential future protected species.

e) *Federal Candidate Species: (Former Category 1) Expected proposal for listing based on available scientific information and USFWS Study of biological vulnerability.*

f) *State Endangered Species: Survival and reproduction in the wild is in immediate jeopardy. In danger of extinction within the foreseeable future throughout all or a significant portion of its range.*

g) *CNPS (California Native Plant Society) 2: Plants rare, threatened or endangered in California, but more common elsewhere.*

(Listing: Classified as Endangered or Threatened under the State and/or Federal Endangered Species Acts)

Source: California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB), August 21, 2001; update March 2003.







Swainson's Hawk (*Buteo Swainsoni*)

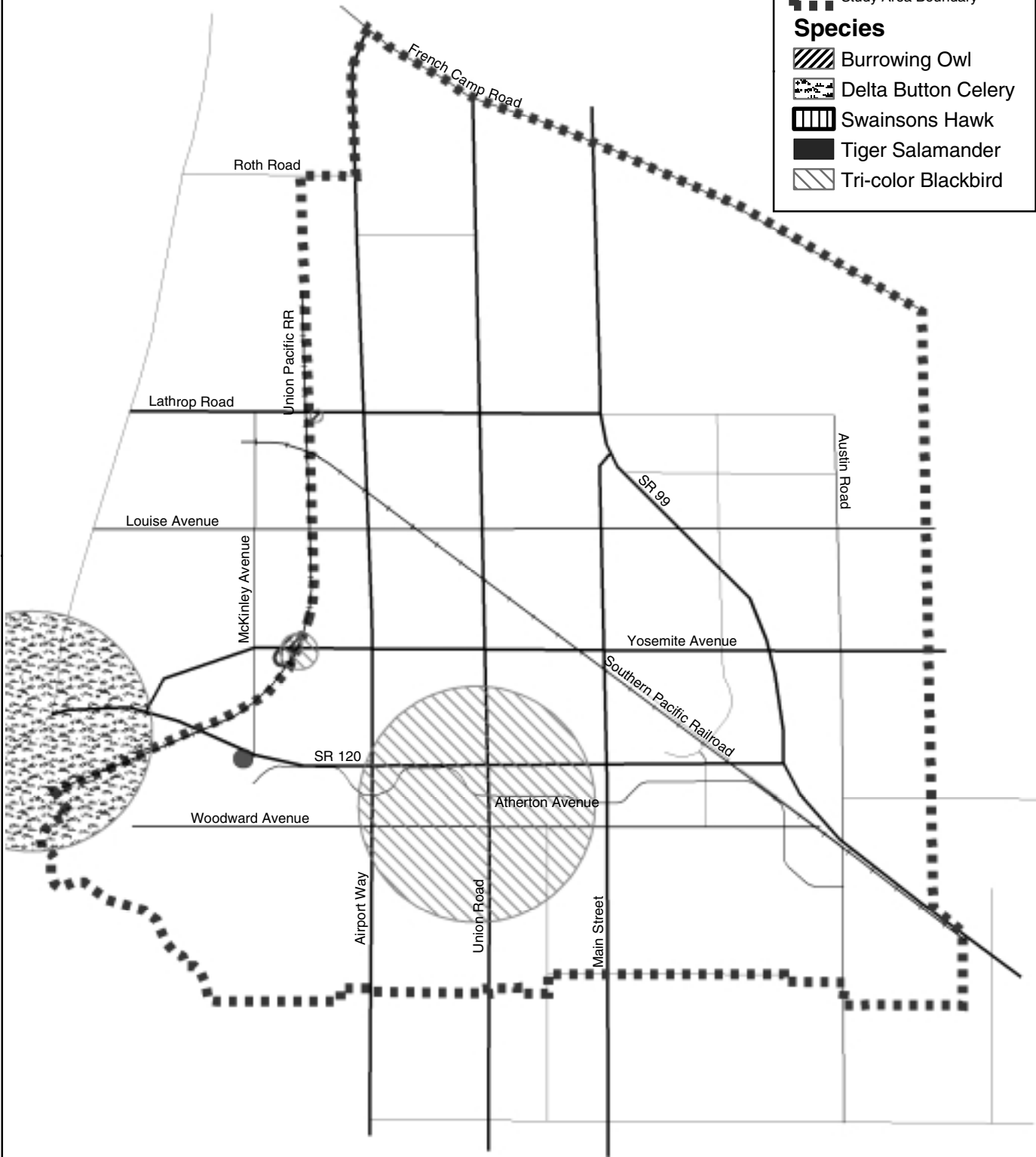
Swainson's hawks were once found throughout California except in the mountainous regions of the state. Today, Swainson's hawks are mostly limited to a few areas of the Great Central Valley and the Great Basin. Historically, there may have been a population in excess of 17,000 pairs; their estimated population in 1992 was 550 pairs in the state. The best remaining habitat for these hawks is found along permanent waterways with a continuous canopy of trees for nesting, with grassland, irrigated pasture, alfalfa or grain fields nearby for foraging. (San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), page 2-48) (3)

California Tiger Salamander (*Ambystoma californiense*)

The California tiger salamander is an amphibian found in the Great Central Valley and the Coast Ranges of California, generally at elevations below 1,000 feet. There are records for this species on both the west and east side of San Joaquin County; the project database includes 38 occurrences, of which 30 define occupied habitat. The California tiger salamander requires both an aquatic and terrestrial habitat for completing its life cycle, and cannot survive in a landscape that does not provide proper conditions for both. This salamander inhabits grasslands, but requires water for successful reproduction. Temporary pools, such as vernal pools and stock ponds, are the optimal breeding ponds for this salamander; permanent pools generally contain predators of the larval salamanders such as introduced fish and bullfrogs. The temporary pools hold water for the several months required for larval transformation. At the onset of the dry season, tiger salamanders return to the nearby uplands (grasslands) for estivation (a state of inactivity). Estivation burrows are found at an average of 3,000 feet from the breeding ponds (ranging from 330 feet to one mile). Holes and crevices created by ground squirrels and other animals are used for these burrows. After approximately nine months of estivation, the adult salamanders migrate back to the breeding ponds. (San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), pages 2-40,41) (3)

LEGEND

-  Study Area Boundary
- Species**
-  Burrowing Owl
-  Delta Button Celery
-  Swainsons Hawk
-  Tiger Salamander
-  Tri-color Blackbird



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Tricolored Blackbird (*Agelaius tricolor*)

Tricolored blackbirds occur chiefly in California in the Central Valley, surrounding foothills, coastal areas, and scattered inland areas of northern and southern California. The Central Valley population of this blackbird declined by perhaps more than 50% from 1937 to 1972. The total population of the tricolored blackbird continues to decline. San Joaquin, as part of the Sacramento-San Joaquin Delta, may be important wintering habitat for this bird. Low reproductive success has recently been found in deep water marshes of cattails (*Typha spp.*) and bulrush (*Scirpus acuta*), due primarily to predation from black-crowned night herons and great blue herons. In contrast, reproductive success is often high for colonies nesting in armored vegetation, especially the Himalaya blackberry (*Rubus procerus*), which protects nests from many predators. Foraging areas must be within a few miles of the nesting site. High-value foraging habitats for breeding tricolored blackbirds include grasslands and pastures (irrigated and non-irrigated), vernal pool-grassland complexes, and hay fields of alfalfa or other species, especially if recently cut and flood-irrigated. (San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), pages 2-45,46) (3)

Burrowing Owl (*Speotyto cunicularia*)

Burrowing owls inhabit open grasslands and shrublands in the Central Valley, coastal regions, and deserts of California. Burrowing owls occur in a patchy distribution throughout San Joaquin County, but recent studies have shown a decline of over 50% in the numbers of breeding pairs in the Central Valley. Burrowing owls occur in open ground and forage on small rodents and larger insects. They live and breed in burrows created by mammals such as ground squirrels and badgers. The owls take over the burrows when abandoned by the original residents. (San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), page 2-52) (3)

Delta Button-Celery (*Eryngium racemosum*)

The Delta button-celery plant species is an annual or perennial herb in the carrot, or celery, family. Its historic range is somewhat disjunct within the San Joaquin Valley and eastern foothills of the Sierra Nevada. However, populations in the San Joaquin and Stanislaus Counties are considered by the California Native Plant Society to have been extirpated. The project database includes 11 collections from San Joaquin County, including the Lathrop USGS Quad coverage area; however, none is used to define occupied habitat. The habitat of this plant species consists of vernal mesic (wet during the spring season) clay depressions, often with riparian scrub. (San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), pages 2-26,27) (3)

Wright's Trichocoronis (*Trichocoronis wrightii* var *wrightii*)

The Wright's trichocoronis plant species is an annual member of the aster, or sunflower, family. Its historic range is in the Central Valley of California from Sutter and Colusa Counties south to Merced County, a disjunct population in Riverside County, and in Texas. It is not clear whether the California populations constitute a separate species. It is presumed extirpated from all known localities in the Central Valley, including the single record from the Lathrop U.S.G.S. Quad. The habitat for this plant species is reported as moist places, mudflats, and shores. (San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), page 2-30) (3)

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS), Sacramento Fish and Wildlife Office, also provided a compilation of special status species that may occur in or be affected by projects within the Manteca Area Quadrangles and San Joaquin County (2). This compilation is included as Appendix E` in the Technical Appendix to this EIR (Volume 2).

6.1.2 The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) (3,4,5)

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) is a multi-species, multi-habitat, multi-purpose open space management program for all of San Joaquin County. The impetus for the Plan arose from conflicts between proposed development and habitat lands for the Swainson's Hawk and San Joaquin Kit Fox, species that are protected under the California Endangered Species Act (CESA) and the Federal Endangered Species Act (ESA). The Plan covers 97 fish, plant, and wildlife species which are afforded varying degrees of protection under the California Environmental Quality Act (CEQA), CESA, ESA, the Migratory Bird Treaty Act (MBTA), and other local, state, and federal regulations. The six Special Status Species discussed above are among the 97 species covered by the SJMSCP.

Because the habitats for these species span multiple jurisdictions, local jurisdictions approached the San Joaquin County Council of Governments (SJCOG) to coordinate a regional strategy to open space planning. A Memorandum of Understanding (MOU) to prepare the SJMSCP was adopted on October 10, 1994 by participating city, county, state, and federal jurisdictions. The Plan is administered on behalf of Plan participants by a Joint Powers Authority (JPA) that has adequate authority to carry out the Plan.

The SJMSCP's stated purpose is to:

"...provide a strategy for balancing the need to conserve Open Space, which contributes to the quality of life of the residents of San Joaquin County, with the on-going pressure to convert Open Space to accommodate a growing population, while at the same time

protecting the region's agricultural economy, preserving landowner property rights, and providing long-term management of plant, fish and wildlife.”

The Manteca City Council adopted the SJMSCP (Resolution #R2001-46) on February 5, 2001, signing a Joint Powers Agreement with other city, county, state, and federal agencies.

Description of SJMSCP

The SJMSCP is a 50-year plan (2001-2051) that provides compensation for the conversion of open space to non-open space uses which affect the plant, fish, and wildlife species covered by the Plan. The specific compensation options are shown in Table 6-2. The Plan also includes some compensation to offset the impacts of open space conversions on non-wildlife related resources such as recreation, agriculture, scenic values, and other beneficial open space. The Plan proposes preserves that contain habitat for many species, not just the targeted species. It is possible that more common plant, fish and animal species may be evaluated for listing in the future; a primary factor in determining the status of those species is likely to be loss of habitat. The SJMSCP preserves benefit these more common species and may help avoid future listings.

SJMSCP Conservation Strategy

The SJMSCP conservation strategy relies on minimizing, mitigating, and avoiding impacts for the covered species.

Minimization

Minimization of impacts to SJMSCP covered species takes a species-based approach emphasizing the implementation of Incidental Take Avoidance Measures aimed at averting the actual killing or injury of individual SJMSCP covered species, and minimization of impacts to habitat for such species in Open Space Lands converted to non-open space uses.

Mitigation

Mitigation of unavoidable impacts to SJMSCP covered species takes a habitat-based approach which emphasizes compensation for habitat losses through the establishment, enhancement and management-in-perpetuity of preserves composed of a specific vegetation type or association of vegetation types upon which discrete groups of covered species rely. Within these preserves, impacts to occupied or potential habitat of covered species will be offset by preserving lands containing potential or occupied habitat for the covered species or group of covered species impacted or for which impacts are assumed. Preserves will normally be located outside of designated existing and planned urban boundaries predominantly on productive agricultural lands located throughout the County. The purchase of easements from landowners willing to sell urban development rights will be the primary method of acquiring preserves.

To ensure that permitted activities will not result in jeopardy to covered species, the Plan also establishes, as part of the mitigation component of its conservation strategy:

- limits to the number of acres of Natural Lands which may be converted from Open Space Lands Countywide;
- limits to the number of acres of occupied and/or potential habitat that may be converted for selected covered species;
- special conservation and mitigation requirements for San Joaquin kit fox, valley elderberry longhorn beetle, valley oak woodlands, and vernal pools;
- mitigation emphasizing changes in project design for linear projects which may create barriers to dispersal of covered species or other plants, fish, or wildlife.

Avoidance

The SJMSCP provides an alternative mitigation approach which allows complete avoidance of covered species and jurisdictional wetlands through project re-design as a substitute for SJMSCP compensation. Wherever covered species or jurisdictional wetlands are entirely avoided, no compensation is required provided that the project proponent complies with the standards established by the SJMSCP.

Monitoring and Adaptive Management

The SJMSCP conservation strategy also relies on monitoring the status of covered species and the success of its minimizing and mitigating actions, and responding to deficiencies in those strategies through the application of an Adaptive Management Plan.

Open Space Categories

The SJMSCP classifies each vegetation type/habitat into one of four (4) general open space land categories for the purposes of evaluating impacts of open space conversions to non-open space uses, and to assist in determining compensation to offset these conversions

Natural Lands: Lands that remain natural vegetation and which are not irrigated or cultivated agricultural lands. These include primarily **riparian, vernal pools, and grassland habitats**. Natural lands are considered to have the highest Open Space value since they provide the most valuable plant, fish and wildlife habitat, provide opportunities for recreational trails along linear waterways, and provide outstanding scenic value.

Agricultural Habitat Lands: Lands that include **perennial and annual croplands**.

Multi-Purpose Open Space Lands: Lands that, if converted, would contribute to the overall loss of Open Space for agriculture, recreation, scenic values, and other beneficial Open Space uses. Multi-Purpose Open Space Lands are primarily **barren lands, or orchards and vineyards**.

Urban Lands: Lands that are already converted from Open Space use by urban uses as of January 11, 2000. These include **urban/industrial/built and scraped/paved** lands.

SJMSCP Permitted Activities

The SJMSCP compensates for conversion of open space for the following activities:

urban development, mining, expansion of existing urban boundaries, non-agricultural activities occurring outside of urban boundaries, agricultural activities which may trigger Section 404 of The Federal Clean Water Act and/or which are subject the Endangered Species Act, levee maintenance undertaken by the San Joaquin Area Flood Control Agency, transportation projects, school expansions, non-federal flood control projects, new parks and trails, non-federal irrigation district projects, utility installation, maintenance activities, managing reserves, and similar public agency projects.

Voluntary Plan

The SJMSCP is a voluntary plan for project proponents. Project proponents who opt not to accept Plan coverage must proceed under the project-by-project application process, including consultation with individual local, state and federal permitting agencies. Project proponents who opt for Plan coverage have four (4) options as shown in Table 6-2.

Table 6-2

Project Proponent Options Under SJMSCP

PROJECT PROPONENTS WHO OPT FOR PLAN COVERAGE:
--

Option 1. Pay appropriate fee.

The Plan includes a program to allocate a proportionate share of the Plan costs to those undertaking new development projects that would result in conversion of open space land, through payment of ~~the following~~ across-the-board fees (these open space land categories are further discussed below):

Category A Exempt (Urban/Developed Lands)	No Pay Zone
Category B Other Open Space (orchards, vineyards, etc.)	\$750/ per acre
Category C Agricultural Open Space	\$1,500/ per acre
Category D Natural Habitat Open Space (non-vernal pool)	\$1,500/ per acre

Category E Vernal Pool Conversion:

Wetted Surface Area ~~\$30,000/per acre~~

Upland Grassland ~~\$5,000/per acre~~

Option 2. Dedicate, as conservation easements or fee title, habitat lands (in-lieu dedications):

Category B Other Open Space (orchards, vineyards, etc.) acre-per-acre

Category C Agricultural Open Space acre-per-acre

Category D Natural Habitat Open Space (non-vernal pool) 3ac/ac converted

Category E Vernal Pool Conversion 3 ac/ac converted

Option 3. Purchase approved mitigation credits (SJMSCP Section 5.3.2.4)

Option 4. Propose an alternative mitigation plan, consistent with the goals of the Plan, and equivalent in biological value to options 1-3 above, subject to approval by the Joint Powers Agreement with the concurrence of the Permitting Agencies representatives on the Technical Advisory Committee.

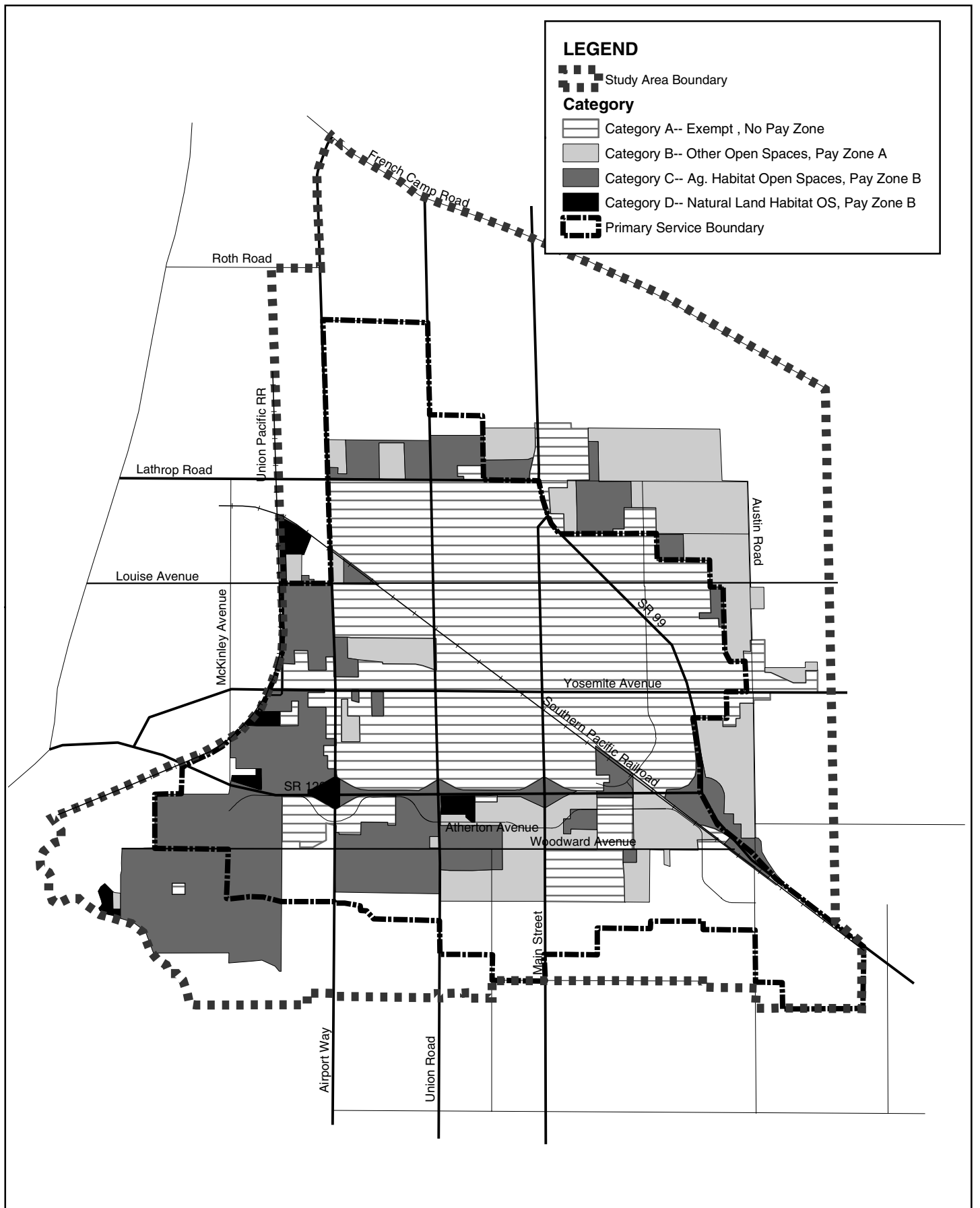
PROJECT PROPONENTS WHO OPT AGAINST PLAN COVERAGE:

Shall satisfy applicable US Endangered Species Act (ESA), California Endangered Species Act (CESA), National Environmental Policy Act (NEPA), and California Environmental Quality Act (CEQA), and other applicable local, state, and federal laws and regulation provisions through consultations with the Permitting Agencies and local planning agencies.

The locations of the open space land categories found within the Study Area are shown in Figure 6-2.

Incidental Take Permits

The SJMSCP replaces project-by-project reviews with agreements from local, county, state and federal agencies to permit development within identified growth areas, in exchange for the management of large tracts of land managed for species located outside population centers. This agreement was accomplished through of use of predictable, standardized mitigation measures for



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any covered land use conversion. The Plan therefore forms the basis for acquiring these binding agreements, known as "incidental take permits," from:

- Federal agencies (Section 10(a)(1)(B) Federal Endangered Species Act (ESA)); and
- State agencies (Section 2081(b) California Fish and Game Code, relating to species listed under California Endangered Species Act (CESA)).

The SJMSCP also applies to species that receive coverage through mitigation pursuant to CEQA.

Incidental Take is described in two ways under the SJMSCP:

- As Conversion of habitat of the covered species to urban and agricultural uses (expressed in acres) under the regulatory definition of "harm"; and
- As direct killing, injury, or harassment of individual animals.

Incidental Take will be minimized under the SJMSCP through implementation of Incidental Take Minimization Measures to reduce the levels of Take, and will be mitigated through measures to compensate for the effects of such Take as is unavoidable under the Plan.

Open Space Land Conversions Permitted Pursuant to SJMSCP

The goal of the SJMSCP is to provide 100,841 acres of Preserves based on an estimated conversion acreage of 109,302 acres. The SJMSCP anticipates acquiring land primarily through conservation easements and fee title at a ratio of approximately 90% easements to 10% fee title acquisition. Establishment and/or use of mitigation banks, and in-lieu land dedications also will play a role in preserving habitats under the SJMSCP. (SJMSCP Chapter 5, Sections 5.3.2 and 5.3.3)

Table 6-3 lists estimates of overall open space and habitat conversions anticipated for the 50-year term of the SJMSCP.

The SJMSCP limits the conversion of Natural Lands to 14,202 acres within 50 years, or not more than 15% of the total acreage of Open Space conversion for SJMSCP permitted activities within any five-year period, whichever is less. The SJMSCP limits the conversion of Natural Lands for both SJMSCP permitted activities and non-SJMSCP permitted activities to 25,912 acres (10% of the existing Natural Lands mapped in San Joaquin County as detailed in Section 2, Table 2-1 of the Plan document) during the 50-year term of the Plan.

The SJMSCP limits the conversions of Agricultural Habitat Lands to 57,635 acres and Multi-Purpose Open Space Lands to 37,465 acres.

Table 6-3**Anticipated Open Space and Habitat Conversions Under 50-Year SJMSCP**

FULL BUILDOUT OF GENERAL PLANS (a) (Acres)	
CONVERSION ACRES TRIGGERING PRESERVE COMPENSATION (b)	
Natural Lands to be converted including submerged aquatic habitats (c)	14,202
Agricultural Habitat Lands (d) to be converted (non-orchard and non-vineyard)	57,635
SJMSCP Covered Species Habitat Conversions (b)	
Subtotal	71,837 (b)
MULTI-PURPOSE OPEN SPACE CONVERSIONS	
Multi-Purpose Open Space Lands to be converted (e)	37,465
Lands to be converted after 1999 Total	109,302
NEIGHBORING LAND PROTECTION PRESERVES	
Preserve Lands required to compensate for potential impacts to SJMSCP Covered Species which wander off SJMSCP Preserves and onto lands neighboring SJMSCP Preserves	600
Preserve Lands required to compensate for impacts to SJMSCP Covered Species (f)	$14,202 \times 3 = 42,606$ $57,635 \times 1 = 57,635$ $\underline{600 \times 1 = 600}$ 100,841

Notes:

(a) See SJMSCP Table 1-2 for details on the distribution of this acreage across the various

habitat types.

*(b) Per Sections 4.1 and 4.3, conversion of Agricultural Habitat Lands and Natural Lands triggers requirements to create Preserves. Conversions of Multi-Purpose Open Space Lands is not considered to result in Incidental Take, but is considered to contribute to cumulative impacts to common plant, fish, and wildlife species and to other impacts associated with converting Open Spaces to non-Open Space uses (e.g., agricultural impacts, scenic impacts). Therefore, fees collected due to conversions of Multi-Purpose Open Space uses will contribute to the overall cost of creating Preserves, but conversion of Multi-Purpose Open Spaces does not trigger requirements to add new Preserve acres to the SJMSCP Preserve system. **These compensation requirements apply only to SJMSCP permitted activities.** Agricultural activities are not covered by the SJMSCP (except that conversion of wetlands as a result of agricultural activities requiring a Section 404 permit pursuant to the Federal Clean Water Act and/or subject to the Federal Endangered Species Act (ESA) may be covered pursuant to the SJMSCP). Therefore, conversion of Agricultural Habitat Lands, Natural Lands, Multi-Purpose Open Space Lands, or any lands by agricultural activities, except as noted above, triggers no actions or requirements related to the SJMSCP. Conversions of Agricultural Habitat Lands, Natural Lands, Multi-Purpose Open Space Lands, or any lands by agricultural activities remain subject to the same legal requirements, including the need to comply with the ESA and/or California Endangered Species Act (CESA) even when permits are not required pursuant to the Federal Clean Water Act, as were in effect before adoption of the SJMSCP. Individuals are encouraged to consult with local, state and federal agencies to determine applicable regulations.*

(c) SJMSCP permitted activities affecting submerged aquatic habitat are listed in Section SJMSCP Section 8.2.1(4).

(d) The term “Agricultural Habitat Land” is not equivalent to similar terms used in the 1996 “Federal Farm Bill.

(e) See SJMSCP Glossary (Chapter 10) and Section 2.2.1.3 for a description of Multi-Purpose Open Space Lands.

(f) Per compensation ratios established by the SJMSCP in Section 4.1. See Section 1.1.5 for a summary of compensation ratios.

Source: SJMSCP Table 1-1, page 1-4.

The SJMSCP limits the conversion of Natural Lands to 14,202 acres within 50 years, or not more than 15% of the total acreage of Open Space conversion for SJMSCP permitted activities within and five-year period, whichever is less. The SJMSCP limits the conversion of Natural Lands for both SJMSCP permitted activities and non-SJMSCP permitted activities to 25,912 acres (10% of the existing Natural Lands mapped in San Joaquin County as detailed in Section 2, Table 2-1 of the Plan document) during the 50-year term of the Plan.

The SJMSCP limits the conversions of Agricultural Habitat Lands to 57,635 acres and Multi-Purpose Open Space Lands to 37,465 acres.

In addition to the 71,837 acres of Open Space conversion that will result in Incidental Take, 37,465 acres of Multi-Purpose Open Space Lands are anticipated for conversion. Multi-Purpose Open Space Land conversion is not anticipated to result in Incidental Take, but is addressed in the SJMSCP because of their value for the following purposes:

- common plant, fish, and wildlife species which are not included in the list of SJMSCP covered species;
- recreational areas;
- agricultural use;
- flood control or water regeneration uses,
- scenic areas;
- educational purposes;
- other beneficial open space uses.

Pay-As-You-Go

The requirement for compensation is triggered by new development. The SJMSCP is a “Pay-As-You-Go” Plan. This means that acquisition of Preserve lands will occur when, and at roughly the same pace, that new development occurs. While compensation is not required until development occurs, the Joint Powers Agreement (JPA) is permitted to purchase surplus lands to “get ahead” and establish Preserves in advance of Open Space conversions whenever feasible.

SJMSCP Index Zones

The conservation strategy for the SJMSCP is built upon the division of the County into five (5) distinctive zones:

- Central Zone
- Southwest Zone
- Vernal Pool Zone
- Primary Zone of the Delta
- Southwest/Central Transition Zone.

Each of the SJMSCP Index Zones is distinguished by a discrete association of soil types, water regimes, elevation, topography, and vegetation types.

The City of Manteca is located in the Central Zone. This zone encompasses the lands surrounding each of the County’s seven incorporated cities and most of the County’s unincorporated defined communities. The Central Zone is composed primarily of Agricultural Habitat Lands on the floor of the Central Valley including, primarily, row and field crops both ditched and unditched. The bulk of the County’s Multi-Purpose Open Space Land, in the form of orchards and vineyards, is also located within this Zone. The majority of existing urban

development and proposed new development in the County exists or will exist within the Central Zone.

Coverage Not Included in SJMSCP

Clean Water Act

The SJMSCP does not currently include coverage under the Clean Water Act (CWA) (Gerald Park, SJCOG, personal communication, December 2002 and May 2003). The SJCOG Joint Powers Authority intends to pursue a CWA regional general permit, or equivalent, from the U.S. Army Corps of Engineers. This permit is expected to cover activities which may trigger Section 404 of the Federal Clean Water Act and/or which are subject to the Endangered Species Act. Until issuance of the CWA regional general permit or its equivalent, acquisition of a Section 404 permit by project proponents will continue to occur as required by existing regulations.

There are areas within the Study Area that may contain jurisdictional waters of the United States.

Streambed Alteration (Fish and Game Code Division 2, Chapter 6)

Streambed alteration is not currently covered by the SJMSCP; however, the JMSPC Joint Powers Authority intends to pursue a Programmatic Streambed Alteration Agreement with the California Department of Fish and Game.

Agricultural Activities

Any agricultural activity located on agriculturally zoned land which is not covered by the SJMSCP remains subject to the ESA, CESA, CWA and other state and federal regulations.

Dredging

Dredging activities are not covered by the SJMSCP, except for those dredging activities of limited size already permitted.

Water Diversion and Conveyance

Existing Biological Opinions

Activities currently receiving "Take" authorization under an existing biological opinion are not listed as permitted activities in the SJMSCP.

Study Area Vegetation Types and Habitats

The SJMSCP Biological Analysis identified the following four (4) vegetation types and habitats within the Study Area:

Riparian

The primary area of riparian vegetation and habitat is associated with Walthall Slough. The Slough's northern boundary is contiguous with the southwestern boundary of the Study Area.

There are irrigation water impoundments along State Route 120 in the western portion of the Study Area. These impoundments appear to have been constructed for irrigation runoff from the adjacent farm plots. They function as seasonal wetland vegetation communities. These seasonal wetlands are found within SJMSCP Natural Lands Habitat Open Space areas, shown along State Route 120 in Figure 6-2 above.

There are irrigation and drainage ditches and canals within the Study Area that support riparian vegetation. The major canal within the Study Area is the French Camp Outlet Canal which runs generally north-south along the east side of the Union Pacific Railroad. The lateral drainage ditches empty into the French Camp Outlet Canal. The French Camp Outlet Canal and lateral ditches are periodically cleared of vegetation to remove obstruction to the flow of water.

Croplands

Orchards and Vineyards

Golf Course/Cultivated Parklands

Study Area "Riparian" areas are found in the SJMSCP Natural Lands Habitat Open Spaces, Category D (Shown on Figure 6-2 above).

Study Area "Croplands" are found in the SJMSCP Agricultural Habitat Open Spaces, Category C (shown on Figure 6-2 above).

Study Area "Orchards and Vineyards" and "Golf Course/Cultivated Parkland" are found in the SJMSCP Other Open Spaces, Category B (shown on Figure 6-2 above).

6.2 REGULATORY SETTING

6.2.1 Applicable Federal Regulation

United States Fish and Wildlife Service Regulation

The United States Fish and Wildlife Service (USFWS) implements the Migratory Bird Treaty Act (16 USC Section 703-711), the Federal Endangered Species Act (ESA, 16 USC Section 153 et seq.), and the Bald and Golden Eagle Protection Act (16 USC Section 668).

Migratory Bird Treaty Act (MBTA)

The Federal Migratory Bird Treaty Act implements domestically a series of treaties between the United States and Great Britain (acting for Canada), Mexico, Japan and Russia. The Act, first enacted in 1918, protects international migratory birds, and authorizes the Secretary of the Interior to regulate the “taking” of migratory birds. The USFWS interprets the Act’s protection to be “zero loss” of migratory birds. However, the courts have recognized that liability for birds flying into such obstacles as structures, plate glass windows, and aircraft is unreasonable, and that the test of compliance is good faith and reasonable care. Precedence exists that reasonable mitigation measures are acceptable where complete avoidance of migratory bird loss was infeasible.

Federal Endangered Species Act (ESA)

Section 9 of the ESA prohibits the “take” of federally listed threatened and endangered fish and wildlife species. In general, ESA does not protect listed plants located on nonfederal lands unless such species are already protected by state law. “Take” is defined to include harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 US Government Code 1532, 50 CFR 17.3). Actions that result in a take may result in civil or criminal penalties

Projects that would result in adverse effects on any federally listed threatened or endangered species are required to consult with, and mitigate through consultation, with the USFWS. This consultation can be pursuant to either Section 7 or Section 10 of the Endangered Species Act. Section 7 outlines the procedures for federal interagency cooperation. Federal agencies are required to consult with the USFWS to ensure that their federal projects do not jeopardize a listed species or critical habitat. Section 10 applies when a federal project is not involved, but “take” of a listed species may occur. Section 10 allows the USFWS to permit an incidental take of a listed species if such take is accompanied by a Habitat Conservation Plan (HCP) that includes measures to minimize and mitigate the impact. The objective of consultation is to determine whether the project would jeopardize a protected species, and what mitigation measures would be required to avoid jeopardizing the species. Species that are identified as candidates for listing do not have the full protection of the Endangered Species Act; however, the USFWS advises project applicants that a candidate species could be elevated to listed status at any time.

The ESA requires the development of recovery plans for listed species. The primary goal of USFWS is to restore endangered or threatened animal and plant species to the point that they can be downlisted or delisted. USFWS has no specific legislative mandate to require federal, state, or local agencies, or private entities, to implement tasks for endangered and threatened species recovery; however, the recovery plans indicate potentially “responsible parties” that may be interested in carrying out particular recovery tasks.

U.S. Army Corps of Engineers Regulation

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) has authority to regulate activity that could discharge fill or dredge material, or otherwise adversely modify wetlands or other waters of the United States.

Clean Water Act

The Clean Water Act and the guidelines outlined in a Memorandum of Agreement (MOA) between the Environmental Protection Agency and the Corps dated November 15, 1989, established the goal of restoring and maintaining existing aquatic resources. The MOA directed the Corps (1) to strive to avoid adverse impacts, and offset unavoidable adverse impacts, to existing aquatic resources; and (2) to strive to achieve a goal of “no overall net loss” of the values and functions of wetlands. These guidelines apply to all waters of the United States, and require mitigation based on “values and functions” for all aquatic resources that are impacted.

Waters of the United States include perennial and intermittent streams, their tributaries, lakes, rivers, ponds and adjacent wetlands. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils conditions.”

In 2001, the U.S. Supreme Court ruled that the Corps has jurisdiction only over wetlands that are adjacent to navigable Waters of the United States, interstate water, all other waters where the use, degradation, or destruction could affect interstate or foreign commerce, or tributaries to any of these waters. The Corps has historically claimed jurisdiction over “isolated” water as well. This court ruling also substantially weakened federal protection over non-tidal wetlands that are not part of or adjacent to navigable Waters of the United States. The Corps is currently evaluating its jurisdiction over isolated wetlands on a case-by-case basis.

The Corps has developed a number of nationwide general permits for activities which have only minimal individual and cumulative impacts where the work meets certain criteria and conditions. Nationwide Permits (NWP) cover minor road crossings, utility line backfills, repair of existing structures, bank stabilization, and other routine discharges of dredged or fill material. Some work authorized by nationwide permits requires pre-construction notification, or reporting, and individual water quality certification or a waiver, from the California Regional Water Control Board under Section 401 of the Clean Water Act. Typically, permits issued by the Corps are a condition of a project as mitigation to offset unavoidable impacts on wetlands and other waters of the United States, in a manner that achieves the goal of “no net loss” of wetland acres or values as required by Executive Order 11990.

If the nationwide permit conditions cannot be met, then those projects may be authorized by other general permits or individual permits. The range of project alternatives should include

alternatives that avoid impacts to wetlands or other waters of the United States. When it can be clearly demonstrated that there are no practicable alternatives to filling these waters, mitigation plans should be developed to compensate for the project impacts.

On January 15, 2002, the Corps announced the re-issuance of all existing NWP's to be effective on March 18, 2002 and to expire on March 19, 2007. The new NWP's maintain the less-than-one-half acre average threshold for use of NWP's, as previously modified in March of 2000, when the Corps reduced the acreage threshold from three (3) acres to one-half (1/2) acre. Therefore, any project that impacts more than one-half acre of wetlands will require an individual permit. Also, any project that impacts more than 300 linear feet of streambed will require an individual permit.

6.2.2 Applicable State Regulation

California Department of Fish and Game Regulation

The California Department of Fish and Game (CDFG) derives its authority from the Fish and Game Code of California. Species listed under the California Endangered Species Act (CESA) cannot be "taken" without adequate mitigation and compensation.

The CESA definition for take is defined as any activity that would directly or indirectly kill an individual of a species, but does not include "harm" or "harass" as in the FESA. As a result, habitat modification is not necessarily considered a take under CESA. The take of state-listed species requires an incidental take permit under the Fish and Game Code Section 2081. CDFG also coordinates with USFWS during the Section 10 process to make the federal permit consistent with CESA.

CDFG receives its authority to designate and protect rare plants under the California Native Plant Protection Act of 1977 (CDFG Code Section 1900 et seq.). CEQA Guidelines Section 15380 defines "rare" in a broader sense than the definitions of threatened, endangered, or species of special concern. Guidelines issued by the Director of CDFG state that plants in the California Native Plant Society (CNPS) 1B category fulfill the criteria of "rare" under Section 15380 of the CEQA Guidelines, and should be included in environmental impact reports and mitigations. CDFG guidelines do not carry the obligations of law or regulation, but CDFG views this policy as a means to avoid project delays in addressing species issues of which the applicant was not formerly notified. CDFG can request additional consideration of species not otherwise protected under this definition.

Fish and Game Code Section 3511 describes bird species, primarily raptors, which are "fully protected." These birds may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds of prey, and their eggs and nests.

Section 1601 through 1607 of the CDFG Code prohibit all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources, without the consent of CDFG. The limit of CDFG jurisdiction is up to the 100-year flood level. This would apply to any channel modifications that would be required to meet drainage, transportation, or flood-control objects of the projects.

Species of Special Concern (CSC) is a category conferred by CDFG for those species which are considered to be indicators of regional habitat changes, or are considered to be potential future protected species. CSC do not have any special legal status, but are intended by CDFG for use as a management tool to take these species into special consideration when decisions are made concerning the future of any land parcel.

California Endangered Species Act (CESA)

The California Endangered Species Act (Fish and Game Code Section 2050 et seq.) is similar to the Federal ESA, but it pertains to state-listed endangered and threatened plant and wildlife species. CESA requires state agencies to consult with the California Department of Fish and Game (CDFG) when preparing CEQA documents in order to ensure that lead agency actions do not jeopardize listed species. It directs agencies to consult with CDFG on projects or actions that could affect listed species, directs CDFG to determine whether jeopardy would occur, and allows CDFG to identify “reasonable and prudent alternatives” to a project consistent with conserving the species. A lead agency can approve a project that affects a listed species if it is determined that there are “overriding considerations;” however, agencies are prohibited from approving projects that would cause the extinction of a listed species. At this time, based upon the opinion of the California Attorney General’s Office, “take” does not prohibit indirect harm by way of habitat modification.

6.2.3 City of Manteca 1988 General Plan

The Natural Resources Element (Section VI) of the existing 1988 General Plan includes the following Goal and Policies which intend to protect, preserve, and enhance biological resources in the City of Manteca:

Goal C To protect sensitive native vegetation and wildlife communities and habitat in the Manteca Area.

- Policy C-1 The City shall attempt to ensure in approving new development that its impact on native vegetation and wildlife will be minimized.

- Policy C-2 New development in the vicinity of the San Joaquin River shall be conditioned to promote and protect riparian, wetlands, and other native vegetation and wildlife communities and habitats.

Policy C-3 The City shall discourage the removal of existing mature trees (both native and introduced).

6.3 **IMPACT EVALUATION CRITERIA**

In accordance with CEQA Guidelines, Appendix G, the proposed project would have a significant adverse impact on the environment if the project would:

- 1) have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- 2) have a substantial 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 U.S. Fish and Wildlife Service;
- 3) 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;
- 4) interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- 5) conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

6.4 **IMPACTS AND MITIGATION**

POTENTIAL IMPACT B-1: Implementation of the General Plan 2023 (proposed project) could result in the loss of identified special status species.

Increased development within the Study Area could lead to the loss of habitat and individuals of special status species.

The special status species identified by the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB) as occurring, or potentially occurring, within or adjacent to the Study Area are shown in Figure 6-1. The general locations of the potential special status species within the Study Area are shown in Figure 6-1. These six (6) special status species are covered by the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).

Level of Significance: Potentially Significant

Mitigation Measures:

B-1.1 The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following policies (P) and implementation (I) measures to protect and maintain special status species.

RC-P-29 Minimize impact of new development on native vegetation and wildlife.

RC-P-34 Protect special status species and other species that are sensitive to human activities.

RC-I-32 Continue to support and comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) when reviewing proposed public and private land use changes.

RC-I-33 Project proponents who opt not to participate in the SJMSCP shall:
Satisfy applicable U.S. Endangered Species Act (ESA), California Endangered Species Act (CESA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and other applicable local, state, and federal laws and regulation provisions through consultations with the Permitting Agencies and local planning agencies.

Provide site-specific research and ground surveys for proposed development projects. This research must include a detailed inventory of all biological resources onsite, and appropriate mitigation measures for avoiding or reducing impact to these biological resources. This requirement may be waived if determined by the City that the proposed project area is already sufficiently surveyed.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above policies and implementation measures are implemented.

Compliance with the SJMSCP will mitigate the impact to these covered special status species. Project proponents who opt not to participate in the SJMSCP must mitigate any impact to these

special status species through the “project-by-project” evaluation and mitigation process with each permitting agency. The major permitting agencies are discussed above in Section 6.2.

POTENTIAL IMPACT B-2: Implementation of the City of Manteca General Plan 2023 could result in the loss of riparian habitat or other sensitive natural communities.

Increased development within the Study Area could lead to the loss of riparian habitat or other sensitive natural communities.

A major area of riparian habitat is ~~approximately four (4) miles outside~~ located on the west side of the Study Area along the San Joaquin River. The riparian vegetation along Walthall Slough is contiguous with the southwestern Study Area boundary. This area of the proposed General Plan 2023 will be left undisturbed in open space.

The seasonal wetland areas (impounded irrigation runoff) along State Route 120 in the western portion of the Study Area also support riparian vegetation and associated wildlife. These wetland areas are located within the SJMSCP Natural Lands Habitat Open Space category. The General Plan 2023 proposes business/industrial park, commercial, and public/quasi-public/utility land uses near these seasonal wetlands.

Level of Significance: Potentially Significant

Mitigation Measures:

B-2.1: The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following goal, policies (P), and implementation (I) measures to protect and maintain riparian and other sensitive habitats.

- Goal RC-10 Protect sensitive native vegetation and wildlife communities and habitat in Manteca.
- RC-P-32 Condition new development in the vicinity of the San Joaquin River and Walthall Slough to ~~promote and~~ protect riparian habitat, wetlands, and other native vegetation and wildlife community.
- RC-P-36 Consider the development of new drainage channels planted with native vegetation, which would provide habitat as well as drainage.
- RC-I-32 Continue to support and comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) when reviewing proposed public and private land use changes.

RC-I-33 Project proponents who opt not to participate in the SJMSCP shall:

Satisfy applicable U.S. Endangered Species Act (ESA), California Endangered Species Act (CESA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and other applicable local, state, and federal laws and regulation provisions through consultations with the Permitting Agencies and local planning agencies.

Provide site-specific research and ground surveys for proposed development projects. This research must include a detailed inventory of all biological resources onsite, and appropriate mitigation measures for avoiding or reducing impact to these biological resources. This requirement may be waived if determined by the City that the proposed project area is already sufficiently surveyed.

RC-I-36 Limit the access of pedestrians and cyclists to wetland areas so that access is compatible with long-term protection of these natural resources.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above goal, policies, and implementation measures are implemented.

The proposed General Plan 2023 protects the riparian habitat associated with Walthall Slough by designating the contiguous Study Area land as “open space.” Policy RC-P-32 further protects this important riparian habitat area by placing conditions upon new development in the vicinity.

Possible impacts to the seasonal wetlands along State Route 120 are covered by the SJMSCP Natural Lands Habitat Open Space category. Project proponents who opt not to participate in SJMSCP coverage will be required to conduct site-specific investigations, and to protect such areas through the “project-by-project” evaluation and mitigation process with each permitting agency.

POTENTIAL IMPACT B-3: The General Plan 2023 may have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, or hydrological interruption.

Federally protected (jurisdictional) “waters of the United States” include perennial and intermittent streams, their tributaries, lakes, rivers, ponds and adjacent wetlands. Impoundments of these waters may also be jurisdictional. Wetlands are defined as “those areas that are

inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils conditions.”

The SJMSCP does not currently include coverage under the Clean Water Act (CWA). The SJCOG Joint Powers Authority intends to pursue a CWA regional general permit, or equivalent, from the U.S. Army Corps of Engineers. This permit is expected to cover activities which may trigger Section 404 of the Federal Clean Water Act and/or which are subject to the Endangered Species Act.

The proposed land use adjacent to the Walthall is open space; therefore, this tributary to the San Joaquin River should not be adversely impacted by implementation of the General Plan 2023.

There are no free-running streams or natural bodies of water within the Study Area. The majority of the Study Area has been historically leveled and any naturally occurring drainages have been channelized or otherwise disturbed. Some of the numerous Study Area irrigation and drainage ditches/canals support riparian vegetation. The irrigation runoff impoundments along State Route 120 on the west side of the Study Area function as seasonal wetlands. If the Corps determines that the irrigation and drainage ditches/canals, or the irrigation water impoundments on the western edge of the Study Area represent waters “adjacent” to the San Joaquin River, these features would be regulated pursuant to Section 404.

No vernal pools are recorded by the SJMSCP within the Study Area.

Level of Significance: Potentially Significant

Mitigation Measures:

B-3.1: The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following implementation (I) measure to protect federally protected wetlands.

RC-I-34 Until such time that a Clean Water Act regional general permit or its equivalent is issued for coverage under the SJMSCP, acquisition of a Section 404 permit by project proponents will continue to occur as required by existing regulations. Project proponents shall comply with all requirements for protecting federally protected wetlands.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above implementation measure is implemented.

If the Corps determines that there are jurisdictional waters within the Study Area, project proponents in those areas must pursue required permits. If the nationwide permit conditions cannot be met, then those projects may be authorized by other general or individual permits. The range of project alternatives must include alternatives that avoid impacts to the jurisdictional wetlands. When it can be clearly demonstrated that there are no practicable alternatives to filling these waters, mitigation plans must be developed to compensate for the project impacts.

POTENTIAL IMPACT B-4: Implementation of the General Plan 2023 could substantially interfere with the movement of wildlife species or with established native or migratory wildlife corridors.

The urban/suburban central area of the Study Area is surrounded by intensely farmed agricultural fields and orchards. There are no known native wildlife corridors passing through this developed and intensely farmed Study Area. However, some species of birds may forage in the agricultural fields during migration.

Level of Significance: Potentially Significant

Mitigation Measures:

B-4.1: The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following implementation (I) measures to reduce the impact of loss of agricultural lands to foraging migratory birds.

RC-I-32 Continue to support and comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).

RC-I-33 Project proponents who opt not to participate in the SJMSCP shall:
Satisfy applicable U.S. Endangered Species Act (ESA), California Endangered Species Act (CESA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and other applicable local, state, and federal laws and regulation provisions through consultations with the Permitting Agencies and local planning agencies.

Provide site-specific research and ground surveys for proposed development projects. This research must include a detailed inventory of all biological resources onsite, and appropriate mitigation measures for avoiding or reducing impact to these biological resources. This requirement may be waived if determined by the City that the proposed project area is already sufficiently surveyed.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above implementation measures are implemented.

Compliance with the SJMSCP will mitigate the loss of agricultural lands to any foraging migratory birds. As a SJMSCP participating agency, the U.S. Fish and Wildlife Service will administer the Migratory Bird Treat Act (MBTA).

Project proponents who opt not to participate in the SJMSCP must mitigate any such impact through the “project-by-project” evaluation and mitigation process with each permitting agency, including the U.S. Fish and Wildlife Service.

POTENTIAL IMPACT B-5: Impacts on biological resources from the buildout of the General Plan 2023 may be cumulatively significant.

Level of Significance: Potentially Significant

The impact of expanding urban development on biological resources is cumulatively significant. Mitigating this cumulative impact is the major objective of the SJMSCP.

Mitigation Measures:

B-5.1: The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following implementation (I) measures to reduce the impact of expanding urban development on biological resources.

RC-I-32 Continue to support and comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) when reviewing proposed public and private land use changes.

RC-I-33 Project proponents who opt not to participate in the SJMSCP shall:

Satisfy applicable U.S. Endangered Species Act (ESA), California Endangered Species Act (CESA), National Environmental Policy Act

(NEPA), California Environmental Quality Act (CEQA), and other applicable local, state, and federal laws and regulation provisions through consultations with the Permitting Agencies and local planning agencies.

Provide site-specific research and ground surveys for proposed development projects. This research must include a detailed inventory of all biological resources onsite, and appropriate mitigation measures for avoiding or reducing impact to these biological resources. This requirement may be waived if determined by the City that the proposed project area is already sufficiently surveyed.

Residual Level of Significance: Significant

~~Given the voluntary nature of participation in the SJMSCP, the level of significance cannot be mitigated to less than significant.~~ The SJMSCP is, in effect, a plan to mitigate both the site specific and the cumulative impacts of individual projects on biological resources within San Joaquin County. If all project proponents opted to participate in the SJMSCP, cumulative effects of the buildout of the General Plan 2023 could be mitigated to a less than significant level. However, it cannot be assumed that all project proponents will opt to participate in the SJMSCP. Any project proponent who opts against participating in the Plan will be proceeding under the “project-by-project” evaluation and mitigation process with each permitting agency. Since project-by-project evaluation cannot reasonably foresee the overall effects on biological resources of individual projects under multiple agency control, cumulative impacts may result.

References

- (1) California Department of Fish and Game (CDFG), California Natural Diversity Database (CNDDDB)
- (2) U.S. Fish and Wildlife Service (USFWS), Sacramento Fish and Wildlife Office, Special Status Species of the Manteca Area Quadrangles and San Joaquin County.
- (3) “San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).” San Joaquin County Council of Governments et al, November 14, 2000.

- (4) “Draft Joint EIR/EIS for the Approval and Implementation of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (JMSCP).” San Joaquin County Council of Governments et al, September 23, 1999.

- (5) “Final Joint EIR/EIS for the Approval and Implementation of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (JMSCP).” San Joaquin County Council of Governments et al, November 5, 2000.

7. CULTURAL RESOURCES

This section summarizes known historical and archaeological resources within and adjacent to the Study Area. Potential impacts to cultural resources resulting from implementation of the proposed General Plan 2023 are identified.

This section is based upon and incorporates a cultural resources report authored by Ric Windmiller, Consulting Archaeologist, entitled “City of Manteca – General Plan Update: Background Report on Archaeological Resources and Historical Resources.” Mr. Windmiller’s research includes a record search requested from the Central California Information Center, California State University, Stanislaus, and a 1982 unpublished City of Manteca Historical Survey.

7.1 EXISTING CONDITIONS

7.1.1 Information Resources

The 1988 General Plan contained a survey from the Central California Information Center of the California Archaeological Inventory. The record searches were completed on October 25, 1985 and February 28, 1986. The searches revealed that three archaeological Native American occupation sites were located within the Study Area near the San Joaquin River.

However, it was noted that since cultural resource records for all counties in California were based on incomplete surface and subsurface archaeological and historic investigation, the apparent absence of cultural resources may not be indicative of the actual number, significance, age, or condition of cultural and archaeological resources present in the study area.

The General Plan 2023 record search identified only eight (8) recorded cultural archaeological resources for the Manteca General Plan Study Area:

1. Prehistoric Village and burial site overlain by a historic settlement site.
2. Segments of the Tidewater-Southern Railroad (later, Union Pacific)
3. Segment of the Western Pacific Railroad mainline.
4. Segment of Canal T and Drainage Canal, Southern San Joaquin Irrigation District.
5. Segment of Canal R, Southern San Joaquin Irrigation District.
6. Segment of Drainage Canal, Southern San Joaquin Irrigation District.
7. Historic Cemetery.

8. Kaiser Permanente Metals Corporation Magnesium Plant complex.

7.1.2 Archaeology (Prehistory and Ethnography)

The prehistory of the Manteca area is based on the archaeology of the greater Sacramento Delta region. The earliest known culture dating back to the Middle Archaic of 3000 B.C. was that of hunter-gatherers who buried their dead on clay knolls above the flood plains. The villages of these early settlers were located along the Central Valley's creeks, rivers and delta. The Bear Creek site, located in Stockton, is one example of a Middle Archaic site, which was excavated by archaeologists in the early 1960's.

Prehistoric settlement along the Central Valley's rivers and delta area coincide with the formation of the delta marshlands. At the end of the last ice age, the sea level rose as the continental ice sheets melted. By 8,000 years ago, marine waters began invading the depression that is now San Francisco Bay.

However, archaeologists have uncovered evidence of a much earlier culture in the region between the Valley rivers and delta, and the Sierra Foothills. At the eastern edge of the San Joaquin Valley near Farmington, scholars found stone tools eroding from cobble and gravel stream terraces that date back 7,000 to 9,000 years. The bearers of the Farmington tools would have been contemporaries of the Lower Archaic cultures that adapted to lake, marsh and grasslands along the eastern side of the Sierra Nevada.

Between 6000 and 3000 B.C., many pluvial lakes across the western United States became dry playas as a result of a general warming and drying trend. Between 4000 and 2000 BC, it is probable that Hokan languages were spoken in much of California. However, with increased aridity east of the Sierra, speakers of Penutian languages apparently began moving from the deserts of the northwestern Great Basin and southern Columbia Plateau into northern California.

Between 2000 and 500 B.C., Utian-speaking populations appear to have occupied the Sacramento Delta, the areas along rivers and streams, marshlands, as well as the hills on both the east and west sides of the Sacramento Valley. Expansion westward into the San Francisco Bay area seems to have brought about some type of fusion between the bearers of Utian languages and the resident speakers of Hokan and Yukian languages.

A relatively rapid climatic shift after 400 A.D. coincided with dramatic changes in prehistoric California cultures. It was during this period that ancestral Yokuts-speaking people, members of the Utian language family, probably abandoned foothill areas and congregated at villages near delta waterways. Relatively cool and moist climatic conditions from 1450 to 1850 A.D. coincided with population growth and florescence of native cultures. By the 1600s and 1700s, Yokuts-speaking people held nearly the entire San Joaquin Valley.

Manteca lies between the historic territory of the Chulamni and Lakisamne Yokuts tribelets. It is unfortunate that so little is known with respect to ethnography and archaeology in the northern

San Joaquin Valley. Because the native people were decimated by disease, missionization, and effects of the Gold Rush, it was too late for anthropologists to gather much useful information from the native people themselves.

Nonetheless, scholars have characterized the core of the Northern Valley Yokuts' homeland as the San Joaquin River with its maze of channels and sloughs. Yokuts villages consisted of dwellings oval in shape, constructed of light poles pulled together at the top, and covered with tule mats. Earth-covered "sweat houses" and earth-covered ceremonial lodges were also constructed in the villages.

Salmon and acorns figured prominently in the Yokuts diet, as noted in archaeological excavations at Yokuts village sites. Fish of all kinds were taken by nets and by harpoons. Yokuts fished from boats made of bundled tules. The Yokuts people also hunted waterfowl. Scholars suggest that although elk and antelope were abundant, Northern Valley Yokuts seem to have focused on smaller game, and gathered acorns, tule roots and other wild crops.

7.1.3 Cultural History

The first Europeans to arrive in the area, in 1769, were deserters from the Spanish military. In 1813, Spanish Franciscan friars, accompanied by soldiers, entered the San Joaquin Valley to round up the deserters, convert the Native Americans to Catholicism, and search for suitable mission sites. Although the Yokuts at first coexisted with the Europeans, they were eventually exploited by the newcomers and fought with the settlers. Two notable conflicts took place on the banks of the Stanislaus River, about one and one-half miles upstream from its confluence with the San Joaquin River. In the first battle on May 5, 1829, the combined Spanish forces from San Jose and San Francisco were defeated by the Indians, lead by Chief Estanislao. The Spanish later named the Stanislaus River after the Indian chief. General Vallejo returned to the area and on May 19, 1829, defeated the Yokuts, inflicting great losses.

In 1832, Colonel Warner, a member of a trapping expedition, reported finding numerous Indian villages along the San Joaquin River. Upon his return, he found the villages greatly depopulated due to a smallpox epidemic. Disease, war, and the displacement of Indians from their original hunting and fishing grounds had brought them to virtual extinction

Euro-American settlements in California increased sharply with the Gold Rush of 1848. French Camp, located approximately two miles north of the study area, was one of these first settlements and is one of the oldest existing settlements in San Joaquin County. French Camp was the terminus of the Oregon-California Trail used by French Canadian trappers employed by the Hudson Bay Company from about 1832-1845. On January 14, 1844, the Governor of California issued a land grant to Charles Weber and William Gulnac. The grant included French Camp and present day Stockton.

The first structures, including a public house, store, and adobe structure were erected in French Camp in August 1849. French Camp grew rapidly between 1851 and 1853 as French Camp Road was the only passable all-weather route for thousands of miners working in the Mother Lode. By 1854, a post office was established. As roads between Stockton and the Mother Lode improved, business in French Camp declined.

In addition to the discovery of gold in 1848 and the start of the Gold Rush in 1849, American annexation of California in 1846 and California statehood in 1850 contributed to the transformation of the Manteca area.

Many gold seekers of 1850 turned their attention to the soil when they realized gold would not earn them a living.

Ranchers who remained prominent in local agriculture for decades – John McMullin, Cutler Salmon, James Reynolds, Peter Clapp, George and Orseamis Sperry, and Joshua Cowell – were all well established by the mid-1860s.

The major outside influence on the area changed from gold mining in the Sierra Foothills, which slowed in the 1860s, to the railroad, which arrived in the 1870s. Lathrop, at the junction of two rail lines heading to Stockton, replaced French Camp as the Manteca area's major town. Manteca did not yet exist, although the railroad set up a flag stop, Powell's Station, at the present location of downtown. Community life within Manteca's present City limits focused on the corner of Louise Avenue and Union Road. The East Union School was moved there in 1857. A new school building, erected in 1865, had a second floor for church services and public events. A cemetery was established on another corner in 1872, and a church was constructed on a third corner in 1885.

The economy of Manteca was tied to the vast international grain combine. When prices collapsed in the 1890's, the entire country descended into a severe economic depression. To stay in business, local ranchers promoted irrigation for their farmland, which allowed more intense and more profitable use of the land. In 1909, the South San Joaquin Irrigation District was formed. The district delivered its first water in 1913.

Another agricultural development of the period was deeper land cultivation. This practice led to a widespread cultivation of watermelons on local ranches.

Cowell's Station, at first just an unwheeled boxcar, became the shipping point for local produce. It offered a convenient place at the junction of tow wagon roads. In 1896, a skimming station for raw milk was added. Additional enterprises followed. Soon, the Southern Pacific acknowledged the growing commercial activity by giving its station a more formal name, "Manteca", and replaced the boxcar with a small building.

Between 1905 and 1911, Manteca's downtown was the site for its first brick building, a winery, followed by its first telephone exchange, a post office and a hotel, the town's first two-story

building. A board of trade was set up on 1909. In 1910, a branch library and the town's first lumberyard were opened. Manteca was electrified in 1911, along with construction of a bank, a larger train depot, a pair of two-story brick buildings, and concrete sidewalks.

In 1914, the Manteca Canning Company was founded and a large plant for dairy products opened. In the next few years, three more canneries went into operation. In 1916, the Board of Trade succeeded in bringing a Spreckels sugar factory to town. The new plant, complete with office buildings, a clubhouse, landscaped grounds, and housing, opened in 1918.

The City of Manteca was incorporated on May 28, 1918.

Residential neighborhoods, laid out on an irregular north-south grid, were beginning to fill in by 1918. In just ten (10) years, Manteca grew from a few buildings around a railroad stop to a full-fledged city with public services, manufacturing facilities, and more than 60 businesses.

Residential construction continued strong in the 1920s. Weaknesses in Manteca's agricultural base slowed the town's growth. Despite setbacks, the town continued to grow. Its population rose 25 percent during the 1920s. The economic depression of the 1930s did not prevent further growth. A restart of the Spreckels Company's sugar plant and the opening of a Kraft Foods cheese factory boosted the local economy.

The United States as a whole enjoyed unprecedented prosperity after the end of World War II, and Manteca was no exception. During the 1950's, the City grew even faster, as Manteca's inexpensive housing and small-town atmosphere drew workers from the Sharpe Army Depot in Lathrop and industrial plants in outlying areas.

At various times in its history, Manteca has been known as the "watermelon capital of the world", "sugar beet town," "tomatoville," "sunflower center," and "dairy center of California".

7.1.4 Historical Resources

Current information on Manteca's historical resources is scattered and incomplete. One survey has produced a thorough analysis of buildings near the intersection of East Yosemite Avenue and Austin Road. Another provides preliminary information on ranch structures south of town. The State Historic Resources Inventory also has entries for four small downtown commercial buildings. In addition, the Manteca Historical Society has recognized sixteen important buildings and sites on its "Historical Walking Trail." The most useful source is probably Manteca: Selected Chapters from Its History, by Evelyn Prouty, which furnishes information on many historic properties that were still standing at the time of publication in 1980.

Commercial and Industrial Resources

Manteca has perhaps 100 commercial buildings remaining from the period before 1960. Nearly all are arrayed along Yosemite Avenue and crossing streets. These buildings include the former Jacot Department Store (1911), Oddfellows Hall (1911), the former Wiggin Hotel (1908), and the Pacific Motel (circa 1935).

The number of industrial buildings from the period is much smaller. Most are on Oak Street. Facing Oak Street are the two most important remaining buildings, and the only ones constructed of brick: Archille Bacilieri's old winery (1905) and former Kraft Cheese Factory (1937). A few other buildings, corrugated metal with no architectural detailing, also remain in the area.

Institutional Resources

Manteca retains a number of civic and religious buildings constructed in the 1950s and earlier. All of the major government buildings remain in altered form, including the former Irrigation District Headquarters (circa 1922), City Hall (1923), and Post Office (1939).

The schools, when they have survived, have fared much better. The most striking is the Lindbergh School (1928); a well executed example of the Late Gothic Revival. Two school buildings constructed after World War II – Lincoln School (1948) and Yosemite School (1950) – illustrate small-scale International Style design from the period. The small and apparently unaltered American Legion Hall (circa 1925) represents no architectural style but has vaguely classical detailing.

The most notable remaining church building is the former First Methodist Episcopal Church (1918), now home of the Manteca Historical Society. The building has a simple Gothic Revival design, which has been weakened somewhat by the application of plastic siding.

Residential Resources

Manteca has a fairly diverse collection of residential buildings. Nearly all have wood frames and were built for single families. Most have only one story and represent architectural styles or design ideas popular at the time of their construction. Those dating from before 1955 were usually constructed individually. Because most blocks filled in over several decades, houses of different ages and styles often sit on adjacent parcels. Manteca's old residential neighborhoods do not differ much from one another, though there may be a few more large houses northwest of downtown than elsewhere.

The older remaining houses date from after the turn of the last century. They are small, unadorned, and very few in number. The simple hipped-roofed cottage (circa 1905) on Willow Avenue may be the oldest house in the City.

By 1910, when substantial residential construction got underway in Manteca, the Craftsman style had come into vogue throughout California. An informal, often sprawling appearance typifies this style, which got its start in the Los Angeles area.

After World War I, so-called “period revival” styles enjoyed great popularity in California. Houses in these styles emulated those that were built in Europe in earlier times. The Tudor Revival proved the most popular in Manteca, probably because houses in this style could be small and inexpensive.

A revival to the period styles of the 1920s was the California Bungalow. Houses of this type resembled simplified Craftsman buildings.

California saw the arrival of modern styles in the 1930’s and 1940’s, most notably the California Ranch House and the International Style. Manteca also has a number of houses from this period.

Nearly all residential buildings in Manteca are single-family houses, with a few duplexes put up around World War II. Actual apartment houses were seldom constructed. One of Manteca’s most striking buildings, however, was always intended for multiple occupancy: the ten-unit Walser or Sherman Apartments (circa 1920) on North Sherman Avenue.

Resources in Outlying Areas

Most resources outside the City Limits but within Manteca’s present Study Area are connected to agriculture. By 1950, the number of large farm structures (houses, barns, water tanks) within the area might well have totaled 200. Maybe half remain today. A few date from the late nineteenth century, when wheat dominated local agriculture. The most notable of these structures have been well documented by historians. Most outlying agricultural buildings, however, come from the era of dairying and the raising of orchard crops. Some ranches are still in operation.

Other resources outside the City Limits include a few school buildings arrayed along Airport Way and East Yosemite Avenue in East Manteca. Structures associated with the South San Joaquin Irrigation District may also remain.

7.1.5 Records Search

A record search by the Central California Information Center, California Historical Resources Information Systems was completed on October 22, 2001. The following outlines the results of that record search.

7.1.6 Historic Buildings

The Information Center’s records search identified (10) buildings and structures previously recorded within the Manteca General Plan Study Area:

1. Jesse Building
2. Warren's Shoes
3. Manteca Drug
4. Home Run Hot Dogs
5. Craftsman Style bungalow, constructed in the late 1920s
6. Spanish Colonial Revival Style home, constructed in 1947
7. Craftsman Style bungalow, constructed circa 1930
8. Craftsman Style bungalow, constructed circa 1915
9. Period Revival Style house with minor Spanish Colonial Revival influences, constructed circa 1930
10. Calla High School

7.1.7 Historic Ranches

The Information Center's records search indicated that Thompson and West's History of San Joaquin County (1879) documented 24 historic ranches within Castoria Township that are also within the Manteca General Plan Study Area.

7.1.8 Cultural Resources Known to Have Value to Local Cultural Groups

The Central California Information Center's search of its records included a search for cultural resources known to have value to local ethnic and other groups. The results of that search were negative; no such cultural resources have been reported to the information center.

7.2 REGULATORY SETTING

Cultural resources are protected and managed in California primarily by the California Environmental Quality Act (CEQA), the State Historic Preservation Office (SHPO), and the National Historic Preservation Act (NHPA) of 1966.

7.2.1 Applicable Federal Regulations

National Historic Preservation Act (NHPA) of 1966

The NHPA includes and provides for:

- Advisory Council on Historic Preservation (ACHP) which is authorized by the Secretary of the Interior to maintain the National Register of Historic Places (NRHP);
- approval by the Secretary of the Interior of state historic preservation programs that provide for a State Historic Preservation Officer (SHPO); and
- a National Historic Preservation Fund program.

Section 106 of the NHPA requires that federal agencies take into account the impacts of their actions on properties that may be eligible for or listed on the NRHP, and provide the ACHP the opportunity to comment. All cultural sites that could be affected must be inventoried and evaluated for inclusion on the NRHP.

7.2.2 Applicable State Regulations

California Environmental Quality Act

Before discretionary projects are approved, the potential for significant impacts of the project on archaeological and historical resources must be considered under CEQA.

State archaeological and historic preservation regulations include CEQA Statutes and CEQA Guidelines (including Public Resources Code Sections 21083.2 and 21084.1, and Sections 15064.5 and 15126.4 of the CEQA Guidelines). CEQA requires lead agencies to carefully consider the potential effects of a project on historical resources. 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 disposal of those remains (California Health and Safety Code Section 7050.5, California Public Resources Code Sections 5097.94 et seq.).

CEQA Section 21083.2 states,

“...the lead agency shall determine whether the project may have a significant effect on archaeological resources. If the lead agency determines that the project may have a significant effect on unique archaeological resources, the environmental impact report shall address the issue of those resources. An environmental impact report, if otherwise necessary, shall not address the issue of nonunique archaeological resources.” (Section 21083.2(a))

CEQA Section 21083.2 continues,

“...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 types or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.” (Section 21083.2(g))

CEQA Section 21084.1 states,

“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...an historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources...The fact that a resource is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local register of historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 shall not preclude a lead agency from determining whether the resource may be an historical resource for purposes of this section.”

Under the CEQA Guidelines in Section 15064.5, a “historical resource” includes: a resource listed in or eligible for the California Register of Historical Resources; or listed in a local register of historical resources; or identified in a historical resource survey and meeting requirements in Section 5024.1(g) of the Public Resources Code; or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines historically significant, provided the determination is supported by substantial evidence in light of the whole record; or a resource so determined by a lead agency as defined in Public Resources Code 5020.1(1) or 5024.1.

Under CEQA Guidelines Section 15064.5(b), “(a) project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” Substantial adverse change is physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired (CEQA Guidelines Section 15064.5(b)(2)).

While alteration of the setting of an archaeological site that is eligible only for its information potential may not affect the site’s significant characteristics, alteration of a property’s location (i.e., removing or damaging all or part of the site) may have a significant adverse effect.

CEQA Guidelines Section 15126.4(b)(3) state that, “(p)ublic agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature.” The guidelines further state that preservation in place is the preferred manner of mitigating impacts, and that preservation “may be accomplished by, but is not limited to, the following:

1. Planning construction to avoid archaeological sites;
2. Incorporation of sites within parks, greenspace, or other open space;
3. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site; and
4. Deeding the site into a permanent conservation easement.”

CEQA Guidelines require that, “when data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared

and adopted prior to any excavation being undertaken (Section 15126.4(b)(3)(C)).” However, “data recovery shall not be required for a historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource (CEQA Guidelines, Section 15126.4(b)(3)(D)).”

California Historic Register

The State Historic Preservation Office (SHPO) maintains the California State Register of Historic Resources (CRHR). Properties that are listed on the National Register of Historic Properties (NRHP) are automatically listed on the CRHR, along with State Landmarks and Points of Interest. The CRHR can also include properties designated under local ordinances or identified through local historical resource surveys.

Under the California Environmental Quality Act (CEQA), historical resources are recognized as a part of the environment (Public Resources Code 21001(b), 21083.2, 21084(e), 21084.1). A “historical resource” includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant, or important in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California (Public Resources Code 5020.1).

The Public Resources Code affects historical resources and created the California Register of Historical Resources and the State Office of Historical Preservation (Public Resources Code Sections 5020.4, 5024.1, and 5024.6).

The California Register is an authoritative listing and guide for state and local agencies and private groups and citizens in identifying historical resources. This listing and guide indicates which resources should be protected from substantial adverse change. The California Register includes historical resources that are listed automatically by virtue of their appearance on or eligibility for certain other lists of important resources. The Register includes historical resources that have been nominated by application and listed after public hearing. Also included are historical resources listed as a result of an evaluation by specific criteria and procedures adopted by the State Historical Resource Commission, similar to those developed by the National Park Service for the National Register of Historic Places. However, criteria of eligibility for the California Register were reworded to better reflect California history.

Any building, site, structure, object or historic district meeting one or more of the following criteria may be eligible for listing in the California Register:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

2. It is associated with the lives of persons important to local, California, or national history;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Eligibility for the California Register also depends on the integrity, or the survival of characteristics of the resource that existed during its period of significance. Eligible historic resources must not only meet one of the above criteria, but also they must retain enough of their historic character or appearance to convey the reasons for their importance, or retain the potential to yield significant scientific or historical information or specific data.

Like the process of evaluating historical resources for National Register eligibility, California Register evaluations include the consideration of seven aspects of integrity: location, design, setting, materials, workmanship, feeling and association. The evaluation of integrity must be judged with reference to the particular criterion or criteria under which a resource may be eligible for the California Register. However, the implementing regulations specifically caution that alterations of a historic resource over time may themselves have historical, cultural or architectural significance.

Most often, historical resources eligible for the California Register will be 50 years old or older. However, the new implementing regulations stipulate that “a resource less than fifty (50) years old may be considered for listing in the California Register if it can be demonstrated that sufficient time has passed to understand its historical importance.”

Each register uses similar criteria, and sites eligible for CRHR listing are also potentially eligible for inclusion on the NRHP.

Private Properties

While public agencies are required to consider the effects of their actions on properties listed on the NRCP and CRHR, no comparable provisions exist for listed properties owned by private individuals, organizations, or agencies. Consequently, the preservation of such properties or the mitigation of potentially adverse impacts are not required. However, both private and public owners of listed properties may be eligible to receive financial incentives for preservation or restoration.

7.2.3 City of Manteca 1988 General Plan

The Recreational and Cultural Resources Element (Section V) of the existing 1988 General Plan includes the following Goal and Policies, and Implementation Measures which intend to protect, preserve, and enhance the cultural resources of the City of Manteca:

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- Goal E To preserve and enhance Manteca’s historical heritage.
- Policy E-1 The City shall set as a high priority the protection and enhancement of Manteca’s historically and architecturally significant buildings.
- Policy E-2 The City shall work with property owners in seeking registration of historical structures as State Historic Landmarks or listing on the Federal Register of Historic sites.
- Policy E-3 The City shall prepare and adopt a Historical Preservation Ordinance.
- Policy E-4 The City and Redevelopment Agency shall support the efforts of property owners to preserve and renovate historic and architecturally significant structures. Where such buildings cannot be preserved in tact, the City shall seek to preserve the building facades.
- Goal F To protect Manteca’s Native American heritage.
- Policy F-1 The City shall not knowingly approve any public or private project that may adversely affect an archaeological site without consulting the California Archaeological Inventory at Stanislaus State University, conducting a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendations of a qualified archaeologist. City implementation of this policy shall be guided by Appendix K of the State CEQA Guidelines.
- Policy F-2 The City shall refer development proposals that may adversely impact archaeological sites to the California Archaeological Inventory, Stanislaus State University.
- Implementation Measure 4 The City shall adopt and implement a historic building code, as authorized by state law.
- Implementation Measure 5 The City shall establish an agreement with the California Archeological Inventory at Stanislaus State University for review of development proposals that may adversely impact archeological sites.

7.3 IMPACT EVALUATION CRITERIA

In accordance with CEQA Guidelines, Appendix G, the proposed project would have a significant adverse impact on cultural resources if the project would:

- a) cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
- b) cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- c) directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- d) disturb any human remains, including those interred outside of formal cemeteries.

Section 15064.5(a) of the CEQA Guidelines defines an “historical resource” as:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources.
2. A resource included in a local register of historical resources as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements in Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant.

Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources...including the following:
 - A. is associated with events that have made a significant contribution to the broad pattern of California’s history and cultural heritage;
 - B. is associated with the lives of persons important in our past;
 - C. embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - D. has yielded, or may be likely to yield, information important in prehistory or history.

Section 15064.5(c)(3) of the CEQA Guidelines defines an “archaeological resource” as follows:

If an archaeological resource does not meet the definition of a “historical resource,” it may meet the definition of a “unique archaeological resource” under Public Resource Code 21083.2. An archaeological resource is “unique” if it meets the following criteria:

1. is associated with an event or person of recognized significance in California or American history or recognized scientific importance in prehistory;
2. can provide information that is of demonstrable public interest and is useful in addressing scientifically consequential and reasonable research questions;
3. has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
4. is at least 100 years old and possesses substantial stratigraphic integrity;
5. involves important research questions that historical research has shown can be answered only with archaeological methods.

Section 15064.5(c)(4) of the CEQA Guidelines states that if an archaeological site is neither a “unique archaeological resource” nor a “historical resource” any effect to it shall not be considered significant. The environmental document must provide documentation supporting a conclusion of “no effect” and no further consideration is necessary.

7.4 IMPACTS AND MITIGATION

POTENTIAL IMPACT C-1: Implementation of the General Plan 2023 (proposed project) may cause a substantial adverse change in the significance of known and unknown archaeological or historical resources, or a unique paleontological resource or geologic feature.

Level of Significance: Potentially Significant

Mitigation Measures:

- C-1.1** The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following Goals, policies (P) and implementation (I) measures to protect archaeological and historical resources.
- Goal RC-11 Preserve and enhance Manteca’s archaeological and historic resources for their aesthetic, educational and cultural values.
- Goal RC-12 Protect Manteca’s Native American heritage.
- RC-P-35 The City shall not knowingly approve any public or private project that may adversely affect an archaeological site without consulting the California Archaeological Inventory at Stanislaus State University, conducting a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendation of a qualified archaeologist. City implementation of this policy shall be guided by the California Environmental Quality Act (CEQA) and the National Historic Preservation Act (NHPA).
- RC-P-36 The ~~City shall refer~~ shall require that the proponent of any development proposals, in an area with potential archaeological resources, and specifically near the San Joaquin River and Walthall Slough, and on the east side of State Highway 99 at the Louise Avenue crossing, shall consult with ~~that may adversely impact archaeological sites to~~ the California Archaeological Inventory, at Stanislaus State University to determine the potential for discovery of cultural resources, conduct a site evaluation as may be indicated, and mitigate any adverse impacts according to the recommendation of a qualified archaeologist. The survey and mitigation shall be developer funded. ~~that may adversely impact archaeological sites to the California Archaeological Inventory, Stanislaus State University.~~
- RC-P-37 The City shall set as a ~~high~~ priority the protections and enhancement of Manteca’s historically and architecturally significant buildings.
- RC-P-38 The City shall work with property owners ~~in~~ seeking registration of historical structures as ~~State~~ Historic Landmarks or listing on the ~~Federal~~ Register of Historic Sites.

-
- RC-P-39 The City shall prepare and adopt a Historical Preservation Ordinance.
- RC-P-40 The City and Redevelopment Agency shall support the efforts of property owners to preserve and renovate historic and architecturally significant structures. Where such buildings cannot be preserved in tact, the City shall seek to preserve the building facades.
- RC-I-38. Require a records search for any proposed development project, to determine whether the site contains known archaeological, historic, or cultural resources and/or to determine the potential for discovery of additional cultural resources. This requirement may be waived if determined by the City that the proposed project area is already sufficiently surveyed.
- RC-I-39. Require that sponsors of proposed development projects on sites where probable cause for discovery of archaeological resources (as indicated by records search and where resources have been discovered in the vicinity of the project) retain a consulting archaeologist to survey the project site. If unique resources, as defined by California State law, are found, a qualified archaeologist or historian shall be called to evaluate the find and to recommend proper action. Require a monitoring plan for the project to ensure that mitigation measures are implemented.
- RC-I-40. When feasible, incorporate significant archaeological sites into open space areas.
- RC-I-41. The City should continue its inventory of all historic sites throughout the City. The inventory should contain a narrative of the significant facts regarding the historic events or persons associated with the site, and pictures of the site.
- RC-I-42. The City shall continue to support the local historical society in their efforts to: The City should maintain an archive of historic information, including photographs, publications, oral histories and other materials, and make the information available to the public for viewing and research.
- ~~RC I 43. The historic archives will be compiled according to location in the City, and will be maintained in a safe environment to protect it over time.~~
- ~~RC I 44. The City should develop policies and the means to make the information available to the public for viewing and research.~~

- RC-I-45. All City permits for reconstruction, modification of existing buildings will require submittal of a photograph of the existing structure or site. The intent is to create a record of the buildings in the City over time. A photograph will also be required for vacant sites that will be modified with new construction of new buildings or other above ground improvements.
- RC-I-46. Encourage the placement of monuments or plaques that recognize and celebrate historic sites, structures, and events.
- RC-I-47. The City shall adopt and implement a historic building code, as authorized by state law.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above goals, policies and implementation measures are implemented.

POTENTIAL IMPACT C-2: Implementation of the General Plan 2023 could disturb human remains, including those interred outside of formal cemeteries.

Level of Significance: Potentially Significant

The record search for the Study Area listed two sites of concern regarding human remains: a prehistoric village and burial site overlain by a historic settlement site near the San Joaquin River, and an historic cemetery.

The Native American archaeological site has been reported as destroyed. However, even Native American archaeological sites that appear to some to have been destroyed, may still retain cultural deposits significant for their information potential.

There is no known intention to disturb the human remains buried in the historic cemetery. The standard procedures of the County Coroner’s Office would be enforced in such cases.

Mitigation Measures:

C-2.1: The Resource Conservation Element of the proposed City of Manteca General Plan 2023 provides the following implementation (I) measure to reduce disturbance to discovered human remains.

- RC-I-48. If human remains are discovered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the coroner determines that no investigation of the cause of death is required and if the remains are of Native

American origin, the coroner will notify the Native American Heritage Commission, which in turn will inform a most likely descendant. The descendant will then recommend to the landowner appropriate disposition of the remains and any grave goods.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above implementation measure is implemented. Compliance will help to ensure that any human remains discovered are handled in accordance with state and federal laws.

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8. GEOLOGY, SOILS, AND SEISMICITY

This section discusses geologic conditions in the Manteca area. Specific issues are addressed including soil erosion, expansive soils, and seismicity.

As discussed in Section 1, Summary, mineral resources are not an issue in this General Plan Study Area, and will not be further analyzed.

8.1 EXISTING CONDITIONS

8.1.1 Geology of the Manteca Area

Manteca is located in northern San Joaquin Valley. The San Joaquin Valley is the southern section of the Great Central Valley of California; the Sacramento Valley is the northern section.

The Great Central Valley is a sedimentary basin, with the Coast Range to the west and the Sierra Nevada to the east. Almost all of the sediments that fill the Great Central Valley eroded from the Sierra Nevada. The oldest of these sediments are full of fragments of volcanic rocks eroded from its early volcanoes. As erosion stripped the cover of volcanic rocks from the granites of the Sierra Nevada, their detritus of pale quartz and feldspar sand began to wash into the Great Central Valley.

Drainage into the San Joaquin Valley is mainly from the Sierra Nevada. The sediments on the valley floor were deposited within the past one-two million years, some within the past few thousand years. (1)

Slope Instability

Generally, slopes are nearly level across the Study Area. The elevation ranges from approximately 10-50 feet above sea level, gently rising from the San Joaquin River on the west toward the east and the Sierra Nevada.

Slope instability is not a major constraint to land use in the Study Area because of the relatively flat topography

8.1.2 Study Area Soils

The Soil Conservation Service (now referred to as the Natural Resources Conservation Service (NRCS)) published a Soil Survey for San Joaquin County in 1992. (2) According to that Soil Survey, there are nineteen (19) soil series within the Study Area. A soil series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure,

reaction, consistence, mineral and chemical composition, and arrangement in the profile. The texture of the surface layer or of the underlying material can differ within a series.

The majority of the soils in the Study Area were formed in alluvium, and are found on low alluvial fans, low terraces, and floodplain along the San Joaquin River. These soils are moderately-deep to very-deep, and drainage ranges from partially-drained to moderately well-drained on the majority of these soils. The water table is relatively high.

The Study Area soils are shown in Table 4-1 of Section 4, Agricultural Resources.

Erosion Potential

Erosion can be defined as a combination of processes in which the materials of the surface of the earth are loosened, dissolved, or worn away, and transported from one place to another by natural agents. The primary concerns regarding soil erosion are soil loss, and water quality loss due to erosion and sedimentation.

There are two (2) types of soil erosion: water erosion and wind erosion.

Water Erosion: The Study Area soils are moderately-deep to very-deep, and drainage ranges from partially-drained to moderately well-drained on the majority of these soils. Given the partial-to-moderate drainage characteristics of the majority of the soils and the nearly level topography of the Study Area, water erosion hazard is considered low.

Wind Erosion: The Carquinez Strait, located approximately 55 miles to the northwest of the Study Area, is a sea-level gap in the coastal range. The prevailing wind through the Strait pushes marine breezes over the relatively flat terrain of the Valley. The wind erosion potential within the Study Area ranges from moderate-to-high during the spring, summer, and fall. These sea breezes diminish during the winter.

Subsidence Potential

Subsidence is the settlement of soils. Settlement can result from either desiccation (dehydration) and shrinkage, or oxidation of organic material, or both, following drainage.

The Soil Conservation Service found that subsidence is not a characteristic of the twenty-two soil series found within the Study Area (Table 4-1 in Section 4, Agricultural Resources).

Expansive Soils

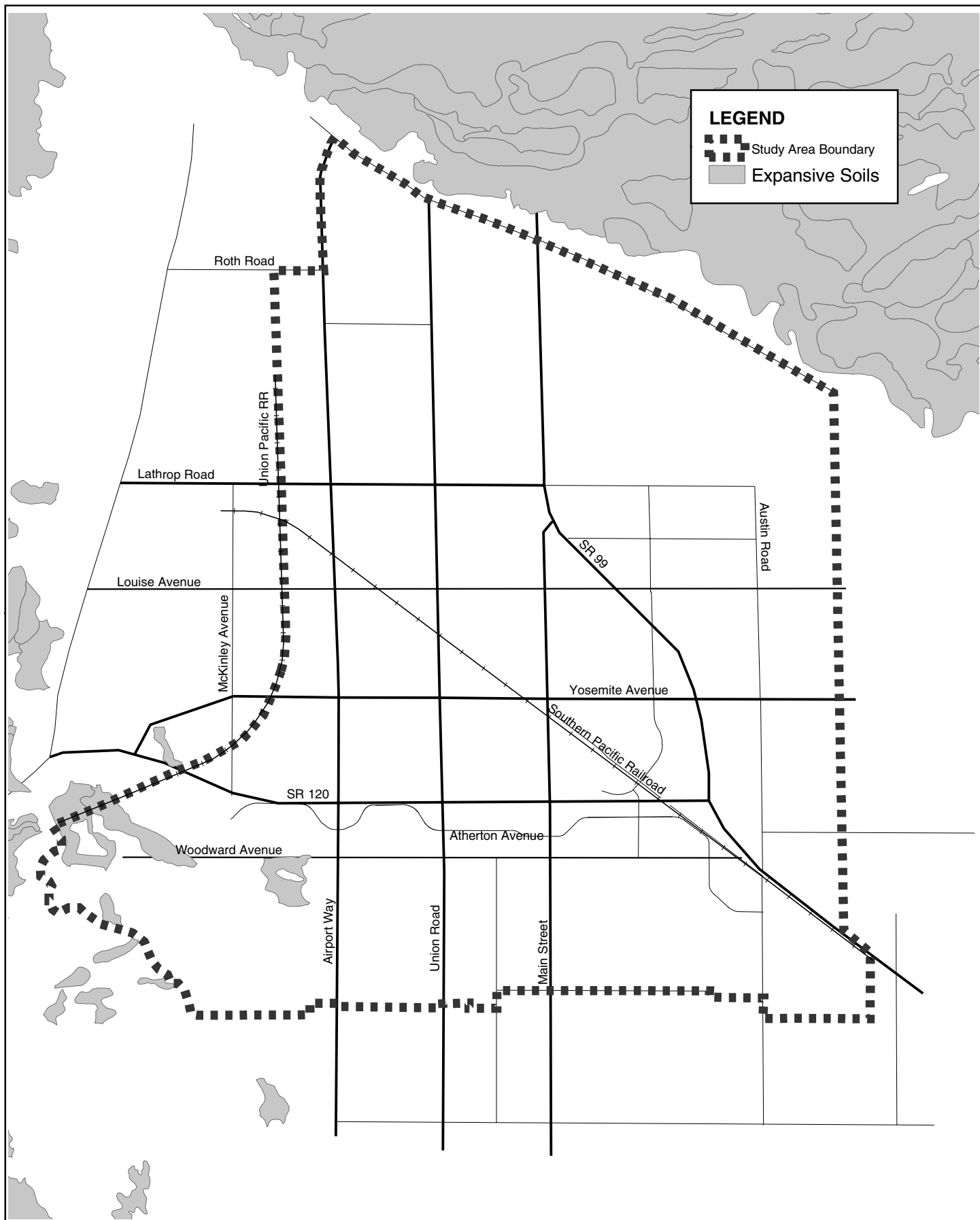
Expansive soils are those that increase in volume when they absorb water and shrink when they dry out, commonly referred to as “shrink-swell” potential. Soil surveys generally rate shrink-swell potential in soils on a low, medium, and high basis. If the shrink-swell potential is rated moderate to high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed.

As shown in Table 8-1, four (4) of the twenty-two Study Area soils have been identified as expansive soils: one (1) with a high shrink-swell potential, two (2) with a moderate-high shrink-swell potential, and one (1) with a moderate shrink-swell potential. The location of these expansive soils is shown in Figure 8-1.

Table 8-1
Expansive Soils in the Study Area

Soil (Symbol & Series Name)	Shrink-Swell Potential
152 Egbert	Moderate-High
153 Egbert	Moderate-High
169 Guard	Moderate
160 Galt	High

Source: Extracted from Soil Survey of San Joaquin County, California. October 1992. U.S. Department of Agriculture, Soil Conservation Service.



Manteca General Plan

8.1.3 Seismicity

Seismicity can be defined simply as earthquake activity.

A seismic hazard is a risk or danger to our environment due to existence of active or potentially active earthquake faults. The term “earthquake” is used to describe both a sudden slip along a fault and the resulting ground shaking and radiated seismic energy caused by the slip, or by volcanic or magmatic activity, or other sudden stress changes in the earth.

Earthquake Hazards

Earthquake hazards include surface faulting, ground shaking, landslides, liquefaction, tectonic deformation, tsunamis, and seiches (tsunami-like waves from an inland body of water). The risk associated with earthquake hazards is generally described in terms of the probability of building damage, and the number of people that are expected to be hurt or killed if a likely earthquake on a particular fault occurs.

Earthquakes are measured by their physical effects and by the amount of energy being released. The Modified Mercalli Scale is used to measure the physical effect of earthquakes, as described in Table 8-2. This scale ranges from I to XII, with an earthquake intensity of XII resulting in nearly total damage to manmade structures and displacement of large masses of rock. The Richter Scale is used to assign a number to the calculated energy release of an earthquake, measuring the amplitude of seismic waves recorded by a seismograph. The Richter Scale is logarithmic, and an increase of one number in magnitude is the same as an increase of 32 times in energy release. A comparison of these two earthquake scales is shown in Table 8-3.

Table 8-2
Modified Mercalli Scale of 1931

<u>Scale</u>	<u>Effects</u>
I	Earthquake shaking not felt.
II	Shaking felt by those at rest.
III	Felt by most people indoors; some can estimate duration of shaking.
IV	Felt by most people indoors. Having objects swing, windows and doors rattle, wooden walls and frames creak.
V	Felt by everyone indoors; many estimate duration of shaking. Standing autos rock. Crockery clashes, dishes rattle, and glasses clink. Doors close, open, or swing.
VI	Felt by everyone indoors and most people outdoors. Many now estimate not only the duration of the shaking, but also its direction and have no doubt as to its cause. Sleepers awoken. Liquids disturbed, some spilled. Small unstable objects displaced. Weak plaster and weak materials crack.
VII	Many are frightened and run outdoors. People walk unsteadily. Pictures thrown off walls, books off shelves. Dishes or glasses broken. Weak chimneys break at roofline. Plaster, loose bricks, unbraced parapets fall. Concrete irrigation ditches damaged.
VIII	Difficult to stand. Shaking noticed by auto drivers, waves on ponds. Small slides and cave-ins along sand or gravel banks. Stucco and some masonry walls fall. Chimneys, factory stacks, towers, elevated tanks twist or fall.
IX	General fright. People thrown to the ground. Steering of autos affected. Branches broken from trees. General damage to foundations and frame structures. Reservoirs seriously damaged. Underground pipes broken.
X	General panic. Conspicuous cracks in ground. Most masonry and frame structures destroyed along with their foundations. Some well-built wooden structures and bridges are destroyed. Serious damage to dams, dikes, and embankments. Railroads bent slightly.
XI	General panic. Large landslides. Water thrown out of banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flatland. General destruction of buildings. Underground pipelines completely out of service. Railroads bent greatly.
XII	General panic. Damage nearly total, the ultimate catastrophe. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into air.

Source: California Geologic Survey, 2002

Table 8-3
Comparison of Richter Magnitude and Modified Mercalli Intensity

Richter Magnitude	Expected Modified Mercalli Maximum Intensity (at epicenter)
2	I-II Usually detected only by instruments
3	III Felt indoors
4	IV-V Felt by most people; slight damage
5	VI-VII Felt by all; many frightened and run outdoors; damage minor to moderate
6	VII-VIII Everybody runs outdoors' damage moderate to major
7	IX-X Major damage
8+	X-XI Total and major damage

Source: California Geologic Survey, 2002 after Charles F. Richter, 1958, Elementary Seismology.

Uniform Building Code (UBC) Seismic Zones

The Uniform Building Code (UBC) includes a Seismic Zone Map to determine applicable construction standards for proposed structures. Seismic zones range from 0 – 4, with Zone 0 being the least active and Zone 4 being the most active. Manteca is located in Seismic Zone 3. (3) All structures built in Manteca must comply with UBC requirements for this zone.

Seismic Hazard Zones

Seismic Hazard Zones are regulatory zones that encompass areas prone to liquefaction (reduction in strength and stiffness of water-saturated soil) and earthquake-induced landslides. California requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and monitoring construction. As of this writing, lands in San Joaquin County have not yet been mapped. (4)

Alquist-Priolo Act

The Alquist-Priolo Special Studies Zone Act of 1972 is directed at areas identified by the California State Geologist as having active surface fault ruptures. It is a regulatory prohibition to build across a surface fault rupture of active faults. It addresses earthquake safety in building permits and subdivision procedures by requiring project applicants to submit a registered geologist's report describing the potential for on-site surface rupture.

Manteca is not located within an Alquist-Priolo Fault-Rupture Hazard Zone.(4) There are faults located in the region, but there are no known faults located within or adjacent to the Study Area.

The known earthquakes affecting San Joaquin County are shown below in Table 8-4.

Figure 8-2 illustrates faults located in the vicinity of the Study Area, as mapped by the California Department of Conservation, Division of Mines and Geology.

Figure 8-2
Faults in the Vicinity of the Study Area

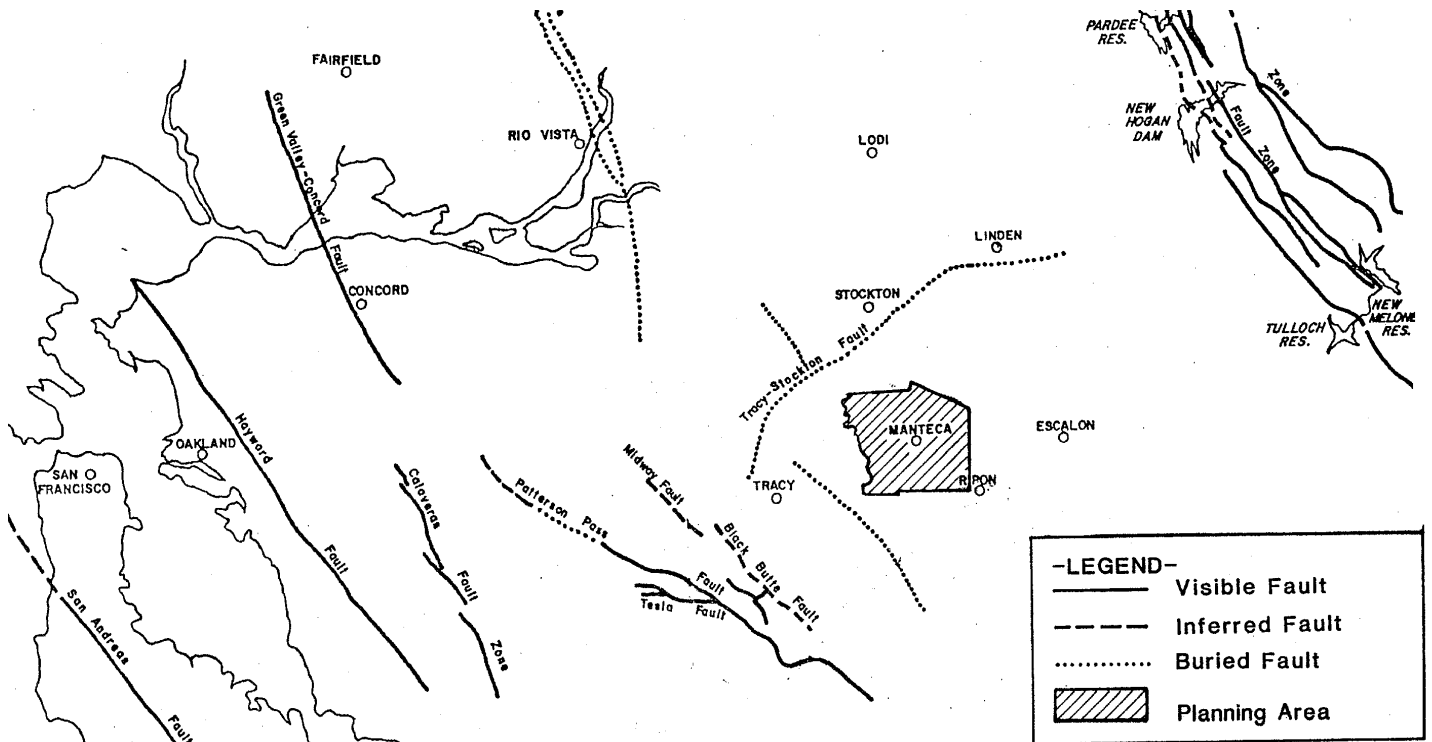


Table 8.1-4
Earthquakes Affecting San Joaquin County

<i>Date</i>	<i>MM Intensity in San Joaquin Co</i>	<i>MM Intensity Near Epicenter</i>	<i>Epicenter</i>	<i>Richter Magnitude</i>
1836	V-VI	IX-X	Hayward	7.0
1838	VI	X	S.F. Peninsula	7.0
1857	VI	X-XI	Mountains between Santa Barbara and Bakersfield	8.8
1868	V-VI	IX-X	Hayward	7.0
1872	VI	X	Owens Valley	8.0
1881	V-VI	VII	Linden	5.0
1892	IV-V	VIII	Vacaville	7.0
1906	VI-VII	XI	San Francisco	8.3
1940	?	?	Southeast of Linden	4.0
1946	?	?	Patterson Pass	4.5
1952	V	VIII	Bakersfield	7.7
1966	IV-V	VII	North of Tahoe	6.5
1980	?	?	Mammoth Lakes	6.5
1980	?	?	Mammoth Lakes	6.7
1989	?	?	Loma Prieta	7.1

Source: California Department of Conservation, California Geological Survey, 2002, as compiled from T. Topozada, 2000.

As shown in Table 8-4 above, seismic activity in other parts of the state can also affect the area. The fault systems detailed below are the most prominent area faults, but do not represent every fault system that could potentially affect the Study Area. *San Andreas Fault Zone.* The San Andreas Fault is one of the longest, most thoroughly studied, and most active faults in the world. Some sections in the Central Coast Ranges south of San Joaquin County are creeping at rates as great as 3.5 centimeters per year. Other segments north and south of the creep areas exhibit essentially no movement. The fault in those areas appears to be temporarily “locked”. It is generally agreed that a “locked” condition allows stresses to accumulate more rapidly, thus shortening the time between major earthquakes.

It is possible to demonstrate an accumulated offset along the San Andreas Fault measured in hundreds of miles, occurring over a period of tens of millions of years. Since there is presently movement along some of its length, and numerous smaller earthquakes are recorded as emanating from the fault zone, it is considered probable that moderate-to-great earthquakes will occur on the San Andreas Fault in the near future.

Hayward Fault. The Hayward Fault is located east of San Francisco Bay and extends southeast to where it probably merges with the Calaveras Fault north of Hollister. A review of the recent history of this fault shows two major earthquakes (1836 and 1868) each with an estimated Richter Scale Magnitude 7.0 (Table 8-4). Numerous small earthquakes continue to occur along this fault, indicating continued activity.

San Joaquin Fault Zone. A new fault system has recently been identified by the U.S. Geologic Survey (USGS), extending from Tracy to Los Banos, paralleling Interstate 5. Geologic studies show that the zone has sustained activity during the Quaternary period. This could be an important fault system for San Joaquin County.

Other nearby fault systems include: Rescue Lineament-Bear Mountains fault zone, Clayton-Marsh Creek-Greenville fault, O'Neil fault system, and Ortigalita fault. The known faults nearest to the Study Area are the Tracy-Stockton Fault crossing southwest near Tracy to the northeast near Linden, and a small buried fault running southeast from the Tracy area (Figure 8-2).

8.2 REGULATORY SETTING

8.2.1 Applicable Federal Regulations

U.S. Uniform Building Code (UBC)

The U.S. Uniform Building Code (UBC) provides site development and construction standards. The UBC is widely used throughout the United States, and is generally adopted on a district-by-district or state-by-state basis. The UBC has been modified for California conditions with more detailed and more stringent regulations.

8.2.2 Applicable State Regulations

California Uniform Building Code (CUBC)

The California Uniform Building Code (CUBC) is based upon the 1997 U.S. Uniform Building Code (UBC). Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls; Chapter 70 regulates grading activities, including drainage and erosion control.

California Code of Regulations (CCR), Title 24 (Building Standards)

The State of California provides minimum standards for building design through the California Building Standards Code.

California Health and Safety Code 19100 et seq. (Earthquake Protection Law)

The State of California earthquake protection law requires that buildings be designed to resist stresses produced by lateral forces caused by wind and earthquakes.

California Department of Conservation, Division of Land and Resource Protection (DLRP)

The California Division of Land and Resource Protection (DLRP) provides information to guide land use planning decisions, and well as programs that allow agricultural and open space landowners to voluntarily protect their land.

California Department of Conservation, Division of Mines and Geology

The California Division of Mines and Geology has historically focused on gathering geologic information and mapping information. However, programs have expanded often due to the passage of legislation. DMG's authority now includes obtaining statewide records of the response of rock, soil, and structures to ground motion caused by earthquakes; mandating the delineation of zones along traces of hazardous faults; ensuring that significant mineral deposits are identified and protected; providing geologic hazard review and investigation; identifying and mapping seismic hazard zones; developing public policy; and providing emergency response services.

8.2.3 City of Manteca

The Health and Safety Element (Section VII) of the existing 1988 General Plan includes the following goals and policies to protect Manteca residents and structures from geologic and seismic hazards:

Goal A: To prevent loss of lives, injury, and property damage due to geological hazards.

Policy A-1 The City shall require preparation of geological reports and/or geological engineering reports for proposed new development located in areas of suspected significant geological hazards.

Goal B: To prevent loss of lives, injury, and property damage due to the collapse of building and critical facilities and to prevent disruption of essential services in the event of an earthquake.

Policy B-1 The City shall maintain an inventory of pre-1940 unreinforced masonry buildings within the City. No change in use to a higher occupancy or more intensive use shall be approved in such structures until an engineering evaluation of the structure has been conducted and any structural deficiencies corrected. The Redevelopment Agency shall be encouraged to assist property owners in reinforcing buildings.

Policy B-2. The City should ensure that all public facilities, such as buildings, water tanks, and reservoirs, are structurally sound and able to withstand seismic shaking and the effect of seismically induced ground failure.

8.3 IMPACT EVALUATION CRITERIA

In accordance with CEQA Guidelines, Appendix G, the proposed project would have a significant adverse impact the project would:

- 1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.
 - Strong seismic ground shaking.
 - Seismic-related ground failure, including liquefaction.
 - Inundation by seiche, tsunami, or mudflow.
 - Landslides.
- 2) Result in substantial soil erosion or the loss of topsoil.
- 3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- 4) Be located on expansive soil creating substantial risks to life or property.
- 5) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waster water.

8.4 IMPACTS AND MITIGATION

POTENTIAL IMPACT GSS-1: **Implementation of the General Plan 2023 may expose people and structures to rupture of a known earthquake, as delineated on the Alquist-Priolo Earthquake Fault Zoning Map.**

Level of Significance: **Less Than Significant Impact**

Manteca is not located within an Alquist-Priolo Fault-Rupture Hazard Zone. There are no known active surface fault ruptures located within or adjacent to the Study Area.

POTENTIAL IMPACT GSS-2: **Implementation of the General Plan 2023 may expose people and structures to ground shaking, ground failure (including liquefaction) or landslides.**

Level of Significance: **Potentially Significant**

Lands within San Joaquin County have not yet been mapped in the California Department of Mines and Geology Seismic Hazard Zone Mapping System, which maps areas of possible liquefaction and landslides. However, given the nearly level terrain of the Study Area, the possibility of landslides is considered a less than significant impact. The Soil Survey for the area found that subsidence is not a characteristic of the soils within the Study Area. As shown in Table 8-4 above, significant earthquakes from regional fault systems have affected San Joaquin County in the past; therefore, the possibility of some level of regional ground shaking in the future is likely. Given that there is a relatively high water table, liquefaction could be a significant impact within the Study Area.

Mitigation Measures:

GSS-2.1: The General Plan 2023 Safety Element (Section 7) provides the following goals, policies (P), and implementation measures (I) to lessen the possible exposure of people and structures to ground shaking or ground failure, including liquefaction:

Goal S-1: Prevent loss of lives, injury, and property damage due to seismic activity and geological hazards.

Goal S-2: Prevent loss of lives, injury, and property damage due to the collapse of buildings and critical facilities and to prevent disruption of essential services in the event of an earthquake.

S-P-1 The City shall require preparation of geological reports and/or geological engineering reports for proposed new development

- located in areas of suspected significant geological hazards, including potential subsidence (collapsible surface soils) due to groundwater extraction.
- S-P-2 The City shall require new development to mitigate the potential impacts of geologic hazards through Building Plan review.
- S-P-3 The City shall ~~avoid potential~~ require new development to mitigate the potential impacts of seismic induced settlement of uncompacted fill and liquefaction (water-saturated soil) due to the presence of a high water table.
- S-P-4 The City shall maintain an inventory of pre-1940 unreinforced masonry buildings within the city. No change in use to a higher occupancy or more intensive use shall be approved in such structures until an engineering evaluation of the structure has been conducted and any structural deficiencies corrected. The Redevelopment Agency shall be encouraged to assist property owners in reinforcing buildings.
- S-P-5 The City shall ~~should~~ shall ensure that all public facilities, such as buildings, water tanks, and reservoirs, are structurally sound and able to withstand seismic shaking and the effects of seismically induced ground failure.
- S-P-6 The City shall comply with the California State seismic and building standards in the design and siting of critical facilities, including police and fire stations, school facilities, hospitals, hazardous materials manufacturing and storage facilities, and large public assembly halls.
- SG-I-1 All new development shall comply ~~Comply~~ with the current Uniform Building Code (UBC) requirements for Seismic Zone 3, which stipulates building structural material and reinforcement.
- SG-I-2 All new development shall comply ~~Comply~~ with California Health and Safety Code Section 19100 et seq. (Earthquake Protection Law), which requires that buildings be designed to resist stresses produced by natural forces caused earthquakes and wind.

SG-I-3 The City shall inventory potentially hazardous buildings within the City and adopt a mitigation program, including requirements for strengthening buildings, changing the use of the buildings to an acceptable occupancy level, or demolishing the buildings.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above goals, policies, and implementation measures are implemented.

POTENTIAL IMPACT GSS-3: Implementation of the General Plan 2023 may result in substantial soil erosion or loss of topsoil.

Given the partial-to-moderate drainage characteristics of the majority of the soils and the nearly level topography of the Study Area, water erosion hazard is considered low.

The wind erosion potential within the Study Area ranges from moderate-to-high during the Spring, Summer, and Fall. These sea breezes diminish during the Winter.

Level of Significance: Potentially Significant

Mitigation Measures:

GSS-3.1: The Resource Conservation Element (Section 8) of the City of Manteca General Plan 2023 provides the following goal, policy (P), and implementation measures (I) to mitigate the potential of substantial soil erosion or loss of topsoil.

Goal RC-6 Preserve and maintain Manteca's soils to avoid pollution of surface waters, decreased air quality, and loss of soil.

RC-P-9 The City shall adopt and enforce land management standards that minimize ~~Minimize~~ soil erosion and loss of topsoil from land development activities, wind, and water flow.

RC-I-16 All new development shall comply ~~Comply~~ with the Uniform Building Code (UBC) requirements for specific site development and construction standards for specific soils types.

RC-I-17 All new development shall comply ~~Comply~~ with the Uniform Building Code (UBC), Chapter 70, regulating grading activities including drainage and erosion control.

RC-I-18 Require site-specific land management and development practices ~~survey and research~~ for proposed development

projects, including appropriate mitigation measures for avoiding or reducing erosion, if needed. ~~This requirement may be waived if the City determines that the proposed project area is already sufficiently surveyed.~~

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above goal, policies, and implementation measures are implemented.

POTENTIAL IMPACT GSS-4: Implementation of the General Plan 2023 may expose people and structures to the hazards of expansive soils.

Level of Significance: Potentially Significant

Five (5) of the nineteen Study Area soils have been identified as expansive soils: two (2) with a high shrink-swell potential, and three (3) with a moderate shrink-swell potential.

Mitigation Measures:

GSS-4.1: The General Plan 2023 Safety Element (Section 7) provides the following policies (P) to lessen the possible exposure of people and structures to the shrink-swell hazards of expansive soils:

S-P-1 The City shall require preparation of geological reports and/or geological engineering reports for proposed new development located in areas of suspected significant geological hazards, including potential subsidence (collapsible surface soils) due to groundwater extraction.

S-P-2 The City shall require new development to mitigate the potential impacts of geologic hazards through Building Plan review.

The General Plan 2023 Resource Conservation Element (Section 8) provides the following policies implementation measure (I) to lessen the possible exposure of people and structures to the shrink-swell hazards of expansive soils:

RC-I-16 Comply with the Uniform Building Code (UBC) requirements for specific site development and construction standards for specific soil types.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above policies and implementation measure are implemented. Compliance with UBC construction requirements will implement state-of-the-art mitigation relating to site-specific soil types.

POTENTIAL IMPACT GSS-5: Septic tanks or alternative waste water systems could be placed in soils incapable of supporting their use.

Level of Significance: No Impact

All proposed development within the Study Area will be served by the City's municipal sewer system. No septic tanks or alternative waste water systems will be used.

References

- (1) Alt, David and Donald W. Hyndman. Roadside Geology of Northern and Central California. Mountain Press Publishing Company. Missoula, Montana. August 2001, Second Printing. Extracted from Pg. 243-254.
- (2) U.S. Department of Agriculture, Soil Conservation Service. Soil Survey of San Joaquin County, California. October 1992. Extracted from Pg. 185-238.
- (3) Telephone Conversation with Dennis Rock, San Joaquin County Community Development Department, Building Inspection and Permitting. June 2003.
- (4) Telephone Conversation with Dale Stickney, Information Geologist, California Department of Conservation, Division of Mines and Geology. February 21, 2002; Update June 2003.

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9. HAZARDOUS MATERIALS

Hazardous materials are substances that may pose a potential hazard to human health or the environment when handled improperly.

This Section addresses hazardous materials and the City of Manteca. The discussion includes hazardous wastes from residential, small business, industrial, and government facilities. Hazardous waste sites that appear on San Joaquin County and California state hazardous materials database lists for Manteca are addressed. The transportation of hazardous materials, particularly over the Union Pacific Railroad lines through the City, is also discussed.

9.1 EXISTING CONDITIONS

9.1.1 Household Hazardous Waste

Household hazardous waste includes common items such as paints, cleaners, motor oil and pesticides. Other household items contain hazardous materials that are considered less hazardous to handle, such as batteries, lamps, televisions, and computer monitors. Such items are classified by the Environmental Protection Agency (EPA) and the California Department of Toxic Substances Control (DTSC) as Universal Waste.

City of Manteca Household Hazardous Waste Disposal Program

The City of Manteca's Solid Waste Division has a free household hazardous waste disposal program for its residents. The Division's "Facts & Information" publication gives details on (1) the year-around drop-off locations for used motor oil, latex paints, antifreeze, and auto batteries; (2) twice-per-year drop-off events for pesticides, oil-based paints, solvents, varnishes, cleaners, and other types of hazardous wastes; and (3) E-Waste (computers, computer monitors, printers, telephones, typewriters, cell phones, televisions, and "just about anything that you can plug into an electrical socket") drop-off locations, by appointment.

9.1.2 Non-Household Hazardous Waste

Hazardous waste can also be generated by small businesses, industry, and government facilities. Small businesses and government facilities may be classified as Small Quantity Generators (SQG's) or Conditionally Exempt Small Quantity Generators (CESQG's). Industries are typically classified as SQG's or Large Quantity Generators (LQG's). These classifications are discussed below in Subsection 9.2, Regulatory Setting.

9.1.3 Hazardous Material Sites in City of Manteca

CalSites Database

Summary reports that list potential toxic sites within the City of Manteca are shown in Table 9-1. These listings are from the Site Mitigation and Brownfields Reuse Program Database, also known as the CalSites Database, maintained by the (DTSC) (1). This Database contains information on properties in the state where hazardous substances have or may have been released. No sites within the City of Manteca have been classified as a confirmed hazardous materials site, also known as a CalSite or State Superfund site.

The DTSC also maintains the Hazardous Waste and Substances Site List Database, also known as the Cortese List Database, which contains information on hazardous material sites provided by various state and local agencies. Agencies are required by CEQA to use the Cortese List to identify locations of hazardous materials release sites when considering development proposals. The City of Manteca does not contain sites that are identified on the Cortese List.

As shown in Table 9-1, “no further action” is required for the four (4) school sites. It has been determined that these properties do not pose a threat from hazardous materials. The Department of Toxic Substances Control recommended their Website for current status of the remaining seven (7) properties. The following information was obtained from that search (2):

Schmiedt Soil Service, Inc.:

Site inspections by the California Regional Water Quality Control Board (RWQCB) in 1987 and 1988, and by the San Joaquin County Department of Public Health Services in 1990, found no violations. A site inspection was conducted on 9/23/93 by the EPA, which found no groundwater contamination in the on-site well. The EPA recommended no further action, and referred the property to San Joaquin County on 3/7/96.

Spreckels Sugar Company:

Referred to the RWQCB on 6/10/91. RWQCB currently monitors groundwater at the site. Water quality is regulated with monitoring wells. On 1/21/94, water was reported as contaminated with salts and bicarbonates. Wastewater ponds on-site consisted of beet-hop wastes, mud, and limestone wastewater. There was also a problem with odor. RWQCB reported that the concerns are being addressed.

United Agricultural Products:

On 7/13/82, a questionnaire was completed by United Agricultural Products. Based on 8/17/82 and 8/24/82 follow-up telephone calls, no further action was recommended.

Table 9-1
CalSites Database Summary Report, City of Manteca

Site Name	Address	Status
Schmiedt Soil Service, Inc.	20696 South Manteca Road	REFOA
Spreckels Sugar Co.	Yosemite Avenue	REFRW
United Agricultural Products	301 Wetmore	REFOA
French Cleaners	416 W. Yosemite Avenue	REFOA
OK Cleaners #1	162 N. Maple Avenue	REFOA
Mainz Cleaners	358 N. Main Street	REFOA
Bobson Cleaners	600 N. Main Street	REFOA
South Manteca Elementary School	Tannehill Drive	NFA
North Main Street Community School	1271, 1275, 1281 N. Main Street	NFA
Sand Lane Elementary School	6647 E. Woodward Avenue	NFA
South Airport Way School	21164 South Airport Way	NFA

LEGEND

REFOA: Referred to Other Agencies. Identifies properties referred to another agency, such as the Integrated Waste Management Board or other State or local agency. These properties were determined not to require direct Department of Toxic Substances Control Site Mitigation Program action or oversight. In many referral cases, it should be noted that DTSC has not confirmed an actual release of a hazardous substance.

REFRW: Referred to the Regional Water Quality Control Board. Identifies properties that were determined not to require direct Department of Toxic Substances Control Site Mitigation Program action or oversight and have been referred to another state or local regulatory agency. In many referral cases, it should be noted that DTSC has not confirmed an actual release of a hazardous substance.

NFA: No Further Action. Identifies properties that had a possibility of a release that the Department of Toxic Substances Control determined after additional investigation (a Preliminary Endangered Assessment (PEA)) that the property does not pose a problem to the environment or the public health.

Source: Department of Toxic Substances Control, May 23, 2002. Update April 23, 2003 (Telephone Conversation with Shannon Similai, Toxics Help Desk, Department of Toxic Substances Control)

French Cleaners:

The facility was identified from DMI List on 6/24/82. A facility drive-by was completed on 9/28/82. Based on finding no problems during drive-by, a recommendation for no further action was made on 10/14/82.

OK Cleaners #1:

The facility was identified from DMI List on 6/24/82. A facility drive-by was completed on 9/28/82. Based on finding no problems during drive-by, a recommendation for no further action was made on 10/14/82. (Same information as for French Cleaners)

Mainz Cleaners:

The facility was identified from DMI List on 4/2/82. A facility drive-by was completed on 8/10/82. Based on finding no problems during drive-by, a recommendation for no further action was made on 9/5/82.

Bobson Cleaners:

The facility was identified from DMI List on 6/24/82. A facility drive-by was completed on 9/28/82. Based on finding no problems during drive-by, a recommendation for no further action was made on 10/14/82. (Same information as for French Cleaners)

Underground Tank Site Mitigation Database

San Joaquin County Public Health Services monitors the possible groundwater and soil contamination from underground tanks. The "Closed Site" entries in Table 9-2 indicate that it has been determined that the site will not contaminate ground water nor impact drinking water (3). As noted, the remaining sites are currently being monitored for either ground water or soil contamination.

Table 9-2
Underground Tank Site Mitigation Database List, City of Manteca

Site Name	Address	Status
Luther Russell	23675 W. Airport Way	Closed Site
Tuff Boy Trailers	5151 Almondwood Drive	GW Site
Frank's Exxon #4	14800 S. Highway 99	Closed Site
Edward and M Pitts	203 S. Lincoln Avenue	Closed Site
Quik Stop Market #21	1196 Louise Avenue	GW Site
Manteca USD-District Office	2901 E. Louise Avenue	Soil Site

Site Name	Address	Status
Shell Service Station	1071 N. Main Street	GW Site
Jiffy Lube	1130 N. Main Street	Closed Site
7 Eleven, #19976	1399 N. Main Street	GW Site
Diamond Lumber	151 S. Main Street	GW Site
Fiore Development	2001 N. Main Street	Closed Site
Modesto Dry Ice	260 S. Main Street	Closed Site
Super Stop Market	290 N. Main Street, #C	GW Site
Boyett Petroleum	419 S. Main Street	Closed Site
Beacon	470 N. Main Street	Closed Site
Royal Oaks Savings	510 N. Main Street	Closed Site
Manteca Equipment Rental	616 S. Main Street	Closed Site
Food and Liquor	890 N. Main Street	Closed Site
Carl Karcher Distribution Center	800 Mellon Avenue	Soil Site
Manteca USD Shop	660 Mikesell Street	Soil Site
Manteca Bean Co.	229 Moffat Boulevard	Closed Site
San Joaquin County Ag. Comm.	392 S. Moffat Boulevard	GW Site
Bob's Muffler and Radiator	466 Moffat Boulevard	GW Site
Eckert Cold Storage Company	757 Moffat Boulevard	GW Site
Lee Jennings Enterprises	815 Moffat Boulevard	Closed Site
Pony Express Courier Corp.	959 Moffat Boulevard	Closed Site
Olympian CFN	983 Moffat Boulevard	GW Site
City of Manteca Public Works	220 Oak Street	Closed Site
Cal West Concrete Cuttings	1153 Vanderbilt Circle	Closed Site
City of Manteca	210 E. Wetmore Avenue	GW Site
Yosemite Avenue Beacon	1001 E. Yosemite Avenue	GW Site
Fill-em Fast	1012 W. Yosemite Avenue	GW Site
7 Eleven #17647	1048 W. Yosemite Avenue	GW Site
Payless Shoe Store	1160 W. Yosemite Avenue	GW Site
Chevron #SS1848	1257 W. Yosemite Avenue	GW Site
Frank's Exxon #2	1399 E. Yosemite Avenue	Closed Site
Jackpot Food Mart	1434 W. Yosemite Avenue	Closed Site
Tosco Corporation #30877	1700 E. Yosemite Avenue	Closed Site
Arco Station #6020	1711 E. Yosemite Avenue	GW Site
Arco Station #6020	1711 E. Yosemite Avenue	Closed Site

Site Name	Address	Status
Ted Peters Trucking Company	1985 W. Yosemite Avenue	GW Site
Frank's Exxon #3	2072 W. Yosemite Avenue	GW Site
ABF Freight Systems, Inc	2427 W. Yosemite Avenue	Closed Site
Rainwater Car Wash	420 W. Yosemite Avenue	GW Site
Pontes Quicki-Kleen Car Wash	707 E. Yosemite Avenue	Closed Site
Pontes Quicki-Kleen Car Wash	707 E. Yosemite Avenue	Soil Site
7 Eleven #21756	853 E. Yosemite Avenue	GW Site
Texaco	941 E. Yosemite Avenue	Closed Site

LEGEND

Closed Site: Site is no longer active for remediation under the Local Oversight Program.

GW Site: Site remains active for remediation of groundwater under the Local Oversight Program.

Soil Site: Site remains active for remediation of soil under the Local Oversight Program.

Source: San Joaquin County Public Health Services, Environmental Health Division, Report #7541, May 2002 (Update unavailable as of May 21, 2003)

9.1.4 Hazardous Materials Transportation

Union Pacific Railroad

The Union Pacific Railroad tracks are located at the west side of the Study Area. Cargo is transferred between trucks and trains at a transfer station north of Lathrop Road.

Potential issues related to the railroad running through the City include risks to human health and safety associated with a hazardous materials-related emergency.

The Union Pacific Railroad has primary responsibility for hazardous materials spills on its premises. Union Pacific's emergency response plan contains operations guidelines, training requirements, and response procedures to be implemented in the event of a derailment, leak, or off-railroad incident involving hazardous materials.

Roadways

Hazardous materials are routinely transported over state and federal highways, as well as local roads. Trucks travel to and from Interstate 5 (outside the Study Area) to the railroad transfer station north of Lathrop Road.

Hazardous materials spills on state and federal highways are the responsibility of the California Department of Transportation (Caltrans) and the California Highway Patrol (CHP). These agencies provide on-scene management of the spill site and coordinate with the California Environmental Health Department, California Office of Emergency Services, and the Manteca Fire Department.

9.1.5 Solid Waste Management

The Integrated Waste Management Board (CIWMB) coordinates the database records of waste management facilities in Manteca with San Joaquin County Public Health Services, Environmental Health Division. The IWMB lists eight (8) waste management facilities in Manteca. (4) A copy of this IWMB list is included as Appendix F in the Technical Appendix (Volume 2). Following is a summary of the current status of those listed facilities:

1. Manteca County Dump (I.D. SWIS #39-CR-0025)

Solid waste disposal site. Pre-regulations site closed 12/31/63.

2. Manteca City Dump (I.D. SWIS #39-CR-0024)

Solid waste disposal site. Pre-regulations site closed 12/31/63.

3. Spic and Span Private Garbage Dump (I.D. SWIS #39-CR-0032)

Solid waste disposal site. Pre-regulations site closed (no date given).

4. Forward Resource Recovery Facility (I.D. SWIS #39-AA-0020)

Unit 01 Solid waste transfer/processing facility. Permitted site now inactive.

Unit 02 Solid waste materials recovery facility (MRF). Permitted site now inactive.

Unit 03 Solid waste composting facility (Green Waste). Permitted site now active.

Unit 04 Solid waste composting facility (Mixed). Permitted site planned.

Unit 05 Solid waste operation (Non-Hazardous Ash Disposal/Monofill). Permitted site now inactive.

5. Austin Road/Forward Landfill (I.D. SWIS #39-AA-0001)

Solid waste landfill. Permitted site now active.

6. Lovelace Transfer Station (I.D. SWIS #39-AA-0008)

Solid waste large volume transfer/processing facility. Permitted site now active.

7. Forward, Inc. (I.D. SWIS #39-AA-0015)

Unit 01 Solid waste landfill. Permitted site now active.

Unit 02 Solid waste treatment (processing) facility. Permitted site now active.

Unit 03 Solid waste ACW disposal operation. Permitted site now active.

8. Delicato Vineyards (I.D. SWIS \$39-AA-0037)

Solid waste composting facility (Ag). Notification site now active.

San Joaquin County Public Health Services (Environmental Health Division), the State Regional Water Quality Control Board (RWQCB), and the California Department of Toxic Substances Control (DTSC) are now in the process of developing protocols for urban development in the vicinity of these waste management facilities. Currently, the Health and Safety Code requires a DTSC Preliminary Environmental Assessment (PEA) for development within 1,000 feet of a solid waste facility. (5)

9.1.6 City of Manteca Fire Department (MFD)

The City of Manteca operates a full-service Fire Department (MFD). MFD provides support for a variety of public agencies at the local, state, and federal levels. Support and services include hazardous materials response.

9.2 REGULATORY SETTING

The regulation of hazardous materials occurs at the federal, state, and local levels. These regulatory agencies are described below.

9.2.1 Applicable Federal Regulation

U.S. Environmental Protection Agency (EPA)

EPA's mission is to protect human health and to safeguard the natural environment, related to air, water, and land. EPA works closely with other federal agencies, state and local governments, and Indian tribes to develop and enforce regulations under existing environmental laws. EPA is responsible for researching and setting national standards for a variety of environmental programs and delegates to states and tribes responsibility for issuing permits, and monitoring and enforcing compliance. Where national standards are not met, EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

The Agency also works with industries and all levels of government in a wide variety of voluntary pollution prevention programs and energy conservation efforts.

EPA Region 9 office has jurisdiction over Manteca and the southwestern United States (Arizona, California, Nevada, and Hawaii).

EPA Programs related to Hazardous Materials include:

- Community Right-to-Know Information
- Pesticide Management
- Toxic Release Inventory
- Brownfields (CalSites Database)
- Cleanup Technologies
- Compliance Assistance
- Emergency Response
- Hazardous Waste
- Oil Spills

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) as updated in 1984, deals with both hazardous and nonhazardous solid waste. The EPA (or the states) must issue a permit to facilities before they can treat, store, and dispose of hazardous wastes.

According to the RCRA, generators are separated into three groups:

1. Large Quantity Generators (LQG's): Those that generate more than 2,200 pounds of hazardous waste per calendar month. Examples include pharmaceutical companies and chemical manufacturers.
2. Small Quantity Generators (SQG's): Those that generate between 220 pounds and 2,200 pounds of hazardous waste per calendar month. Examples include laboratories, printers, and dry cleaners.
3. Conditionally Exempt Small Quantity Generators (CESQG's): Those that generate less than 220 pounds of hazardous waste per calendar month. Examples include 1-hour photo labs and dental offices.

U.S. Department of Transportation (DOT)

The Hazardous Materials Transportation Act of 1974, as amended, is the basic statute regulating hazardous materials transportation in the U.S.. This law gives USDOT and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials.

State agencies are authorized to designate highways for the transport of hazardous materials. Where highways have not been designated, hazardous materials must be transported on routes that do not go through or near heavily populated areas.

Office of Emergency Services (OES)

OES administers the state's Emergency Plan for coordinating emergency services provided by federal, state, local government agencies, and private agencies, including California Environmental Protection Agency, California Highway Patrol, California Department of Fish and Game, and various county agencies and fire protection districts. Response to hazardous materials incidents is one part of this Plan.

9.2.2 Applicable State Regulation

CEQA and the Cortese List

The Cortese List (Hazardous Waste and Substances Site List) is a planning document used by the state, local agencies, and developers to comply with CEQA requirements to consider Government Code Section 5962.5 in evaluating proposed development projects. Section 65962.5 states,

“The list should contain all hazardous waste facilities subject to corrective action , all hazardous waste property or border zone property designations, all information received on hazardous waste disposals on public land, all hazardous substance release sites listed pursuant to Government Code Section 25356, and all sites that were included in the former Abandonment Site Assessment Program (2).

California Environmental Protection Agency (Cal EPA)

Government Code Section 65962.5 requires the California Environmental Protection Agency to develop a Cortese List at least annually. The Department of Toxic Substances Control is responsible for a portion of the information on the list, and other local and state government agencies are required to provide additional information

Cal EPA operates the Air Resources Board, the Department of Pesticide Regulation, Department of Toxic Substances Control, Integrated Waste Management Board, Office of Environmental

Health Hazard Assessment, and the State Water Resources Control Board. The function of each of these six (6) offices is discussed below:

Air Resources Board (ARB): To promote and protect public health, welfare and ecological resources through the effective and efficient reduction of air pollutants in recognition and consideration of the effects on the economy of the state.

Department of Pesticide Regulation (DPR): Regulates all aspects of pesticide sales and use to protect the public health and the environment for the purpose of evaluating and mitigating impacts of pesticide use, maintaining the safety of the pesticide workplace, ensuring product effectiveness, and encouraging the development and use of reduced risk pest control practices.

Department of Toxic Substances Control (DTSC): The Department's mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality, by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention. DTSC protects residents from exposures to hazardous wastes. DTSC operates programs to:

- -Deal with the aftermath of improper hazardous waste management by overseeing site cleanups.
- -Prevent releases of hazardous waste by ensuring that those who generate, handle, transport, store and dispose of wastes do so properly.
- -Take enforcement actions against those who fail to manage hazardous wastes appropriately.
- -Explore and promote means of preventing pollution, and encourage reuse and recycling.
- -Evaluate soil, water and air samples taken at sites, and develop new analytical methods.

Integrated Waste Management Board (IWMB): To protect the public health and safety and the environment through waste prevention, waste diversion, and safe waste processing and disposal. The IWMB is responsible for managing California's solid waste stream. The Board is helping California divert its waste from landfills by:

- -Developing waste reduction programs.
- -Providing public education and outreach.
- -Assisting local governments and businesses.
- -Fostering market development for recyclable materials.
- -Encouraging used oil recycling.
- -Regulating waste management facilities.

- -Cleaning up abandoned and illegal dump sites.

Office of Environmental Health Hazard Assessment (OEHHA): OEHHA is responsible for developing and providing risk managers in state and local government agencies with toxicological and medical information relevant to decisions involving public health. OEHHA also works with Federal agencies, the scientific community, industry and the general public on issues of environmental as well as public health. Specific examples of OEHHA responsibilities that directly relate to Manteca include:

- -Developing health-protective exposure standards for air, water, and land to recommend to regulatory agencies, including ambient air quality standards for the Air Resources Board and drinking water chemical contaminant standards for the Department of Health Services.
- -Assessing health risks to the public from air pollution, pesticide and other chemical contamination of food, seafood, drinking water, and consumer products.
- -Providing guidance to local health departments, environmental departments, and other agencies with specific public health problems, including appropriate actions to take in emergencies that may involve chemicals.

State Water Resources Control Board (SWRCB): To preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. The SWRCB maintains the Leaking Underground Storage Tank Information System (LUTIS) Database, which contains information on registered leaking underground storage tank (LUST's) in the state.

California Occupational Safety and Health Agency (CalOSHA)

CalOSHA sets and enforces standards that insure safe and healthy working conditions for California's workers. The Division of Occupational Safety & Health is charged with the jurisdiction and supervision over workplaces in California that are not under Federal jurisdiction. CalOSHA regulates issues involving unsafe workplace conditions, worker exposure to chemicals, illness due to workplace exposure, or improper training.

State Regulatory Programs Division (SRPD)

The State Regulatory Programs Division (SRPD) oversees the technical implementation of the state's Unified Program; a consolidation of six environmental programs at the local level, and conducts reviews of Unified Program agencies to ensure their programs are consistent statewide, conform to standards, and deliver quality environmental protection at the local level. SRPD also carries out the state's hazardous waste recycling and resource recovery program designed to facilitate recycling and reuse of hazardous waste. SRPD conducts a corrective action oversight program that assures any releases of hazardous constituents at generator facilities that conduct

onsite treatment of hazardous waste are safely and effectively remediated, and oversees the hazardous waste generator and onsite waste treatment surveillance and enforcement program carried out by local Unified Programs.

California Department of Transportation (Caltrans) and California Highway Patrol

The California Vehicle Code Section 31303 requires that hazardous materials be transported via routes with the least overall travel time, and prohibits the transportation of hazardous materials through residential neighborhoods.

In California, the California Highway Patrol (CHP) is authorized to designate and enforce route restrictions for the transportation of hazardous materials.

To operate in California, all hazardous waste transporters must be registered with the Department of Toxic Substances Control (DTSC). Unless specifically exempted, hazardous waste transporters must comply with the California Highway Patrol Regulations; the California State Fire Marshal Regulations; and the United States Department of Transportation Regulations. In addition, hazardous waste transporters must comply with Division 20, Chapter 6.5, Article 6 and 13 of the California Health and Safety Code and the Title 22, Division 4.5, Chapter 13, of the California Code of Regulations which are administered by DTSC.

Central Valley Regional Water Quality Control Board (RWQCB)

There are nine Regional Water Quality Control Boards (RWQCBs) throughout the State. The Central Valley RWQCB has jurisdiction over the City of Manteca, with offices in Stockton.

Individual RWQCB's function as the lead agencies responsible for identifying, monitoring, and cleaning-up leaking underground storage tanks. Storage of hazardous materials in underground storage tanks is regulated by the State Water Resources Control Board (SWRCB), which oversees the nine RWQCB's.

9.2.3 Applicable Local Government Regulation

Certified Unified Program Agencies (CUPA)

Senate Bill 1082 (1993) required the establishment of a unified hazardous waste and hazardous materials management program. The result was Cal EPA's United Program, which consolidates the actions of DTSC, the SWRCB, the RWQCB's, OES, and the State Fire Marshall. DTSC oversees the implementation of the hazardous waste generator and onsite treatment program, one of six environmental programs at the local level, through Certified Unified Program Agencies (CUPAs). CUPAs have authority to enforce regulations, conduct inspections, administer

penalties, and hold hearings. San Joaquin County implements the CUPA that has enforcement authority over the City of Manteca. Offices are located in Stockton.

San Joaquin County Air Pollution Control District (APCD)

San Joaquin County Air Pollution Control District has jurisdiction over the City of Manteca and deals with pollutants that get into the air from stationary sources (including fumes, dust and smoke, some asbestos). APCD responds to complaints about smells and answers questions about air quality management permits. The APCD and air quality are addressed in detail in Section 5, Air Quality, of this EIR.

San Joaquin County

Hazardous waste programs are managed and implemented locally through the County of San Joaquin Certified Unified Program Agency (CUPA). The County hosts a variety of hazardous waste collection events throughout the County in an effort to deter improper disposal of hazardous wastes

Household Hazardous Waste (HHW) Collection Facilities receive hazardous waste that comes from homes and, in some cases, from small business hazardous waste generators. Household wastes include pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals that should not go into a regular municipal landfill.

San Joaquin County Public Health Services monitors the possible groundwater and soil contamination from underground tanks. Its funding mechanism is a billing contract with the State Water Quality Control Board. Public Health Services clean-up enforcement falls under Title 23, California Code of Regulations. Case workers monitor site specific development, and must be contacted prior to development (3).

The City of Manteca and San Joaquin County Public Works Department deal with illegal discharges to sanitary or industrial sewers, and sometimes collect household hazardous waste. They also help to guard against illegal discharges to storm sewers (releases to the street, etc.).

9.2.4 City of Manteca

Household Hazardous Waste (HHW)

Household wastes include pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals that should not go into a regular municipal landfill. HHW programs focus on removing dangerous substances from homes and preventing their release into the environment through landfills, sewer systems and illegal dumping. The City of Manteca and San Joaquin County Public Works Solid Waste Division host a variety of hazardous waste collection events throughout the year to assist in the elimination of household hazardous waste. HHW Collection

Facilities receive hazardous waste that comes from homes and, in some cases, from small business hazardous waste generators.

9.2.5 City of Manteca 1988 General Plan

The Health and Safety Element (Section VII) of the existing 1988 General Plan includes the following Goal, and Policies, and Implementation Measure which intend to protect Manteca residents from hazardous materials:

- Goal F To protect Manteca residents from the effects of hazardous materials.
- Policy F-1 City approvals of all new development shall consider the potential for the production, use, storage, and transport of hazardous materials and provide for reasonable controls on such hazardous materials.
- Policy F-2 Within its authority, the City shall regulate the production, use, storage, and transport of hazardous materials to protect the health of Manteca residents.

Implementation

- Measure 3 The City shall adopt an ordinance requiring businesses, manufacturing, storing, using, or transporting significant quantities of hazardous materials to identify annually such materials and their quantities.

9.3 IMPACT EVALUATION CRITERIA

In accordance with CEQA Guidelines, Appendix G, the proposed project would have a significant adverse impact on the environment if the project would:

1. create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials;
2. create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
3. emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school;
4. be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
5. impair implementation of or physically interfere with an adopted emergency plan or emergency evaluation plan.

9.4 IMPACTS AND MITIGATION

POTENTIAL IMPACT HM-1: **The existing and future residents of the City of Manteca could be exposed to increased risk resulting from the routine use, transport, or disposal of hazardous materials.**

Light industrial development is expected to involve storage and use of hazardous materials. Commercial development may also use hazardous materials. Hazardous wastes are expected to be generated by some small businesses as well. The use and storage of hazardous materials will involve the transport of such materials.

Level of Significance: **Potentially Significant**

Mitigation Measures:

HM-1.1 The General Plan 2023 Safety Element ~~of the City of Manteca General Plan (Subsection 7.3)~~ provides the following goal, policy (P), and implementation (I) measures to mitigate the exposure of residents to hazardous materials:

- | | |
|----------|---|
| Goal S-5 | The City shall protect Protect the health, safety, natural resources, and property through regulation of use, storage, transport, and disposal of hazardous materials. |
| S-P-15 | The City shall maintain an awareness of hazardous materials throughout the Manteca region. |
| S-I-9 | The City shall require Require businesses that manufacture, store, use, or transport significant quantities of hazardous materials to identify annually such materials and their quantities. |
| S-I-10 | The City shall require Require the submittal of lists of hazardous materials used in existing and proposed industrial and commercial businesses within the City of Manteca. The list shall be maintained through the Manteca Fire Department and updated through periodic review. |

Residual Level of Significance: **Less Than Significant With Mitigation**

The level of significance will be mitigated to less than significant if the above goal, policy and, implementation measures are implemented. The requirement for businesses and others manufacturing, storing, using, and transporting hazardous materials to identify such activities annually, will reduce the risks of increased exposure.

POTENTIAL IMPACT HM-2: The existing and future residents of the City of Manteca could be exposed to increased risk of accidental release of hazardous materials.

With the increased use, storage and transport of hazardous materials expected from the development of small business, industrial, and commercial land uses, the risk of accidental release of those materials is increased. In addition, the proposed residential development increases the use of household hazardous materials, which increases the accidental release of common household hazardous materials.

Level of Significance: Potentially Significant

Mitigation Measures:

HM-2.1 The Safety Element of the City of Manteca General Plan (Subsection 7.3) provides the following policies (P) and implementation measure (I) to reduce the risk of accidental release of hazardous materials:

S-P-17 Within its authority, the City shall regulate the production, use, storage, and transport of hazardous materials to protect the health of Manteca residents.

S-I-11 Work with San Joaquin County and other public agencies to inform consumers about household use and disposal of hazardous materials.

S-I-12 Cooperate fully with Union Pacific Railroad and other public agencies, such as the CHP, in the event of a hazardous material emergency.

HM-2.2 The General Plan 2023 Air Quality Element (Section 10) provides the following implementation (I) measure to help reduce the exposure to hazardous materials:

AQ-I-3 Cooperate with San Joaquin County Environmental Health Department in identifying hazardous material users and in developing a hazardous materials management plan.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above policy and implementation measure are implemented. Regulation and increased awareness of proper use and disposal of hazardous materials will reduce the risk of accidental release. Cooperation with the Railroad and CHP will help reduce the level of release during any emergency.

POTENTIAL IMPACT HM-3: Use and possible emission of hazardous materials within one-quarter mile of an existing or proposed school could occur.

Increased mixed-use development, including building of needed schools, could increase the possibility of hazardous materials use near schools.

Level of Significance: Potentially Significant

Mitigation Measures:

HM-3.1 The Safety Element of the City of Manteca General Plan (Subsection 7.3) provides the following policy (P) to mitigate the possible exposure of schools to hazardous materials:

SP-P-16 City approvals of all new development shall consider the potential for the production, use, storage, and transport of hazardous materials and provide for reasonable controls on such hazardous materials.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above policy is implemented. Through the approval and permitting process, the City can regulate the location of hazardous material use, assuring that such activities are not placed near schools.

POTENTIAL IMPACT HM-4: Placing development on a site which included on the Cortese list of hazardous materials would create a significant impact.

Level of Significance: No Impact

The City of Manteca does not contain sites that are identified on the Cortese List.

POTENTIAL IMPACT HM-5: The City of Manteca General Plan 2023 could interfere with emergency response or evacuation procedures.

Level of Significance: Potentially Significant

Mitigation Measures:

HM-5.1	The Safety Element of the City of Manteca General Plan (Subsection 7.4) provides the following goal, policy (P), and implementation measures to facilitate emergency procedures.
Goal S-6	Ensure that City emergency procedures are adequate in the event of potential natural or man-made disasters.
S-P-18	The City shall maintain and periodically update the City's Emergency Plan.
S-I-14	The City shall conduct periodic emergency response exercises to test the effectiveness of City emergency response procedures.
S-I-15	The City shall review County and state emergency response procedures that must be coordinated with City procedures.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above goal, policy, and implementation measures are implemented. These actions will facilitate emergency procedures for hazardous materials incidents, as well as other emergency situations. Seismic, flooding, and structural fire emergencies are discussed in Section 8, Section 10, and Section 14, respectively.

References

- (1) California Department of Toxic Substances Control. "CalSites Short Summary Report." May 22, 2002.
- (2) California Department of Toxic Substances Control. www.DTSC.ca.gov. May 2003.
- (3) San Joaquin County Public Health Services, Environmental Health Division. Telephone conversation with Margaret Lagorio, LOP Director. May 21, 2003.
- (4) California Integrated Waste Management Board. www.CIWMB.ca.gov. June 2003.
- (5) San Joaquin County Public Health Services, Environmental Health Division. Telephone conversation with Robert McClellan. June 2003.

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10. HYDROLOGY AND WATER QUALITY

This section addresses the quality of groundwater and surface water, and the depletion of groundwater. This section also addresses potential flooding in the Study Area.

10.1 EXISTING CONDITIONS

10.1.1 Local Drainage

No major drainages flow within the Study Area. Manteca is located on the relatively higher ground between Lone Tree Creek to the north, the Stanislaus River to the south, and the San Joaquin River to the southwest and west.

Although no major watercourse lies within the Study Area, the San Joaquin River flows approximately four (4) miles to the west of the Study Area boundary. Walthall Slough is a tributary to the river. The Slough's northern boundary is contiguous with the southwestern boundary of the Study Area.

Meteorological events such as intense precipitation may adversely affect the natural drainage of the region. In addition, seasonal snowmelt from the Sierra Nevada mountain range to the east contributes to the volume of water in the local hydrologic system. Urbanization contributes to an increased volume in the hydrologic system by increasing impervious surfaces, which do not allow for infiltration of water into the soil resulting in increased velocities and volumes of runoff.

The South San Joaquin Irrigation District (SSJID) operates drainage facilities that pass through Manteca and carry a portion of the City's drainage. Because of topography, drainage facilities generally follow along an east-to-west alignment. In some instances where subdivisions have developed near irrigation laterals, drainage pumping stations have been installed in lieu of long trunk lines to drains. Water from the SSJID, along with drainage pumped by the City, flows west into French Camp Canal, which eventually flows into French Camp Slough. Storm drainage is gravity-discharged from the Study Area north to French Camp Canal. Existing road and railroad crossings of the Canal are, however, undersized and will require replacement to accommodate peak design flows from the Study Area. The San Joaquin Delta is the ultimate destination of drainage carried by French Camp Slough.

The City's stormwater drainage system is further discussed in Public Facilities and Services (Section 14).

10.1.2 100-Year Flood Areas

The Federal Emergency Management Agency (FEMA) categorizes flood prone areas based on the frequency of occurrence. The City of Manteca has not been mapped. Figure 10-1 shows the location of the FEMA defined 100-year area of potential inundation and the 500-year area of

potential inundation nearest to the City. The primary flood hazard is the San Joaquin River (four miles outside the Study Area) and its tributaries, notably Walthall Slough (contiguous with the southwestern Study Area boundary). A levee running from Williamson Road east to Airport Way provides flood protection for the land north and east of Walthall Slough. This levee is under the jurisdiction of Reclamation District No. 17.

10.1.3 Dam Failure Inundation

Portions of the 100-year floodplain would be subject to inundation in the event of dam failure. Although the likelihood is remote, the area subject to inundation within the Study Area is not specifically defined, but would generally coincide with the area delineated as the 100-year floodplain.

Despite the number of dams near San Joaquin County, the risk of dam failure inundating portions of the County is considered low, and the degree and nature of risk for each dam is unknown. Dam failure can occur under three general conditions: as a result of an earthquake, an isolated incident due to structural instability, or because of intense rain in excess of design capacity.




Section 8589.5 of the California Government Code requires local jurisdictions to adopt emergency procedures for the evacuation of populated inundation areas identified by dam owners. The local Office of Emergency Services has prepared a Dam Failure Plan. This plan includes a description of dams, direction of floodwaters, responsibilities of local jurisdictions, and evacuation plans.

10.1.4 Surface Water Quality



The quantity, quality, and availability of water are vital to both human activities, and vegetation and wildlife in the Study Area. Water is essential to the viability of agriculture; the development of housing, commerce, and industry; recreation; and the maintenance of high-quality fish and wildlife habitats.

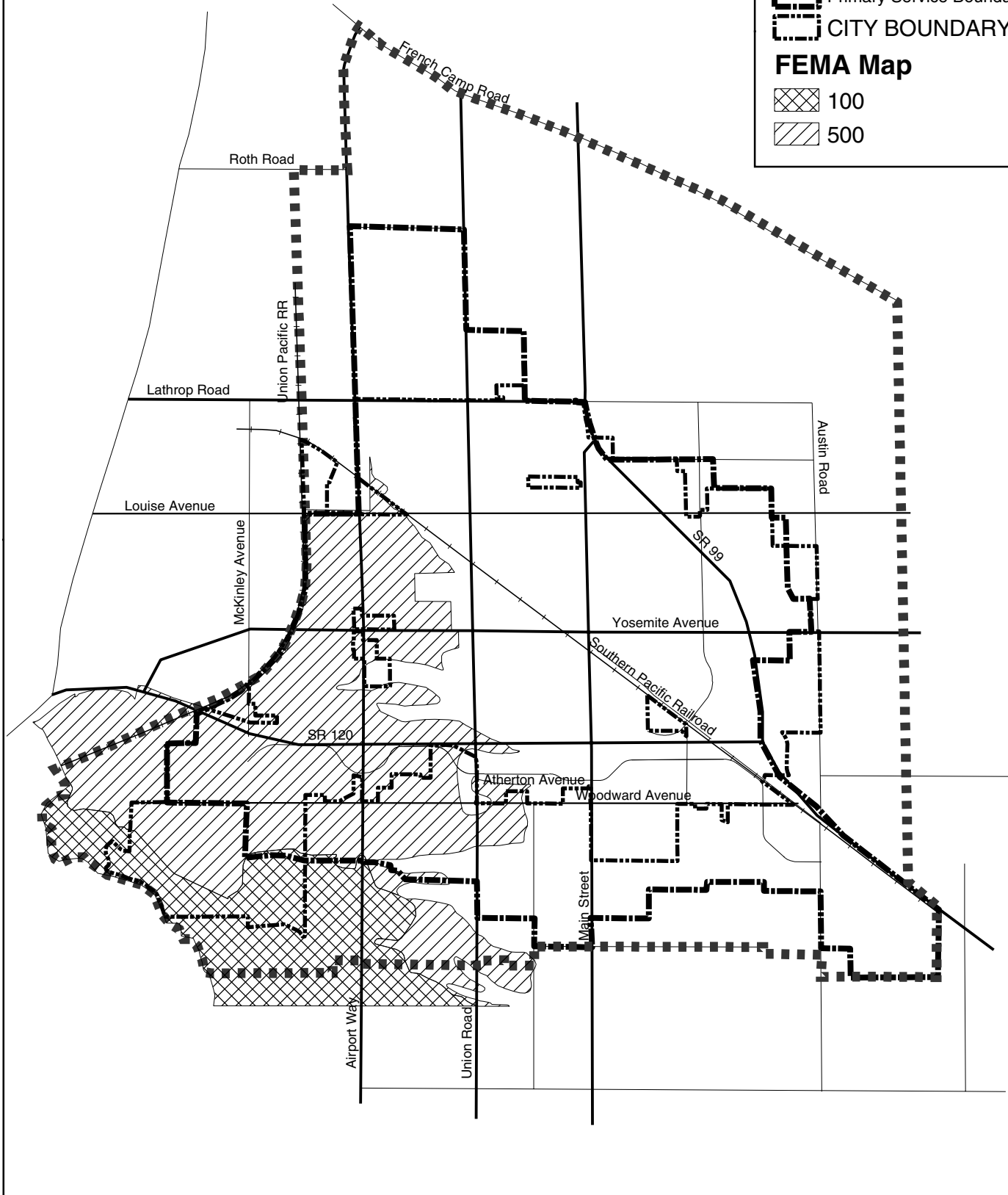
There are land uses and activities which the City must consider in protecting its water quality, including construction activities, agricultural land use, a dairy, urban runoff, and the wastewater treatment plant. Water quality issues associated with underground fuel or chemical storage tanks are discussed in Hazardous Materials (Section 9).

LEGEND

-  Study Area Boundary
-  Primary Service Boundary
-  CITY BOUNDARY

FEMA Map

-  100
-  500



Manteca General Plan

Construction Activities

Construction grading can impact water quality because it exposes bare soil. Rainfall on bare soil can cause erosion and sedimentation into nearby water bodies. Unstabilized soil can be washed or wind-blown into nearby surface water. Construction activities can also result in petroleum products and other pollutants from construction equipment, entering nearby drainages.

Agricultural Land Use

Water running off irrigated agricultural fields may contain fertilizers and pesticides. Improper use and disposal of farm chemicals can contaminate surface and groundwater resources. Agricultural procedures can also result in erosion of unstabilized soil, especially during conversion of vegetation. Aerial spraying could also drift into nearby water bodies.

Dairy

There is a dairy within the Study Area, located along Airport Way north of Yosemite Avenue. Wastes from confined animals can cause problems in nearby surface and groundwater. The wastes include nitrate, ammonia, bacteria, and total dissolved solids (TDS). The current adjacent land uses to the dairy are residential and a golf course. This property is proposed for conversion to residential land use in the General Plan 2023.

Urban Runoff

Urban runoff includes household chemicals (including pesticides, herbicides, and paints), as well as petroleum products from automobiles and landscaping equipment. Municipal sources of pollution include government yards where transportation, fueling, and maintenance activities take place.

Wastewater Treatment Plant

Discharge from municipal treatment plants may result in high coliform counts, elevated temperatures, pH changes, increased turbidity, and low dissolved oxygen in water bodies.

The discharge is subject to standards established by the California Regional Water Quality Control Board.

10.1.5 Groundwater Quality

Groundwater levels are relatively high throughout the Study Area.

The City's wells produce groundwater that meet or exceed the State Department of Health Services recommended drinking water quality standards.

10.1.6 Groundwater Recharge

Area water levels are buoyed by the proximity of the Delta channels to the west. Groundwater recharge comes from irrigation of agricultural lands surrounding the City and infiltration from streams flowing west out of the Sierra Nevada. This recharge occurs in areas with permeable materials which allow the infiltration of water along streams, alluvial fans and foothill areas. The Study Area includes a variety of soil types that provide percolation to groundwater. However, with no streams or alluvial fan conditions, there are no notable groundwater recharge areas identified within the Study Area.

10.2 REGULATORY SETTING

The following is a summary of the regulatory context under which surface water and groundwater resources are managed at the federal, state, and local level.

10.2.1 Applicable Federal Regulation

Water Quality: Federal Clean Water Act

The Federal Clean Water Act of establishes the basic structure for regulating discharges of pollutants into surface waters of the United States, and sets water quality standards for all contaminants in surface waters. Water quality standards are intended to protect public health, enhance the quality of water, and serve the purposes of the Clean Water Act. The Act defines water quality standards as federal or state provisions or laws that, (1) designate the beneficial uses of water, and (2) establish water quality criteria to protect those designated uses.

Safe Drinking Water Act

The Safe Drinking Water Act was amended in 1986 and 1996, and requires protection of drinking water and its sources (i.e., rivers, lakes, reservoirs, springs, and groundwater wells). The Act authorizes the U.S. Environmental Protection Agency (EPA) to set national standards for drinking water to protect against pollutants. The EPA, states, and local agencies work together to enforce these standards.

Water Quality: National Pollution Discharge Elimination System (NPDES)

The Federal Clean Water Act was amended in 1972 to regulate discharge of pollutants from any point source into the waters of the United States. NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, stormwater associated with industrial activity, runoff from construction sites disturbing more than one (1) acre of soil, mining operations, and animal feedlots and agricultural facilities above certain thresholds.

Stormwater discharges from both large and small construction sites are now subject to NPDES requirements. Large construction sites are those that involve five or more acres of soil

disturbance. Small construction sites are those that involve from one to five acres of soil disturbance.

The NPDES stormwater permitting program is administered by the State Regional Water Quality Control Boards on behalf of the U.S. Environmental Protection Agency (EPA).

Flooding and Drainage: FEMA 100-Year Floodplain

The boundaries of the 100-year floodplain are delineated by FEMA on the basis of hydrology, topography and modeling during predicted rainstorms. Areas designated as flood zones are shown on published Flood Insurance Rate Maps (FIRM). FEMA requirements for residential development in a designated 'A' Zone include raising the first floor to at or above the base flood elevation (100-year). The National Flood Insurance Program (NFIP) requires owners of property within designated flood zones to purchase flood insurance.

10.2.2 Applicable State Regulation

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, also known as the California Water Code, is California's statutory authority for the protection of water quality. Under this Act, the state must adopt water quality policies, plans and objectives that protect the state's waters. The Act sets forth the obligations of the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCB) pertaining to the adoption of Basin Plans and establishment of water quality objectives. Unlike the Federal Clean Water Act, which regulates only surface water, the Porter-Cologne Act regulates both surface and ground water.

State Water Resources Control Board (SWRCB)

The State Water Resources Control Board (SWRCB) administers state water rights and water quality functions. The SWRCB and its nine (9) Regional Water Quality Control Boards (RWQCB) administer water rights and enforce pollution control standards. The SWRCB and RWQCB's are responsible for ensuring implementation and compliance with the provisions of the Federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act. The project is situated within the jurisdiction of the Central Valley Region of the RWQCB. The Central Valley RWQCB has the authority to implement water quality standards through the issuance of permits for discharges to waters within its jurisdiction.

General Construction Activity Stormwater Permit

General Stormwater Discharge Permits are required by the state for stormwater discharges associated with construction activities involving disturbance of five (5) acres or more. Construction on sites of fewer than five acres requires a permit if part of a larger development or

land sale. Landowners are responsible for obtaining and complying with the permits, but may delegate specific duties to developers and contractors by mutual consent.

Regulations under Section 402(p) of the Federal Clean Water Act are now in effect. They involve control of pollution in stormwater discharges. In California, the Section 402(p) NPDES Permit applicants are required to prepare and retain at the construction site a Stormwater Pollution Prevention Plan (SWPPP), and implement Best Management Practices (BMP) to reduce construction effects on receiving water quality by implementing erosion control measures. The SWPPP must describe the site, erosion and sediment controls, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls. Dischargers are also required to inspect construction sites before and after storms to identify stormwater discharge from construction activity, and to identify and implement controls where necessary.

Central Valley RWQCB Basin Plan

The Water Quality Control Plan for the Sacramento and San Joaquin River Basins provides water quality objectives and standards for waters of these two river basins. The Basin Plan contains specific water quality objectives for bacteria, dissolved oxygen, pH, pesticides, electrical conductivity, total dissolved solids (TDS), temperature, turbidity, and trace elements. It also includes objectives for groundwater quality that pertain to bacteria, chemical constituents, radioactivity, taste, color, and toxicity.

California and Section 303(d) of the Clean Water Act

Section 303(d) of the Clean Water Act requires states to develop lists of water bodies that will not attain water quality standards after implementation of minimum required levels of treatment by point-source dischargers (municipalities and industries). Section 303(d) requires states to develop a total maximum daily load (TMDL) for each of the listed pollutants and water bodies. TMDL is the amount of loading that the water body can receive and still meet water quality standards.

The most recently approved (1988) Clean Water Act Section 303(d) list for California identifies the various waterways throughout the state that are water quality impaired for a number of constituents. The SWRCB is responsible for compiling the list. The San Joaquin River is on that list. The TMDL end dates for the pollutant constituents for the river range from December 1999 to December 2011. (1)

10.2.3 City of Manteca

South San Joaquin Irrigation District (SSJID) Surface Water Project

Groundwater is the City's primary source of domestic water. The City of Manteca is participating in the South San Joaquin Irrigation District (SSJID) Surface Water Project. This project will deliver surface water to provide a conjunctive use of groundwater and surface water. This will enhance the available water supply and will substantially reduce the amount of groundwater withdrawal. The South San Joaquin Irrigation District (SSJID) Surface Water Project and the conjunctive use of surface and ground water is described in Subsection 14.1.1 of this EIR.

Drainage

The City of Manteca Public Facilities Implementation Plan (1993) identifies a series of specific improvements required to accommodate drainage of the existing urban areas of the City. In addition, the plan identified other measures that apply to future development.

The PFIP requires that:

- Wherever possible, the land ultimately required for each improvement (included in the Drainage Master Plan) will be preserved before development occurs in an area.
- Storm drainage and flood protection facilities should be constructed when each new development begins.

Manteca has predominantly relied upon the lateral and drain facilities of South San Joaquin Irrigation District for terminal drainage. In concert with development, the SSJID facilities have been realigned into rights-of-way and/or structurally upgraded to be compatible with the land conversion from agricultural to urban use. As in the past, drainage improvements will be constructed in a timely manner in order to maintain the level of service standard. This is accomplished by constructing the storm drainage and flood protection facilities for each new project, and by having the necessary facilities in place at time of occupancy.

Manteca presently administers a variety of regulations designed to prevent flooding and address stormwater management. These include a flood ordinance, various provisions of the zoning ordinance and subdivision ordinance, and construction codes for residential and non-residential developments.

The City's municipal drainage system is further discussed in Public Facilities and Services, Section 14.

10.3 IMPACT EVALUATION CRITERIA

In accordance with CEQA Guidelines, Appendix G, any land use directed by the General Plan 2023 would have a significant impact on the environment if the land use would:

- a. Violate any water quality standards or waste discharge requirements.
- b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in substantial flooding on- or off-site.
- e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- f. Otherwise substantially degrade water quality.
- g. Place housing within a 100-year flood hazard as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map.
- h. Place within 100-year flood hazard area structures which would impede or redirect flood flows.
- i. 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.
- j. Inundation by seiche, tsunami, or mudflow.

Soil erosion is addressed in Geology, Soils, and Seismicity, Section 8.

Stormwater drainage system capacity is addressed in Public Facilities and Services, Section 14.

10.4 IMPACTS AND MITIGATION

POTENTIAL IMPACT HWQ-1: Planned development in the General Plan 2023 could violate water quality standards or waste discharge requirements.

Level of Significance: **Potentially Significant**

Mitigation Measures:

HWQ-1.1: Subsection 8.6 of the Resource Conservation Element of the proposed General Plan 2023 addresses water quality. The following implementation measure (I) should be **amended (as shown below in bold)** to meet water quality standards and waste discharge requirements for groundwater and surface water:

RC-I-24 Comply with the Regional Water Control Board's regulations and standards to maintain and improve groundwater **and surface water quality** in Manteca.

Residual Level of Significance: **Less than Significant with Mitigation**

Through compliance with the RWQCB regulations, the City of Manteca will meet water quality standards.

POTENTIAL IMPACT HWQ-2: **Planned development in the General Plan 2023 could substantially deplete groundwater supplies or interfere with groundwater recharge.**

Level of Significance: **Less Than Significant**

As discussed in Subsection 10.1.6 above, the Study Area includes a variety of soil types that provide percolation to groundwater. However, with no streams or alluvial fan conditions, there are no notable groundwater recharge areas identified within the Study Area.

Continued use of groundwater as the City's primary source of domestic water would be a significant impact. However, the level of significance will be reduced when surface water supplies are available through the SSJID Surface Water Project. Delivery of this water is planned for 2005, well before major new development would occur under the General Plan 2023. Even with the Surface Water project, Manteca would continue to pump groundwater water to meet the full projected demand associated with planned growth but would do so at the safe yield rate of extraction. Therefore, the impact is less than significant.

In addition, the General Plan 2023 provides the following goals, policies (P), and implementation measures (I) from the Resource Conservation Element (Section 8) will help to lessen the impacts to groundwater supplies:

-
- Goal RC-1 Minimize the consumption of water to reasonable levels consistent with a high level of amenities and quality of life for City residents and visitors.
- Goal RC-2 Maximize the beneficial uses of water by recycling water for irrigation and other non-potable uses.
- Goal RC-7 To protect water quality in the San Joaquin River and in the area's groundwater basin.
- RC-P-1 The City shall continue to implement water conservation standards for all commercial and industrial development, and for all existing and new residential development.
- RC-P-2 The City shall explore potential uses of treated wastewater when such opportunities become available.
- RC-P-4 The City shall require ~~promote~~ water conservation in both City operations and private development to minimize the need for the development of new water sources.
- Development of private water wells within the city limits shall be allowed only where the City makes a finding that municipal water service is not readily and feasibly available, and such private well systems shall only be allowed to be used until such time as City water service becomes available.
- RC-I-1 Continue to implement standards for water conserving landscape practices, including the use of drought tolerant plants, for both public and private projects.
- RC-I-2 Continue efforts to increase public participation in water conservation.
- RC-I-3 Require large commercial and industrial water users to submit a use and conservation plan as part of the project entitlement review and approval process, and develop a program to monitor compliance with and effectiveness of that plan.
- RC-I-4 Cooperate with other agencies and jurisdictions to expand water conservation programs, and to develop methods of water reuse.
- RC-I-5 Actively pursue the use of treated wastewater in irrigation and industrial applications, including development of appropriate infrastructure.

- | | |
|---------|---|
| RC-P-12 | Protect the quality of Manteca's groundwater. |
| RC-P-13 | Encourage participation of the County and surrounding communities in a basin-wide groundwater management study. |
| RC-I-19 | The City shall work with the County and surrounding communities to develop an action plan and/or to create an agency to manage and protect local and regional groundwater resources. |
| RC-I-20 | The City shall not approve new industrial or commercial development that has a significant potential for adversely affecting water quality in the San Joaquin River or in the area's groundwater basin. |

POTENTIAL IMPACT HWQ-3: Implementation of the General Plan 2023 could alter the existing drainage pattern, or increase the rate of runoff that could result in flooding.

Level of Significance: Potentially Significant

There are no natural drainages in the Study Area. The South San Joaquin Irrigation District (SSJID) operates drainage facilities that pass through Manteca and carry a portion of the City's drainage. Water from the SSJID, along with drainage pumped by the City, flows west into French Camp Canal, which eventually flows into French Camp Slough.

Urban development increases the amount of impervious surfaces, which in turn increases the amount of runoff.

Mitigation Measures:

HWQ-3.1: The Safety Element (Section 7) of the General Plan 2023 addresses the issue of impervious surfaces and flooding potential. The following implementation measures (I) are intended to reduce the amount of impervious surfaces and the subsequent flooding potential:

- | | |
|-------|---|
| S-I-6 | Discourage large continuous paved areas <u>unless provided with engineered drainage facilities.</u> |
|-------|---|

S-I-7 ~~Where feasible, require~~ ~~Encourage~~ the use of pervious paving materials, such as brick or stepping stones with sand joints.

S-I-8 ~~Where feasible,~~ New development shall be required to maintain natural stream courses and adjacent habitat and combine flood control, recreation, water quality, and open space functions.

Residual Level of Significance: Less than Significant with Mitigation

The implementation measures listed above will help reduce the potential for flooding due to impervious surfaces.

POTENTIAL IMPACT HWQ-4: Runoff from new development and impervious surfaces would contain urban contaminants that could affect receiving water quality.

Level of Significance: Potentially Significant

Conversion of undeveloped land to urban uses would increase the amount of impervious surfaces, which in turn would alter the types of pollutants that could be present in runoff. Urban activities which increase polluted runoff include motor vehicle operation and maintenance, residential and landscape maintenance, littering, careless material storage and handling (fertilizers, herbicides, pesticides, gasoline, oil, paint, etc.), domestic animal waste, and pavement wear.

Mitigation Measures:

HWQ-4.1: The Resource Conservation Element (Section 7) of the proposed General Plan 2023 provides the following policy (P) and implementation measures (I) to help reduce urban contaminants from polluting receiving water bodies:

RC-P-11 Minimize pollution of waterways and other surface water bodies from urban runoff.

RC-I-22 Maintain a buffer areas between waterways and urban development to protect water quality and riparian areas.

RC-I-23 Utilize cost-effective urban runoff controls, including Best Management Practices (BMPs), to limit urban pollutants from entering the water courses.

Residual Level of Significance:

The level of significant of urban pollutants entering receiving waters will be reduced to less-than-significant with above implementation measures. BMPs are specifically designed to reduce the impact of urban runoff.

POTENTIAL IMPACT HWQ-5: Implementation of the City of Manteca General Plan 2023 may expose people and structures to the flood hazards of the San Joaquin River 100-year floodplain.

Level of Significance: Potentially Significant

The FEMA 100-Year Potential Flood Map nearest to Manteca is that for the San Joaquin River, as shown in Figure 10-1. The City of Manteca has not been mapped. The San Joaquin River and its tributary, Walthall Slough (contiguous with the southwestern Study Area boundary) are the primary flood hazards for the Study Area. A levee running from Williamson Road east to Airport Way provides flood protection for the land north and east of Walthall Slough. This levee is under the jurisdiction of Reclamation District No. 17.

Mitigation Measures:

HWQ-5.1: The Safety Element (Section 7) of the City of Manteca General Plan 2023 provides the following goals, policies (P), and implementation measures (I) to mitigate potential exposure of people and structures to a significant loss of property and life involving flooding from the designated San Joaquin River 100-year floodplain:

- Goal S-3 Prevent loss of lives, injury, and property damage due to flooding.
- Goal S-4 Pursue flood control solutions that minimize environmental impacts.
- S-P-7 Regulate all uses and development in areas subject to potential flooding through zoning and other land use regulations.
- S-P-8 Cooperate with other agencies in the pursuit of ~~Pursue~~ a regional approach to flood issues.
- S-P-9 Combine flood control, recreation, water quality, and open space functions where feasible.

- S-P-10 Ensure that any existing structures subject to the 100-year flood provide adequate protection from flood hazards.
- S-P-11 Ensure that the impacts of potential flooding are adequately analyzed when considering areas for future urban expansion.
- S-P-12 New residential development, including mobile homes, shall be constructed so that the lowest floor is at least one foot above the 100-year flood level.
- S-P-13 Non-residential development shall be anchored and flood-proofed in accord with the Federal Emergency Management Agency (FEMA) standards to prevent damage or causing damage due to a ~~from the~~ 100-year flood or, alternatively, elevated to at least one foot above the 100-year flood level.

When improvements to existing development are made costing at least 50 percent of the current market value of the structure before improvements, the structure shall be brought into compliance with FEMA standards.

- S-I-4 The City shall continue to participate in the National Flood Insurance Program. To this end, the City shall ensure that local regulations are in full compliance with standards adopted by the Federal Emergency Management Agency (FEMA).
- S-I-5 Provide flood warning and forecasting information to City residents.
- The City shall adopt and implement local flood management development standards.

Residual Level of Significance: Less than Significant with Mitigation

The level of significance will be less than significant after implementation of the above goals, policies, and implementation measures. Combined with General Plan 2023 open space designations nearest the 100-year floodplain and the levee system, these measures will significantly reduce the flood hazards to the Study Area.

POTENTIAL IMPACT HWQ-6: Implementation of the proposed General Plan 2023 could expose people of structures to inundation by seiche, tsunami, or mudflow.

Level of Significance: Less Than Significant

It is highly unlikely that inundation from a seiche (earthquake-induced, tsunami-like flows of water from an inland body of water) will affect the Study Area. The nearest body of inland water is the San Joaquin River, and the Study Area is protected by a levee system.

Given that the Study Area is nearly level in topography; ~~(Geology, Soils, and Seismicity, Section 8)~~, it is highly unlikely that the Study Area would be inundated by mudflows. The nearest source of possible mudflow is the San Joaquin River located at the southwesterly perimeter of the Study Area ~~four miles outside the Study Area boundary, and the Study Area is protected by a levee system.~~

References

- (1) Central Valley Water Quality Control Board, 1988 303(d) List, By Water Body.
www.swrcb.ca.gov/rwqcb5.

11. LAND USE

This section describes the current land use patterns and development trends within the General Plan Study Area, and the regulatory and planning environment under which future land use planning will or may occur.

11.1 EXISTING CONDITIONS

11.1.1 Land Use Development History

The City of Manteca was established as an agricultural service center. Manteca formed around the primary crossroads, Yosemite Avenue and Main Street, and the Southern Pacific (now the Union Pacific) and Tidewater railroads.

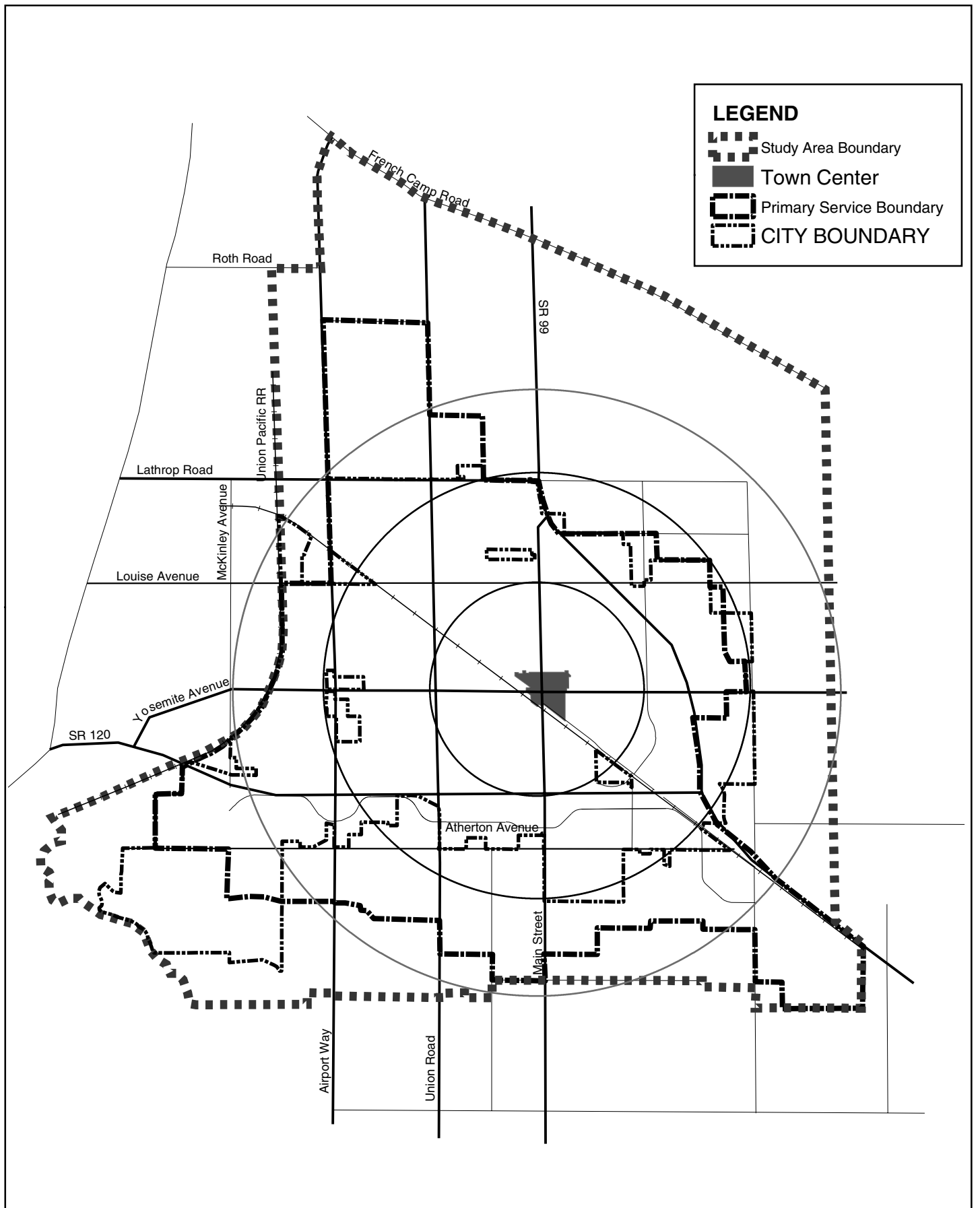
Development began in earnest in Manteca between 1914 and 1920. Residential neighborhoods were beginning to fill in by 1918. The City of Manteca was incorporated on May 28, 1918. During the 1950's, the City grew as inexpensive housing drew workers from the Sharpe Army Depot in Lathrop and industrial plants in south San Joaquin County.

While agriculture still plays an important role in the local economy, the economic base has become more diversified with the development of industries and the influx of Bay Area workers seeking affordable housing. The community has grown with the addition of new neighborhoods, primarily to the north and west of the historic geographic core.

As shown in Figure 11-1, Manteca has grown outward from the geographic center at Yosemite Avenue and Main Street. Commercial development along Yosemite Avenue and Main Street is flanked by residential neighborhoods. In the early years, the community grew close to the historic center in a concentric pattern. In the decades of the 1970's through 1990's the community grew away from the center toward the north and west. In the latter 1990's, following the approval of the South Area Plan, Manteca began to grow south of SR 120.

The community has tended to grow in a compact form with few large vacant parcels. The few, larger vacant lands tend to be located along the west end of Yosemite Avenue and the north end of Main Street at the periphery of the historic urban growth pattern. In these locations more contemporary residential neighborhoods have by-passed underutilized commercial and industrial properties. A handful of agricultural lands remain near the urbanized area.

Development densities are typical of small, suburban communities. The average residential neighborhood has approximately 4 to 5 dwelling units per acre. The density of residential neighborhoods in the older portions of Manteca is comparable to the newer residential neighborhoods.



Manteca General Plan

11.1.2 Existing Land Use Conditions

As of 2003, the City of Manteca encompassed an area of 16.2 square miles and an urbanized area of approximately 8 square miles.

Table 11-1
Land Area in the City of Manteca (2002)

Area	Acres	Square Miles
City Boundary	10,353	16.2
Urbanized Area	5,120	8.0
Primary Area (1988 General Plan)	11,560	18.1
Secondary Service Area (1988 General Plan)	25,149	39.0

Source: Manteca General Plan, 1988 and City of Manteca GIS Data Base, 2002

11.1.3 Physical Constraints

Urban development is not significantly constrained by physical features or terrain in the Study Area. All natural features, including natural waterways and any native vegetation have been removed for agriculture.

Potential flooding is limited to the southwest quadrant of the Study Area, as described in Section 10.1.2 of this EIR. South San Joaquin Irrigation District irrigation and drainage ditches cross the Study Area, generally flowing in an east-west direction. These ditches have been modified or piped in most developed areas of the city. The French Camp Outlet Canal on the west side of the Study Area is a large open drainage canal that could affect the development potential adjacent to it. The canals and other drainage features are discussed in more detail in Section 10.1.1 of this EIR.

The Union Pacific Railroad (UPRR) along the west side of the Study Area would constrain development, coincides with the common boundary with the City of Lathrop and is, therefore, not a factor. The UPRR, running diagonally through Manteca, is substantially developed along the rail right-of-way, and is not a significant constraint to future development.

The power line corridor easement that transects the Study Area from northeast to southwest is a potential constraint to future development, but is substantially developed along the easement. In

some areas of the older part of Manteca, the easement crosses the yards of single family development and is used as part of the private yard.

The Lovelace Solid Waste Transfer Station located on Lovelace Road is a major waste management facility that serves all of Manteca. Potential land use conflicts with this established public facility could constrain future land use or could result in operational constraints on the facility that could affect its future use.

11.2 REGULATORY SETTING

11.2.1 City of Manteca 1988 General Plan

The 1988 City of Manteca General Plan, which currently regulates land development issues, will be replaced by the 2023 General Plan. The 1988 General Plan, as amended through 2002, provides approximately 12,000 acres designated for urban use, exclusive of agricultural uses.

11.2.2 City of Manteca South Area Plan

The South Area Plan was approved by the City of Manteca in 1993 to establish urban land uses south of SR 120. The Plan provides for residential, commercial, and industrial uses near SR 120. The Plan also established the Planned Employment Center (PEC) designation in the southwest quadrant, west of Airport Way.

11.2.3 Manteca Redevelopment Agency




The City of Manteca Redevelopment Agency has established two redevelopment areas. The Redevelopment Plan establishes goals and policies for these areas that may affect General Plan land use. Figure 11-2 shows the boundaries of the existing redevelopment areas.

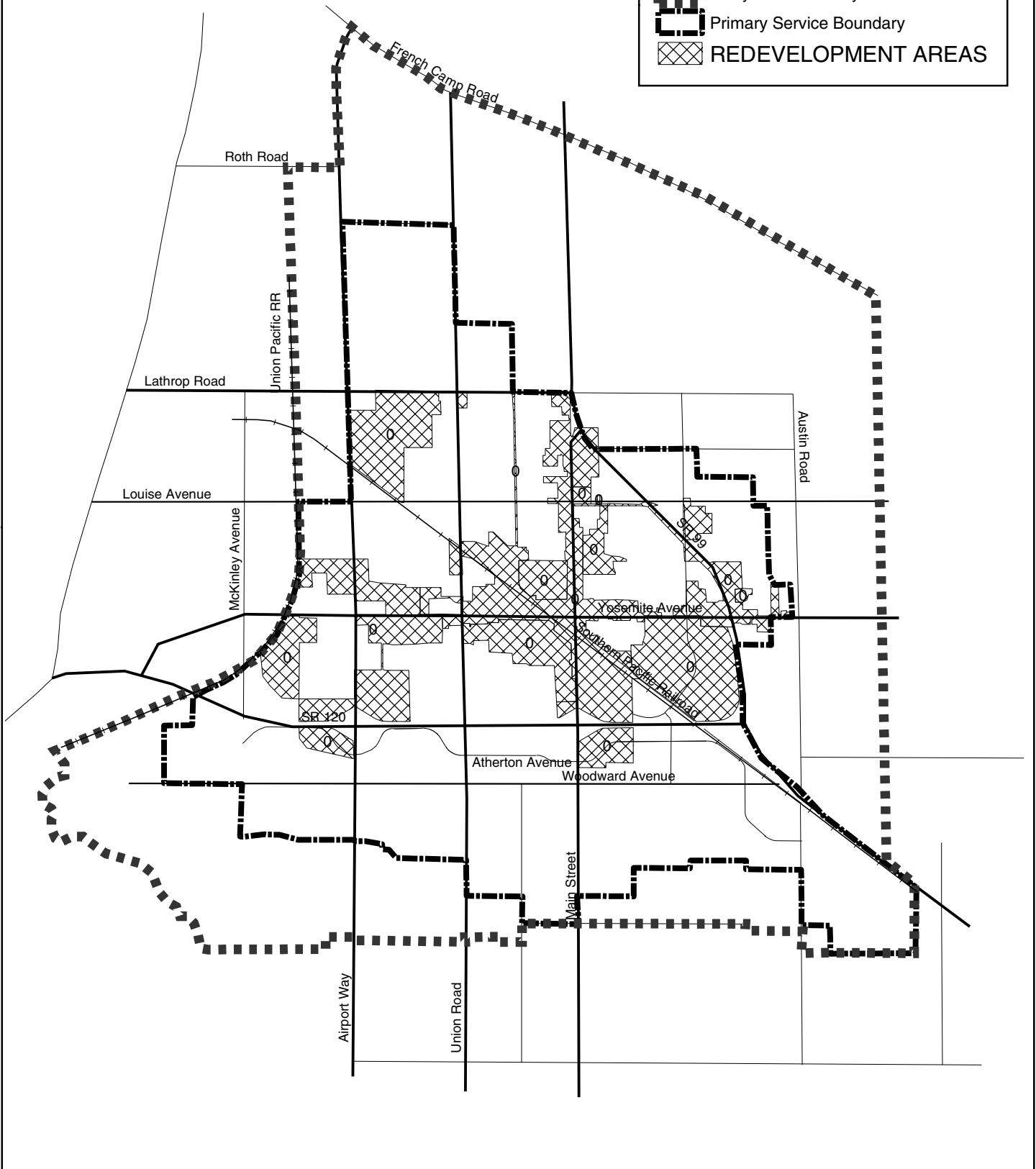
11.2.4 San Joaquin County

The San Joaquin County General Plan and Zoning Ordinance regulates land use in the unincorporated area adjacent to the Manteca City boundary. Manteca has historically annexed land as development has created the demand for urban services. Therefore, the incorporated area of Manteca very closely follows the existing developed area. The predominant land use designation in the County is Agriculture, and the typical zoning in the Manteca area is AG-40 or AU-20. Figure 11-3 shows the County zoning in the General Plan Study Area.

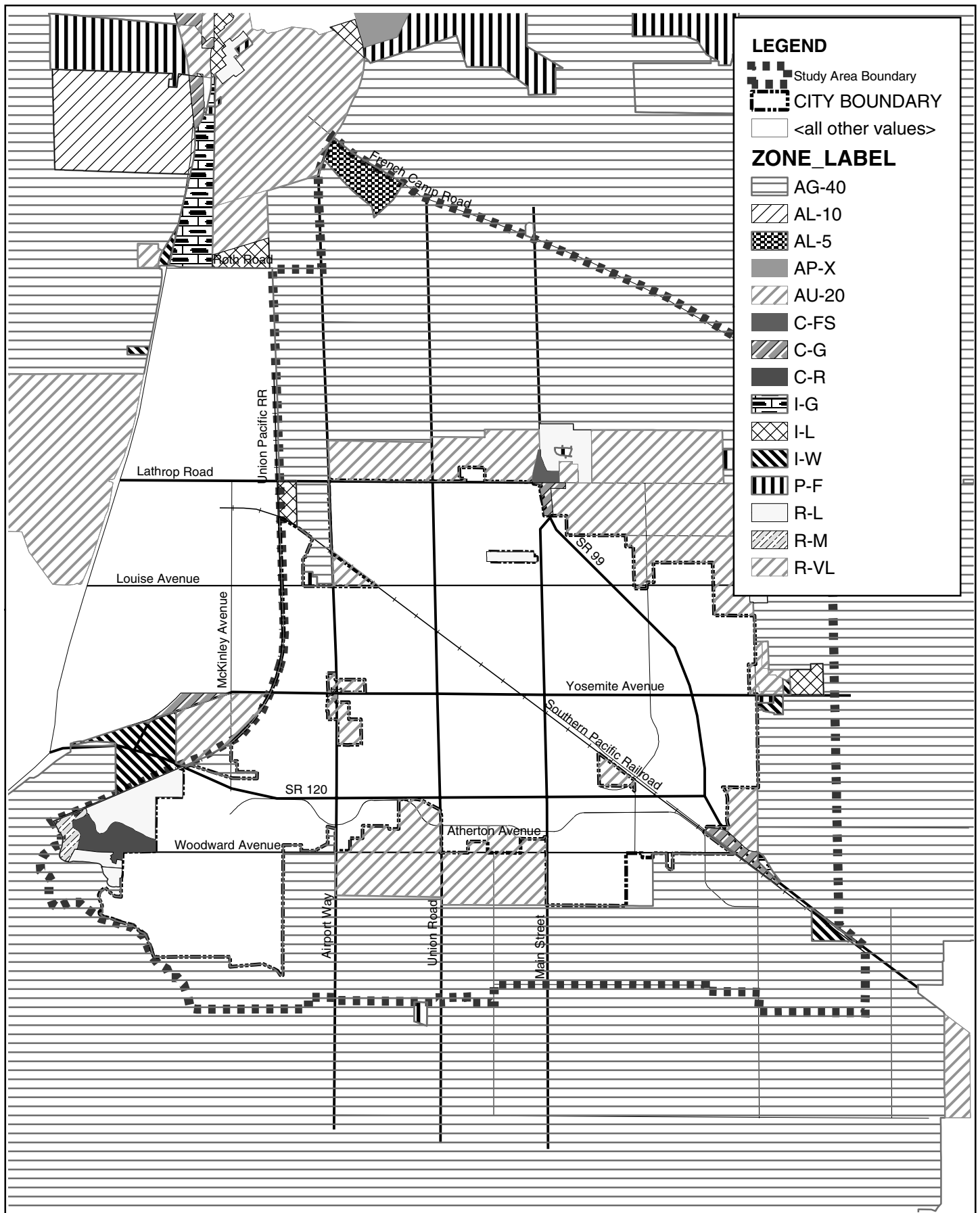
The Oakwood Lake Resort and the residential areas around the Weatherbee Lake (a reach of Walthall Slough) are existing developments within the County that are included in the Study Area boundary, but are not proposed to be annexed to Manteca. These areas were included in the Study Area because their sole access is through the proposed development areas in Manteca and would therefore, be part of the traffic analysis. In addition to the existing developed area, San

LEGEND

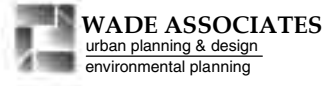
-  Study Area Boundary
-  Primary Service Boundary
-  REDEVELOPMENT AREAS



Manteca General Plan



Manteca General Plan



SAN JOAQUIN COUNTY ZONES

FIGURE 11-3

Joaquin County has approved a subdivision and commercial use area within the Oakwood Lake properties. This proposed development is contiguous to the proposed land use in the General Plan 2023.

11.2.5 Local Agency Formation Commission

The San Joaquin County Local Agency Formation Commission (SJLAFCo) has authority over the formation of special districts, incorporation of municipalities, and reorganization of district and municipal boundaries. All land use designations in the Manteca General Plan that lie beyond the existing Manteca municipal boundary will apply to the affected properties only when those properties have been annexed to the City. Such annexation can only occur with the approval of the SJLAFCo.

Municipal Spheres of Influence

The Local Agency Formation Commission also has the authority to establish a Sphere of Influence (SOI) for each special district and city in the county. The SOI establishes the anticipated area of annexation for each of these agencies. Therefore, the general plan for each agency should be compatible with the SOI of each adjacent jurisdiction. Figure 11-4 shows that the Manteca General Plan Study Area does not conflict with the Stockton, Ripon, or Lathrop municipal spheres of influence.

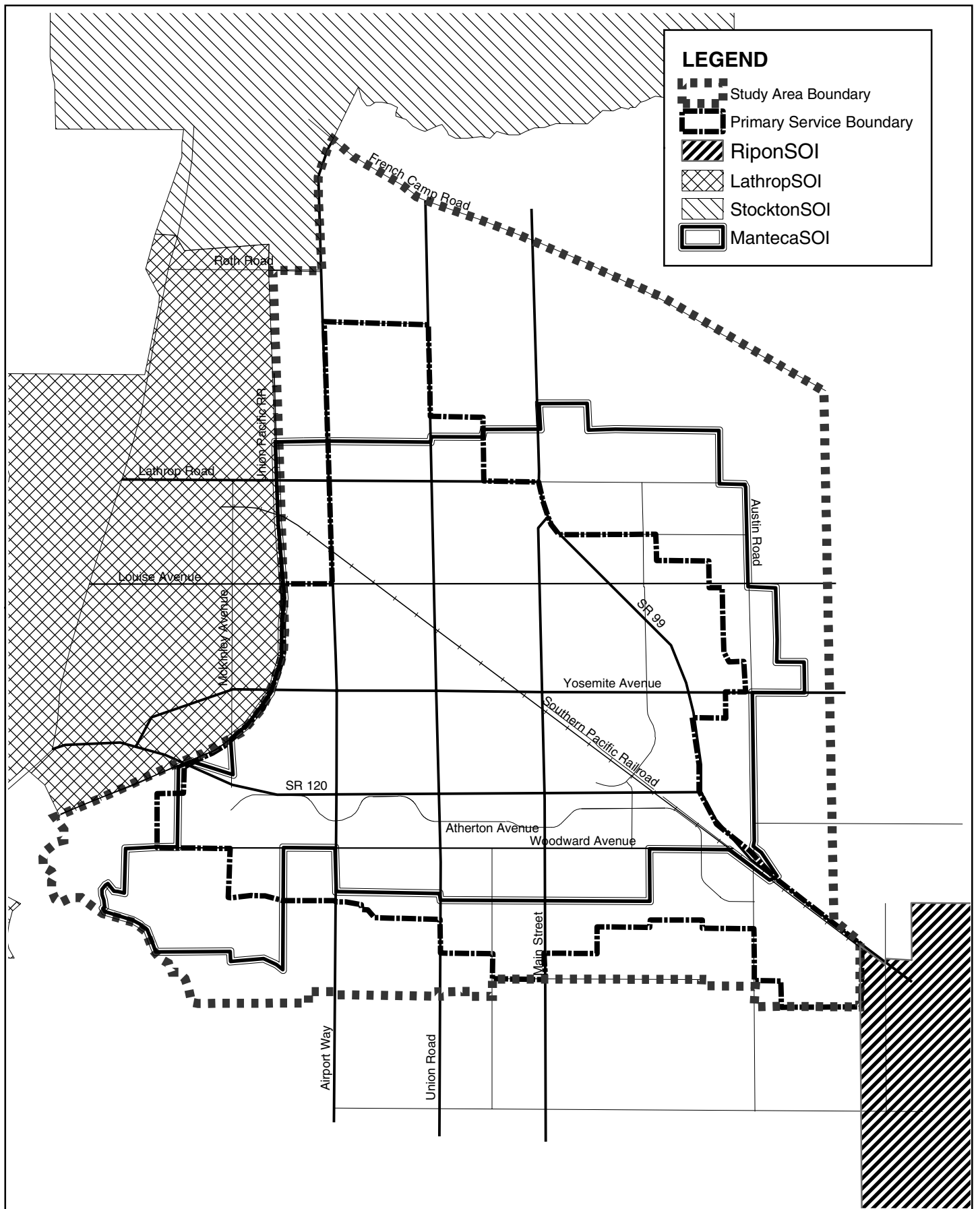
11.2.6 School District Boundaries

The Manteca General Plan Study Area is primarily within the Manteca Unified School District boundary. Figure 11-5 shows that approximately 1,260 acres located in the southeast quadrant of the Study Area lies within the Ripon Unified School District boundary.

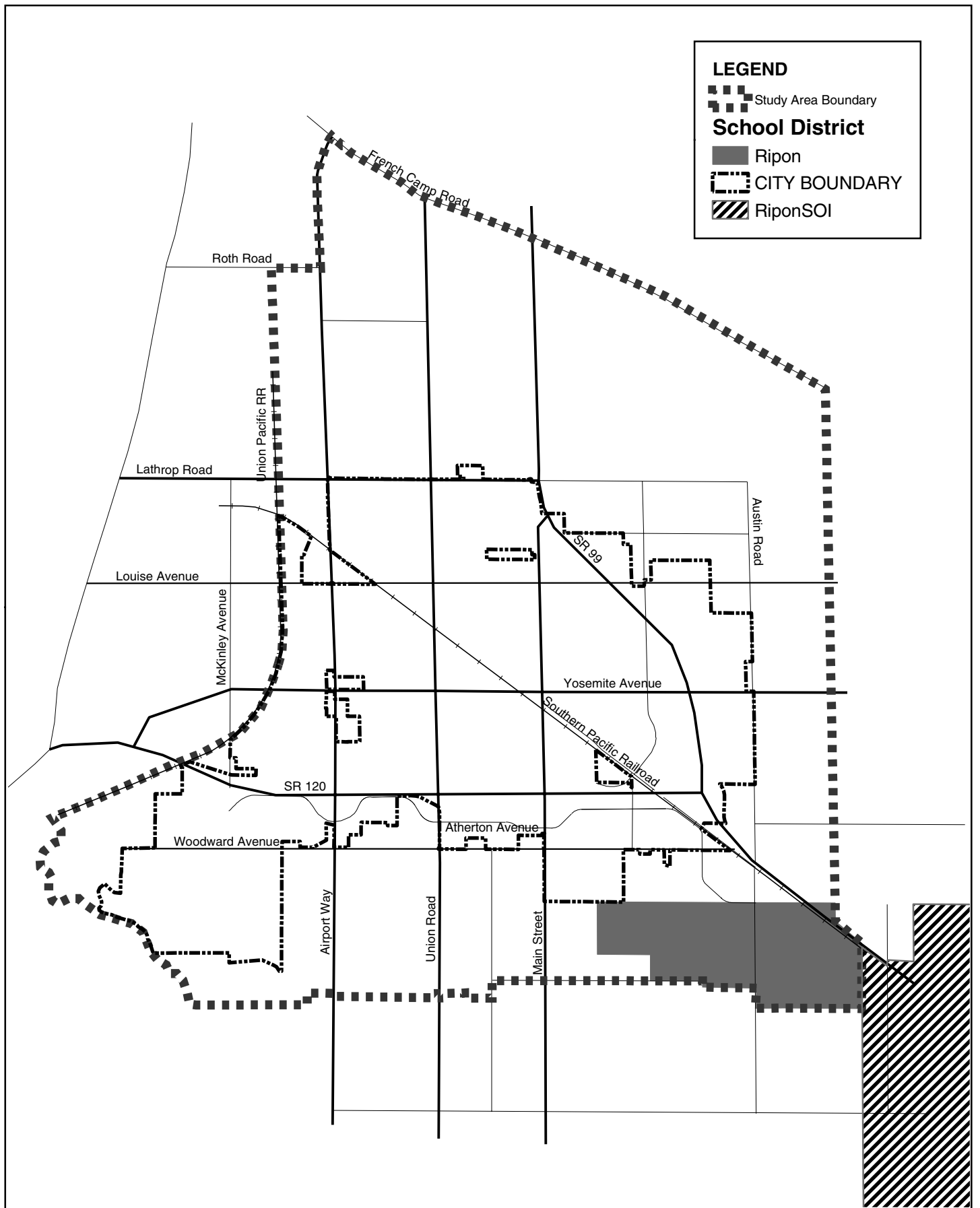
11.2.7 The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) (3,4,5)

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) is a multi-species, multi-habitat, multi-purpose open space management program for all of San Joaquin County, including the incorporated area of Manteca. The Manteca City Council adopted the SJMSCP (Resolution #R2001-411) on February 5, 2001, signing a Joint Powers Agreement with other city, county, state, and federal agencies.

The SJMSCP is a 50-year plan (2001-2051) that provides compensation for the conversion of open space to non-open space uses that affect the plant, fish, and wildlife species covered by the Plan. The Plan also includes some compensation to offset the impacts of open space conversions on non-wildlife related resources such as recreation, agriculture, scenic values, and other beneficial open space. The Plan proposes preserves that contain habitat for many species, not just the targeted species.



Manteca General Plan



Manteca General Plan

The SJMSCP conservation strategy relies on minimizing, mitigating, and avoiding impacts for the covered species. These strategies may directly influence land use by establishing preserve areas that would preclude future development or by constraining the potential land use. The specific features of the SJMSCP that apply to the Manteca General Plan Study Area are more fully described in Section ~~6.1.2~~ ~~11.1.2~~ of this EIR.

11.2.8 California Farmland Mapping and Monitoring Program (FMMP)

The FMMP establishes criteria and mapping for prime farmland, unique farmland, and farmlands of statewide importance. The California Environmental Quality Act (CEQA) requires that these farmland designations be considered in the environmental analysis and consequently, may affect the General Plan land use. The FMMP is discussed in detail in Section 4.1.1 of this EIR.

11.2.9 Delta Protection Act of 1992

The southwest corner of the General Plan Study Area is within the “Secondary Zone” defined in the Resource Management Plan required in the California Delta Protection Act of 1992. As stated in the act the “basic goals of the state for the delta are the following:

- (a) 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.
- (b) Assure orderly, balanced conservation and development of delta land resources.
- (c) Improve flood protection by structural and nonstructural means to ensure an increased level of public health and safety.

"Secondary zone" means all the delta land and water area within the boundaries of the delta not included within the primary zone, subject to the land use authority of local government, and that includes the land and water areas as shown on the map titled "Delta Protection Zones" on file with the State Lands Commission. (Section 29731)

However, this division does not confer any permitting authority upon the commission or require any local government to conform their general plan, or land use entitlement decisions, to the resource management plan, except with regard to lands within the primary zone. The resource management plan does not preempt local government general plans for lands within the secondary zone. (Section 29764)

11.3 IMPACT EVALUATION CRITERIA

The General Plan would have a significant adverse impact on the environment if development would:

- Physically divide an existing community.
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning, ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
- Conflict with any applicable habitat conservation plan or natural community conservation plan.
- The proposed land use would create conflicts with established land uses.

11.4 IMPACTS AND MITIGATION

11.4.1 Summary of Proposed General Plan Land Use

Table 11-2 summarizes the General Plan 2023 Land Use.

Table 11-2
General Plan 2023 Land Use

	Proposed Developable Land Use	Existing Urbanized Land Use	Total 2023 Land Use
LAND USE	Acres	Acres	Acres
AG Agriculture	3960.0		3960.0
GC General Commercial	518.0	154	672.0
NC Neighborhood Commercial	111.8	380	491.8
CMU Commercial Mixed Use	255.0		255.0
HI Heavy Industrial	715.0	194.9	909.9
LI Light Industrial	798.1	226	1024.1
BIP Business Industrial Park	258.0		258.0
BP Business Professional	133.0		133.0
HDR High Density Residential (15.1 to 25 du/ac)	251.0	191	442.0
MDR Medium Density Residential (8.1to 15 du/ac)	359.0	187.6	546.6
LDR Low Density Residential (2.1 to 8 du/ac)	3685.9	2741.7	6427.6
VLDR Very Low Density Residential (0.5 to 2 du/ac)	248.0	109.8	357.8
P/QP/ Public/Quasi-public Schools/Utilities	317.6	788.3	1105.9
OS Open Space	516.0	27	543.0
P Park	175.7	342.4	518.1
Total	12302.1	5342.7	17644.8

Proposed Land Use Designations

The General Plan amends the existing land use designations in the 1988 General Plan by increasing the densities permitted in each residential category, and by providing new designations. Commercial Mixed Use (CMU) is added to provide a flexible designation suited to small retail and service commercial uses combined with office, and residential uses. One purpose of this designation is to provide pedestrian destinations within neighborhoods.

Organization of Land Uses

The General Plan 2023 directs land use in a pattern that maintains the historic commercial core of Manteca as the geographic center of development. Figure 11-1 shows that the pattern of planned development in the Primary Urban Service Boundary corresponds to concentric circles at one-mile intervals radiating out from the historic core.

POTENTIAL IMPACT LU-1: Proposed land use would divide an existing community.

Level of Significance: Less Than Significant

Manteca has grown outward from the historic core of the city. Continued urbanization as planned would continue this expansion and would seek to reinforce the historic concentric growth pattern focused on the geographic center of the city. Such expansion would not interfere with any adjacent community. However, the planned urbanization of Manteca would overlap the Ripon Unified School District boundary near Austin Road and Sedan Avenue, as shown in Figure 11-5. This area is currently undeveloped, but is contiguous to the Ripon community.

The Land Use Element (Section 2) of General Plan 2023 establishes specific policies (P) for addressing the potential annexation of an adjacent area.

- LU-P-9 The City will consider applications for annexations that:
- are contiguous with city boundaries and provide for a logical expansion of the city;
 - create clear and reasonable boundaries;
 - ensure the provision of adequate municipal services;
 - reflect a long-term fiscal balance to the city and its residents, when reviewed cumulatively with other annexations;
 - are consistent with State law and San Joaquin County Local Agency Formation Commission standards; and
 - are consistent with the General Plan.

- LU-P-10 The City will consider expanding its sphere of influence to incorporate areas that logically should be planned and serviced by Manteca. The City shall consider the following factors when making determinations involving sphere of influence boundaries:
- Present and planned land uses in the area;
 - Present and probable need for public facilities and services in the area;
 - Present capacity of public facilities and adequacy of public services; and
 - Existence of any social or economic communities of interest in the area.

POTENTIAL IMPACT LU-2: **The proposed General Plan 2023 would conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.**

Level of Significance: **Less Than Significant**

The General Plan 2023 proposes urbanization of land that is currently unincorporated territory of San Joaquin County and is subject to the San Joaquin County General Plan and Zoning Ordinance. The County General Plan designates much of the area surrounding Manteca as Agriculture. Approximately 15,700 acres, or 60 percent of the General Plan Study Area, is in the unincorporated area of San Joaquin County. However, the General Plan 2023 does not propose to urbanize the entire Study Area. The Primary Urban Service Area would affect 4,221 acres outside of the existing City of Manteca Boundary.

The area planned for urbanization is substantially within or contiguous to the Manteca Sphere of Influence and is therefore designated for urban use. The procedures and standards for annexation of unincorporated areas are established by the San Joaquin County Local Agency Formation Commission. The General Plan 2023 policies LU-P-5, LU-P-6, LU-P-7, and LU-P-9 establish the City policies for proceeding with annexations that would convert the current County land use designations to City of Manteca land use designations.

The General Plan 2023 proposes land uses that differ from the 1988 General Plan and the Manteca South Area Plan. It is the purpose of the General Plan 2023 to update the 1988 General Plan and the South Area Plan. Therefore, although different land use policies and a new land use map will apply, the General Plan 2023 does not conflict with existing plans.

POTENTIAL IMPACT LU-3: **The proposed General Plan 2023 would conflict with any applicable habitat conservation plan or natural community conservation plan.**

Level of Significance: Less Than Significant

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) identifies the location of sensitive species habitat within the General Plan Study Area, (refer to General Plan Figure 6-1), and establishes the procedures for compensating for the loss of such habitat. Through the compensation methods described in Section 6 of this EIR, the development of such habitat is allowed.

POTENTIAL IMPACT LU-4: The proposed General Plan 2023 would create conflicts between incompatible land uses.

Level of Significance: Potentially Significant

The General Plan 2023 Land Use Map creates a potential land use conflict with the location of residential use adjacent to the Lovelace Solid Waste Transfer Station on Lovelace Road. The City of Manteca depends on the Waste Transfer Station to process all solid waste collections. Complaints from residents regarding normal operations of the Waste Transfer Station could lead to calls for closure of the facility, with a substantial loss in public investment and environmental impacts resulting from trash hauling to another location.

Mitigation Measure:

LU-4.1 The General Plan 2023 Public Facilities Element (Section 6) ~~of the General Plan 2023~~ provides the following policy (P) for reducing conflicts between residential use and the Lovelace Solid Waste Transfer Station.

PF-P-31 The City shall deny any residential or institutional uses within one half-mile of the Lovelace Transfer Station that would constrain or limit its continuation.

The City shall respond negatively to any County referral for proposed residential or institutional use within one half-mile of the Lovelace Transfer Station that would constrain or limit its continuation.

~~**LU-4.2** Before adoption of the General Plan 2023, the Land Use Map would be revised to remove any land uses that would constrain or limit the continued use of the Lovelace Transfer Station.~~

Residual Level of Significance: Less than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above policies and measures are implemented to maintain a buffer between residential uses and the Lovelace Transfer Station.

12. NOISE

This section is based upon and incorporates the noise analysis completed by Brown-Buntin, Inc., Noise Analysts: “Noise Analysis for the City of Manteca General Plan Update.”

12.1 EXISTING CONDITIONS

The principal noise sources in the City of Manteca are traffic on State Routes 99, 120 and on local roads; the Union Pacific rail line; and commercial/industrial facilities. The existing noise environment in the City of Manteca was determined by a combination of noise level measurements and noise modeling. Following is a discussion of the background noise level survey results in residential and industrial areas of the City, and a description of the studied noise sources in the City.

12.1.1 Background Noise Level Survey

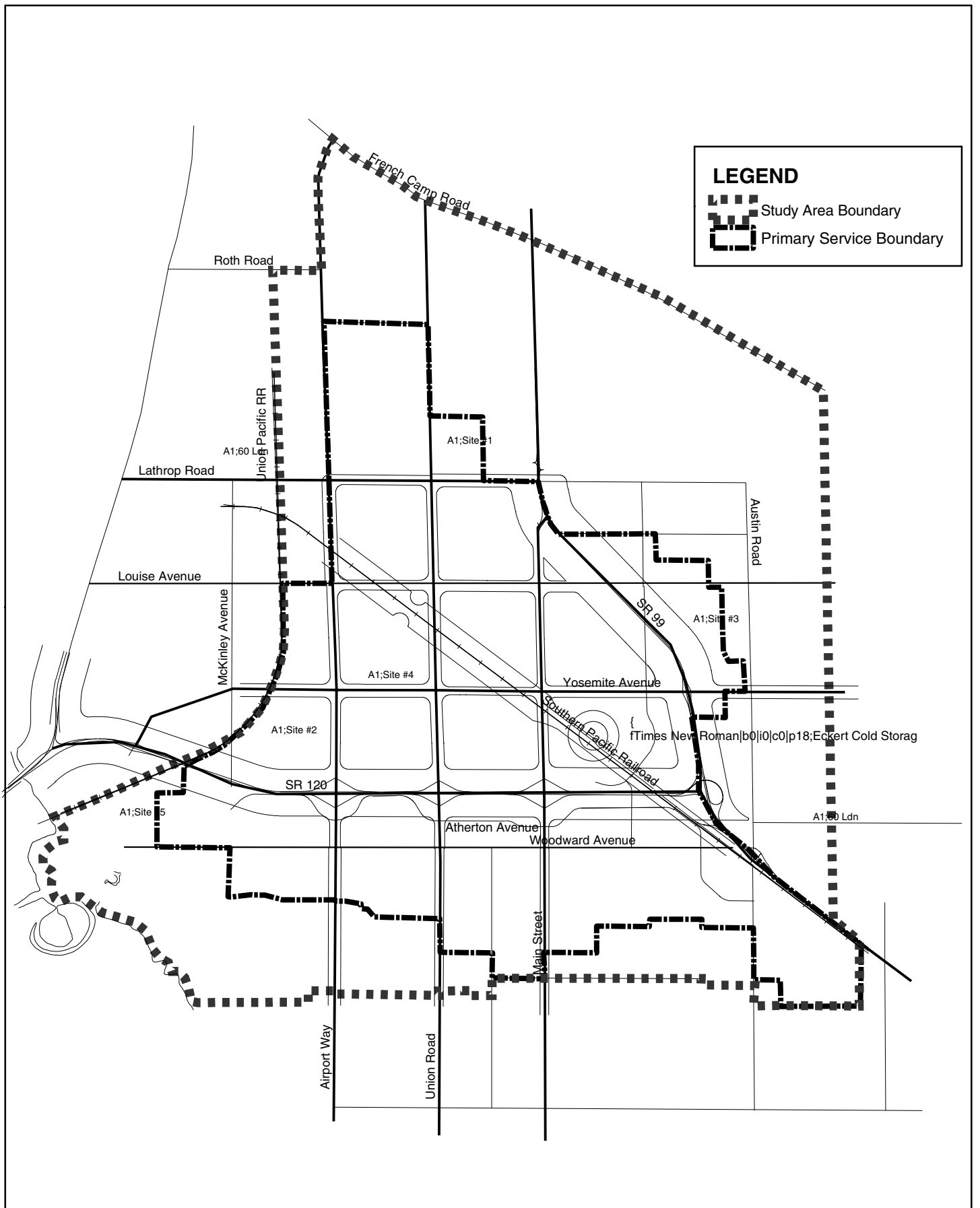
The purpose of the background noise level survey was to determine the baseline environment in the City at various locations. Three residences (Sites 1-3) were selected for the survey for continuous noise monitoring through a 24-hour period. Two other locations (Sites 4 & 5) were monitored intermittently. Their locations are shown in Figure 12-1. The results of the monitoring are shown in Figures 12-2 through 12-4 and in Table 12-1.

The background noise levels in terms of the Day/Night Average Level (L_{dn}) at the three residences that were measured for a 24-hour period ranged from about 55 to 59 dB. These noise levels are typical of residential areas in small communities that are located away from major noise sources, such as State Highways. In Table 12-1 background noise levels are summarized at a location off Airport Way (Site #4) in the Yosemite-Airport Specific Plan Area, and south of Route 120 (Site #5) in the Southwest Manteca Specific Plan Area.

Table 12-1
Intermittent Measurements of Background Noise Levels

Location	Date	Time	Sound Level, dBA			Source
			L_{eq}	L_{max}	L_{min}	
Site #4	5/20/03	10:20 a.m.-10:35 a.m.	56	72	43	Traffic on Airport Way
		11:30a.m.-11:45 a.m.	54	70	41	
		3:30 p.m.-3:45 p.m.	49	70	40	
Site #5	5/20/03	10:40 a.m.-10:55 a.m.	49	72	56	Traffic on SR 120
		1:30 p.m.-1:45 p.m.	53	75	58	
		4:00 p.m.-4:15 p.m.	52	70	55	

Source: Brown-Buntin



Manteca General Plan



WADE ASSOCIATES
 urban planning & design
 environmental planning

LOCATION OF BACKGROUND NOISE LEVEL SURVEYS AND EXISTING 60 dB Ldn NOISE CONTOURS

Figure 12-2
Background Noise Levels
655 Sierra, May 19-20, 2003

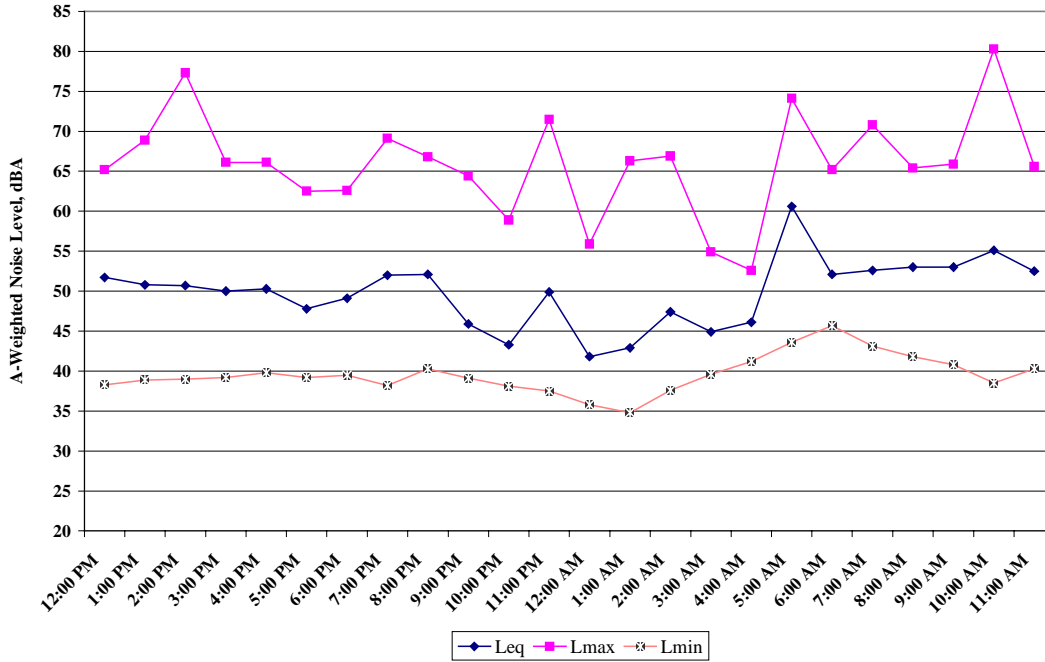
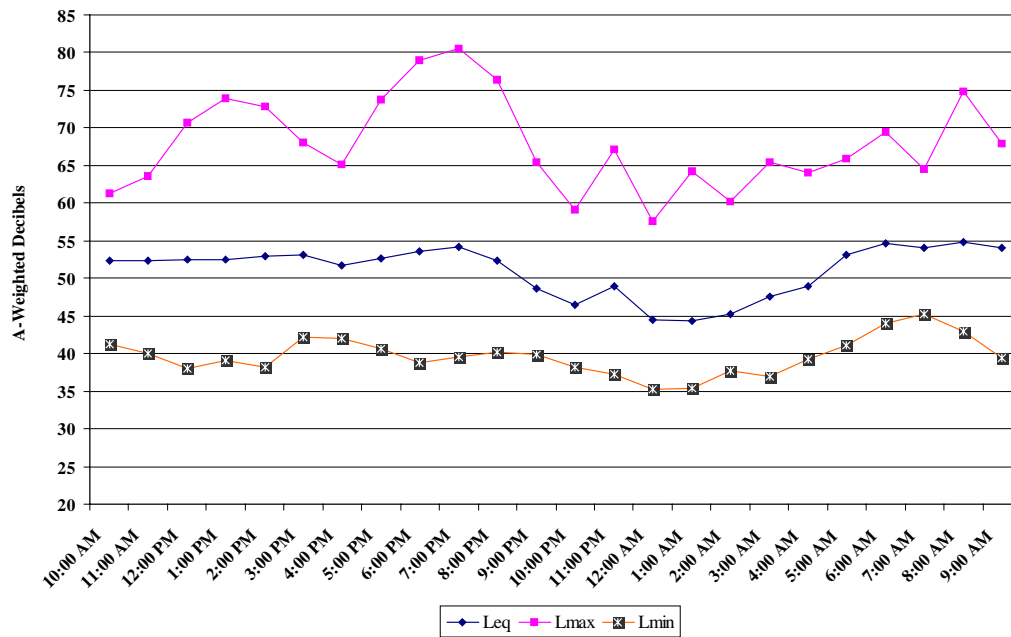
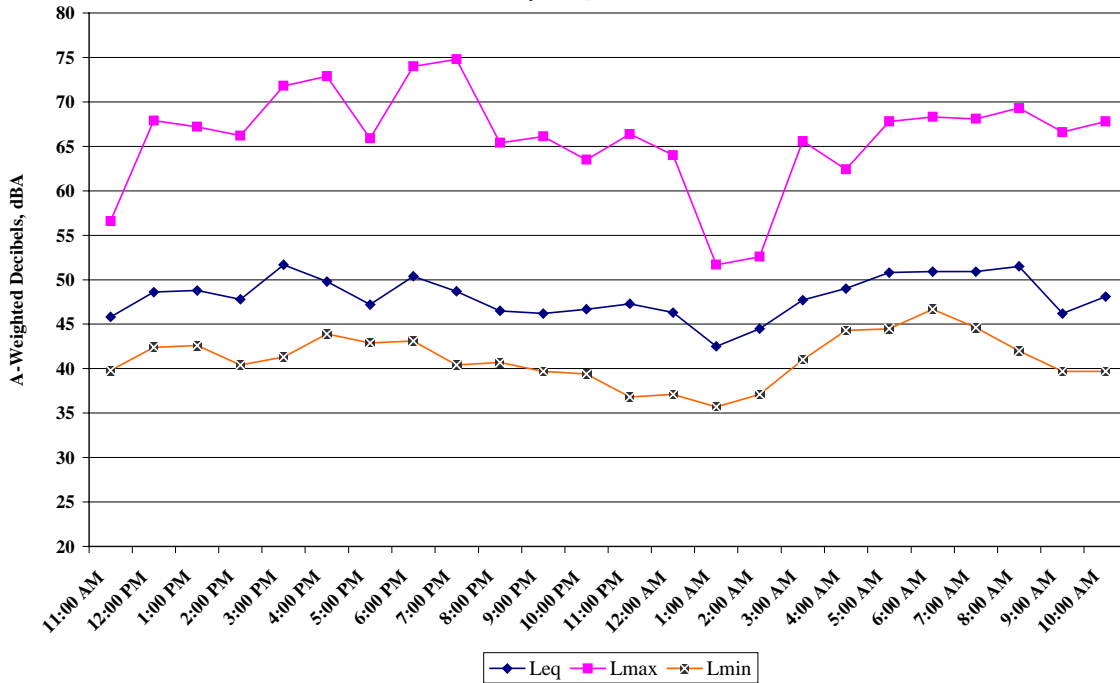


Figure 12-3
Background Noise Levels
1345 Keith Lane, May 19-20, 2003



**Figure 12-4
Background Noise Levels
1417 Sextant, May 19-20, 2003**



In Figures 12-2 through 12-4 the L_{max} represents the highest (maximum) instantaneous noise level occurring during an hour. The L_{min} is the minimum instantaneous noise level during an hour, and the L_{eq} is the energy equivalent or average noise level during the hour.

Major Stationary Noise Sources

The production of noise is an inherent part of many industrial, commercial and agricultural processes, even when the best available noise control technology applied. Noise production within industrial or commercial facilities is controlled indirectly by Federal and State employee health and safety regulations (OHSA and Cal-OSHA), but exterior noise emissions from such operations have the potential to exceed locally acceptable standards at nearby noise-sensitive land uses.

Noise exposure information for the major stationary noise sources selected for study by the City was developed from noise level measurements conducted at reference locations around the noise source, and BBA file information. Only existing noise levels are described since there are too many variables and unknown conditions to predict future noise exposure.

The following discussions provide generalized information concerning the relative noise impacts of each source, and identify specific noise sources which should be considered in the review of development proposals where potential noise conflicts could result. Not all industrial noise sources in the City are discussed. Unidentified industries or other major noise sources may exist, which could generate significant noise levels and result in noise-related land use conflicts. Generalized 50 and 55 dBA hourly L_{eq} noise contours were prepared for major stationary noise sources where it was determined that such contours would be located off the property occupied by the source. These contours are included in Figure 12-1 of this document. The generalized contours contained within Figure 12-1 should be used as a screening device to determine when potential noise-related land use conflicts may occur, and when site-specific studies may be required to properly evaluate noise at a given noise-sensitive receiver location.

Eckert Cold Storage:

This industrial facility is located at 757 Moffat Boulevard. The main sources of noise appear to be heat exchanger fans. At a distance of 100 feet, the energy average noise level was 72.1 dBA. The hourly 50 and 55 dBA L_{eq} are approximately 1270 and 720 feet from the industry. These contours are plotted on Figure 12-1.

Miscellaneous Stationary Noise Sources:

A wide variety of land uses is permitted in light industrial and commercial zones areas. Thus there is the potential for a wide variety of noise sources associated with those uses. However, the noise sources which could be present can be categorized as either fixed or mobile noise sources, and the typical sources of concern can be limited to relatively few. For example, the following list describes typical noise sources of concern in industrial and commercial uses.

Fixed Noise Sources

Fans and blowers	Car wash equipment
Impact-causing devices, such as:	Vacuums
hammers	Garage pickup
presses	Garage compactors
bottling equipment	Machine shop equipment
loading operations (lumber, pipes)	Barking dogs (kennels)
Saws, routers, grinders	Music (in studios)
Cardboard compactors	Music (in bars and restaurants)
Small engine repair and testing	Arcade games
Auto, motorcycle, boat repair and testing	Carnivals
	Heating and ventilation (HVAC) units

Mobile Noise Sources

Delivery trucks

Heavy truck loading and unloading

Forklifts

It is difficult to quantify noise levels produced by the noise sources listed above, as the levels depend upon such variables as the size of the equipment, the amount of noise control engineered into the equipment, the distance to the equipment or activity, and whether the receiver is shielded from the noise by a close structure, a barrier, or an intervening building. In general, however, each of the noise sources listed above has the potential to exceed the provisions of the City of Manteca noise standards.

12.1.2 TRANSPORTATION NOISE SOURCES**Traffic Noise**

Traffic noise exposure was calculated using the Federal Highway Administration Highway Traffic Noise Model (FHWA Model). The FHWA Model is the analytical method currently favored by most state and local agencies, including Caltrans, for highway traffic noise prediction. The Model is based upon reference energy emission levels for automobiles, medium trucks (2 axles) and heavy trucks (3 or more axles), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, the acoustical characteristics of the site. The FHWA Model was developed to predict hourly L_{eq} values for free-flowing traffic conditions, and is generally considered to be accurate within ± 1.5 dB. The Model assumes a clear view of traffic with no shielding at the receiver location. To predict L_{dn} values, it is necessary to determine the hourly distribution of traffic for a typical day and adjust the traffic volume input data to yield an equivalent hourly traffic volume. The Calveno traffic noise emission curves were used as recommended by Caltrans to more accurately calculate noise levels generated by California traffic.

Traffic conditions for existing conditions that were used in the FHWA Model were provided by Fehr and Peers. Traffic volumes within some road segments were averaged by BBA where differences were minor. Appendix A shows the traffic data used in the Model. Appendix B shows existing traffic noise levels calculated at a reference distance of 100 feet, and Appendix C shows distance to noise contours. Figure 1 shows the distances to noise contours from roadway centers.

In general, existing traffic noise levels on major roadways through Manteca range from about 62-65 dB L_{dn} at a reference distance of 100 feet. Along Routes 120 and 99, existing noise levels are about 74-75 dB L_{dn} at the same distance. Traffic noise levels that are 60 dB L_{dn} or less usually are considered to be fully compatible with noise-sensitive uses, which include residences, schools, churches and hospitals. Levels between 60 and 70 dB L_{dn} are marginally acceptable, and levels over 70 dB L_{dn} usually are considered to be unacceptable.

Rail Noise

The Union Pacific (UP) mainline track runs through the center of Manteca diagonally in a southeast to northwest direction. According to the UP there are about 18-23 freight trains on the track during a typical 24-hour period. The mean Sound Exposure Level (SEL) for a UP freight train more than 1,000 feet from a grade crossing is 96.3 dB at 125 feet. At grade crossings where the warning horn is blown, the mean SEL is 101.3 at 125 feet. The distances to the 60 dB L_{dn} were calculated based on the mean SEL values and the operational characteristics of the trains. The 60 dB L_{dn} contour is shown in Figure 12-1.

A branch line of the UP forms the west boundary of the General Plan Study Area. Very few train operations occur on the branch line and the noise exposure is less than 60 dB L_{dn} outside the railroad right-of-way.

12.1.3 Sensitive Land Uses

Noise sensitive land uses refer to specific uses where a person would be adversely impacted by noise and where the person would have the expectation of a relatively quiet environment. Uses include residences of all types, nursing homes, day care centers, medical facilities, schools, parks, and open space near the City.

12.1.4 Mobile Noise Sources

The primary mobile noise sources in the Study Area are vehicular traffic along SR 99 and SR 120, and railroad operations. Noise from the railroad operations, including train traffic and train whistles, is generally buffered by distance from much of the community. The rail lines are separated from homes on the east and west sides of the tracks by a distance of approximately 250 feet.

Maximum allowable noise exposure from mobile sources is shown in Table 12-2.

Table 12-2
Maximum Allowable Noise Exposure – Mobile Noise Sources

Land Use	Outdoor Activity Areas	Interior Spaces	
		Ldn/CNEL, dB	Leq, dB2
Residential	60	45	
Transient Lodging	60	45	
Hospitals, Nursing Homes	60	45	
Theaters, Auditoriums, Music Halls			35
Churches, Music Halls	60		40
Office Buildings	65		45
Schools, Libraries, Museums			45
Playgrounds, Neighborhood Parks	70		

Notes:

Outdoor activity areas for residential development are considered to be backyards, patios, areas, or decks of single family dwellings, and the patios, balconies, or common areas where people generally congregate for multi-family developments.

Outdoor activity areas for non-residential developments are considered to be those common areas where people generally congregate, including pedestrian plazas, seating areas, and outside lunch facilities.

Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

Determined for a typical worst-case hour during periods of use.

Where a proposed use is not specifically listed on the table, the use shall comply with the noise exposure standards for the nearest similar use as determined by the City.

12.1.5 Stationary Noise Sources

Stationary noise sources include, but are not limited to, construction activities, operational, and equipment noise produced from commercial and industrial facilities. These noise sources are typically mitigated through enforcement of the City's Noise Ordinance. The Ordinance sets forth criteria for residential areas impacted by stationary noise sources.

Performance standards for stationary noise sources are shown in Table 12-2.

No standards have been included for interior noise levels. Standard construction practices should, with the exterior noise levels identified, result in acceptable interior noise levels.

Table 12-3
Performance Standards for Stationary Noise Sources or
Projects Affected by Stationary Noise Sources

Noise Level Descriptor	Daytime	Nighttime
	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
Hourly Leq, dB	60	45
Maximum Level, dB	60	45

Notes:

Each of the noise levels specified above should be lowered by five (5) dB for simple noise tones, noises consisting primarily of speech or music, or recurring impulsive noises. Such noises are generally considered by residents to be particularly annoying and area a primary source of noise complaints.

12.2 REGULATORY SETTING

12.2.1 Federal Standards

The U.S. Department of Housing and Urban Development (HUD) has set an L_{dn} of 45 dB as its goal for interior noise in residential units built with HUD funding.

12.2.2 State of California Standards

The Office of Noise Control, California Department of Health Services (DHS), has established four categories for judging the severity of noise intrusion on specified land uses:

- normally acceptable - no undue burden on affected receptors and no mitigation needed
- conditionally acceptable - some mitigation of exposure, as established by an acoustic study, would be warranted
- normally unacceptable - noise intrusion is so severe that it would require extraordinary noise reduction measures to avoid disruption
- clearly unacceptable - noise so severe that it cannot be mitigated

Title 24 of the California Code of Regulations establishes standards governing interior noise levels that apply to all new multi-family residential units. The standards require that acoustical

studies be conducted prior to construction where the future Ldn exceeds 60 dbA. Mitigation measures are required that will limit maximum Ldn values to 45 dB in any inhabitable room.

12.2.3 Non-Regulatory Standards of Significance

Another means of assessing noise impact is to estimate public reaction to the change in noise level that results from a given project. Expected human reactions to changes in ambient noise levels have been quantified by metrics that define short-term exposure (e.g., hourly Leq, Lmax, and L_n) to noise. An increase of at least 3 dB is usually required before most people will perceive a change in noise levels, and an increase of 5 dB is required before the change will be clearly noticeable. Table 11-6 (GP) is used to show expected public reaction to changes in environmental noise levels. This table was developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source. It is probably most applicable to similar sounds in the range of 50 to 70 dBA.

12.2.4 City of Manteca Noise Standards

The City of Manteca Noise Ordinance establishes the noise standards shown in Table 12-3.

The City of Manteca uses the Uniform Building Code that establishes the following standard for interior living spaces.

“Interior community noise levels (CNEL) with windows closed, attributable to exterior sources, shall not exceed an annual CNEL or Ldn of 45 dB in any habitable room.”

This standard is to apply to all new hotels, motels, apartments, and dwellings other than single-family detached dwellings. State law also requires noise insulation of new multi-family dwellings constructed within the 60 dB CNEL noise exposure contours.

Table 12-4
Maximum Permissible Sound Pressure Levels, City of Manteca

Receiving Land Use Category	Time Period	Max Exterior Noise Level (dBA)
Single & Limited Multiple Family	10 pm – 7 am	50
	7 am – 10 pm	60
Multiple Family, Public Institutional, & Neighborhood Commercial	10 pm – 7 am	55
	7 am – 10 pm	60
Medium & Heavy Commercial	10 pm – 7 am	60
	7 am – 10 pm	65
Light Industrial	Anytime	70
Heavy Industrial	Anytime	75

Notes:

The following corrections are applicable (apply only one correction):

Daytime Operation Only (7 am – 7 pm) + 5 decibels

Noise Source Operates Less Than:

20% of any one-hour period + 5 decibels

5% of any one-hour period +10 decibels

1% of any one-hour period + 15 decibels

Noise of Impulsive Character - 5 decibels

(hammering, etc.)

Noise Rising or Falling in Pitch or - 5 decibels

Volume (hum, screech, etc.)

Source: City of Manteca. Title 17, Zoning Ordinance. Chapter 17.13, Section 17.13.040.

12.3 IMPACT EVALUATION CRITERIA

In accordance with CEQA Guidelines, Appendix G, any substantial increase in the ambient noise levels for adjoining areas would be significant if the project would result in:

1. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
2. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

12.4 IMPACTS AND MITIGATION

POTENTIAL IMPACT N-1: Planned development in the General Plan 2023 could result in exposure of persons to noise levels in excess of established standards.

The existing city is a relatively quiet residential community with the notable exceptions of the railroad operations, traffic noise from SR 99 and SR 120, and commercial/industrial uses. These sources are endemic to the community and cannot be easily avoided. The General Plan 2023 seeks to avoid creating new noise generating conditions that would degrade the existing community environment, or to place a sensitive land use where it would be adversely affected by an existing noise source.

Level of Significance: Potentially Significant

Mitigation Measures:

N-1.1: The General Plan 2023 Noise Element (Section 9) ~~of the General Plan 2023~~ provides the following policies (P) to mitigate the effects of increased noise levels in excess of established standards:

N-P-2: New development of residential or other noise-sensitive land uses will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to satisfy the performance standards in Table 9-1 (*Table 12-2 above*).

N-P-3 The City may permit the development of new noise-sensitive uses only where the noise level due to fixed (non-transportation) noise sources satisfies the noise level standards of Table 9-2 (*Table 12-3 above*). ~~Noise mitigation may be required to meet Table 9-2 performance standards.~~

N-P-4 The City shall require stationary noise sources proposed adjacent to noise sensitive uses to be mitigated so as to not exceed the noise level performance standards in Table 9-2 (*Table 12-3 above*).

- N-P-6 Where the development of residential or other noise-sensitive land use is proposed for a noise-impacted area, an acoustical analysis is required as part of the environmental review process so that noise mitigation may be considered in the project design. The acoustical analysis shall:
- Be the responsibility of the applicant.
 - Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.
 - Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
 - Estimate existing and projected (20 years) noise levels in terms of the standards of Table 9-1 (*Table 12-2 above*) or Table 9-2 (*Table 12-3 above*), and compare those levels to the adopted policies of the Noise Element.
 - Recommend appropriate mitigation measures to achieve compliance with the adopted policies and standards of the Noise Element.
 - Estimate noise exposure after the prescribed mitigation measures have been implemented.
 - Describe a post-project assessment program that could be used to monitor the effectiveness of the proposed mitigation measures.
- N-P-8 The City shall enforce the Sound Transmission Control Standards of the California Building Code concerning the construction of new multiple occupancy dwellings such as hotels, apartments, and condominiums.
- N-P-10 The Manteca Police Department shall actively enforce requirements of the California Vehicle Code relating to vehicle mufflers and modified exhaust systems.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above policies are implemented. These policies will reduce the exposure of people to noise levels in excess of established standards.

POTENTIAL IMPACT N-2: Implementation of the General Plan 2023 could expose people to the impacts of construction noise.

During the construction phases ~~resulting from implementation of the General Plan~~, noise from construction activities would dominate the noise environment in the immediate area of construction.

Activities involved in construction would generate noise levels ranging from 70 dB to 90 dB at a distance of 50 feet. Construction equipment operations can vary from intermittent to continuous, with multiple pieces of equipment operating concurrently. Assuming concurrent operation of multiple sources in the same area, such as a scraper, a bulldozer, a heavy truck, and a backhoe, the maximum noise level during a period of construction could be as high as 94 dBA at 50 feet from the working area. Assuming multiple sources as described above, and typical sound attenuation over distance, locations within about 800 feet of a construction site could experience noise exposures up to 70 dBA.

Construction activities would be temporary in nature, typically occurring during normal working hours. Construction noise impacts could be significant, as nighttime operations or use of unusually noisy equipment could result in annoyance or sleep disruption for nearby residences.

During construction, traffic noise in the general area would be reduced because of the reduction in speed required by working road crews. Conversely, noise levels due to vehicles leaving the construction area would be slightly higher than normal as a result of acceleration. The net effect of the accelerating and decelerating traffic upon noise would not be appreciable. The most important project-generated noise source would be truck traffic associated with the transport of heavy materials and equipment. This noise increase would be of short duration and limited primarily to daytime hours.

Level of Significance: Potentially Significant

Mitigation Measures:

N-2.1: The General Plan 2023 Noise Element ~~of the General Plan 2023~~ (Section 9) provides the following policy (P) to mitigate the levels of construction noise on ambient noise levels throughout the General Plan Study Area.

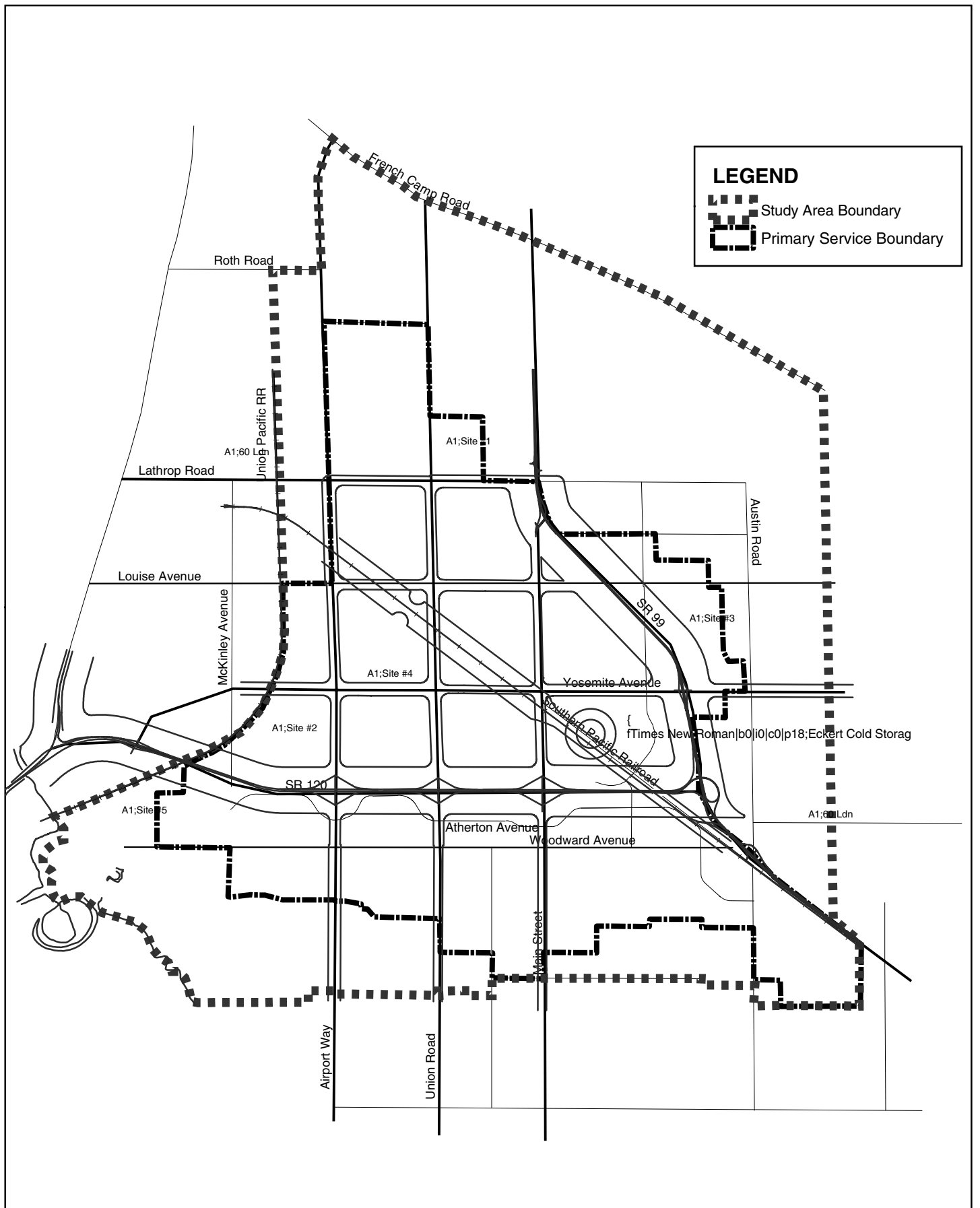
N-P-5 In accord with Table 9-2 standards the ~~The~~ City shall regulate construction-related noise ~~to reduce~~ impacts on adjacent uses.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be less than significant if the above policy is implemented. This policy will reduce the exposure of people to construction noise.

POTENTIAL IMPACT N-3: Implementation of the General Plan 2023 could expose residents to the impact of future roadway traffic noise.

Projected future traffic volumes on State Highways and local roads were used to predict future traffic noise impacts in Manteca. The FHWA methodology, as described in the Existing Noise Environment report, was used to make the calculations. On SR 99, SR 120 and I-5 traffic speeds less than current speed limits were assumed because the predicted level of service for these roads is D through F. Appendices A, B & C of the Noise Analysis Report (available for review at the City's Community Development Department) show input data into the model, predicted noise levels at a reference distance of 100 feet, and the distance to noise contours. Figure 12-5 shows the location of projected future 60 dB L_{dn} contours for roadways.



Manteca General Plan



LOCATION OF PROJECTED FUTURE 60 db Ldn CONTOURS FOR ROADWAYS

In general, future traffic noise levels on City roads will range from about 65-68 dB L_{dn} at a distance of 100 feet. Along SR 120 and SR99, future noise levels will range from about 75-77 dB at the same distance. Comparing these levels to existing traffic noise levels, it is apparent that traffic noise levels will increase in Manteca by about 3 dB. These changes may be smaller or greater along individual roadways.

Since the proposed noise compatibility standard is 60 dB L_{dn} in Manteca, it is apparent that traffic noise impacts could occur at many locations and that noise mitigation measures will have to be employed.

Level of Significance: **Potentially Significant**

Mitigation Measures:

- N-3.1** The General Plan 2023 Noise Element ~~of the General Plan 2023~~ (Section 9) provides the following policies (P) to mitigate the levels of roadway traffic noise levels throughout the General Plan Study Area:
- N-P-11 For ~~in~~ residential development subdivisions backing on to a freeway or railroad right-of-way, the developer shall be required to build a sound barrier wall, and provide for other appropriate mitigation measures, to satisfy the performance standards in Table 9-1 ~~in accordance with City development standards.~~
- N-P-12 The City shall require new roadways to be mitigated so as to not exceed the noise levels specified in Table 9-1 (*Table 12-2 above*). Widening or other improvement projects of existing roadways shall be mitigated to the most practical extent.

Residual Level of Significance: **Less Than Significant With Mitigation**

The level of significance will be less than significant if the above policies are implemented. These policies will reduce the exposure of people to future roadway traffic noise.

POTENTIAL IMPACT N-4: **Implementation of the General Plan 2023 could expose residents to the impact of railroad noise.**

The factors that overwhelmingly determine the extent of rail noise is the number of rail operations and the presence of grade crossings along the railroad tracks. For the most part, the sound produced by an individual locomotive does not change much and therefore is not a major

factor. Train operations, however, can change depending on business conditions. Unfortunately, changes in train operations are rarely predictable or are considered to be confidential by train companies.

Grade crossings have a major effect on railroad noise impacts because all trains are required to sound their horns as the approach grade crossings. To the extent that grade crossings are abandoned, or overpasses or under passes are constructed, overall railroad noise levels will decrease.

Level of Significance: Potentially Significant

Mitigation Measures:

N-4.1 The Noise Element of the General Plan 2023 (Section 9) provides the following implementation measure (I) to mitigate the levels of railroad noise within the Study Area:

N-I-8 Work in cooperation with Caltrans and the Union Pacific Railroad to maintain noise level standards for both new and existing projects in compliance with Table 9-1 (*Table 12-2 above*).

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above implementation measure is implemented. Working with Caltrans and Union Pacific Railroad will help reduce the exposure of people to railroad noise.

Potential Impact N-5: Implementation of the General Plan 2023 could expose residents to the impacts of future industrial/commercial, emergency, and outdoor activity noise.

It is not possible to predict new industrial/commercial noise impacts since a general plan update does not specify actual industries or commercial uses that will be built; nor does a general plan update specify the actual sources of noise that are often associated with industrial/commercial uses. Please refer to the list of stationary noise sources listed in Section 12.2.1 of this EIR.

Although it is not possible to predict with certainty new sources of industrial/commercial noise, it is possible that noise impacts may occur where such adjoin or are close to proposed or existing noise-sensitive uses, such as residential developments.

Level of Significance: Potentially Significant

Mitigation Measures:

N-5.1 The Noise Element of the General Plan 2023 (Section 9) provides the following policies (P) and implementation measures (I) to mitigate the noise levels from industrial/commercial, emergency, and outdoor activities throughout the General Plan 2023 Study Area:

- N-P-2: New development of residential or other noise-sensitive land uses will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to satisfy the performance standards in Table 9-1 (*Table 12-2 above*).
- N-P-4 The City shall require stationary noise sources proposed adjacent to noise sensitive uses to be mitigated so as to not exceed the noise level performance standards in Table 9-2 (*Table 12-3 above*).
- N-P-7 Noise level criteria applied to land uses other than residential or other noise-sensitive uses shall be consistent with noise performance levels of Table 9-1 and Table 9-2 ~~recommendations of the Guidelines for the Preparation and Content of Noise Element of the General Plan.~~
- N-P-13 The City shall carefully review and shall give potentially affected residents an opportunity to fully review any proposals for the establishment of helipads or heliports.
- N-I-1 New development in residential areas with an actual or projected exterior noise level of greater than 60 dB Ldn will be conditioned to use mitigation measures to reduce exterior noise levels to less than or equal to 60 dB Ldn.
- N-I-14 Control noise at the source through use of insulation, berms, building design and orientation, buffer space, staggered operating hours and other techniques. Use insulation, berms,

building design and orientation, buffer space, noise barriers, and other techniques to attenuate noise to acceptable levels.

Residual Level of Significance: Less Than Significant With Mitigation

The level of significance will be mitigated to less than significant if the above policies (P) and implementation measures (I) are implemented. Through enforcement of the noise standards and the use of noise attenuation measures, the exposure of people to industrial/commercial, emergency, and outdoor activity noise will be reduced or elimination.

13. POPULATION AND HOUSING

This section addresses the increase in population, and housing that is anticipated in the General Plan 2023.

13.1 EXISTING CONDITIONS

13.1.1 Population

The California Department of Finance, Demographic Research Unit estimates that the population in the City of Manteca was 57,200 as of January 2003.

The population of Manteca has significantly increased in recent years as housing prices have remained relatively affordable in the region compared to the regional housing market in the Bay Area. Table 13-1 reflects Manteca's demographic changes in the decade 1990 through 2000.

Table 13-1
Summary of Population Characteristics 1990 –2000

	1990 Census	2000 Census	Net Change
Total Population	40,773	49,258	20.8%
Total Households	13,466	16,368	21.6%
Total Housing Units	13,981	16,937	21.1%
Average Household Size	3.05	2.98	-0.1
Median Age	32.5	32.5	0.0
% Population Under 18	32.36%	31.60%	-0.8%
% Population Over 65	8.35%	9.30%	0.9%
% Population- White	76.83%	64.10%	-12.7%
% Population- Hispanic or Latino	12.68%	25.10%	12.4%
% Population- Black	1.12%	2.90%	1.8%
% Population- Asian/Pacific Islander	3.18%	3.90%	0.7%

Source: 1990 and 2000 U.S. Census

13.1.2 Housing

The availability and relative low-cost of housing in Manteca has been a major factor in population and housing growth. Many residents have found Manteca's location, climate, and

housing opportunities attractive and have relocated from Bay Area locations. This has encouraged a “bedroom community” in Manteca as many residents commute to areas west of the Altamont Pass, into the Bay Area to work.

Table 13-2 indicates the rate of housing growth in the City since 1991. The City did not differentiate between single family and multi-family dwellings until 1996. The number of permits issued for multi-family housing during that period is negligible. The rate of housing production has increased over time, but has fluctuated from year to year. The relative few building permits for multi-family housing developed during that time reflects the policies in the 1988 General Plan that emphasized construction of single family homes.

Table 13-2
Manteca Residential Building Permit History

Building Permits Issued			
Year	Single Family	Multi-Family	Total
1991	N/A	N/A	73
1992	N/A	N/A	193
1993	N/A	N/A	212
1994	N/A	N/A	162
1995	N/A	N/A	244
1996	298	0	298
1997	249	0	249
1998	322	0	322
1999	627	2	629
2000	1,147	0	1147
2001	619	0	619
			4,148

Source: U.S. Census Bureau, City of Manteca Building Department

The 2000 Census reflects a community with growing housing values, low vacancy, and relatively small households. Approximately 25 percent of the housing stock in Manteca is over 30 years old (built before 1970); 23 percent built between 1970 and 1979; 29 percent built between 1980 and 1989; and 23 percent built between 1991 and 2001. These statistics reflect the rate of growth in the area during the 1980s and 1990s that continues today. It is also important to note that a significant portion (approximately 48%) of the existing housing stock will be likely to have rehabilitation needs in the next 7-10 years. Table 13-3 details a variety of 2000 Census Manteca housing characteristics, compared with the 1990 Census.

Table 13-3
Manteca Housing Characteristics

Housing Characteristic	1990	2000
Total Housing Units	13,981	16,937
Median Value	\$139,400	\$213,658 <i>(Central Valley Association of Realtors)</i>
Average Value	\$145,828	\$223,925 <i>(Central Valley Association of Realtors)</i>
Owner Occupied Units	59.69%	63%
Vacancy Rate	N/A	3.4%
Owner-Occupied Vacancy Rate	N/A	1.1%
Rental Vacancy Rate	N/A	3.1%
Average Persons per Household	3.05	2.98

Source: U.S. Census 2000, unless otherwise noted.

13.1.3 Jobs/Housing Balance

The City of Manteca is a “housing-rich” community, indicating more housing opportunities than jobs available. Many residents have moved to Manteca, searching for a lower-cost housing alternative to the Bay Area. Many of these residents have maintained their jobs in the Bay Area, choosing to commute from Manteca. The commute pattern directly affects Manteca’s economy. Manteca suffers from a low daytime population, because so many residents work outside of the area. As such, their daytime activities and spending occur outside of Manteca.

13.2 REGULATORY SETTING

13.2.1 Federal

U.S. Department of Housing and Urban Development (HUD) is a cabinet-level department of the federal government responsible for housing, housing assistance, and urban development. Housing programs administered through HUD include Community Development Block Grant (CDBG), HOME, and Section 8 Rental Assistance.

13.2.2 State of California

The Department of Housing and Community Development (HCD) administers and allocates the Regional Housing Needs Assessment (RHNA) for each county. State Housing law requires SJCOG to create a plan every five years that summarizes regional housing needs for both existing conditions, as well as for a five-year planning period. This plan, known as the Regional Housing Needs Assessment (RHNA) allocates regional housing needs by income level among its members. SJCOG has determined that Manteca's current housing need as 3,104 new housing units.

13.2.3 San Joaquin County

The San Joaquin Council of Governments (SJCOG) brings together mayors, city council members, and county supervisors throughout San Joaquin County to work on regional issues. While regional transportation planning is its primary role, SJCOG also participates in housing, population statistics, airport land use, habitat and open space planning, and other regional issues. SJCOG is responsible for preparation of the Regional Housing Needs Assessment (RHNA) which determines a jurisdiction's share of regional housing growth.

13.2.4 City of Manteca

The 1988 General Plan goals and the Growth Management Ordinance regulate housing and population in Manteca.

The 1988 Manteca General Plan establishes the following goals related to population and housing:

- Goal A: To provide a range of housing types, densities, designs, and prices to meet existing and projected housing needs for all economic segments of the community.
- Goal B: To encourage the maintenance and continued improvement of the existing housing stock and residential neighborhoods.
- Goal C: To ensure the provision of adequate services to support existing and future residential development.
- Goal D: To promote equal opportunity to secure safe, sanitary, and affordable housing for everyone in the community regardless of race, sex, and other arbitrary factors.
- Goal E: To encourage energy efficiency in all new and existing housing.

The Manteca Growth Management Ordinance seeks to establish a maximum population growth rate of 3.9 percent annually.

13.3 IMPACT EVALUATION CRITERIA

For the purposes of this EIR, impacts would be significant if implementation of the proposed General Plan would:

- induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and/or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

13.4 IMPACTS AND MITIGATION

POTENTIAL IMPACT H-1: Implementation of the General Plan 2023 would increase the City's population over existing conditions.

Population in California, in general, and in the San Joaquin Valley specifically, will increase in the future for several reasons. Primarily, the increasing cost of housing in urban areas near job centers will cause consumers to look for lower cost housing in suburban communities. In addition, as technology changes, businesses have opportunities to locate in non-traditional areas such as Manteca.

Population growth is projected to continue for the near future, primarily driven by continued demand for relatively affordable housing and quality of life in Manteca. Table 13-4 indicates the San Joaquin Council of Governments projection that Manteca will grow to 86,370 by 2025, approximately the horizon of the General Plan. It is notable that the population projection for 2005 is exceeded by the Department of Finance population estimate for 2003.

**Table 13-4
Population Projection**

	City of Manteca	San Joaquin County
2000	49,500	566,600
2005	56,874	633,348
2010	64,248	700,095
2015	71,622	766,843
2020	77,699	821,851
2025	86,370	900,338

Source: SJCOG, Research and Forecasting Center.

Table 13-4 provides a calculation of the annual population growth that would occur at the maximum rate allowed under the Growth Management Ordinance. Under this growth rate, the population of Manteca could reach approximately 120,000 in twenty years, approximately double the current population. However, such a sustained rate of growth would be unusual for any California city and is substantially higher than the state average rate.

**Table 13-5
Population Projection at 3.9% Annual Growth**

Year	Population
2003	57,200
2005	61,749
2010	74,766
2015	90,528
2020	109,613
2022	118,329
2025	132,721

Source: Wade Associates, May 2003

As noted in Section 2.6, Assumptions Regarding Population Growth as a Basis for Environmental Impact Evaluation, the total of 94,378 people would be accommodated in the Primary Urban Service boundary under the assumptions established by the General Plan Steering Committee. This would equate to a population growth rate of approximately 2.7% annually, and is comparable to the SJCOG projection.

The assumptions include a Market Reserve of 20 percent. The Market Reserve is land that would be available to accommodate population growth, but is not projected to be required. It is intended to provide flexibility and choice in the residential land market in order to maintain reasonable land prices that contribute to affordable housing. Development of the Market Reserve would accommodate a population of approximately 113,254 residents in twenty years. This would be slightly less than would occur if the population grew consistently at the maximum rate allowed under the Growth Management Ordinance. Moreover, the residential designations provide a range of housing types and densities that can accommodate additional population without increasing the land area allocated to urban use. The population projection used in this Environmental Impact Report is based on the assumptions for average housing density established by the General Plan Steering Committee.

Level of Significance: Significant and Unavoidable

There are no specific mitigation measures that will reduce or eliminate the impact of increased population on Manteca and the surrounding area. However, monitoring and regulating growth to a responsible level will maintain the integrity of the community.

POTENTIAL IMPACT H-2: **The number and type of dwellings will exacerbate the existing jobs and housing imbalance in the Study Area.**

There is an existing jobs-housing imbalance as the job market has not expanded as quickly as the housing market. Therefore, if Manteca attracts new businesses, as described in the General Plan Economic Development Element, the jobs/housing balance should improve. The growth of the local economy and the associated development that coincides will be a beneficial impact on the City of Manteca and San Joaquin County.

Level of Significance: Potentially Significant

Mitigation Measures:

The General Plan Land Use Element establishes the mix of land uses designed to sustain a balance of jobs and housing over a period of twenty years. Implementation of goals, policies, and implementation measures as identified in the General Plan 2023 would lessen the significance of the impact.

H-2.1: The General Plan 2023 provides the following policies (P) and implementation measures (I) to assist in the mitigation of a jobs/housing imbalance by encouraging employment development in the city.

LU-P-1: The City shall promote, cooperate in, and assist in the maintenance and expansion of Manteca's industrial sector employment development within the City of Manteca and in the south San Joaquin County area

that will help reduce the home-to-work commute distance for Manteca residents.

- LU-P-2: New employment centers that may include office, business-professional, research and development, and light industrial or industrial development and shall be located in areas served by full City services or served by suitable facilities approved by the City. Employment centers should be located along major arterials with easy freeway access and with access from public transit, and accessible to bicyclists and pedestrians.
- LU-P-3: The City shall continue to support full development of its existing industrial park.
- LU-P-4: The City shall promote the development of “clean” industries that do not create problems or pose health risks associated with water and air pollution or potential leaks or spills. However, the City will designate appropriate locations that accommodate light industrial and heavy industrial uses.
- LU-P-5: Redevelopment incentives shall be used judiciously to promote industrial employment development in approved Project Areas and for projects benefiting approved Project Areas.
- LU-P-6: The City shall monitor employment development to maintain the balance of residential, commercial, and industrial development.
- LU-P-7: The City shall promote and plan for at least one Primary Employment Center to accommodate a variety of employment opportunities compatible with the employment skills of the Manteca resident labor force.

- LU-I-1 The City shall maintain a growth management system that provides a mechanism for the annual allocation of the amount of residential, commercial, and industrial development that may occur.
- LU-I-7 The City will continue to cooperate with planning efforts among local jurisdictions to minimize the impacts of growth to Manteca and in the south San Joaquin County area.

H-2.2: The General Plan 2023 Land Use designations provide an expanded range of housing densities to encourage development of a diverse mix of housing types and prices. Table 13-5 provides a comparison of the housing densities permitted in each residential category in the General Plan 2023 compared to the 1988 General Plan.

Table 13-6
Comparison of Residential Density Permitted in
Each Residential Land Use Designation
(1988 General Plan and General Plan 2023)

Land Use Designation	1988 Dwelling Units per Acre	2023 Dwelling Units per Acre
Very Low Density Residential	0.5 to 2.0	less than 2.0
Low Density Residential	2.1 to 5.0	2.1 to 8.0
Medium Density Residential	5.1 to 9.0	8.1 to 15
High Density Residential	9.1 to 17.0	15.1 to 25
Commercial Mixed Use	NA	15.1 to 25

Source: Wade Associates, May 2003

Residual Level of Significance: Less than Significant

The level of significance will be less than significant after implementation of the above goals, policies, and implementation policies.

References:

- (1) E-1 Report, City/County Estimates with Annual Percent Change, January 2002 and 2003

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14. PUBLIC FACILITIES AND SERVICES

The public facilities and services issues addressed in this section include domestic water, wastewater treatment (sewer), stormwater drainage, solid waste disposal, education (schools), library, parks and recreation, police protection, and fire protection.

14.1 WATER

14.1.1 Existing Conditions

Groundwater Supply

Groundwater is presently the only source of domestic water for the City. The City operates a system of wells interconnected with a transmission/distribution pipe system. Well depths range from 155 feet to 400 feet, and individual capacities of the operating wells range from 380 gpm to 2,300 gpm. The City has abandoned six wells over time due to age and water quality problems, but has added new wells to maintain the supply. The groundwater aquifers underlying the City extend to depths in excess of 600 feet and have been identified to include four formations. In general, the underlying strata slope from the hills east of the City downward to the west. The groundwater basin safe yield was estimated in the 1985 Groundwater Study at 1.0 acre-foot per acre per year.

Area groundwater levels are buoyed by the proximity of the Delta channels to the west. Groundwater recharge comes from irrigation of agricultural lands surrounding the City and infiltration from streams flowing west out of the Sierra Nevada. This recharge occurs in areas with permeable materials which allow the infiltration of water along streams, alluvial fans and foothill areas. The Study Area includes a variety of soil types that provide percolation to groundwater. However, with no streams other than Walthall Slough, or alluvial fan conditions, there are no notable groundwater recharge areas identified within the Study Area.

Surface Water Supply

The City of Manteca is participating in the South County Surface Water Supply Project. In 1995, Manteca entered into an agreement with the South San Joaquin Irrigation District (SSJID) and the Cities of Lathrop, Tracy and Escalon to jointly study the issues and related costs associated with developing a surface water treatment plant for the affected areas. This project now includes the construction of a state-of-the-art water treatment plant at Woodward Reservoir and 40 miles of pipeline to deliver treated water to each of the partner cities, including Manteca. When complete in 2005, the South County Surface Water Supply Project will begin deliveries of treated surface water to Manteca. The City of Manteca is contracted to receive up to 11,500 acre-feet of water from this project through 2010. A subsequent phase will increase the City of Manteca water allocation to 18,500 acre feet per year. (1)

Conjunctive Use

The project will help preserve groundwater quality and promote regional water management planning, keeping water historically used in San Joaquin County within the County. The surface water and ground water will be applied in a conjunctive use program in which the surface water becomes the primary supply. Groundwater would then be allowed to naturally recharge and replenish the groundwater basin. Groundwater would be used as a supplemental supply. Wells would be operated only for on-going maintenance and to supplement the surface water supply during peak demand periods.

Water Storage

The City has one surface storage reservoir, a 300,000-gallon elevated tank, located the City Corporation yard between the downtown and industrial area. The tank is 30 feet high and 42 feet in diameter and is supported on top of a 100-foot high tower.

14.1.2 Service Standard

The City of Manteca Water Master Plan (2) and the Public Facilities Implementation Plan (PFIP) establishes the Level of Service Standard for Water.

The City of Manteca's target Level of Service (LOS) for water is to supply an average of 200 gallons per day (gpd) per person at pressures of no less than 40 pounds per square inch (psi) under average conditions, and 20 pounds per square inch under emergency and peak demand conditions. The water service standard for fire suppression is 1,250 gallons per minute (gpm) for Low Density Residential (LDR) uses, 2,500 gpm for commercial land uses, and 3,500 gpm for industrial uses. This Level of Service standard is applicable to all areas of the City that are already developed and those areas where development is planned.

14.2 WASTEWATER TREATMENT (SEWER)

14.2.1 Treatment Capacity

The City of Manteca Wastewater Quality Control Facility (WQCF) is a 6.95 million gallons per day (mgd) rated, combined biofilter-activated sludge plant. Secondary effluent is land applied during the spring and summer (flood irrigation for alfalfa production) and discharged to the San Joaquin River during the winter (October- March). Dried sludge is subsequently spread on agricultural lands adjacent to the plant site. (3)

The WQCF serves commercial and residential properties in Manteca (5.93 mgd) and to the City of Lathrop (1.02 mgd), and one frozen food packager (Eckert Cold Storage). Subsequent phased improvements will increase the capacity of the treatment facility to 10 mgd. These

improvements are scheduled for completion by December 2005. The existing Wastewater Quality Control Facility can ultimately be expanded to treat 25 mgd. (4)

14.2.2 Sewer Collection System

Generally, the land within the existing developed City has trunk sewer constructed to fully serve the expected development. A relatively small sewer service is presently partially served by an interim lift station and will require a trunk sewer to serve the entire shed. Undeveloped areas will require trunk sewers in order to develop.

The City of Manteca has set a target (PFIP) such that capacity is sought to be available to serve demand at the specific LOS but not to anticipate demand. The required timing for each public improvement is related primarily to the timing of additional development that will be served by that improvement.

The expanding areas of Manteca, for the most part, have no sewer facilities and therefore have not existing deficiencies as it relates to the LOS target. However, the infill development expected to occur may exert a demand upon the existing facilities in excess of their capacity. At the crux of this issue is the Union Road Lift Station; existing and future peak flows at the lift station; and improvements required, if any, to handle the expected greater flows. This is, however, a possible capacity problem and not a deficiency.

14.2.3 Service Standard

The City of Manteca Public Facilities Implementation Plan (PFIP) establishes the Level of Service Standard for Wastewater.

Manteca's target LOS for sewer is to collect and treat an average of 325 gallons per day per dwelling unit equivalent (due). This LOS standard is applicable both in the areas of Manteca that have already developed and in the geographic areas where development is expected.

Sewer collection dwelling unit equivalent (due) factors are calculated in the PFIP based on the relative average generation of wastewater for the various land use types. Sewer generation factors are based upon the expected building intensities and population densities. For example, the average daily generation per unit for Low Density Residential (LDR) is calculated as the product of the population per unit (3.25) times the average daily per capita generation (100 gallons). As a result, the LDR generation is 325 gallons per unit per day. Sewer flow generation factors are based upon industry standards applicable to conceptual level facilities planning and professional judgement.

14.3 STORMWATER DRAINAGE

14.3.1 Existing conditions

The South San Joaquin Irrigation District (SSJID) operates drainage facilities that pass through Manteca and carry a portion of the City's drainage. Because of topography, drainage facilities generally follow along an east-to-west alignment. In some instances where subdivisions have developed near irrigation laterals, drainage pumping stations have been installed in lieu of long trunk lines to drains. Water from the SSJID, along with drainage pumped by the City, flows west into French Camp Canal, which eventually flows into French Camp Slough. Storm drainage is gravity-discharged from the Study Area north to French Camp Canal. Existing road and railroad crossings of the Canal are, however, undersized and will require replacement to accommodate peak design flows from the Study Area. The San Joaquin Delta is the ultimate destination of drainage carried by French Camp Slough.

The concept for handling drainage is to collect, store, and meter the water into the terminal drainage conduits and channels. Individual development plans in the City are required to provide on-site detention designed to reduce the peak flow. Typically, 7 to 10 percent of the land area is required for on-site detention. The detention basins in residential subdivisions are often developed as joint use park facilities.

The capacity of the French Camp Outlet Channel and its tributary drains is the limiting factor that sets the metered flow rates. Location of the discharge along the outlet conduits and channels is not a factor affecting the hydraulic capacity requirements of the system. Therefore, regardless of position along the channel, each tributary subarea along the system is provided the same level of service.

All stormwater is to flow to retention basins in order to help control both the quality and quantity of storm runoff discharge to the main drainage system, and ultimately the San Joaquin River. (5), (6)

14.3.2 Service Standard

The City of Manteca Public Facilities Implementation Plan (PFIP) establishes the Level of Service Standard for Drainage.

The target Level of Service for drainage is to provide 10-year storm drainage protection for all development and to provide 100-year storm drainage protection for all structures.

14.4 SOLID WASTE DISPOSAL

14.4.1 Existing Conditions

The City of Manteca Solid Waste Division collects solid waste throughout the City and deposits it at the Lovelace Solid Waste Transfer Station. (7) Recyclable materials are sorted at the Lovelace facility. Green waste is delivered to the Austin Road/Forward Landfill. This landfill has a closure date of 2053 and has a remaining capacity of 1,608,752 cubic yards.

The Solid Waste Division helps to ensure that the City's residential and commercial demands are met effectively and that landfill use remains available for future generations by helping residents and businesses to recycle, compost and reduce the overall solid waste flow.

The City functions interactively with customers to remove all permissible waste and achieve the community's responsibility towards conserving resources. Manteca provides the following solid waste services:

- Residential recycling picked up on a bi-weekly schedule at no extra cost to the customer.
- Residential bi-weekly curbside pickup of compost materials.
- Leaf and Christmas tree pick up.
- Oil collection containers picked up on a weekly basis.
- Commercial recycling.
- Household Hazardous Waste collection.

Hazardous waste handling/disposal is discussed in Hazardous Materials, Section 9 of this EIR.

14.5 EDUCATION (SCHOOLS)

14.5.1 Existing Primary and Secondary Education Resources

The Manteca Unified School District (MUSD) operates twenty-eight (28) schools ranging from Kindergarten through High School; education facilities include twenty (20) elementary schools, three high schools, one adult education school, and two continuation high schools. The estimated number of students is 21,327 as of May 16, 2003. Schools follow both a traditional and year-round calendar. MUSD includes the communities of Manteca, Lathrop, French Camp, and Weston Ranch. (8)(9)(10)

14.5.2 Existing Post-Secondary Education Resources

There are no post-secondary campuses located in Manteca. However, post-secondary educational resources are available through distance learning and regional education. San Joaquin Delta College (Stockton) offers classes at Delta College Farm Laboratory in Manteca and the Manteca Adult School. Courses in Manteca are taught by Delta college instructors or are

provided by “distance learning” utilizing the internet, television, and video. California State University, Stanislaus also offers educational opportunities in Manteca at Manteca High School. Community colleges are located in Stockton, Merced and Modesto. There are a variety of private and specialized college opportunities nearby. California State University, Sacramento, and University of Phoenix, Sacramento, offer a university experience to Manteca residents.

14.5.3 Service Standard

The projected enrollment is based on an average number of students per dwelling unit. Table 14-1 summarizes the student yield rate as of 2003-2004.

**Table 14-1
Projected Student Yield Rate**

K-6	0.534 students per unit
7-8	0.147 students per unit
9-12	0.267 students per unit
Total	0.948 students per unit

Source: Student Generation Analysis, Manteca Unified School District, Public Economics, Inc. May 2003

14.6 LIBRARY

The Manteca Branch Library was constructed in 1961, and is a 14,396 square-foot facility. The Library is the information and learning center for the City of Manteca, and a service area that includes outlying unincorporated county areas. Part of the Stockton-San Joaquin County Public Library, the Manteca Branch is one of the libraries serving the southern end of San Joaquin County. The branch is located in the heart of downtown Manteca. It has served as the connection to government, business, schools, and community organizations for the residents of Manteca for over 40 years, providing meeting room space, among other services. The Library is a current depository for local government documents and ordinances. The Library and the community room have long been the unofficial center of the City of Manteca.

14.6.1 Planned Library Building Program

The current Library’s size and infrastructure is inadequate to meet the modern library service needs of the community. Grant funding is currently being sought in order to build a new facility. The City of Manteca will own and maintain the new Library.

The new Branch Library will be constructed on the downtown site of the current Library, which a community assessment has shown to be the preferred location for the residents of Manteca. The new Library will include a Family Literacy Center. It will also provide easy access to computers and other electronic resources. The new facility will be 58,481 square feet, which is 3.7 times the size of the current facility. The target building completion date is March 2007.

14.6.2 Service Standard

The existing Manteca Library provides .29 square feet per capita.(11) The proposed new Library facility will provide an overall .69 square feet per capita of library space to a projected population of 77,699.

14.7 PARKS AND RECREATION

The City of Manteca currently provides 28 neighborhood and five (5) community parks distributed throughout the City. Many parks are co-located with a small detention basin the serves the surrounding neighborhood. Consequently, the parks are typically located within easy walking distance of the residents. The City is currently planning for a large active sports complex focusing on baseball and softball fields in conjunction with a private company, Big League Dreams.

14.7.1 Service Standard

The City has a standard of 5 acres of parkland per 1000 residents. This standard will be reviewed in the preparation of a Recreation Master Plan that will follow the adoption of the General Plan 2023.

14.8 POLICE PROTECTION

The Manteca Police Department is a full service municipal law enforcement agency with specialized assignments and recognized specialties. In addition, the Department has an active and valuable volunteer staff consisting of Police Explorers, Reserve Officers, and senior citizens who render invaluable assistance to the Department and the community. The Department provides aggressive crime prevention through neighborhood watch, proactive enforcement, community policing, and citizen involvement.

The Department currently has 58 sworn officer positions.

14.8.1 Service Standard

The City meets a standard of one sworn officer per 1000 residents.

14.9 FIRE PROTECTION

Fire protection for the City of Manteca is provided by the Manteca Fire Department (MFD). The Insurance Services Office (ISO) has rated Manteca as a Class 3 on a scale of 9. Manteca shares the second best rating in the County and is rated in the top 15% of fire departments in San Joaquin County. The most common ISO rating in San Joaquin County is 5 in developed areas where water for fire suppression is provided and 8 in undeveloped areas.

MFD's main functions are to provide fire prevention, organized and efficient response to fires, first response to hazardous materials incidents, basic level "first responder" medical response, and public fire education.

MFD responds to emergencies and calls for service from three fire stations located within the City limits. It is also the responsibility of the MFD to provide emergency medical services to customers. Medically related responses account for nearly 60 percent of all requests for service. To maintain a standard level of care, all fire personnel are trained and certified Emergency Medical Technician-1 (EMT) and EMT-D.

MFD has entered into a cooperative agreement with the Stockton Fire Department for the consolidation of emergency dispatching services.

14.9.1 Service Standard

The existing goal is to maintain an average 5-minute response time for all emergencies, and engine and ladder companies should be staffed with a minimum of 3 personnel.

14.10 NATURAL GAS AND ELECTRICITY

Natural Gas and Electricity are supplied by in the City of Manteca by Pacific Gas and Electric Company, Inc. (PG&E), a private corporation. PG&E currently owns and operates electricity and natural gas infrastructure within Manteca.

14.11 REGULATORY SETTING

14.11.1 Applicable Federal Regulation

Federal Energy Regulatory Commission (FERC)

The Federal Energy Regulatory Commission (FERC) regulates the construction of the interstate natural gas pipelines that serve California.

14.11.2 Applicable State Regulation

Solid Waste Management: California Integrated Waste Management Board (CIWMB)

The California Integrated Waste Management Act became law on January 1, 1990. This law mandates that every county and city divert twenty-five percent (25%) of its waste from landfills by 1995 and fifty percent (50%) by 2000, or face fines of \$10,000 per day. The California Integrated Waste Management Board (CIWMB), administering this Law, requires each city and county to prepare an Integrated Waste Management Plan (IWMP). The IWMP must include a Source Reduction and Recycling Element (SRRE) and a Household Hazardous Waste Element (HHWE).

Fire Protection: California Occupational Safety and Health Administration (Cal/OHSA)

The California Occupational Safety and Health Administration (Cal/OHSA) requires for presence of a minimum of four firefighters before the use of respirators, which are required for entry into an enclosed space filled with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors. Therefore, a minimum of four (4) firefighters are required in order to respond to most fire incidents.

California Public Utilities Commission (CPUC)

Electricity: The California Public Utilities Commission (CPUC) has permitting authority over the construction of new and expanded power plants, electric transmission lines and substations. Pursuant to CEQA, environmental analyses must be conducted before issuance of construction permits by CPUC. The CPUC Utilities Safety Branch audits utility overhead and underground electric facilities through random field inspections.

Natural Gas: The CPUC regulates local natural gas distribution facilities and services, as well as intrastate pipelines. CPUC published the California Natural Gas Infrastructure Outlook 2002-2206 Report, which concluded that PG&E's natural gas infrastructure would be sufficient through the year 2006.

California Energy Commission (CEC)

The California Energy Commission (CEC) has the statutory authority to site and license thermal power plants that are rated at 50 megawatts and larger and related transmission lines, fuel supply lines and other facilities. Pursuant to CEQA, environmental analyses are required prior to the issuance of energy facility licenses.

14.12 IMPACT EVALUATION CRITERIA

In accordance with CEQA Guidelines, Appendix G, a project would have a significant impact on the environment if it would:

1. Have insufficient water supplies available to serve the project from existing entitlements and resources, requiring expanded entitlements.
2. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
4. Exceed wastewater treatment requirements of the Regional Water Quality Control Board.
5. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effect.
6. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
7. Be in noncompliance with federal, state, and local statutes and regulations related to solid waste.
8. Result in substantial adverse physical impacts associated with the provision of new or altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services including schools, parks, police protection, or fire protection.

Domestic water and wastewater regulation by the Regional Water Quality Control Board (RWQCB) is further discussed in Hydrology and Water Quality, Section 10 of this EIR.

14.13 IMPACTS AND MITIGATION

POTENTIAL IMPACT PFS-1: **The General Plan 2023 would create a demand for domestic water beyond current entitlements, resulting in significant adverse effects upon the environment.**

Level of Significance: **Potentially Significant**

Water demand will increase with the planned increase in residential, commercial and industrial uses. The level of demand cannot be precisely predicted due to the variability of water demand in non-residential uses, notably industrial, and the potential for changes in average household water use due to changes in household size and composition. Residential conservation practices, smaller residential lots and the potential to use recycled water for landscape irrigation could reduce the current level of demand for the average residential use.

Mitigation Measures:

PFS-1.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses domestic water supply through the following goal, policies (P), and implementation measures (I):

- | | |
|-----------|--|
| Goal PF-7 | Maintain an adequate level of service in the City's water system to meet the needs of existing and project development. |
| PF-P-4 | Secure sufficient sources of water to meet the needs of the existing community and planned residential and commercial growth. |
| PF-P-5 | The City will continue to rely principally on groundwater resources for its municipal water in the near term, but will participate in the regional improvements to deliver surface water to augment the City's groundwater supply. |
| PF-P-6 | The City shall develop new water sources as necessary to serve new development. |
| PF-P-7 | The City shall develop new water storage and major distribution lines as necessary to serve new development. |
| PF-P-9 | City water services shall not be extended to unincorporated areas except in extraordinary circumstances. Existing commitments for City water service outside the City limits shall continue to be honored. |
| PF-P-11 | The City will develop and implement water conservation measures as necessary elements of the water system. |

- PF-I-2 The City shall update the Public Facilities Implementation Plan regarding water supply and distribution, every five years. The update shall be reviewed annually for adequacy and consistency with the General Plan.

- PF-I-3 The City shall require, as a condition of project approval, dedication of land and easements, or payment of appropriate fees and exactions, to help offset municipal costs of expansion of water treatment facilities and delivery systems.

- PF-I-7 The City will encourage the use of recycled water for landscape irrigation where feasible, within the parameters of State and County Health Code and standards.

PFS-1.2: The City of Manteca Water Service Master Plan (1998) defines the future water supply, storage and delivery system for the City. The Master Plan recommends a conjunctive use of surface water from the South San Joaquin Irrigation District (SSJID) Surface Water Project to meet the future water needs of the City. SSJID plans to commence surface water supply deliveries to the City in 2005. Based on limiting average groundwater supplies to the safe yield of 1.0 acre-foot per acre per year, it is estimated that under a conjunctive use program groundwater could meet 48 percent of the City’s annual water needs and surface water would meet the remaining 52 percent.

Table 14-2 presents the proposed future annual water supply distribution for the City.

Table 14-2
Conjunctive Use of Surface Water and Groundwater

Year	Annual Water Use (Acre-Feet)		
	Surface Water	Groundwater	Total
2000		12,800	12,800
2005	9,400	8,600	18,000
2010	12,700	11,800	24,500
2015	17,500	16,200	33,700
2020	21,600	19,900	41,500
2025	24,500	22,400	46,900

Source: 1998 Water Master Plan – City of Manteca

The surface water supply will be used as the base supply and groundwater facilities will be used to meet peak water demands. During winter months SSJID surface water deliveries will meet nearly the entire City's projected water demands. City wells will be utilized only as necessary to exercise wells (for operational water quality or treatment equipment maintenance considerations) or to alleviate localized low pressure wells.

The City service area for the Water Master Plan encompasses the SSJID 1991 Study Service Area which includes the existing City limits and the 2023 General Plan Study Area. The total Water Master Plan service area encompasses approximately 35,000 acres, and the General Plan Study Area encompasses 25,975 acres.

The Water Master Plan assumes that 17,620 acres will be used for residential purposes at full build out of the SSJID 1991 Study Service Area. Table 14-3 compares land use proposed in the General Plan 2023 to the Ultimate Land Use assumed in the Water Master Plan. The General Plan Land Use categories are summarized to match the land use designations in the Water Master Plan. Table 14-3 indicates that the Water Master Plan assumes substantially greater residential land use that provided in the General Plan 2023. The Water Master Plan assumes less land allocated to Commercial/Industrial use for the combined planned land use and reserve land use in the General Plan 2023.

Table 14-3

Land Use Assumptions - Water Master Plan and General Plan 2023

Land Use Category	Water Master Plan Service Area	2023 Manteca GP Land Use	2023 Manteca GP Reserve Land Use	2023 Manteca GP Total Potential Land Use
	Acres	Acres	Acres	Acres
Residential	17,620	8,569	2,515	11,084
Commercial/Industrial	3,820	3,802	1,004	4,806
Parks and Public/Quasi Public Land	960	1,267	91	1,358

Source: Wade Associates and 1998 Water Master Plan – City of Manteca, May 2003

Residual Level of Significance: Less than Significant with Mitigation

Implementation of the above goal, policies, and implementation measures, together with the City's Water Master Plan and PFIP, and continued participation in the SSJID Surface Water

Project, will help ensure that the domestic water demands for implementation of the General Plan 2023 will be met without substantial adverse effects upon the environment.

POTENTIAL IMPACT PFS-2: The General Plan 2023 would create a demand for wastewater (sewer) treatment beyond capacity of current facilities, resulting in significant adverse effects upon the environment.

Level of Significance: Potentially Significant

The city has planned for expansion of the WQCF to accommodate growth. The existing site constrains the long term expansion of the plant due to limitations on land disposal. Continued expansion on the site will depend on future improvements that rely less on land disposal methods. Such methods include improved treatment technology, use of recycled wastewater for irrigation, and management of solid waste, among other methods. The current population of 55,000 residents create a demand that is within the capacity of the treatment plant, 6.95 mgd. The planned improvements would provide 10 mgd and the ultimate planned capacity of 25 mgd would be more than sufficient to accommodate the growth planned in General Plan 2023.

Mitigation Measures:

PFS-2.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses wastewater (sewer) treatment through the following goal, policies (P), and implementation measures (I):

- Goal PF-8 Maintain an adequate level of service in the City’s sewage collection and disposal system to meet the needs of existing and projected development.

- PF-P-16 Ensure wastewater collection and treatment for all development in the City and the safe disposal of wastes.

- PF-P-17 The City will maintain capacity to process combined residential, commercial, and industrial flow.

- PF-P-18 The City shall develop new sewage treatment and trunk line capacity as necessary to serve new development.

- PF-P-19 City sewer services will not be extended to unincorporated areas, except in extraordinary circumstances. Existing commitments for sewer service outside the City limits shall continue to be honored.

-
- PF-P-23 The City will maintain the ability to handle peak discharge flow while meeting State Regional Water Quality Control Board Standards as established in the current NPDES Permit.
- PF-I-8 The City shall update the Public Facilities Implementation Plan (PFIP) regarding wastewater collection and treatment, every five years. The update shall be reviewed annually for adequacy and consistency with the General Plan.
- PF-I-10 The City will encourage and permit an industrial pretreatment program for business parks and other industrial uses in accordance with state and federal requirements.
- PF-I-12 The City will promote reduced wastewater system demand through efficient water use by:
- requiring water conserving design and equipment in new construction,
- encouraging retrofitting with water conserving devices;
- designing wastewater systems to minimize inflow and infiltration to the extent economically feasible; and
- maintaining a Citywide map of all sewer collection system components and monitoring the condition of the system on a regular basis.

Residual Level of Significance: Less than Significant with Mitigation

Implementation of the above goal, policies, and implementation measures, together with the City's Sewer Master Plan and PFIP, will help ensure that the wastewater treatment demands for implementation of the General Plan 2023 will be met without substantial adverse effects upon the environment.

POTENTIAL IMPACT PFS-3: The General Plan 2023 would create a demand for stormwater drainage beyond capacity of current facilities, resulting in significant adverse effects upon the environment.

Level of Significance: Potentially Significant

The capacity of the French Camp Outlet Channel and its tributary drains is the limiting factor that sets the flow rates for drainage systems in the City.

Mitigation Measures:

PFS-3.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses stormwater drainage through the following goal, policies (P), and implementation measure (I):

- Goal PF-9 Maintain an adequate level of service in the City's drainage system to accommodate runoff from existing and projected development and to prevent property damage due to flooding.
- PF-P-24 The City shall continue to complete gaps in the drainage system in areas of existing development.
- PF-P-25 The City shall require the dedication and improvement of drainage detention basins as a condition of development approval according to the standards of the Drainage Master Plan. The responsibility for the dedication and improvement of detention basins shall be based on the prorated share of stormwater runoff resulting from each development.
- PF-P-26 Storm drainage systems within new development areas shall include open drainage corridors where feasible to supplement or replace an underground piped drainage system. The drainage systems would provide for short-term stormwater detention, stormwater conveyance for stormwaters exceeding a 10-year event, stormwater quality treatment, bike and pedestrian paths, and visual open space within neighborhoods.
- PF-I-13 The City shall update the Storm Drainage Master Plan and Public Facilities Implementation Plan, regarding stormwater drainage, every five years. The update shall be reviewed annually for adequacy and consistency with the General Plan.

PFS-3.2: The Public Facilities Implementation Plan (PFIP) 1993 addresses additional drainage capacity made necessary by development occurring through June 30, 2020.

All stormwater is to flow to detention basins in order to help control both the quality and quantity of storm runoff discharge to the main drainage system, and ultimately the San Joaquin

River. Detention basins are designed to temporarily hold and gradually release water for short periods not to exceed 72 hours. Retention basins do not provide for release but will allow water to percolate or evaporate within a 72-hour period.

The LOS standard is the existing standard in the areas of Manteca that have already developed and is the target standard in the areas where development is expected. The LOS targets identified should be maintained through all future development.

Residual Level of Significance: Less than Significant with Mitigation

Implementation of the above goal, policies, and implementation measure, together with the City's Storm Drainage Master Plan and PFIP, will help ensure that the stormwater drainage demands for implementation of the General Plan 2023 will be met without substantial adverse effects upon the environment.

POTENTIAL IMPACT PFS-4: The General Plan 2023 would create a demand for solid waste services beyond the capacity of current landfill facilities, resulting in significant adverse effects upon the environment.

Level of Significance: Potentially Significant

The City of Manteca utilizes the Lovelace Transfer Station to process and ship its solid waste and materials. The Lovelace Transfer Station is of regional significance in that it provides services to the majority of south San Joaquin County.

Mitigation Measures:

PFS-4.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses solid waste handling and disposal through the following goals, and policies (P):

- | | |
|------------|---|
| Goal PF-11 | Provide for the implementation and enforcement of the provisions for the Source Reduction and Recycling Element, as mandated by the State. |
| Goal PF-12 | Maintain efficient, effective and economical solid waste services for the residents, businesses and visitors to Manteca. |
| PF-P-30 | The City shall support the continued use of the Lovelace Transfer Station on Lovelace Road, between Union Road and Airport Way, for the processing and shipping of solid waste materials. |

As discussed above in Subsection 14.1.4, the City of Manteca Solid Waste Department currently provides household and commercial recycling, and compost material pickup, among other programs, to help reduce the City's solid waste load.

Residual Level of Significance: Less than Significant with Mitigation

Implementation of the above goal and policies, including implementation and enforcement of the Source Reduction and Recycling Element, will help ensure that solid waste disposal demands for implementation of the General Plan 2023 will be met without substantial adverse effects upon the environment.

POTENTIAL IMPACT PFS-5: The General Plan 2023 would not comply with statutes and regulations related to solid waste.

Level of Significance: Potentially Significant

Mitigation Measures:

PFS-5.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses compliance with statutes and regulations related to solid waste through the following goal and policy (P):

- Goal PF-11 Provide for the implementation and enforcement of the provisions for the Source Reduction and Recycling Element, as mandated by the State.

- PF-P-29 The City will implement and enforce the provisions of its Source Reduction and Recycling Element.

Residual Level of Significance: Less than Significant with Mitigation

Implementation of the above goal and policy providing for the implementation and enforcement of the Source Reduction and Recycling Element will help comply with statutes and regulations related to solid waste.

POTENTIAL IMPACT PFS-6: Implementation of the General Plan 2023 would require additional facilities and LOS for police protection, fire protection, schools, and parks.

Level of Significance: Potentially Significant

Police Protection: The effect of growth from the General Plan 2023 will be an incremental increase in the number of service calls from the Manteca Police Department. The effects will be in terms of personnel requirements for training and emergency responses, and an increased need to upgrade equipment and facilities.

Fire Protection: The effect of growth from the General Plan 2023 will be an incremental increase in the number of calls for service from the MFD. The current Insurance Services Organization (ISO) level of service and other indicators of service capability will be affected as the population increases and the general character of the community changes over time. The effects will be in terms of personnel requirements for training and emergency responses, and an increased need to upgrade equipment and engines. Personnel requirements will also increase due to the Cal OSHA requirement of a minimum of four (4) firefighters to respond to most fire incidents. New fire stations will be required to maintain a standard of a maximum 5 minute response. The MFD will determine the location of these stations as growth occurs to maintain the response coverage of the urban area. Therefore, the stations will be located in urbanizing areas.

Schools: Proposed growth in the General Plan 2023 will require new K-8 and high schools. The location of these schools cannot be determined in the General Plan. The Manteca Unified School District will select the location of new schools sites based on the location of new growth and the District's site criteria.

Parks and Recreation: Based upon the standard of 5 acres of parkland per one thousand residents new neighborhood and community parkland will be required. The City Parks and Recreation Department and the Parks and Recreation Commission will establish location and site criteria in the Recreation Master Plan.

Mitigation Measures:

PFS-6.1: The Public Facilities and Services Element (Section 6) of the General Plan 2023 addresses police protection, fire protection, schools, and parks and recreation through the following goals, policies (P), and implementation measures (I):

Police Protection

- | | |
|---------|--|
| PF-P-39 | The City shall endeavor through adequate staffing and patrol arrangements to maintain the minimum feasible police response times for police calls. |
| PF-P-40 | The City shall provide police services to serve the existing and projected population. |
| PF-P-41 | The City will establish the criteria for determining the circumstances under which police service will be enhanced. |
| PF-I-22 | The Police Department shall continuously monitor response times and report annually on the results of the monitoring. |

PF-I-23

The Planning Commission and City Engineer will review proposed residential developments to evaluate the accessibility for police patrols and emergency response.

Fire Protection

- PF-P-42 The City shall endeavor to maintain an overall fire insurance (ISO) rating of 4 or better.
- PF-P-43 The City shall endeavor through adequate staffing and station locations to maintain the minimum feasible response time for fire and emergency calls.
- PF-P-45 The City shall establish the criteria for determining the circumstances under which fire service will be enhanced.
- PF-I-24 The Fire Department shall continuously monitor response times and report annually on the results of the monitoring.
- PF-I-25 The Planning Commission and City Engineer will review proposed residential street patterns to evaluate the accessibility for fire engines and emergency response.

Education (Schools)

- Goal PF-13 Maintain sufficient land inventory so that the Manteca Unified School District can provide for the educational needs of the Manteca residents.
- PF-P-32 The City shall cooperate with the Manteca Unified School District and others in locating and reserving appropriate sites for new schools. Adequate facilities shall be planned to accommodate new residential development.
- PF-P-33 The City shall cooperate with the Manteca Unified School District in their collection of school facility development fees from new development.
- PF-P-34 Financing of new school facilities will be planned concurrent with new development.
- PF-P-35 The City and Manteca Unified School District will work together to develop criteria for the designation of school sites and consider opportunities for reducing the cost of land for school facilities. The City will encourage the school district to comply with City standards in the design and landscaping of school facilities.

- PF-P-37 The City will consider opportunities for joint-use of facilities the school district. When feasible, a joint-use agreement will be pursued to maximize public use of facilities, minimizing duplication of services provided, and facilitate shared financial and operational responsibilities.
- PF-P-38 When feasible, schools will be located away from hazards of sensitive resource conservation areas, except where the proximity of resources may be of educational value and the protection of resources is reasonably assured.
- PF-I-18 The City will maintain an inventory of all public lands to identify opportunities for joint-use facilities.
- PF-I-19 The City shall cooperate with the Manteca Unified School District to select a suitable location for a high school south of SR-120.
- PF-I-20 The City will request an annual meeting with the Administrator and the Board of Trustees of the Manteca Unified School District to review development issues and opportunities for cooperation between the school district and the City.
- PF-I-21 The City will encourage the expansion of higher education program offerings and opportunities in Manteca.

Parks and Recreation

- Goal PF-14 Establish and maintain a park system and recreation facilities that support economic development and residential growth in the City.
- Goal PF-15 Establish and maintain a park system and recreation facilities that are suited to the needs of Manteca residents and visitors.
- Goal PF-16 Promote the provision of private recreational facilities and opportunities.
- Goal PF-17 Establish a recreation program that is suited to the needs and interests of all Manteca residents.
- Goal PF-18 Provide a network of pedestrian and bicycle routes connecting Manteca's major open space areas and destination points.

-
- PF-P-46 The City shall expand the community and neighborhood park system with the goal of providing neighborhood park facilities within reasonable walking distance of all City residential areas.
- PF-P-47 The City shall use joint development of park and drainage detention basins in the development of neighborhood parks.
- PF-P-48 The City shall cooperate with the Manteca Unified School District in opportunities for joint-use of school and park and recreation facilities.
- PF-P-49 City park acquisition efforts shall be based on a goal of 5 acres of developed neighborhood and community parkland per 1,000 residents within the City limits.
- PF-P-50 Neighborhood parks shall conform to the following general guidelines (specific detail and standards to be determined within the Parks and Recreation Master Plan):
- The typical minimum size shall be set to support active and passive recreation activities.
 - The typical service areas for a neighborhood park is approximately ¼ mile walking distance.
 - Neighborhood parks shall include a turf area above the basin flood line of sufficient area to be used for playgrounds, sports, picnic areas, and other recreational facilities.
- PF-P-51 The City shall aggressively pursue State and County funding to supplement City revenues to the extent such funding is available.
- PF-P-52 The City shall endeavor to identify, acquire, and develop one or more community parks as defined in the Parks and Recreation Master Plan.
- PF-P-53 All new residential development will be required to pay a park acquisition and improvement fee, based on providing 5 acres per 1,000 residents, to fund system-wide improvements.
- PF-P-54 The City shall require the provision of private open space and recreational facilities as part of new residential developments.

- PF-P-55 The City shall not discourage the expansion of private commercial recreational facilities.
- PF-P-56 The City shall develop a convenient system of pedestrian sidewalks and pathways linking City parks, major open space areas, and the downtown core.
- PF-P-57 The City shall adopt a Bicycle Route Master Plan and develop a bicycle route system linking open space areas, schools, public facilities, the downtown core, and neighborhoods.
- PF-I-26 The City shall adopt a Parks and Recreation Master Plan, setting out goals, policies, and standards for the location, size, and level of development of all existing and proposed parks. The Plan will establish specific development criteria for the use of neighborhood and community parks. The master plan shall cover at least the succeeding 10-year period, with greater detail devoted to improvements planned for the first five-year period.
- PF-I-27 The City shall periodically review projected park development needs and plans, update cost estimates for park acquisition and development, and remaining development potential based on the General Plan.

Residual Level of Significance: Less than Significant with Mitigation

Implementation of the above goal and policies, including the Parks and Recreation Master Plan, will help ensure that police protection, fire protection, educational, and parks and recreation demands for implementation of the General Plan 2023 will be met without substantial adverse effects upon the environment.

POTENTIAL IMPACT PFS-7: The General Plan 2023 would require expanded energy sources and infrastructure for expanded urban development.

Level of Significance: Potentially Significant

Ever-increasing energy demand has been a prominent issue in recent years, as reflected in ever-increasing energy bills, black-outs, brown-outs, and scheduled outages.

Electrical and natural gas services are provided to the City of Manteca by Pacific, Gas & Electric Company, Inc., a private corporation.

Power plants, substations, and transmission lines, and natural gas transmission lines are approved by a combination of agencies, including FERC, CPUC, and CEC (discussed in Subsection 4.2 above). These agencies are exempt from following local regulations, although in practice each of these agencies consults with local jurisdictions and the public.

The CPUC published the California Natural Gas Infrastructure Outlook 2002-2206 Report, which concluded that PG&E's natural gas infrastructure would be sufficient through the year 2006

Mitigation Measures:

PFS-7.1: The General Plan 2023 Public Facilities and Services Element (Section 6) addresses electricity through the following goal, policy (P), and implementation (I) measures:

Goal PF-10 The City shall ensure adequate, reliable electric service is available to all users in the City.

PF-P-28 Cooperate with and encourage efforts to expand the opportunities for electric power service in the City.

PF-I-14 The City will consider participating on generating and/or distributing electric service within the City.

FP-I-15 The City will support energy conservation measures and innovative uses of solar energy, heat recovery, and co-generation in all structural and industrial processes.

PF-I-16 The City will confer with utility companies regarding major development plans and cooperate with planning extensions.

PFS-7.2: The General Plan 2023 Resource Conservation Element (Section 8) provides the following measures to mitigate impacts related to electricity and infrastructure expansion:

RC-I-6 The City shall implement development standards which promote energy conservation and the use of solar energy techniques for heating and cooling, including building orientation, street and lot layout, landscape placement, and protection of solar access.

- RC-I-8 The City shall enforce Title 24 energy requirements (Building Code) which define construction standards that promote energy conservation.

- Goal RC-3 The City shall ensure that land use and circulation improvements are coordinated to reduce the number and length of vehicles trips and thereby help conserve scarce and nonrenewable energy resources.

- RC-P-8 The City shall support use of alternative energy sources in new commercial, industrial and residential development.

- RC-I-10 Encourage large energy users to use an energy conservation plan as part of the project review and approval process, and develop a program to monitor compliance with and effectiveness of that plan.

- RC-I-11 Cooperate with other agencies and jurisdictions to expand energy conservation programs.

Residual Level of Significance: Significant and Unavoidable

The need for expanded energy sources and infrastructure is a significant impact with expanded urban development. Implementation of the above goal, policy and implementation measures will help reduce the amount of energy and infrastructure needed to serve new urban development in the City of Manteca, but not to a less-than-significant level.

References:

- (1) Jim Podesta, Manteca Department of Public Works, telephone conversation, May 28, 2003

- (2) City of Manteca, Water Master Plan, Kennedy/Jenks Consultants, August 1998

- (3) Wastewater Quality Control Facility Master Plan – 1995 for City of Manteca Nolte and Associates, June 1995

- (4) Phil Govea, Manteca Department of Public Works, conversation, May 6, 2003

- (5) DRAFT Storm Drainage Master Plan, City of Manteca, Carter-Burgess, June 2000

- (6) Jim Podesta, Manteca Department of Public Works, telephone conversation, May 28, 2003
- (7) Frederic Clark, Manteca Department of Public Works, telephone conversation, May 29, 2003
- (8) Sandy Dwyer, Manteca Unified School District, conversation, October 28, 2001
- (9) Manteca Unified School District Educational Specifications K-8 Elementary Schools, n.d.
- (10) Manteca Unified School District, Educational Specifications 4th High School, December 1999
- (11) Community Needs Assessment, Manteca Branch Library, Drew Harrington, Library Building Consulting, Revised February 2003

Additional References

- (12) Steve Houx, City of Manteca Parks and Recreation Director, conversation, December 2001
- (13) Robert Adams, City Manager, conversation, October 2001
- (14) George Quaresma, Fire Chief, conversation, October 28, 2001 and various e-mail
- (15) Charlie Halford, Police Chief, conversation, October 28, 2001
- (16) Manteca City Fire Department Annual Report 2000
- (17) City of Manteca Comprehensive Annual Financial Report, June 30, 2000

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15. TRAFFIC AND CIRCULATION

This section is based upon and incorporates a traffic analysis report authored by Fehr & Peers Associates, Inc., entitled “City of Manteca – General Plan Transportation Analysis, May 2003.”

15.1 EXISTING CONDITIONS

15.1.1 Roadway Segments

The City of Manteca is located at the junction of State Routes 120 (SR 120) and State Routes 99 (SR 99) in San Joaquin County. State Route 99 and Interstate 5 provide regional access to Manteca from the north and the south, and State Route 120 provides regional access to Manteca from the east and west.

Travel through Manteca is handled along several two- and four-lane facilities. Major north-south routes include Airport Way, Union Road, and Manteca Road / Main Street. Major east-west routes include Lathrop Road, Louise Avenue, and Yosemite Avenue. These streets are located with approximately one mile in a square arterial grid.

One major north/south roadway is Airport Way, which extends from Lathrop Road to Woodward Avenue along the western border of the City of Manteca near the City of Lathrop. The daily volumes on Airport Way average around 9,000 vehicles per day. Airport Way is currently a two-lane roadway.

Another major north/ south roadway is Union Road that is west of Main Street. Currently, Union Road is four lanes from Lathrop Road to near State Route 120. The sections near State Route 120 extending south to the City limits are two-lane. Union Road carries an average of 15,000 vehicles per day in the City of Manteca.

Manteca Road / Main Street is one of the major north-south roadways in Manteca. A majority of Main Street has four lanes but a small two-lane segment is located at the intersection of Main Street and Yosemite Avenue in the downtown Manteca Area. The average daily volume on Main Street ranges from 15,000 to 23,000.

Other north-south roadways in the City include McKinley Avenue, Winters Drive, Elm Avenue, Fremont Avenue, and Powers Avenue. These roadways carry volumes that are 3,000 vehicles per day or less.

Yosemite Avenue is one of the major east-west roadways in the City of Manteca, with average daily volumes ranging from 11,000 to 17,000 vehicles. Yosemite Avenue serves as a major through route and provides access to recreational areas to the east of the City, such as the Yosemite National Park. Yosemite Avenue is currently a two-lane roadway.

Another major east-west roadway is Louise Avenue, which is located north of Yosemite Avenue. This roadway is currently four lanes and carries an average of 14,000 vehicles per day in the City.

The final major east-west roadway is Lathrop Road, a two-lane roadway north of Louise Avenue. This road currently carries daily volumes ranging from 10,000 to nearly 12,000.

Other east-west roadways include Northgate Drive, Crom Street, Alameda Street, Center Street, North Street, Wawona Street, and Mission Ridge Drive. These roadways generally carry daily volumes ranging from 1,000 to 2,000 vehicles. However, a daily count of 6,000 was taken on Mission Ridge Drive near Main Street and a count of 5,000 occurred on Center Street near Main Street.

Figure 15-1 illustrates the existing roadway system in the Study Area.

The average daily traffic counts were drawn from traffic counts conducted by City of Manteca Staff in 2001. Freeway traffic volumes were obtained from Caltrans. The key road segments and average daily traffic levels are shown in Table 15-1. Figure 15-2 shows the traffic volume, (the sum of vehicles traveling in both directions), on the designated roadway.

15.1.2 Intersections

Five intersection locations were identified for existing conditions analysis, as shown on Figure 15-3. Intersections were selected based on existing and projected traffic volumes through the intersections and consultation with City staff. The intersections are:

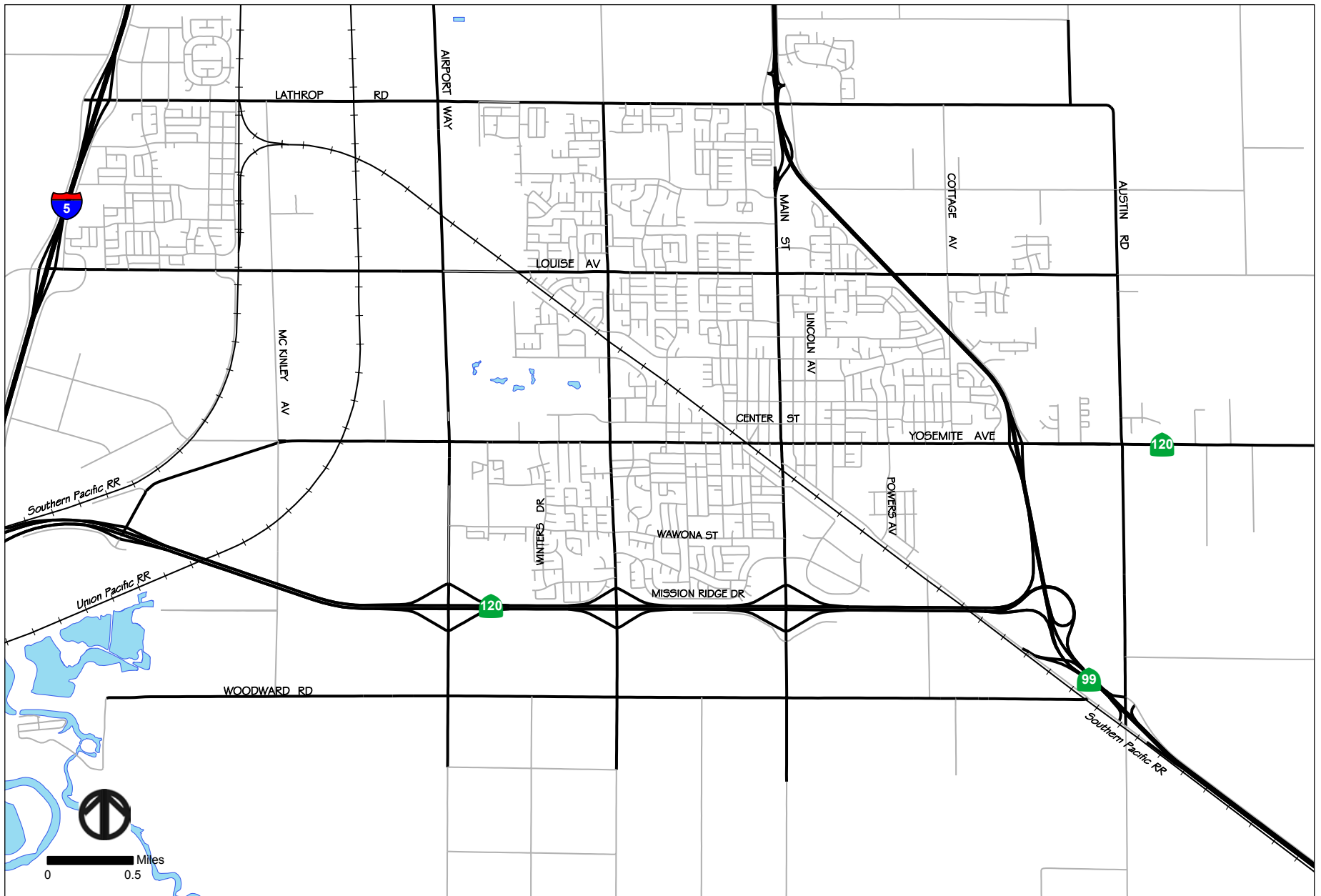
1. Lathrop Road and Airport Way;
2. Louise Avenue and Union Road;
3. Louise Avenue and Main Street;
4. Yosemite Avenue and Union Road; and
5. Yosemite Avenue and Main Street.

Existing turning movement counts were conducted at the five study intersections during the PM peak period (4:00 to 6:00 p.m.) in 1999 and 2001 by City of Manteca Staff. The PM peak hour period generally has the highest traffic volumes. To present a more conservative analysis, the highest counts (1999 or 2001) were used as the basis for the analysis. For each intersection count period, the one-hour with the highest traffic volumes was identified for the peak hour of analysis.

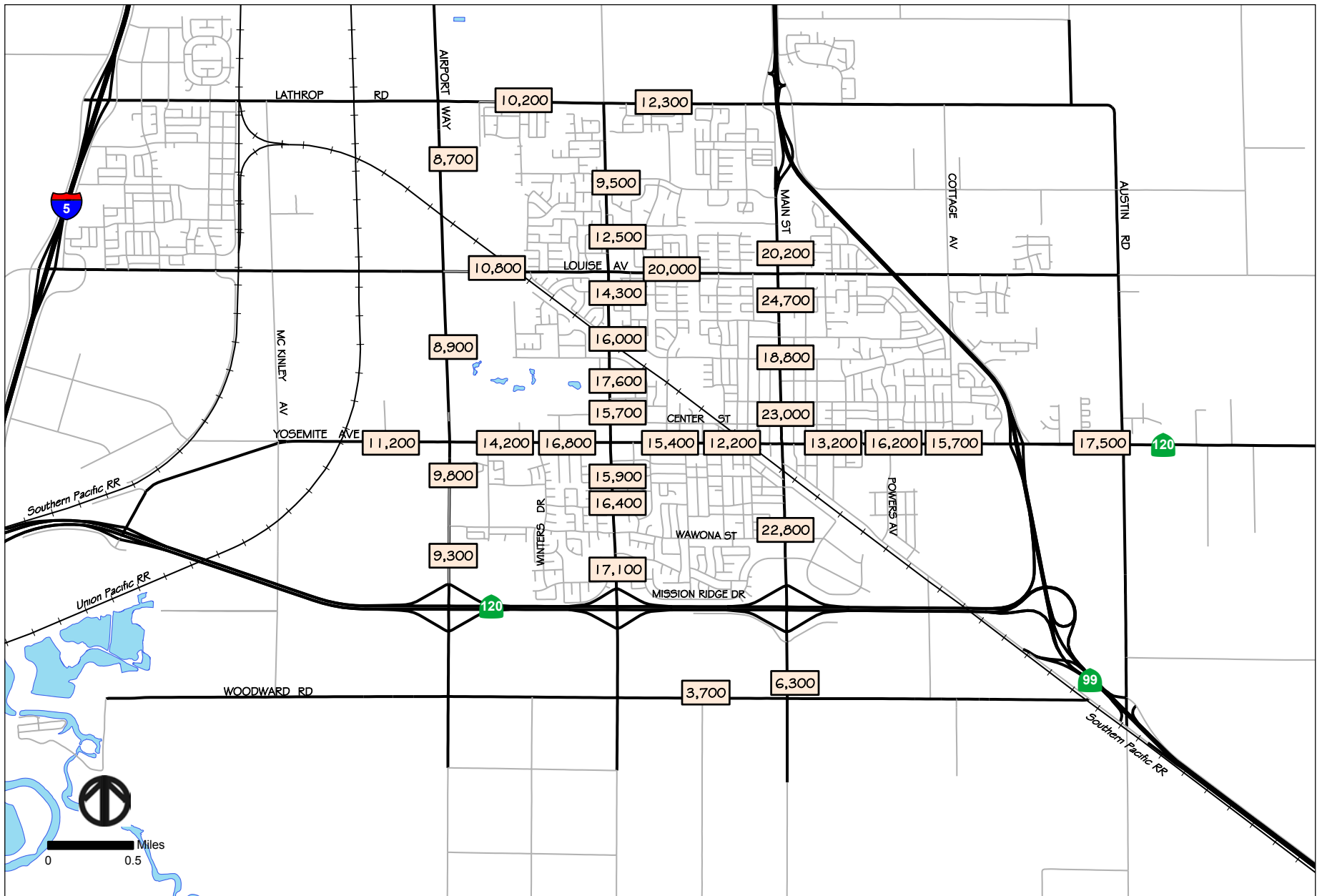
**Table 15-1
Existing Traffic Volumes**

Roadway	Between	1999-2001 Traffic Count
Airport Way	Lathrop to Louise	8700
	Louise to Yosemite	8900
	Yosemite to Wawona	9800
	Wawona to SR 120	9300
Union Road	Lathrop to Northgate	9500
	Northgate to Louise	12500
	Louise to Alameda	14300
	Alameda to Crom	16000
	Crom to Center	17600
	Center to Yosemite	15700
	Yosemite to Wawona	15900
	Wawona to Mission Ridge	16400
	Mission Ridge to SR 120	17100
	Main Street	Northgate to Louise
Louise to Alameda		24700
Alameda to North		18800
North to Center		23000
Center to Yosemite		15200
Yosemite to SR 120		22800
SR 120 to Woodward		6300
Woodward	Union to Main	3700
Yosemite	McKinley to Airport	11200
	Airport to Winters	14200
	Winters to Union	16800
	Union to Walnut	15400
	Walnut to Main	12200
	Main to Fremont	13200
	Fremont to Powers	16200
	Powers to Cottage Ave.	15700
Cottage to Austin	17000	
Louise Avenue	Airport to Union	10800
	Union to Elm	11800
	Elm to Main	17900
Lathrop Road	Airport to Union	10200
	Union to Main	11900

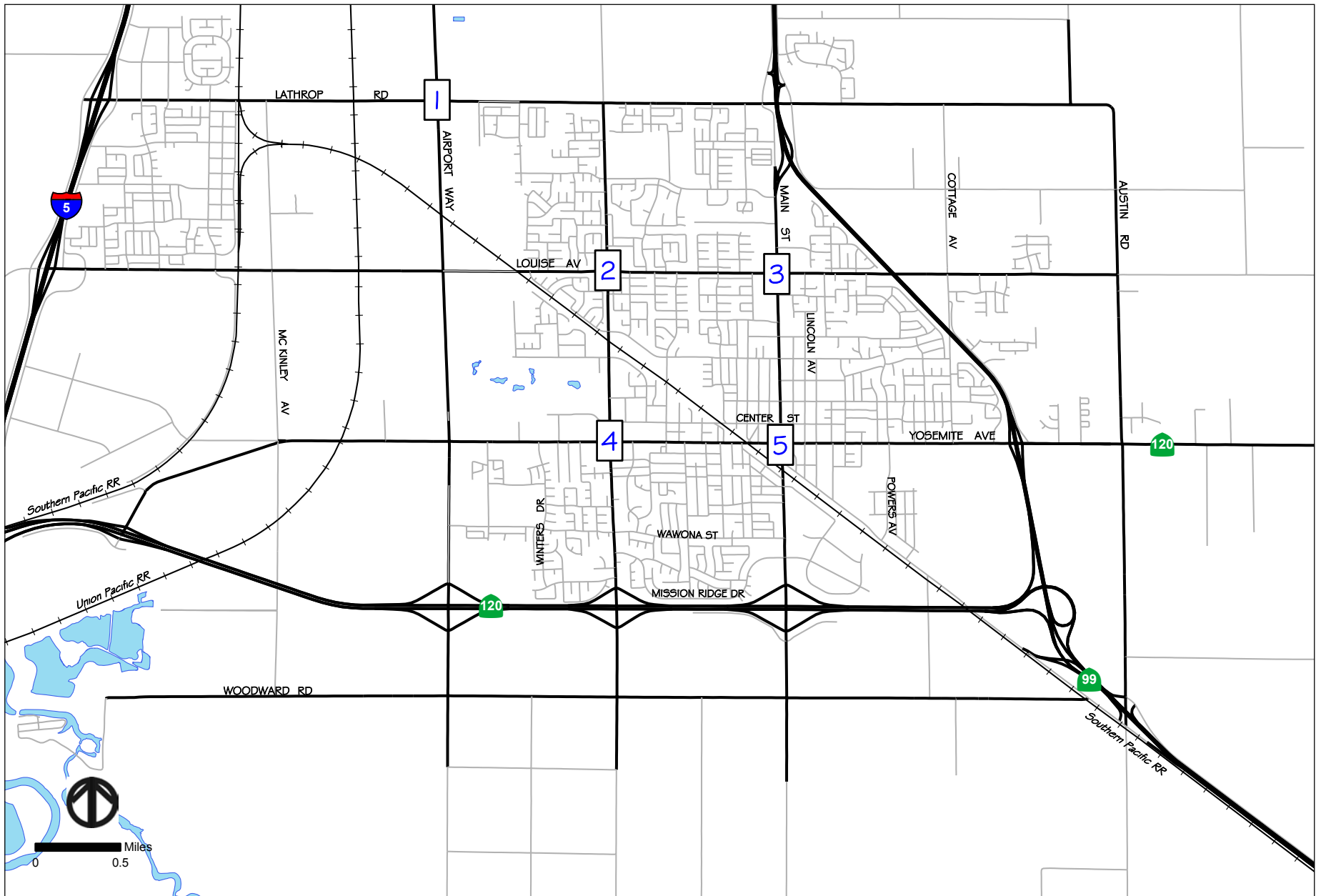
Source: Fehr & Peers, Inc. May 2003



Manteca General Plan



Manteca General Plan



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15.2 ANALYSIS METHODOLOGY

Operations of the study intersections were evaluated using level of service (LOS) calculations. Level of service criteria is discussed below with an evaluation of existing LOS standards at the four study intersections.

15.2.1 Level of Service Criteria

Transportation engineers and planners commonly use a grading system called level of service (LOS) to measure and describe the operational status of the local roadway network. Level of service is a description of an intersection's operation, ranging from LOS A (indicating free-flow traffic conditions with little or no delay) to LOS F (representing over-saturated conditions where traffic flows exceed design capacity, resulting in long queues and delays). LOS can be reported for both roadway segments and intersections. This analysis reports both the more general roadway segment LOS and the detailed intersection LOS.

Roadway Segments

Roadway segment LOS is based on the comparison of volumes against reference charts. This analysis employs reference tables developed by the authors of the Highway Capacity Manual for the Florida Department of Transportation (FDOT). FDOT reference tables are widely utilized for roadway segment analysis. They are transferable to other states and have been accepted by Caltrans. Please note that these tables provide only a generalized level of service judgment should applied when reviewing results. These tables employ assumptions regarding signal spacing, peak to daily volume ratios, roadway width, presence of turn lanes, and other factors that affect roadway operation. These LOS thresholds used in this study are shown in Table 15-2.

Table 15-2
Arterial Roadway Segment
LOS Standards (Daily Volumes)

Number of Lanes	LOS C	LOS D	LOS E
2	9,100	14,600	15,600
4	21,400	31,100	32,900
6	33,400	46,800	49,300

Source: Florida Department of Transportation, Generalized Level of Service Tables for Urbanized Areas.

The results of the roadway segment LOS analysis are shown on Table 15-3. As indicated in the table, a majority of the roadway segments operate at an acceptable LOS of C. The LOS of each roadway is also shown on Figure 15-4.

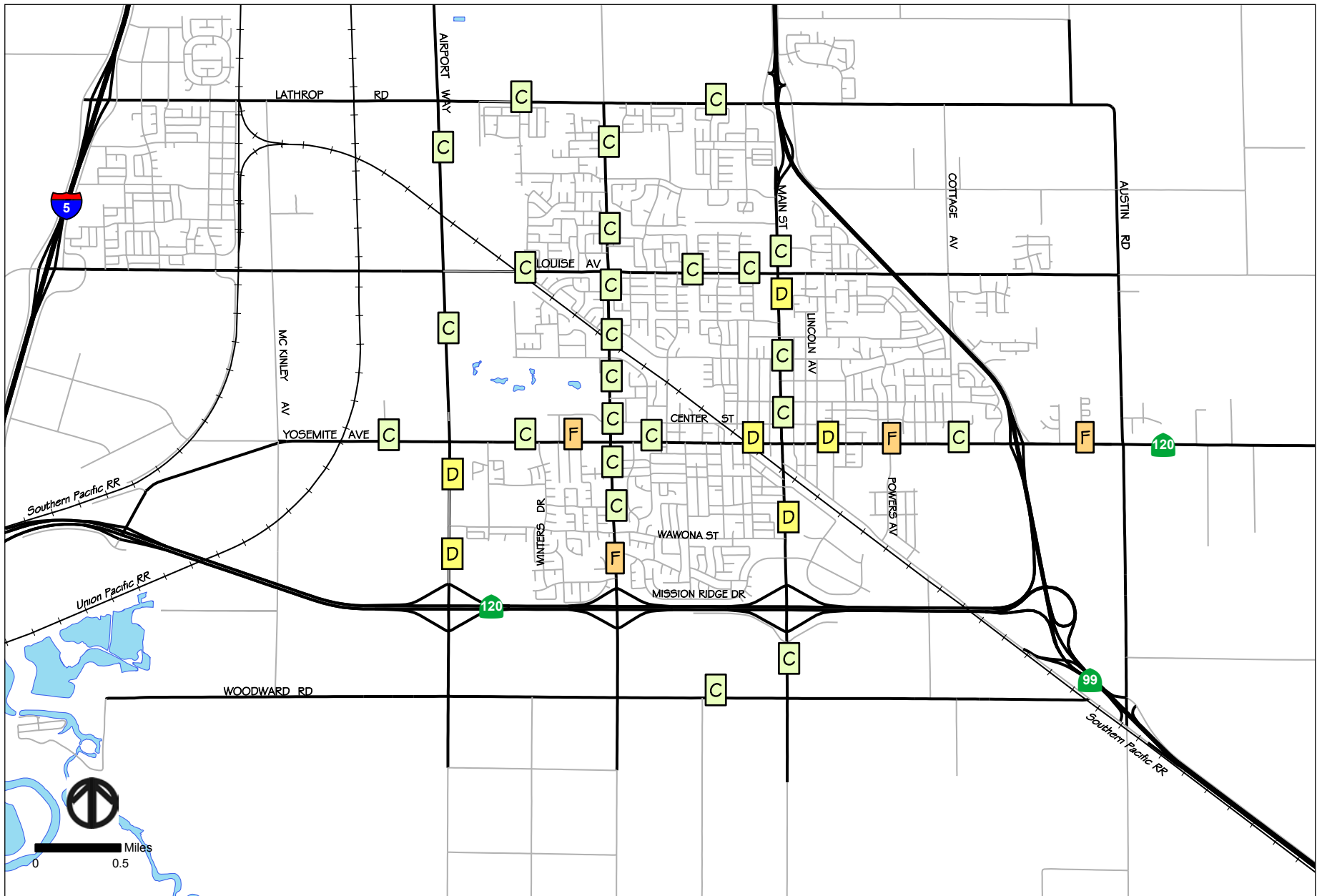
However, there are several roadway segments that operate at a deficient level currently. One segment of Yosemite Avenue operates at LOS E (Union to Walnut) and other segments operate at LOS F (Winters to Union, Fremont to Powers, Powers to Cottage, Cottage to Austin). Please note that the volumes typically exceed the thresholds by small amounts (less than 10%). Therefore, roadways may be operating closer to acceptable levels because of the generalized nature of the roadway LOS standards.

**Table 15-3
Existing Traffic Volumes and LOS Results**

Roadway	Between	Existing Lanes	2001 Traffic Count	Capacity LOS C	Capacity LOS D	Capacity LOS E	V/C Ratio	LOS
Airport Way	Lathrop to Louise	2	8700	9100	14600	15600	0.56	C
	Louise to Yosemite	2	8900	9100	14600	15600	0.57	C
	Yosemite to Wawona	2	9800	9100	14600	15600	0.63	D
	Wawona to SR 120	2	9300	9100	14600	15600	0.60	D
Union Road	Lathrop to Northgate	4	9500	21400	31100	32900	0.29	C
	Northgate to Louise	4	12500	21400	31100	32900	0.38	C
	Louise to Alameda	4	14300	21400	31100	32900	0.43	C
	Alameda to Crom	4	16000	21400	31100	32900	0.49	C
	Crom to Center	4	17600	21400	31100	32900	0.53	C
	Center to Yosemite	4	15700	21400	31100	32900	0.48	C
	Yosemite to Wawona	4	15900	21400	31100	32900	0.48	C
	Wawona to Mission Ridge	2	16400	9100	14600	15600	1.05	
Mission Ridge to SR 120	2	17100	9100	14600	15600	1.10		
Main Street	Northgate to Louise	4	20200	21400	31100	32900	0.61	C
	Louise to Alameda	4	24700	21400	31100	32900	0.75	D
	Alameda to North	4	18800	21400	31100	32900	0.57	C
	North to Center	4	23000	21400	31100	32900	0.70	C

	Center to Yosemite	4	15200	21400	31100	32900	0.46	C
	Yosemite to SR 120	4	22800	21400	31100	32900	0.69	D
	SR 120 to Woodward	2	6300	21400	31100	32900	0.19	C
Woodward	Union to Main	2	3700	9100	14600	15600	0.24	C
Yosemite	McKinley to Airport	2	11200	9100	14600	15600	0.72	C
	Airport to Winters	2	14200	9100	14600	15600	0.91	C
	Winters to Union	2	16800	9100	14600	15600	1.08	
	Union to Walnut	4	15400	21400	31100	32900	0.47	C
	Walnut to Main	2	12200	9100	14600	15600	0.78	D
	Main to Fremont	2	13200	9100	14600	15600	0.85	D
	Fremont to Powers	2	16200	9100	14600	15600	1.04	
	Powers to Cottage Ave.	4	15700	21400	31100	32900	0.48	C
	Cottage to SR 99	4	15700	21400	31100	32900	0.48	C
	Cottage to Austin	2	17000	9100	14600	15600	1.09	
Louise Avenue	Airport to Union	4	10800	21400	31100	32900	0.33	C
	Union to Elm	4	11800	21400	31100	32900	0.36	C
	Elm to Main	4	17900	21400	31100	32900	0.54	C
Lathrop Road	Airport to Union	2	10200	21400	31100	32900	0.31	C
	Union to Main	2	11900	21400	31100	32900	0.36	C

Source: Fehr & Peers Associates, May 2003



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Signalized Intersections

At signalized intersections, traffic conditions are evaluated using the 2000 *Highway Capacity Manual* methodology. The operations analysis uses various intersection characteristics (such as traffic volumes, lane geometry, and signal phasing) to estimate the average delay experienced by motorists traveling through an intersection. Table 15-4 summarizes the relationship between delay and LOS for signalized intersections.

Table 15-4
Signalized Intersection LOS Criteria

Level of Service	Description	Average Control Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D	Operations with longer delay due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered the limit of acceptable delay.	> 55.0 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	> 80.0

Source: Transportation Research Board Highway Capacity Manual, 2000.

Please note that with the update of the Highway Capacity Manual in the Year 2000, the definition of delay was changed from stop delay to control delay and the LOS ranges were recalibrated to reflect this change. Therefore, previously reported delay calculations using previous methodologies cannot be compared to any future calculations. However, the LOS results are comparable. Existing

intersection conditions were evaluated for the weekday evening peak hour at the five study intersections. Table 15-5 summarizes the existing intersection analysis results. The LOS analysis results are shown in Appendix A of the *City of Manteca General Plan Transportation Analysis, Fehr & Peers, May 2003*, available for review at the City of Manteca Community Development Department.

**Table 15-5
Existing (2001) Peak Hour Level of Service**

Location	Control₁	Peak Hour	Delay^{2&3}	LOS
Lathrop Road and Airport Way	Signal	PM	26.5	C
Louise Avenue and Union Road	Signal	PM	28.3	C
Louise Avenue and Main Street	Signal	PM	29.6	C
Yosemite Avenue and Union Road	Signal	PM	28.5	C
Yosemite Avenue and Main Street	Signal	PM	23.2	C

1. Signal = Signalized Intersection
2. For signalized intersections, average delay (in seconds per vehicle) calculated using the *2000 Highway Capacity Manual* methodology.

Source: Fehr & Peers Associates, 2002.

As indicated in Table 15-5, all intersections operate at an acceptable LOS C or better during the PM peak hour.

15.2.2 Transit and Park-and-Ride Facilities

The San Joaquin Regional Transit District (SJRTD) provides transit service throughout Manteca with Stockton Metropolitan Area Rapid Transit service (SMART) and County Area Transit (CAT). Manteca is also served by the Altamont Commuter Express (ACE). Figure 15- 5 highlights the corridors currently served by transit. SJRTD also provides a dial-a-ride service for the elderly and handicapped. Manteca has established one park-and-ride location on Northgate Street near the Northgate Church. This location provides access to ACE commuter rail and SMART bus lines.

SMART Route 21 is an intercity route that serves the cities of Stockton, Lodi and Manteca. Weekday service between 6:00 AM and 6:00 PM is provided on this route with headways ranging between one and two hours. In Manteca, the route serves the Doctors Hospital, Main Street and the Manteca Civic Center.

SMART Routes 53, 54 and 55 are interregional routes that serve commuters traveling between Manteca and Tracy to Lawrence Livermore and Sandia Laboratories. Three buses are provided westbound in the morning with three buses returning in the evening.

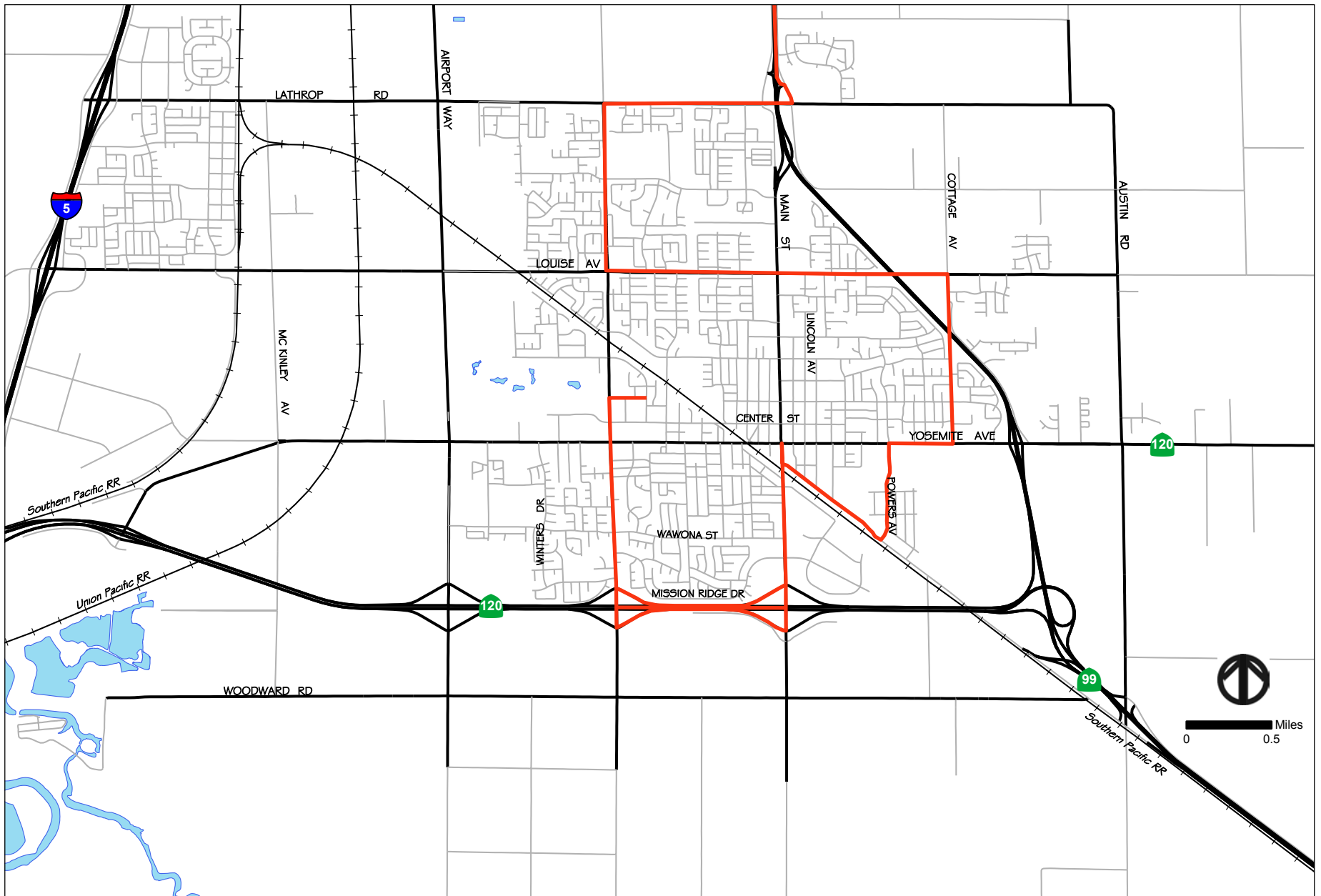
County Area Transit fixed route service provides transit service to French Camp, Lathrop and Manteca. In Manteca, the Civic Center, St. Dominic's Hospital and the Doctors Hospital are served. Connections to SMART Route 21 can be made from the CAT service line.

Altamont Commuter Express (ACE) provides commuter rail service between Stockton and San Jose. A stop is provided in Manteca on Yosemite Avenue at Shideler Parkway. Three trains are provided during the morning commute from Stockton to San Jose and three trains return in the evening.

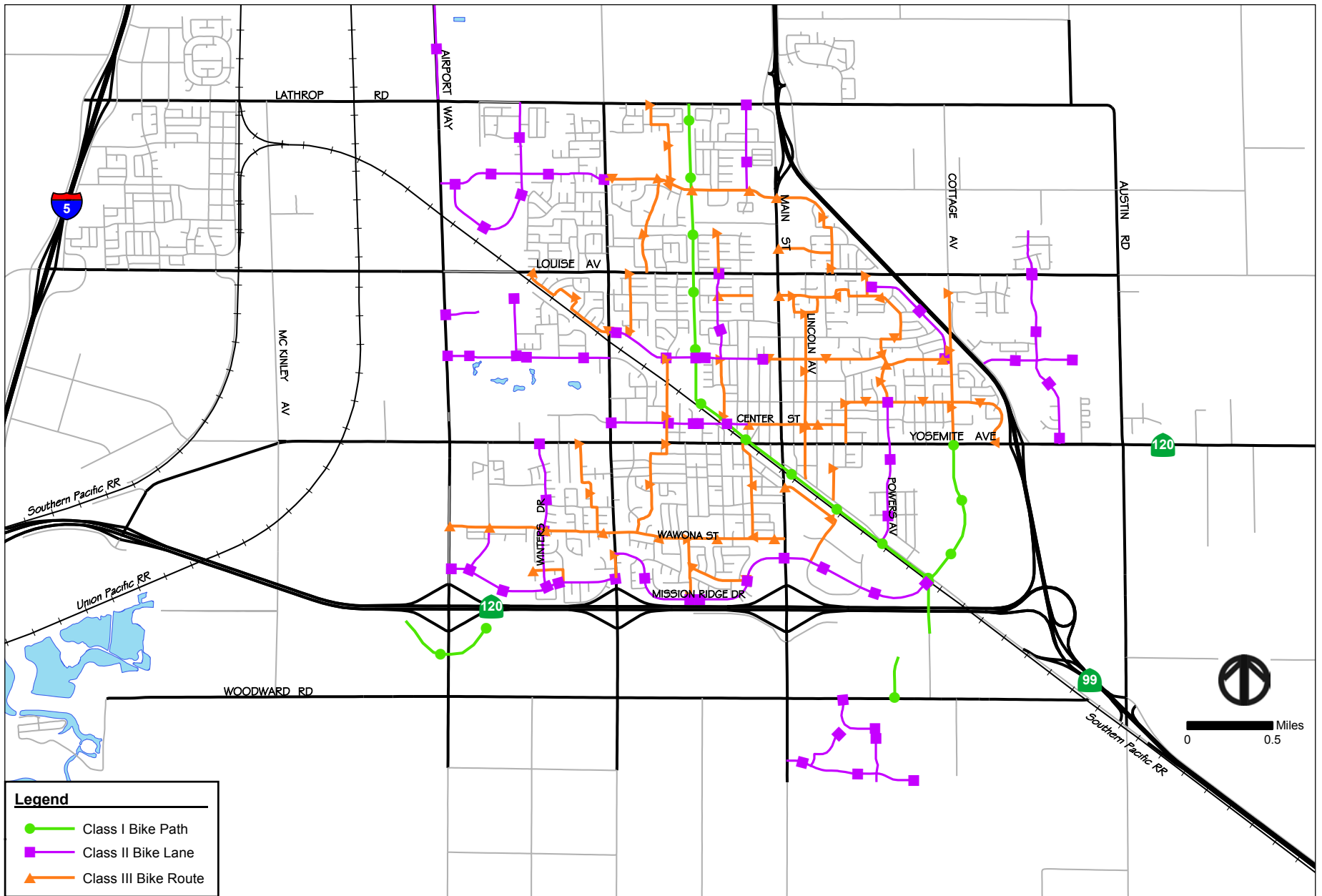
15.2.3 Bicycles and Pedestrians

The City of Manteca has a number of bicycle facilities, including Class I (bicycle path), Class II (bicycle lane) and Class III (bicycle route) facilities. Figure 15-6 shows the extent of Manteca's bicycle routes. These facilities provide for bicycle travel throughout the city.

With respect to pedestrian circulation, most streets provide sidewalks and crosswalks are provided at major intersections.



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15.2.4 2000 Census Journey to Work Data

The results of the 2000 Census Journey to Work analysis is presented below. This information details the mode choice for Manteca residents as well as the average travel time for the commuter trip. For comparison purposes, county, state, and national information is presented in Table 15-6.

Table 15-6
2000 Census Journey to Work Results

	Manteca	San Joaquin County	California	United States
Single Occupant Auto	76.5%	74.6%	71.8%	75.7%
Carpool	16.3%	17.0%	14.5%	12.2%
Public Transit	1.5%	1.4%	5.1%	4.7%
Bicycling	0.7%	0.7%	0.8%	0.4%
Walking	1.7%	2.3%	2.9%	2.9%
Other Means	0.6%	1.0%	1.0%	0.8%
Work at Home	2.7%	2.9%	3.8%	3.3%
Average Travel Time to Work	34.2 minutes	29.2 minutes	27.7 minutes	25.5 minutes

Source: 2000 Census, SF-3

The average travel time from home to work for Manteca residents has grown from 26 minutes in 1990 to 34 minutes in 2000, a result that is substantially higher than the average for the county, state, or nation.

One influence on this relatively higher travel time is the percentage of workers who travel one hour (60 minutes) or more. About one-quarter of the employed City residents drive more than 60 minutes to reach their place of employment. For San Joaquin County as a whole, only 15% of the residents required more than 60 minutes to reach their employment location.

The complete Census tables for the Journey to Work data are provided in Appendix B of the *City of Manteca General Plan Transportation Analysis, Fehr & Peers, May 2003*, available for review at the City of Manteca Community Development Department.

15.3 REGULATORY SETTING

This chapter addresses the regulatory setting for the City of Manteca General Plan 2023. From a transportation perspective, the major items that impact the General Plan 2023 development and evaluation include:

- San Joaquin Council of Governments' (SJCOG) Regional Transportation Plan (RTP)
- Measure K Expenditure Plan
- San Joaquin Regional Transportation Impact Fee Study
- 1988 General Plan
- 1993 Public Facilities Infrastructure Plan
- City of Manteca Bicycle Plan

15.3.1 SJCOG Regional Transportation Plan

The Regional Transportation Plan (RTP) is a twenty-year transportation plan that outlines the major transportation improvements to be completed in San Joaquin County. This plan outlines funding for highway projects, transit station and service upgrades, bicycle/pedestrian facilities, and air service enhancements. As a federally designated air quality non-attainment and maintenance area, the San Joaquin County region is required to submit a regional transportation plan every three years.

The RTP relates to the proposed General Plan 2023 in two ways. First, the RTP contains goals and policies related to transportation planning in San Joaquin County. Second, the RTP describes planned improvements affecting local and regional facilities.

Relevant RTP policies include:

- Design a transportation system that meet the travel needs of both citizens and businesses
- Design a transportation system that will improve the environment or minimize environmental impacts
- Design an efficient, safe, and economical transportation system
- Effectively implement the transportation system

The RTP also presents lists of future transportation projects prioritized based on the need, benefit, cost and available funds over the 20 year horizon. According to the RTP, expected revenues are \$3.9 billion with total needs of \$7 billion. Therefore, there is a funding gap of over \$3 billion. This gap represents the disparity between the transportation needs of San Joaquin County and the available resources to fund transportation. Based on insufficient funds for all of the transportation needs, the potential projects are segregated into two groups. The first group, Tier 1, represents projects that can be funded within the existing revenues. The second group, Tier 2, includes projects that cannot be

funded within the current revenue projections; these projects are needed and will move onto the Tier 1 list as additional revenues are identified.

The Tier 1 transportation projects in and around the City of Manteca include:

- Widening of State Route 99 to six lanes
- Widening of State Route 120 to six lanes
- State Route 99 / State Route 120 Interchange improvements
- Route 120 / McKinley Avenue Interchange construction
- Widening of Lathrop Road to four lanes
- Widening of Louise Avenue to four lanes
- Widening of Airport Way to four lanes
- Manteca Multi-modal station

The RTP also includes funding for continued bus and Altamont Commuter Express (ACE) services that benefit City of Manteca residents as well as other residents of San Joaquin County.

15.3.2 Measure K Expenditure Plan

Measure K refers to the one-half cent sales tax measure that funds transportation projects in San Joaquin County. Measure K funds are expended on a variety of projects that include congestion relief projects (major roadway improvements), railroad crossing safety improvements, rail and bus projects, bicycle/pedestrian projects, and local street repair. As part of this last element, Measure K funds are distributed to local jurisdictions to pay for local street repair based on relative population. According to reports from SJCOG, the City of Manteca receives approximately \$400,00 each year for local street repair from Measure K.

One Manteca project that was partially funded by Measure K was the Tidewater Bikeway, a 3.4-mile bicycle facility that runs along an abandoned railroad right of way. This project was completed with Measure K funds along with funding from local, state, and federal sources.

15.3.3 San Joaquin Regional Transportation Improvement Fee Study

Under the authority granted by Assembly Bill 1600, SJCOG is conducting a regional transportation fee study. As part of this study, SJCOG is conducting a nexus analysis (as required by statute) to relate the costs of future transportation improvements to the demand generated by future development.

This study has not been completed as of May 2003. If completed and implemented, the regional fee program would increase the funding available for transportation projects. These regional fees would be in addition to traffic impact fees assessed by jurisdictions such as the City of Manteca.

15.3.4 1998 General Plan & General Plan Environmental Assessment

The last update to the City of Manteca General Plan was completed in 1988. As part of this update, the Goals and Policies were updated. Additionally, the Circulation Element presented the projected roadway network for the City of Manteca. This General Plan anticipated significant growth in the City of Manteca with a total of 826,600 daily trips estimated at the buildout of the General Plan.

15.3.5 1993 Public Facilities Implementation Plan and South Manteca Area General Plan Amendment

In 1993, the City of Manteca completed a Public Facilities Implementation Plan (PFIP) and a General Plan Amendment regarding the South Manteca Area. The PFIP addressed the future infrastructure needs related to the City including water, wastewater, and transportation. The General Plan Amendment for the South Manteca Area Plan outlined future development in the area south of State Route 120.

The main purpose of the PFIP was the identification of future infrastructure needs and the calculation of fees that would fund future infrastructure. Since the completion of the PFIP, the City of Manteca has collected fees from development projects, which has funded a variety of improvements in the City.

As stated previously, the City adopted a General Plan Amendment related to the South Manteca Area Plan. This Amendment modified the 1988 General Plan to allow development in the area south of State Route 120. This General Plan Amendment envisioned significant growth in this area south of Manteca. With this General Plan Amendment, the total number of daily trips anticipated for the City of Manteca was 709,800, a reduction of approximately 10-15% from the 1988 General Plan. Of this 700,000 total daily trips, nearly one-third (246,400) was anticipated to occur as a result of development south of State Route 120.

For purposes of the General Plan 2023 EIR, the *No Project Alternative* is the 1988 General Plan as modified by the 1993 General Plan Amendment.

15.4 MODEL CALIBRATION / VALIDATION

The model calibration / validation effort is detailed in the *City of Manteca General Plan Focused Model Calibration / Validation* report (August 2002) by Fehr & Peers Associates. This report in its entirety is provided as Appendix C of the *City of Manteca General Plan Transportation Analysis, Fehr & Peers, May 2003*, available for review at the City of Manteca Community Development Department.

15.5 ROADWAY IMPROVEMENTS

15.5.1 Manteca Roadways

There are two main funding sources for roadway improvements in the City of Manteca. The first funding source is SJCOG, which allocates regional transportation funds for projects throughout San Joaquin County. The second source is development fees collected through the 1993 PFIP.

The San Joaquin Council of Governments Regional Transportation Plan (SJCOG RTP) outlines projects that are funded through regional funds. These projects include Tier 1 projects (can be funded with projected revenues) and Tier 2 projects (cannot be funded with projected revenues). This analysis assumes that Tier 1 projects are implemented.

As mentioned in Chapter III, the City of Manteca finances local infrastructure needs (water, sewer, and transportation) through a fee system that was codified in the 1993 PFIP. This plan established a future infrastructure network that would be funded through fees paid by residential and commercial development. This infrastructure plan includes a future roadway network.

The improvements assumed for the roadways in Manteca are indicated in Table 15-7. For each roadway improvement, documentation is provided indicating whether that improvement is referenced in the PFIP, the RTP Tier 1 project list or both documents.

Table 15-7
2025 Assumed Roadway Improvements

Roadway	Segment	Improvement	Included in PFIP?	Included in RTP Tier 1?
McKinley Avenue	Yosemite to SR 120	Widen to four lanes	Yes	No
McKinley Avenue	SR 120 to Atherton	Widen to six lanes	Yes	No
McKinley Avenue	Atherton to Woodward	Widen to four lanes	Yes	No
Airport Way	Lathrop to Woodward Road	Widen to six lanes	Yes	Yes (four lanes only)
Union Road	Mission Ridge to SR 120	Widen to four lanes	Yes	No
Union Road	SR 120 to Atherton	Widen to six lanes	Yes	No
Union Road	Atherton to south of Woodward Road	Widen to four lanes	Yes	No
Lathrop Road	Airport to Main	Widen to four lanes	Yes ¹	Yes
Main Street	Northgate to Alameda	Widen to six lanes	Yes	No
Main Street	Alameda to North	Widen to four lanes	Yes	No
Main Street	Yosemite to Woodward	Widen to six lanes	Yes	No
Yosemite Avenue	McKinley to Union	Widen to six lanes	Yes	No
Yosemite Avenue	Union to Walnut	Widen to four lanes	Yes	No
Yosemite Avenue	Freemont to Austin	Widen to four lanes	Yes	No
Atherton (SR 120 Frontage Road)	Airport to Austin	New 4 Lane roadway (arterial)	Yes	No
Woodward Road	McKinley to Main Street	Widen to Four Lane	No	Yes
Woodward Road	Main Street to Austin	Widen to Four Lane	Yes	No
New Collector Roadway	McKinley to Austin	New 2 Lane roadway (collector)	No	No

Notes: 1- Based on personal communication with Dave Vickers (City of Manteca) regarding feasibility of improvement.

Source: Fehr & Peers Associates, May 2003

15.5.2 Regional Roadway and Interchange Improvements

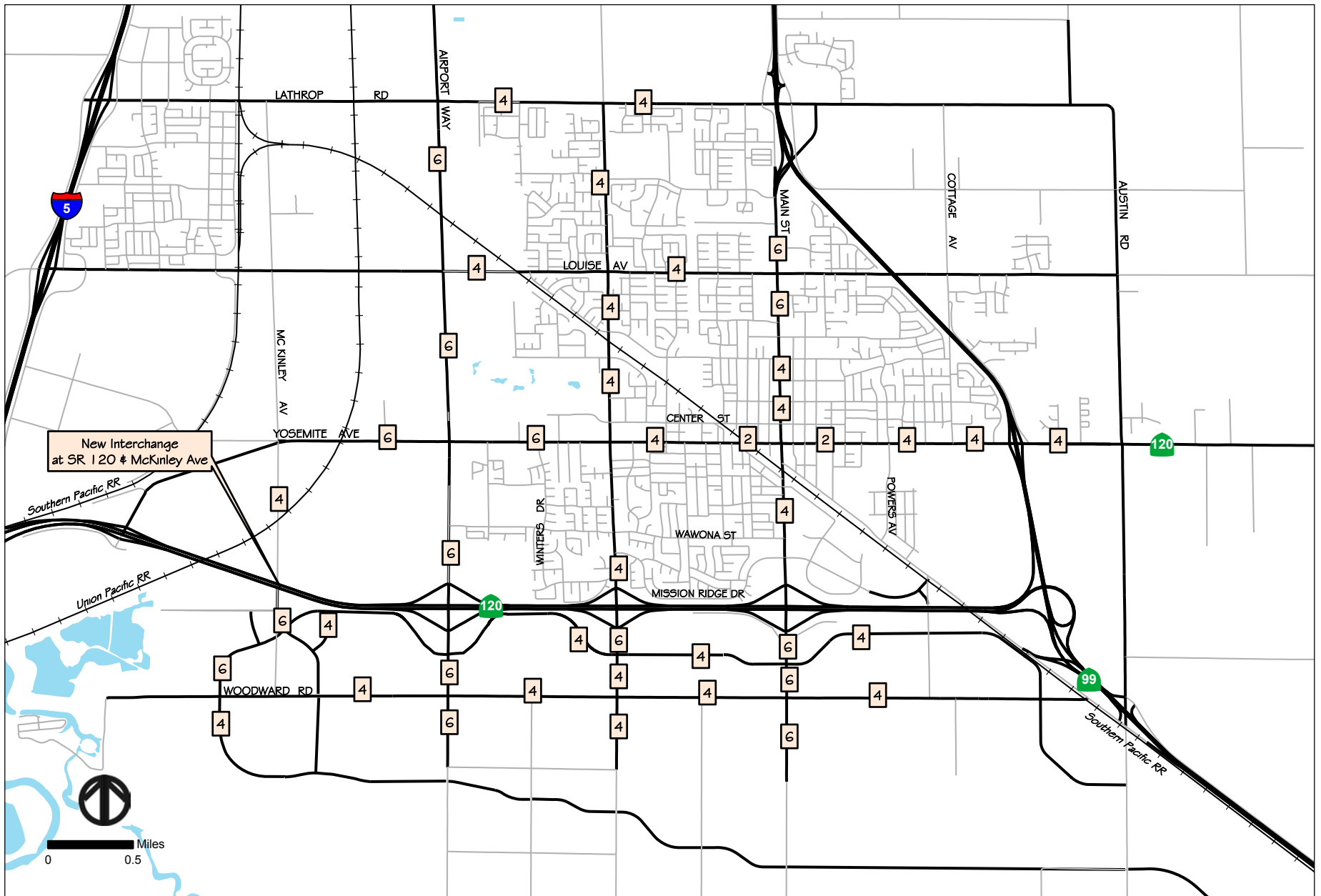
San Joaquin County has an extensive network of regional freeways and limited access facilities including Interstate 5, State Route 99, and State Route 120. State Route 99 and State Route 120 are particularly important to the City of Manteca given that these facilities border on the City and City residents and employees utilize these roadways on a daily basis. Several of the major roadways in Manteca have existing interchanges with either State Route 99 or State Route 120. As stated previously, the SJCOG regional travel demand model was utilized as the basis for the City of Manteca travel demand model. A comprehensive update of the regional transportation model was completed in 2001. For the areas outside of Manteca, no changes were made in the roadway network. For instance, it was assumed that the roadway network or improvements in Stockton and Tracy was correct.

Inside the project Study Area, the lane configurations and project improvements for State Route 99 and State Route 120 were reviewed based on the information contained in the 2001 SJCOG RTP. This review indicated the following:

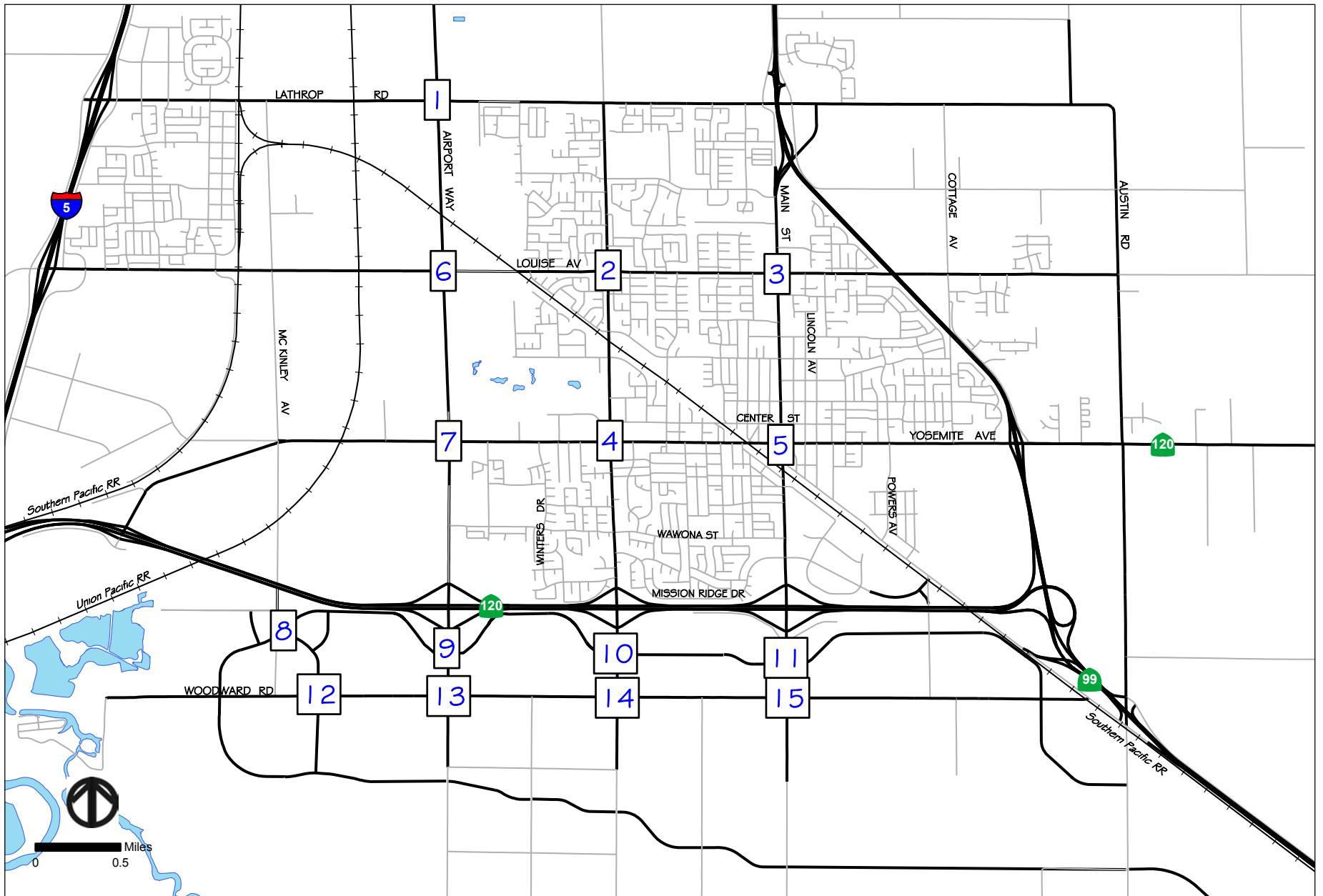
- The widening of State Route 99 adjacent to the City of Manteca is included on the Tier 1 project list. This widening would widen SR 99 from the existing four lanes to six lanes through widening in the median. Please note that the Tier 2 project list includes the widening of SR 99 to 8 lanes south of the SR 99 / SR 120 interchange.
- The widening of State Route 120 adjacent to the City of Manteca is on the Tier 1 project list. This widening would extend from I-5 to State Route 99 with the widening occurring in the median.
- Improvements to the interchange at SR 99 / SR 120 are included in the Tier 1 project list.
- A new interchange would be constructed at SR 120 / McKinley Avenue.

15.5.3 Future Roadway Network

The future laneage is shown on Figure 15-7. Intersection configurations for selected intersections are provided. A map of these selected locations is included as Figure 15-8. The default roadway configuration is that there are single left turn and right turn lanes on four lane roadways with dual left turn lanes and single right turn lanes on six lane and eight lane roadways. These conceptual configurations mirror the assumed configurations developed during the 1993 PFIP.



Manteca General Plan



Manteca General Plan

15.6 FUTURE TRAFFIC FORECASTS

This chapter discusses the project traffic volumes found on Manteca area roadways with the build-out of the General Plan 2023. This build-out scenario incorporates the land use and roadway network data contained in Section 15.5.

This sections presents the total daily trips, roadway segment volumes and the afternoon peak hour turning movements.

15.6.1 Total Daily Trips

With the proposed General Plan 2023, the total number of daily trips generated in the City of Manteca would be 1,107,208 at project buildout. This total represents an increase of 390,000 trips over the previous total under the No Project Alternative (1993 General Plan Amendment).

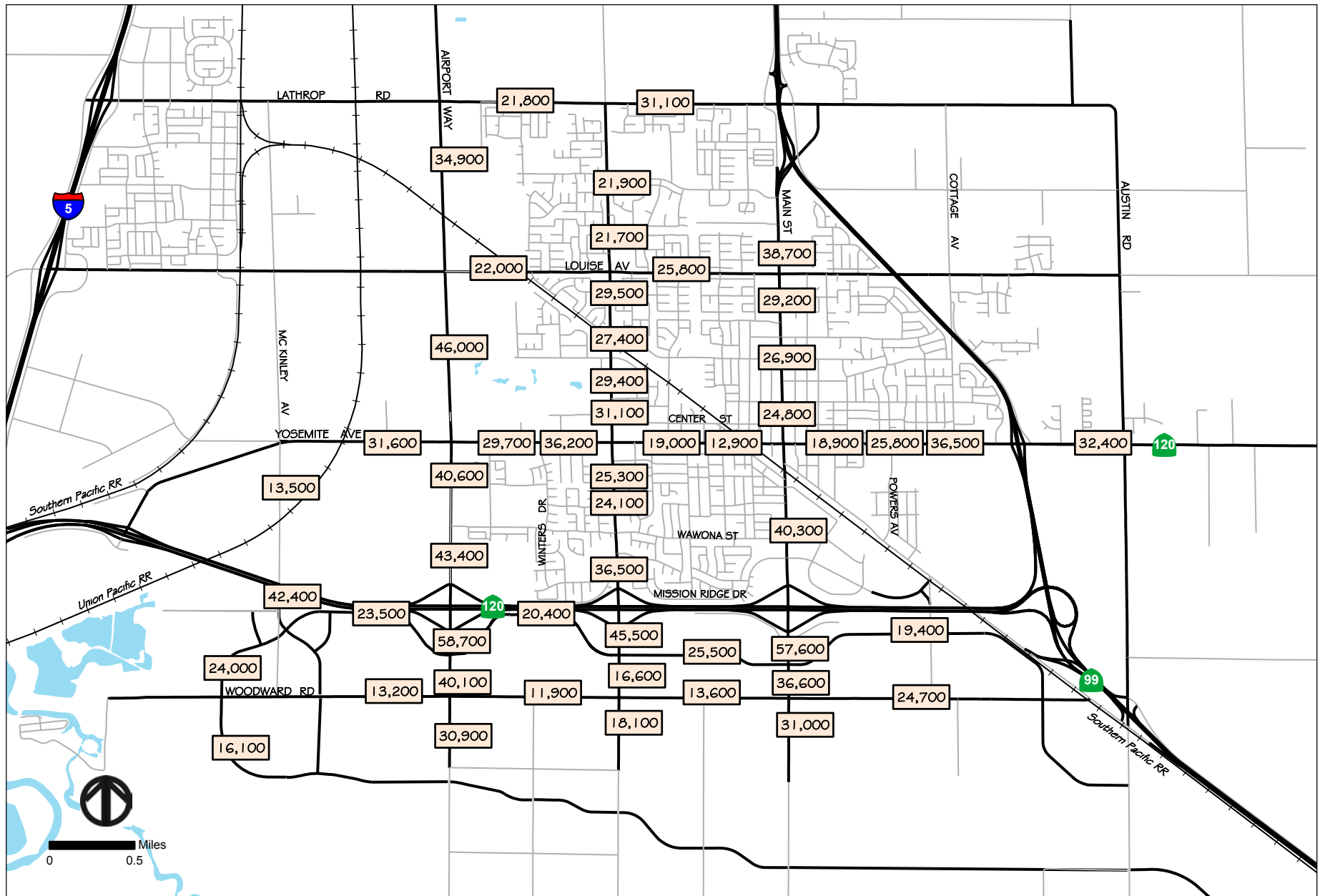
Future Segment Volumes

Figure 15-9 shows the future traffic volumes by road segment. Table 15-8 presents the future roadway segment volumes for the build out of the General Plan 2023. As shown in this table, there is significant growth in traffic volumes with the land uses included in the General Plan 2023.

Table 15-9 compares the traffic volumes to the existing traffic counts. The average increase per link is 138%, which indicates at least a doubling of traffic on City roadways by build-out of the General Plan 2023. This table also includes traffic volumes from the 1993 PFIP and South Manteca Area Plan General Plan Amendment. The average increase in these volumes is 36%. Therefore, the average roadway volume is approximately one-third more than the traffic volumes with the No Project Alternative.

Future Turn Volumes

Future turn volumes intersection locations were selected based on the five intersections analyzed under existing conditions as well as other intersections that might be impacted by future development. These volumes were developed using a variety of methods. For existing intersections for which existing turn movements are available, the furnessing process is employed which proportions the turning movements based on projected growth in traffic entering the entering on the street for which the movement begins and the growth in traffic existing on the street to which the movement is directed. When existing turning movements are not available, such as with the construction of a new roadway (Atherton), the future turning movements are directly extracted from the travel demand model.



Manteca General Plan

Table 15-8
Future Daily Volumes

		Key	2025
Roadway	Between	Number	Forecast
McKinley Avenue	Yosemite to 120	1	12400
	120 to Atherton	2	41400
	Atherton to Woodward	3	23600
	Woodward South	4	15700
Airport Way	Lathrop to Louise	5	39700
	Louise to Yosemite	6	45800
	Yosemite to Wawona	7	44700
	Wawona to SR 120	8	44700
	SR 120 to Atherton	9	59200
	Atherton to Woodward	10	39700
	Woodward South	11	29300
Union Road	Lathrop to Northgate	12	21300
	Northgate to Louise	13	21400
	Louise to Alameda	14	28800
	Alameda to Crom	15	26900
	Crom to Center	16	28900
	Center to Yosemite	17	31200
	Yosemite to Wawona	18	25100
	Wawona to Mission Ridge	19	24400
	Mission Ridge to SR 120	20	37500
	SR 120 to Atherton	21	46500
	Atherton to Woodward	22	16700
Woodward South	23	17000	
Main Street	Northgate to Louise	24	36400
	Louise to Alameda	25	27100
	Alameda to North	26	25300
	North to Center	27	22900
	Center to Yosemite	28	23600

	Yosemite to SR 120	29	42500
	SR 120 to Atherton	30	57400
	Atherton to Woodward	31	34800
	Woodward South	32	30800
Woodward	McKinley to Airport	33	16300
	Airport to Union	34	15600
	Union to Main	35	18000
	Main to Austin	36	24700
Atherton	McKinley to Airport	37	21300
	Airport to Union	38	17800
	Union to Main	39	23200
	Main to Woodward	40	20200
Yosemite	McKinley to Airport	41	26400
	Airport to Winters	42	30500
	Winters to Union	43	26700
	Union to Walnut	44	16700
	Walnut to Main	45	11700
	Main to Fremont	46	17000
	Fremont to Powers	47	23600
	Powers to Cottage Ave.	48	32400
	Cottage ro SR 99	49	36100
	SR 99 to Austin	50	31800
Louise Avenue	Airport to Union	51	21400
	Union to Elm	52	29400
	Elm to Main	53	30300
Lathrop Road	Airport to Union	54	23400
	Union to Main	55	21400

Source: Fehr & Peers Associates, May 2003

Table 15-9
Comparison of Existing to Forecast Traffic Volumes

Roadway	Between	2001 Traffic Counts	Forecasted Growth	Current General Plan	New General Plan	Percent Change
Airport Way	Lathrop to Louise	8700	359%	23000	39700	73%
	Louise to Yosemite	8900	417%	30300	45800	51%
	Yosemite to Wawona	9800	314%	22300	44700	100%
	Wawona to SR 120	9300	367%	24800	44700	80%
Union Road	Lathrop to Northgate	9500	131%	18800	21300	13%
	Northgate to Louise	12500	74%	18800	21400	14%
	Louise to Alameda	14300	106%	22600	28800	27%
	Alameda to Crom	16000	71%	22600	26900	19%
	Crom to Center	17600	67%	22600	28900	28%
	Center to Yosemite	15700	98%	22600	31200	38%
	Yosemite to Wawona	15900	59%	22600	25100	11%
	Wawona to Mission Ridge	16400	47%	22600	24400	8%
	Mission Ridge to SR 120	17100	113%	22600	37500	66%
Main Street	Northgate to Louise	20200	92%	20300	36400	79%
	Louise to Alameda	24700	18%	20300	27100	33%
	Alameda to North	18800	43%	21000	25300	20%
	North to Center	23000	8%	21000	22900	9%
	Center to Yosemite	15200	66%	21000	23600	12%
	Yosemite to SR 120	22800	77%	41920	42500	1%
	SR 120 to Woodward	6300	814%	47200	57400	22%
Woodward	Union to Main	3700	268%	6900	18000	161%
Yosemite	McKinley to Airport	11200	182%	29600	26400	-11%
	Airport to Winters	14200	109%	29300	30500	4%
	Winters to Union	16800	115%	28100	26700	-5%

	Union to Walnut	15400	23%	12900	16700	29%
	Walnut to Main	12200	6%	12600	11700	-7%
	Main to Fremont	13200	36%	10400	17000	63%
	Fremont to Powers	16200	48%	14700	23600	61%
	Powers to Cottage Ave.	15700	64%	14700	32400	120%
	Cottage to Austin	17000	115%	30000	36100	20%
Louise Avenue	Airport to Union	10800	104%	17800	21400	20%
	Union to Elm	11800	89%	18800	29400	56%
	Elm to Main	17900	44%	26200	30300	16%
Lathrop Road	Airport to Union	10200	114%	20100	23400	16%
	Union to Main	11900	161%	20900	21400	2%
Average Change Per Roadway Segment			138%			36%

Source: Fehr & Peers Associates, February 2003

15.7 IMPACT EVALUATION CRITERIA

The following specific criteria are used in conjunction with the CEQA Guidelines, Appendix G, for determining any significant adverse impacts from the project upon the environment.

1. Does the proposed General Plan 2023 meet City of Manteca LOS standards for local roadways?

For the local roadways, LOS will be assessed using a two-tier approach based on the language from the General Plan 2023 policies. First, every roadway segment must meet LOS D at a minimum. Second, one-half of the Study Area roadway segments must operate at LOS C or better in order to achieve the “LOS C Average” policy. If these two criteria are not met, then a significant impact is judged to occur.

2. Does the proposed General Plan 2023 meet City of Manteca LOS standards for intersections?

Intersection operations will be assessed using the approach outlined above. Each intersection must operate at LOS D or better. Also, one-half of the Study Area intersections must operate at LOS C or better.

3. Does the proposed General Plan 2023 meet SJCOG LOS standards for regional roadways?

LOS D is the standard for regional roadways. In terms of this analysis, regional roadways are defined to be the three freeway facilities directly adjacent to the City of Manteca (Interstate 5, State Route 99, and State Route 120). If the incremental growth in traffic from the proposed General Plan 2023

causes the traffic volumes to exceed LOS D, then a significant impact will be identified. Impacts are not identified when the roadway would exceed LOS D under the No Project condition.

4. Does the proposed General Plan 2023 conflict with regionally adopted transportation goals or policies?

A significant impact will be assessed if an element of the proposed General Plan 2023 conflicts with regional goals and policies related to transportation.

5. Does the proposed General Plan 2023 impede the operations of alternate travel modes including transit, bicycles, and pedestrians?

A significant impact will be identified if the proposed General Plan 2023 negatively impacts non-automotive modes including transit, bicycles, and pedestrians.

15.8 IMPACTS AND MITIGATION

This section presents the results of the impact analysis. This impact analysis addresses the extent to which the proposed General Plan 2023 creates significant impacts on both the local and regional roadway and transportation network. This section also addresses the extent to which the proposed General Plan 2023 may create impacts on other modes of transportation including transit, bicycles, and pedestrians.

POTENTIAL IMPACT TC-1: Planned development in the General Plan 2023 may not meet City of Manteca LOS standards for local roadways.

For analysis purposes, these roadways are limited to the major arterials within the City of Manteca. The LOS daily volume thresholds from Table 15-2 were applied to the future volumes. The results of this application are shown in Table 15-10. Figure 15-10 shows the LOS results by location.

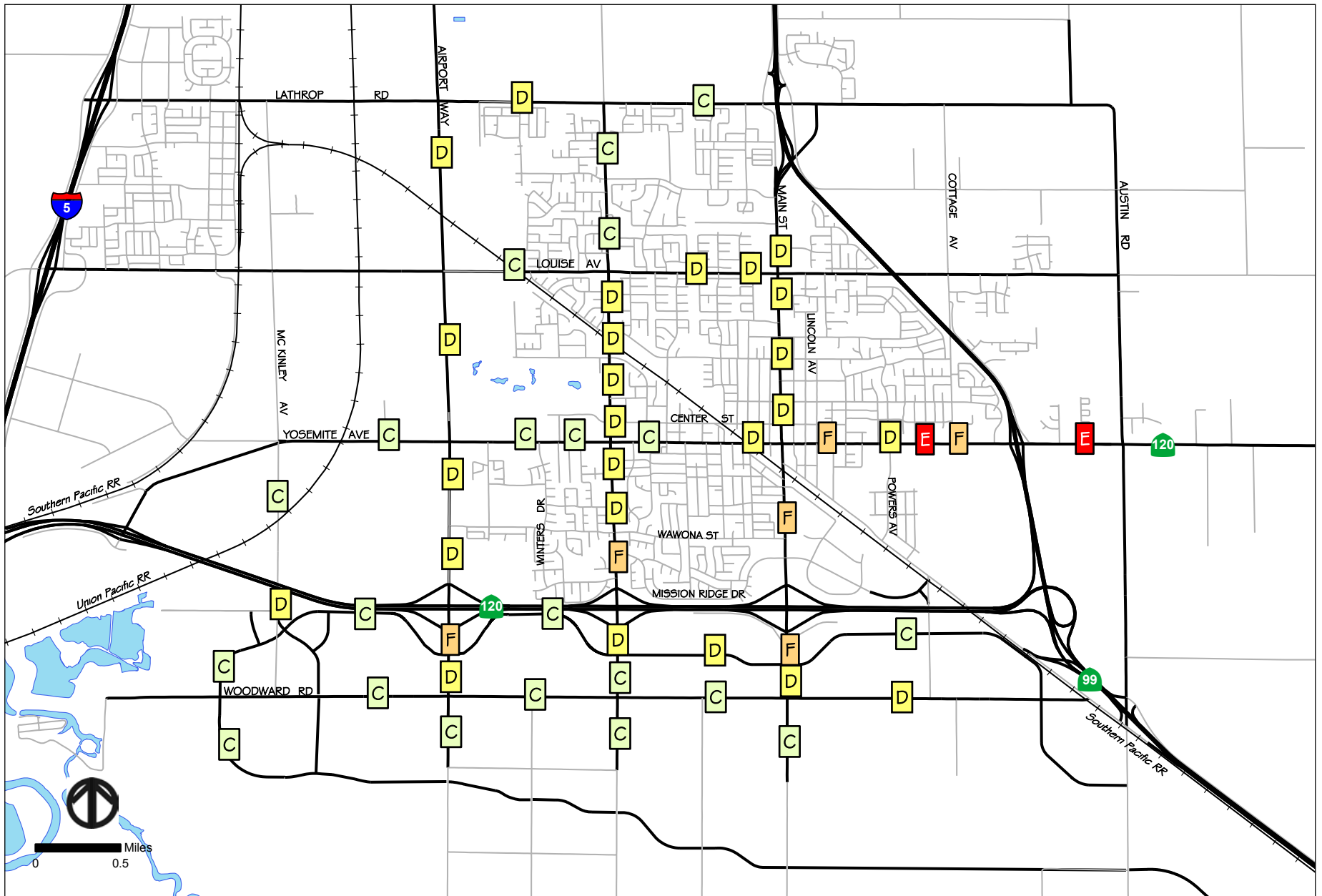
Level of Significance: Potentially Significant

**Table 15-10
Future Roadway LOS**

Roadway	Between	Existing Lanes	Future Lanes	2025 Forecast	V/C Ratio	New LOS
McKinley Avenue	Yosemite to 120	2	4	12400	0.38	C
	120 to Atherton	2	6	41400	0.84	D
	Atherton to Woodward	2	6	23600	0.48	C
	Woodward South	2	4	15700	0.48	C
Airport Way	Lathrop to Louise	2	6	39700	0.81	D
	Louise to Yosemite	2	6	45800	0.93	D
	Yosemite to Wawona	2	6	44700	0.91	C
	Wawona to SR 120	2	6	44700	0.91	D
	SR 120 to Atherton	2	6	59200	1.20	F
	Atherton to Woodward	2	6	39700	0.81	D
	Woodward South	2	6	29300	0.59	C
	Union Road	Lathrop to Northgate	4	4	21300	0.65
Northgate to Louise		4	4	21400	0.65	C
Louise to Alameda		4	4	28800	0.88	D
Alameda to Crom		4	4	26900	0.82	D
Crom to Center		4	4	28900	0.88	D
Center to Yosemite		4	4	31200	0.95	D
Yosemite to Wawona		4	4	25100	0.76	D
Wawona to Mission Ridge		4	4	24400	0.74	D
Mission Ridge to SR 120		2	4	37500	1.14	F
SR 120 to Atherton		2	6	46500	0.94	D
Main Street	Atherton to Woodward	2	4	16700	0.51	C
	Woodward South	2	4	17000	0.52	C
	Northgate to Louise	4	6	36400	0.74	D
	Louise to Alameda	4	6	27100	0.82	D
	Alameda to North	4	4	25300	0.77	D
	North to Center	2	4	22900	0.70	D

	Center to Yosemite	4	4	23600	0.72	D
	Yosemite to SR 120	4	4	42500	1.29	F
	SR 120 to Atherton	4	6	57400	1.16	F
	Atherton to Woodward	4	6	34800	0.71	D
	Woodward South	2	6	30800	0.62	C
Woodward	McKinley to Airport	2	4	16300	0.50	C
	Airport to Union	2	4	15600	0.47	C
	Union to Main	2	4	18000	0.55	C
	Main to Austin	2	4	24700	0.75	D
Atherton	McKinley to Airport	N/A	4	21300	0.65	C
	Airport to Union	N/A	4	17800	0.54	C
	Union to Main	N/A	4	23200	0.71	D
	Main to Woodward	N/A	4	20200	0.61	C
Yosemite	McKinley to Airport	2	6	26400	0.54	C
	Airport to Winters	2	6	30500	0.62	C
	Winters to Union	2	6	26700	0.54	C
	Union to Walnut	4	4	16700	0.51	C
	Walnut to Main	2	2	11700	0.75	D
	Main to Fremont	2	2	17000	1.09	F
	Fremont to Powers	2	4	23600	0.72	D
	Powers to Cottage Ave.	4	4	32400	0.98	E
	Cottage ro SR 99	4	4	36100	1.10	F
	SR 99 to Austin	2	4	31800	0.97	E
Louise Avenue	Airport to Union	4	4	21400	0.65	C
	Union to Elm	4	4	29400	0.89	D
	Elm to Main	4	4	30300	0.92	D
Lathrop Road	Airport to Union	2	4	23400	0.71	D
	Union to Main	2	4	21400	0.65	C

Source: Fehr & Peers Associates, May 2003



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Mitigation Measures:

TC-1.1: The Circulation Element (Section 4) of the General Plan 2023 includes, among others, the following policies (P) to meet the standards for local roadways:

C-P-1: The City shall strive to attain the highest possible traffic levels of service (LOS) consistent with the financial resources available and the limits of technical feasibility. The impact of new development and land use proposals on LOS should be considered in the review process.

C-P-2 Manteca's target for transportation LOS is to provide ("**citywide average**" removed) LOS of C or better, and a minimum of LOS D at any individual location. LOS C, LOS D and the other Level of Service ratings as defined in current traffic engineering standards. This "LOS C average, LOS D minimum" shall be accomplished by attempting to provide LOS C at all locations, but accepting LOS D under the following circumstances:

- Where constructing facilities with enough capacity to provide LOS C is found to be unreasonably expensive. This applies to facilities, for example, on which it would cost significantly more per dwelling unit equivalent (DUE) to provide LOS C than to provide LOS D.
- Where it is difficult or impossible to maintain LOS C because surrounding facilities in other jurisdictions operate at LOS D or worse.
- Where free-flowing roadways or interchange ramps would discourage use of alternate travel modes.
- Where maintaining LOS C will be a disincentive to use of existing alternative modes or to the implementation of new transportation modes that would reduce vehicle travel.

As stated previously, the daily LOS standards are general guidelines and are not as accurate as more detailed intersection analyses. However, many of the segments exceed the LOS C threshold by 30-40%; therefore it is not likely that these impacts are within the normal tolerances of the LOS thresholds.

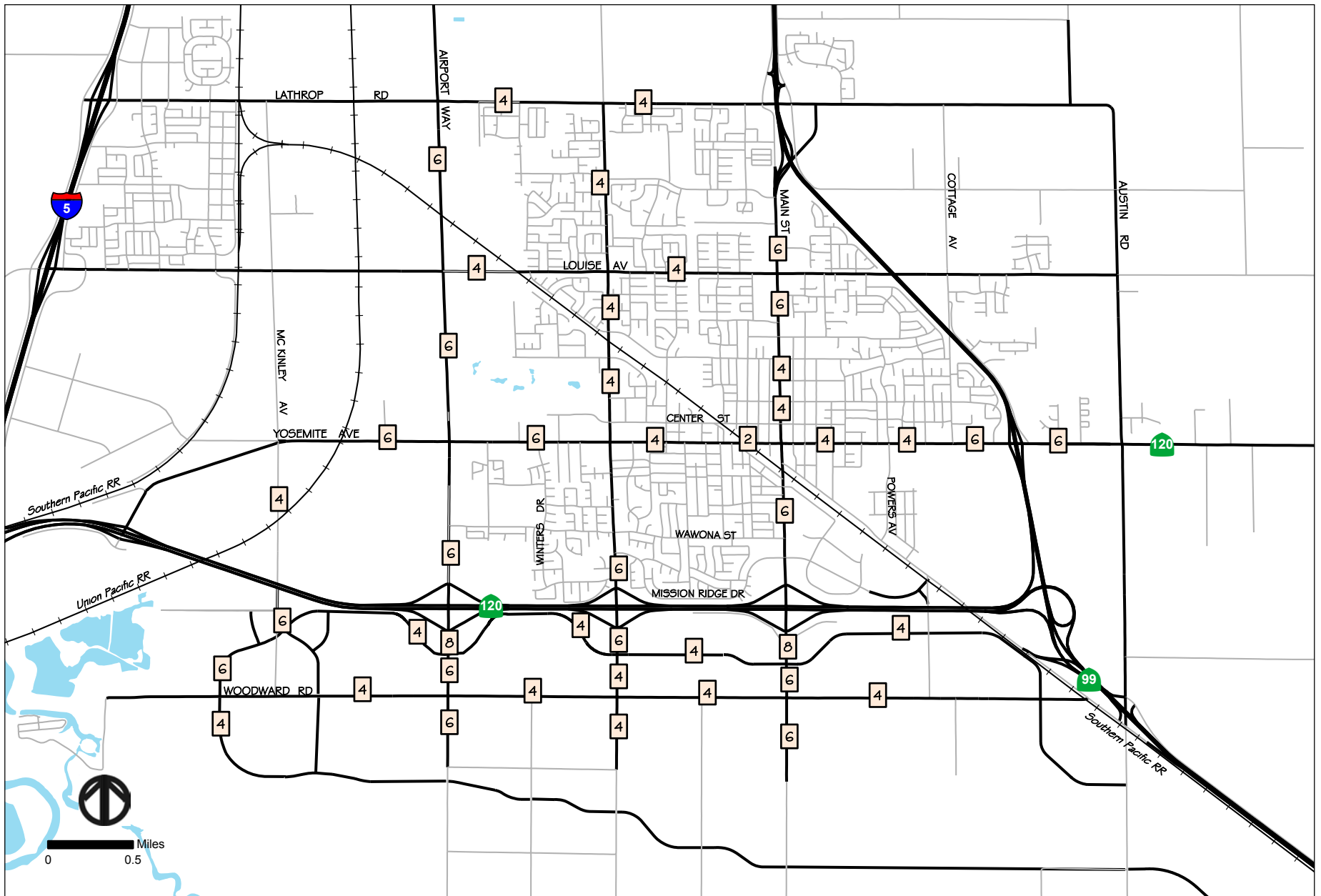
Based on the significance criteria above and the comparison to the existing 1988 General Plan, the proposed General Plan 2023 is inconsistent with the adopted goals and policies because several

segments do not meet the LOS D minimum and a majority of the roadways do not operate at LOS C (only 17 of 55 segments operate at LOS C). A total of eight segments do not meet LOS D standards.

Each of these deficient segments could be mitigated through widening each segment from its existing or projected laneage. The widening required improving the roadway segment LOS from E or F to D is listed below:

- Airport Way (SR 120 to Atherton)- Widen from six to eight lanes
- Union Road (Mission Ridge to 120)- Widen from four to six lanes
- Main Street (Yosemite to SR 120)- Widen from four to six lanes
- Main Street (SR 120 to Atherton)- Widen from six to eight lanes
- Yosemite (Main to Fremont)- Widen to 4 lanes
- Yosemite (Powers to Cottage)- Widen to 6 lanes
- Yosemite (Cottage to SR 99)- Widen to 6 lanes
- Yosemite (SR 99 to Austin)- Widen to 6 lanes

In most cases, these improvements occur in areas yet to be developed (south of State Route 120) or along roadways that will be widened (Yosemite Avenue). The one improvement that would be difficult to implement would be the widening of Yosemite to the east of Main Street. These improvements are shown on Figure 15-11.



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Widening the following three roadway segments will enable the proposed General Plan 2023 to meet the LOS C average on half of the roadway segments. These improvements include:

- McKinley Avenue (SR 120 to Atherton)- Widen to 8 lanes
- Airport Way (Atherton to Woodward)- Widen to 8 lanes
- Main Street (Atherton to Woodward)- Widen to 8 lanes

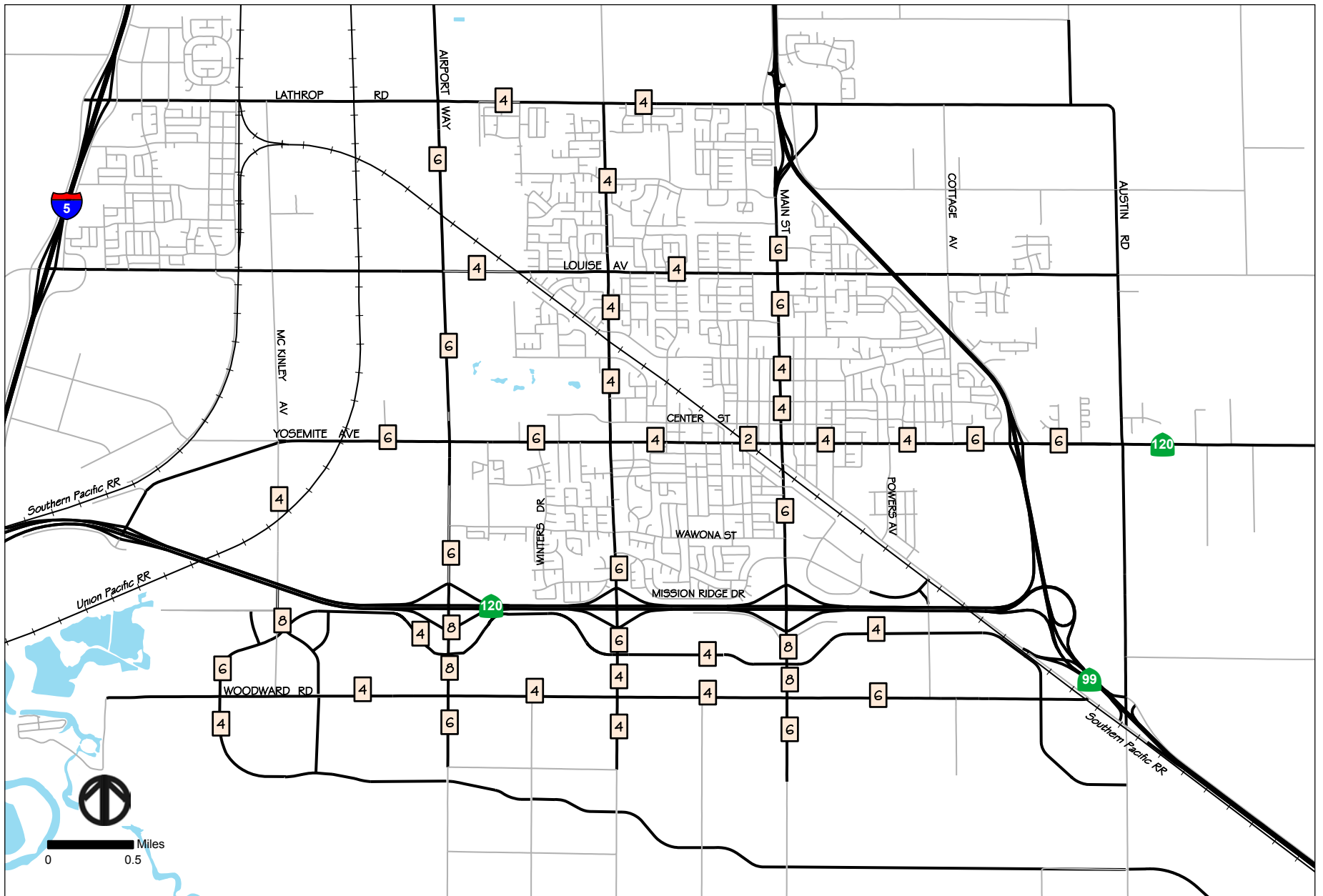
The three improvements can be considered feasible given that these roadways will be widening concurrent with the projected development of SR 120. There are no right-of-way considerations given that this land is currently unoccupied.

With this last set of roadway improvements, the proposed General Plan 2023 achieves internal consistency by having a roadway system to that matches the LOS policy in the General Plan 2023. These improvements are shown on Figure 15- 12. The LOS for these segments is shown on Table 21 in the *City of Manteca General Plan Transportation Analysis, Fehr & Peers, May 2003*, available for review at the City of Manteca Community Development Department.

Revising the LOS policy in the Circulation Element can obviate these last three roadway improvements. By removing the phrase “city-wide average”, the policy would still indicate that LOS C is the target and LOS D is the minimum. Such a change in the policy would also remove any ambiguities regarding the LOS policy of the City.

Residual Level of Significance: Less Than Significant With Mitigation

Implementation of the General Plan 2023 policies, together with the traffic improvements detailed above, will help ensure that the General Plan 2023 will meet the standards for local roadways.



Manteca General Plan

POTENTIAL IMPACT TC-2: **Planned development in the General Plan 2023 may not meet City of Manteca LOS standards for local intersections.**

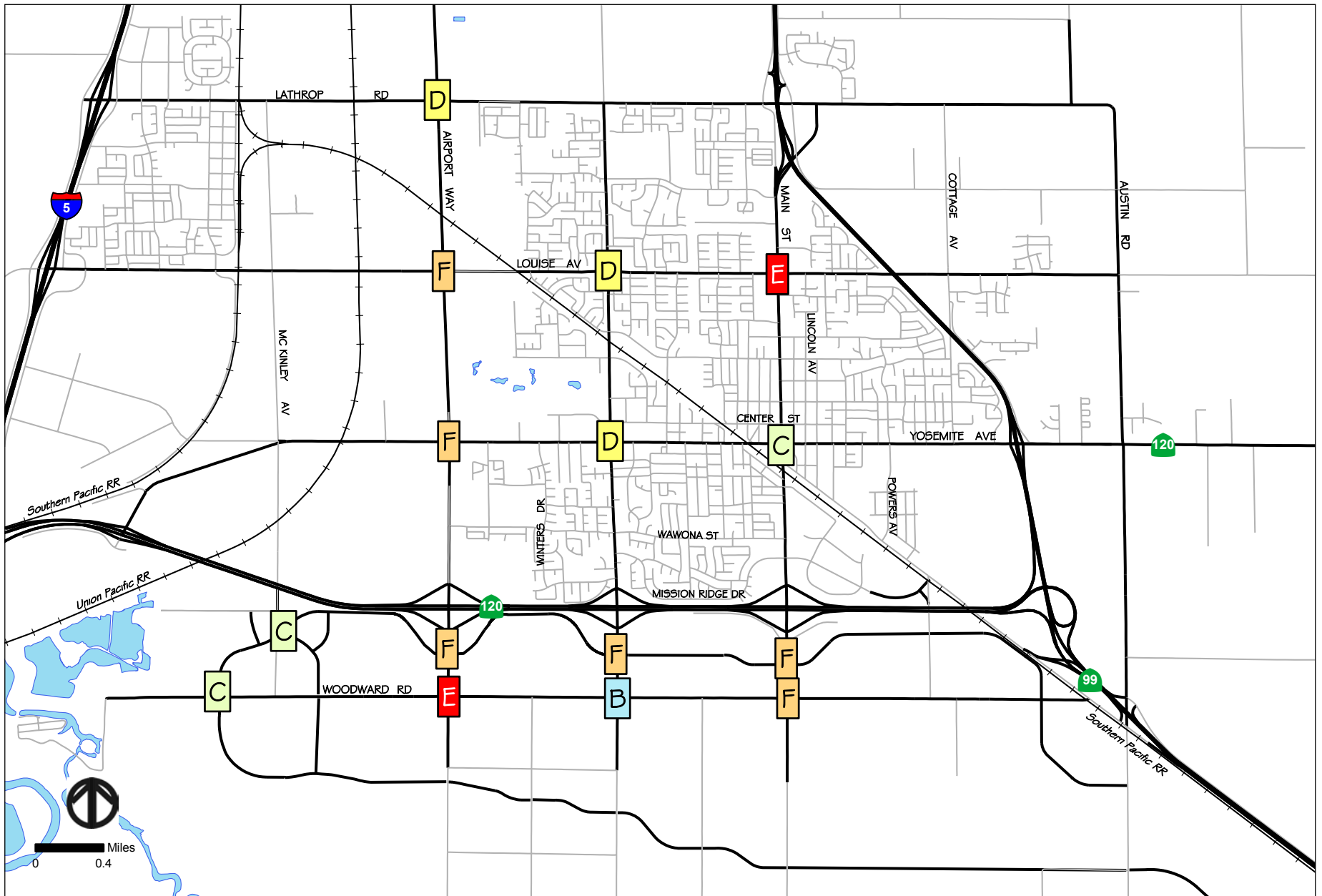
As shown in Table 15-11, eight of the fifteen Study Area intersections operate at LOS D or worse with the incremental traffic from the General Plan 2023. Mitigation includes potential changes to the operations of these intersections.

Table 15-11

2025 PM Levels of Service

Intersection	Control	PM LOS
1. Airport Way / Lathrop Road	Signalized	D
2. Union Road / Louise Avenue	Signalized	D
3. Main Street / Louise Avenue	Signalized	E
4. Union Road / Yosemite Avenue	Signalized	D
5. Main Street / Yosemite Avenue	Signalized	C
6. Airport Way / Louise Avenue	Signalized	F
7. Airport Way / Yosemite Avenue	Signalized	F
8. McKinley Avenue / Atherton	Signalized	C
9. Airport Way / Atherton	Signalized	F
10. Union Road / Atherton	Signalized	F
11. Main Street / Atherton	Signalized	F
12. McKinley Avenue / Woodward Avenue	Signalized	C
13. Airport Avenue / Woodward Avenue	Signalized	E
14. Union Road / Woodward Avenue	Signalized	B
15. Main Street / Woodward Avenue	Signalized	F

Source: Fehr & Peers Associates, May 2003



Manteca General Plan

Level of Significance: Potentially Significant

Mitigation Measures:

- TC-2.1:** The Circulation Element policies (P) listed above in Potential Impact TC-1 address LOC standards, which also apply to local intersections.
- TC-2.2:** Improvements to the impacted intersections can allow LOS D operations or better.

As shown in Table 15-12, the fifteen Study Area intersections can be improved to allow LOS D operations or better. These improvements include any widening of the main-line segments as proposed to bring the roadway segments to LOS D and specific intersection improvements that will improve the operations of the intersection. These specific improvements include:

- Adding dual-left turn lanes on Lathrop Road at Airport Way / Lathrop Road
- Adding dual-left turn lanes on Louise Avenue at Main Street / Louise Avenue
- Adding dual-left turn lanes on Union Road and Yosemite Avenue at Union Road / Yosemite Avenue
- Adding dual-left turn lanes and dual right-turn lanes on Louise Avenue at Airport Way / Louise Avenue
- Adding dual-left turn lanes on Atherton at Airport Way / Atherton Road
- Adding dual-left turn lanes on Union Road and Atherton Road at Union Road / Atherton
- Adding dual-left turn lanes on Atherton at Main Street / Atherton Road
- Adding dual-left turn lanes on Woodward Avenue at Airport Way / Woodward Avenue
- Adding dual-left turn lanes on Woodward Avenue at Main Street / Woodward Avenue

Using the estimated turn volumes, City LOS requirements for both individual intersections and the citywide area can be satisfied with these intersection improvements. In general, these improvements are feasible given that many of the proposed roadways will be widened as part of future roadway projects envisioned by the PFIP and the RTP.

Table 15-12**2025 PM Intersection Levels of Service**

Intersection	Control	PM LOS
1. Airport Way / Lathrop Road	Signalized	C
2. Union Road / Louise Avenue	Signalized	D
3. Main Street / Louise Avenue	Signalized	D
4. Union Road / Yosemite Avenue	Signalized	C
5. Main Street / Yosemite Avenue	Signalized	C
6. Airport Way / Louise Avenue	Signalized	C
7. Airport Way / Yosemite Avenue	Signalized	D
8. McKinley Avenue / Atherton	Signalized	D
9. Airport Way / Atherton	Signalized	D
10. Union Road / Atherton	Signalized	B
11. Main Street / Atherton	Signalized	D
12. McKinley Avenue / Woodward Avenue	Signalized	D
13. Airport Avenue / Woodward Avenue	Signalized	C
14. Union Road / Woodward Avenue	Signalized	B
15. Main Street / Woodward Avenue	Signalized	C

Source: Fehr & Peers Associates, May 2003

Residual Level of Significance: Less Than Significant With Mitigation

Implementation of the General Plan 2023 policies, together with the intersection improvements detailed above, the General Plan 2023 will meet the standards for local intersection.

POTENTIAL IMPACT TC-3: Planned development in the General Plan 2023 may not meet SJCOG LOS standards for regional roadways.

As stated previously, the LOS standard for regional roadways are LOS D. Generally, a majority of the regional roadway segments adjacent to the City of Manteca will operate at that level or above. Only four of the fourteen regional roadway segments will operate at LOS D or better. The future volumes for both the No Project and With Project condition are shown in Table 15-13.

Table 15-13

2025 Freeway Operations

Freeway	Segment	Lanes	2025 Volumes		Capacity	Capacity	Capacity	LOS	
			No Project	With Project	LOS C	LOS D	LOS E	No Project	With Project
I-5	I-205 to SR 120	8	238,000	279,000	115,300	140,200	156,000	F	F
	SR 120 to Louise	6	157,000	154,800	81,700	105,000	120,200	F	F
	Louise to Lathrop	6	152,000	153,500	81,700	105,000	120,200	F	F
	North of Lathrop	6	159,000	148,000	81,700	105,000	120,200	F	F
SR-120	I-5 to Yosemite	6	119,000	148,100	81,700	105,000	120,200	E	F
	Yosemite to McKinley	6	113,000	107,000	81,700	105,000	120,200	E	E
	McKinley to Airport	6	95,000	113,900	81,700	105,000	120,200	D	E
	Airport to Union	6	114,000	114,000	81,700	105,000	120,200	E	E
	Union to Main	6	118,000	115,000	81,700	105,000	120,200	E	E
SR-99	Main to SR 99	6	98,000	99,100	81,700	105,000	120,200	D	D
	North of Lathrop	6	92,000	100,800	81,700	105,000	120,200	D	D
	Lathrop to Yosemite	6	76,000	81,600	81,700	105,000	120,200	C	C
	Yosemite to SR 120	6	98,000	108,900	81,700	105,000	120,200	E	E
	South of SR 120	6	111,000	147,600	81,700	105,000	120,200	E	F

Source: Fehr & Peers Associates, May 2003

Level of Significance: Potentially Significant

The freeway volumes with the proposed land use in the proposed General Plan 2023 are generally equal to or higher than the volumes associated with the previous (1988) General Plan. Large differences in volumes are attributable to traffic associated with large projects included in Manteca (business park south of McKinley) and other projects included in the background. For instance, these projections include traffic from the Landmark Logistic Center (LLC), a large mixed-use project approved in the City of Lathrop.

However, many of these roadway segments will operate at deficient levels of service under both the No Project and Project Condition. However, one segment of SR-120 will operate at a worse level than the No Project Condition. This segment, McKinley to Airport, will operate at LOS E under the Project Condition (LOS D under the No Project Condition). Therefore, there is a significant impact at this location.

This is one significant impact identified on regional roadways. This impact was identified on State Route 120, for the segment from McKinley Avenue to Airport Road. One factor contributing to this impact is the access provided to a proposed business park south of McKinley Avenue. Another factor contributing to these traffic volumes are the region-wide population and employment growth. This roadway segment exceeds the LOS D threshold by approximately 8%. Please note that this impact occurs with the buildout of the General Plan 2023, which represents significant population and employment growth in the City of Manteca. This buildout scenario incorporates a worst-case significant population and employment growth, which vastly exceeds the regional forecasts. These impacts are therefore conservative and will only occur if the City meets its anticipated growth forecasts.

Given that the City lacks the resources and authority to widen State Route 120 directly, other mitigations measures are needed. Mitigations for this impact include:

Mitigation Measures:

TC-3.1: Travel Demand Management: The Circulation Element includes several policies (P) and implementation measures (I) aimed at encouraging alternate modes. These include:

C-I-15 The City shall establish a requirement for a transportation demand management program in any business park, industrial or commercial land use that employs more than 50 full time equivalent employees.

Transit Use: The Circulation Element encourages transit use, including the following policies (P):

C-P-49 The City shall encourage the use of local transportation services, such as jitneys, local shuttles and commuter buses.

C-P-52 The City shall promote the development of park-and-ride facilities near I-5, SR 120, and SR 99.

Bicycle/Pedestrian Use- The Circulation Element encourages bicycle/pedestrian use, including the following policy (P):

C-P-33 The City ~~shall~~ ~~should~~ establish a safe and convenient network of identified bicycle routes connecting residential areas with recreation, shopping, and employment areas within the city". By establishing

this network, the City of Manteca is encouraging bicycle use in the City. This policy is currently being implemented through ~~the update~~ ~~of~~ the City's Bicycle Master Plan.

Participation Regional Cost-Sharing Program: SJCOG is conducting a study regarding the implementation of a region wide traffic fee. The City of Manteca has supported this effort by participating in the study regarding this fee. The City should continue to support similar efforts to develop a mechanism to share the cost of regional transportation improvements when such an effort fairly allocates the costs and benefits of projects through an appropriate nexus-based study. These cost-sharing efforts could be addressed through both region-wide efforts and sub-regional efforts. A sub-regional cost sharing approach could consist of a program to allocate improvement costs to only a limited number of adjacent cities (Tracy, Lathrop, Manteca only) or cities utilizing a particular corridor (I-205).

Several factors contribute to this impact and other impacts on the roadways. These factors include regional population growth and a continuing travel outside of the regional for employment. By allocating significant lands for population, the City of Manteca is providing jobs for the residents of San Joaquin County, including Manteca residents.

While the proposed General Plan 2023 is increasing traffic volumes on regional roadways, the inclusion of significant employment opportunities is addressing one of the region's key transportation issues; namely the ever increasing commute required for San Joaquin County residents.

Residual Level of Significance: Less Than Significant With Mitigation

Implementation of the Circulation Element policies and implementation measures, together with continued participation in the SJCOG Regional Cost-Sharing Program, will help ensure that the General Plan 2023 will meet SJCOG LOS standards for regional roadways.

POTENTIAL IMPACT TC-4: Planned development in the General Plan 2023 could conflict with regionally adopted transportation goals and policies.

Level of Significance: Less Than Significant

As judged by the four major policies contained in the SJCOG RTP, the proposed General Plan 2023 does not conflict with the regional transportation goals and policies.

The first policy states, "Design a transportation system that meet the travel needs of both citizens and businesses". The future transportation plan contains goals and policies oriented towards all travel

modes. The proposed General Plan 2023 includes significant improvements to roadways and bicycle and pedestrian facilities. With the circulation network in the General Plan 2023, the City provides LOS D or better on all roadway segments. Therefore, the proposed General Plan 2023 generally meets the travel needs of citizens and businesses.

The second SJCOG RTP policy states, “Design a transportation system that will improve the environment or minimize environmental impacts”. A majority of the proposed roadway improvements occur to existing roadways. There are minimal new roadways proposed in the General Plan 2023. These roads include Atherton (a new 4-lane arterial between SR 120 and Woodward Avenue) and an unnamed collector roadway south of Woodward Avenue. Because a majority of the road improvements occur to existing roadways, these improvements will have minimal environmental impacts.

The third major policy in the RTP states, “Design an efficient, safe, and economical transportation system”. The transportation outlined in the proposed General Plan 2023 can be considered to be efficient and safe. Delay is minimized even with significant population and employment growth. Therefore, the proposed circulation plan can be considered to efficient, safe, and economical.

The final major policy in the RTP states, “Effectively implement the transportation system”. The key to effectively implementing the transportation system is the City’s Public Facilities Implementation Plan that assesses fees on develops. Portions of these fees are allocated to roadway improvements. Consequently, the City of Manteca has the ability to effectively implement the construction of its transportation system.

Based on the above factors, there are no contradictions between the proposed General Plan 2023 and the adopted policies of the SJCOG RTP.

Therefore, there is no significant impact.

POTENTIAL IMPACT TC-5: Planned development in the General Plan 2023 could impede the operations of alternate travel modes including transit, bicycles, and pedestrians.

Level of Significance: Less Than Significant

The General Plan 2023 Circulation Element addresses alternate modes through a variety of statements. These statements support the development and use of alternative modes include transit, bicycling, and walking. For the purposes of the EIR analysis, a significant impact is assumed to occur if the goals and policies of the General Plan 2023 impede the use of an alternate mode.

The use of transit is addressed through several goals and policies in the Proposed Circulation Element. In general, these policies encourage the use of a variety of transit systems, such as ACE and regional transit given that the establishment of a local transit system would be beyond the ability of the City

of Manteca. Please note that there is a regional study underway regarding unmet transit needs in Manteca. The San Joaquin Regional Transit District is performing this study. Because these goals and policies do not impede the use of transit, there is no significant impact.

Therefore, the Goals and Policies indicate a preference for off-street bicycle facilities as opposed to in-street bicycle lanes. These Goals and Policies conflict with statements made in the description of arterial facilities in the Circulation Element. This description states, “All new arterial streets shall be designed to provide both bike and pedestrian facilities on both sides of the street”. This discrepancy is minor but should be resolved prior to publication of the General Plan 2023.

A review of the goals, policies, and implementation measures indicates that the General Plan 2023 promotes the use of bicycles and walking to the extent possible; therefore there is no significant impact.

16. ALTERNATIVES ANALYSIS

16.1 INTRODUCTION

Section 15126.6(a) of the CEQA Guidelines requires that the Lead Agency,

“...describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.”

Section 15126.6(b) of the Guidelines further states that,

“...the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.”

An EIR must describe a range of “reasonable” alternatives to the proposed project that could feasibly attain most of the basic objectives of the project. The feasibility of an alternative may be determined based on a variety of factors, including but not limited to, economic viability and availability of infrastructure. In addition, by mandating the inclusion of a “no project” alternative, the resulting analysis is intended to provide a baseline against which project-related and alternative impacts can be evaluated. Since a comparative analysis of each alternative is required, this section provides the City’s decision makers and the general public with the means to compare and select between different ways of accomplishing the project’s stated objectives.

16.2 GENERAL PLAN OBJECTIVES

CEQA Guidelines, Section 15124(b), requires a statement of the objectives sought by the proposed project. The primary objective of the General Plan 2023 is to provide specific direction for the future growth and development of the City of Manteca and future annexation areas.

California law requires each city to adopt a comprehensive, long-term general plan for the physical development of the city. The general plan must be an integrated, internally consistent, and compatible statement of policies for the city. It serves as a framework for public and private development, and establishes requirements for additional planning studies where greater specificity is needed.

The general plan is the constitution for a city's development, and governs all land use regulations, including zoning.

The General Plan 2023 Introduction states the following purposes:

- To identify the community's land use, transportation, environmental, economic and social goals and policies as they relate to land use, conservation and development.

While agriculture still plays an important role in Manteca's economy, the City's economic base has become more diversified with the development of industries and the influx of Bay Area workers seeking affordable housing. This objective encompasses a jobs/housing balance, particularly the provision of jobs for the high percentage of interregional commuters who are attracted by Manteca's quality of life and relatively affordable housing. This skilled workforce, presently commuting long distances, is a resource for economic development. Due in part to the skills of the commuter workforce, Manteca will become increasingly competitive for the location of manufacturing and office uses.

- To enable the City Council and the Planning Commission to establish long-range conservation and development policies.

This objective includes the City's awareness of its quality of life value. The City's interest in conserving its natural resources, including preservation of open space and recreation areas, and the protection of natural resources, is reflected in this objective.

- To provide a basis for judging whether specific private development proposals and public projects are in harmony with these policies.

This objective includes the City's intent to equitably balance urban development and economic development with quality of life issues and the conservation of natural resources.

- To inform citizens, developers, decision makers, and other jurisdictions of the policies that will guide development and conservation within the City of Manteca.

This reflects the City's objective of developing a long range land use plan for the community.

In addition, the plan the General Plan reflects community vision and values, and the conditions that influence development of the community. These statements, along with the purposes stated above, can be viewed as the project objectives of the General Plan.

16.2.1 Logical Growth of the City

Manteca has generally grown in a compact pattern around the historic center of the City at the crossroads of Yosemite Avenue and Main Street. Residential neighborhoods have developed within boundaries established by the major streets spaced one mile apart. This General Plan directs land use to continue the historic pattern of compact urbanization. The developed portion of the City should retain its distinct, compact form with clear, well-defined edges.

16.2.2 Community Form, Scale and Identity

The community identity is established by important visual characteristics that provide cues for travelers, as well as residents.

The existing commercial core area should be retained and reinforced as the functional and social center of the City for residents. Urbanization should generally extend outward from this center.

16.2.3 Attractive, Sustainable Neighborhoods

Neighborhoods are the fundamental organizing concept for residential land use. The neighborhoods are typically not more than one mile in any dimension to provide a reasonable walking distance from any part of the neighborhood to the schools, parks, and commercial centers.

16.2.4 Support of Public Transit and Bicycle and Pedestrian Circulation

High activity areas should be located to facilitate the use of public transit.

16.2.5 Housing Opportunity

The General Plan responds to the need for diversity in housing opportunity and changes in market demand for housing types in two primary ways.

16.2.6 Employment and Economic Development

During the twenty-year horizon of this General Plan, Manteca will experience economic development that will add to and diversify the local economy. This will consist of additional growth in warehousing and distribution, but should also include significant new components, such as office and service sectors, research and development, and manufacturing.

16.2.7 Live/Work Housing

It is anticipated that the percentage of individuals working at home will increase over the next twenty years. At home workers may include telecommuters, professional services, small service businesses, mail order, and any number of other entrepreneurial endeavors. It is the intent of this General Plan to support such activities.

16.2.8 Public Services and Fiscal Stability

Growth will provide additional revenue sources, but will also place additional service burdens on the City of Manteca.

16.2.9 Access to Open Space

In the absence of natural features that could define an open space network, the General Plan encourages the creation of a network of open spaces in the storm drainage channels, and naturalized landscaping along major thoroughfares and bike paths.

16.2.10 Agricultural Productivity

The General Plan supports the existing level of agricultural production by directing development in a compact, concentric form in order to reduce the demand for new development areas.

16.3 PROJECT ALTERNATIVES

In fulfillment of the City's CEQA obligations, the City has identified a range of reasonable alternatives that accomplish the project's stated objectives, serve to satisfy specific analytical requirements (i.e. "no project" alternative), and seek to avoid or reduce the significant or potentially significant effects of the proposed project. Each of these alternatives is separately examined below.

Other alternatives identified by the City but deemed to be either infeasible or determined to be unlikely to produce a substantial reduction in any of the significant or potentially significant environmental effects identified in this EIR are specified below.

16.4 ALTERNATIVES CONSIDERED BUT SUBSEQUENTLY REJECTED

A number of project alternatives were considered and subsequently rejected by the City. The following alternatives were rejected either because these options were deemed to be infeasible, or lacked a reasonable likelihood of resulting in the avoidance or substantial reduction of the project's significant or potential significant environmental effects.

16.4.1 Alternative Site

For some projects, impacts can be avoided or reduced merely by relocating the project site (e.g., moving the project out of a sensitive resource area). In recognition of this possible impact avoidance strategy, the Guidelines contain provisions for the consideration of alternative project sites and acknowledge that in some cases there may be no feasible alternative location (Section 15126.6(f)(2)). Since the project constitutes an update to the City's 1988 General Plan, other than an alternative configuration of the Study Area, the project is required to address those areas located within both the corporate boundaries of the City and its Sphere of Influence. Although the City could formulate plans for other areas, those plans would not be binding upon those areas affected, and would not serve to further sound planning decisions for those areas under the City's current or future jurisdiction.

16.4.2 Down-Zoning Alternative

Not all properties within the City are currently developed to the maximum intensity authorized under the 1988 General Plan. As a result, one of the alternatives potentially available to the City is to “freeze” the City as it now exists and to redesignate each parcel to reflect the current land uses located thereupon. This action would reduce or eliminate the introduction of new, or the exacerbation of existing, environmental impacts associated with site intensification.

This action would, however, penalize those property owners who have not developed their properties to the intensities authorized under existing land use policies, and result in no or only limited economic use for those vacant properties within the City. Similarly, this action would not allow individual property owners to respond to existing and future market demands for new residential and non-residential uses. By creating a disincentive to private investment, the City may be establishing blighting influences within the community.

16.4.3 Modification of the Study Area

The area addressed in the General Plan 2023 includes the City’s adopted corporate boundaries and immediately adjacent unincorporated areas. It has been determined that the property within this defined Study Area is impacted, positively or negatively, by actions taken by the City of Manteca.

The City could limit its planning program to only those areas within the City’s existing corporate boundaries, relegating land use planning in adjoining unincorporated areas to San Joaquin County. However, the elimination of areas within the City’s Sphere of Influence would constitute a regressive response to local agency planning. Although jurisdictional boundaries are easily definable, environmental impacts typically extend beyond those often-arbitrary limits. Since both existing and future land uses within the City’s Sphere of Influence will continue to impact the community, sound planning necessitates the inclusion of those areas as part of this General Plan Update.

16.4.4 Market-Driven Alternative

Section 653029(a) of the California Government Code (CGC), states that a general plan shall include a land use element that “designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land.” The City is required to specify the location and intensity of land uses within the community.

Under a purely market-driven approach, the City would not be proactive (neither delineating the geographic areas for land use categories nor establishing standards for those areas), but would be reactive (the City would merely respond to what individual owners determine to be the appropriate land use for each parcel). It is, therefore, the marketplace rather than the City that determines how the City ultimately develops. This approach has the potential to result in the introduction of adjoining uses of different types and intensities and, therefore, create land use conflicts that could otherwise be avoided through effective planning.

16.5 ALTERNATIVES UNDER CONSIDERATION

This analysis includes three primary alternatives to the proposed project:

(1) No Project Alternatives

- No Development
- Build-Out of the 1988 General Plan

(2) Higher Density Alternative

(3) Reduced Development Alternative

16.5.1 No Project Alternatives

Two different scenarios exist under the “no project” alternative. These alternatives are described separately below:

No Project Alternative No. 1: No Development

Under this scenario, no additional dwelling units are constructed and no additional square footage of non-residential uses is added to the City. Other than maintenance, rehabilitation, and renovation activities (which are not generally defined as “projects” under CEQA), the existing status quo is maintained within the City’s corporate boundaries. Since no annexation of unincorporated areas would occur, development within the Sphere of Influence would remain under the jurisdiction of San Joaquin County. It is assumed that development would continue to occur both in County areas, and within those areas located outside the corporate boundaries of the City.

This alternative is specifically mandated under the Guidelines and is posited for the sole purpose of providing a baseline against which other alternatives are considered and the comparative impacts of those alternatives can be evaluated. It is, however, unreasonable to assume that conditions within the City will be retained as the currently exist. As a result, this alternative should be considered infeasible.

No Project Alternative No. 2: Build-Out of 1988 General Plan

Under this second “no project” alternative, build-out of the Study Area would occur in accordance with those land use policies contained in the 1988 General Plan. In drawing comparisons between this alternative and other alternatives presented herein, it should be noted that the Study Area addressed in the 1988 General Plan is comparable to the Study Area now under consideration. The Study Area boundary differs primarily along the south edge.

Additional development within the Study Area, including the Sphere of Influence, can occur under the authorization of the 1988 General Plan. Based on the policies presented therein, reasonable foreseeable future growth within the community can occur in the absence of the General Plan update.

Since the retention of the existing land use policies, as presented in the 1988 General Plan, will result in incrementally less development than now proposed under the General Plan 2023, the potential project-related effects of that action will also be incrementally less than those associated with the proposed project.

It is reasonable to assume that any reduction in the number of future dwelling units or any decrease in the square footages of future non-residential uses constructed within the City will, however, translate into a corresponding increase in the number of units and square footages of other non-residential uses within the remainder of the region (i.e., if it is not built within City Limits, it will be built in surrounding County area). As a result, although development in the project planning area may be incrementally less, the cumulative impacts of this alternative are assumed to be comparable to those associated with the proposed project. In other words, the development will occur if there is a market demand. It is critical to plan for this development rather than simply allow it to occur.

16.5.2 Higher Density Alternative

This alternative allows the same population projection as the proposed project, but allocates less land area to residential land use. This alternative would result in higher density residential development.

The higher density alternative assumes that the same number of dwelling units projected in the General Plan 2023 Land Use would be developed on 20 percent less land area. For purposes of examining the effects of this alternative, Table 16-1 provides a summary of the land use and the number of dwelling units that would be allocated to each residential land use category.

Table 16-1**Calculation of High Density Alternative**

A	B	C	D	E	F
Assumed Residential Density	Proposed GP 2023		Dwellings	Reduced Land Use	Revised Density
Dwellings/acre	Land Use	Acres		Acres	Dwellings/acre
20	High Density Residential	251	5,020	200.8	25
8	Medium Density Residential	359	2,872	287.2	10
5	Low Density Residential	3685	18,425	2948	6.25
1	Very Low Density Residential	248	248	198.4	1.25
		4,543	26,565	3,795	

Source: Wade Associates May 2003

In this alternative the total land area allocated to residential use has been reduced by 20 percent compared to the General Plan 2023 Land Use Map, but the total number of dwelling units remains constant. If the land area is reduced and the dwelling units remain constant, then the density must increase. In this example the land area is reduced from 4,543 acres to 3,795 acres, and the dwelling unit total remains 26,565. The residential densities increase to those shown in Column F in Table 16-1. These densities are within the range established by the General Plan 2023 Land Use Element. The densities are on the high end of the normal range for home builders in the Central Valley. However the intent behind increasing the allowable density in each range is to allow more flexibility for home builders and thereby enhance the diversity of housing types and prices available in Manteca.

The average residential density of the new residential areas in the General Plan 2023 is 5.8 dwellings per acre. The average density of the alternative land use plan is 7.0 dwelling units per acre. This density is in the range that begins to support efficient public transit. It is notable that this alternative is within the range can be achieved in the General Plan 2023 policies. The success of housing types at these densities will depend on the market acceptance.

16.5.3 Reduced Development Area Alternative

This alternative allocates the land use types and policies in the General Plan 2023 to the land area defined as the Primary Urban Service Area in the 1988 General Plan. Application of the new policies and land use in the 1988 service boundary would result in reduced development area, and less potential development than the proposed General Plan 2023.

The 1988 Primary Urban Service boundary and the proposed General Plan 2023 Primary Urban Service boundary cover similar areas, however, the 1998 Service area did not include land in the Southwest Plan Area, (west of Airport Way and south of SR 120).

Table 16-2 shows the land use that would occur under this alternative in the 1988 Primary Urban Service boundary compared to the General Plan 2023 Land Use.

Table 16-2

Alternative Land Use Within 1988 Primary Urban Service Boundary

	Total 2023 Land Use	GP2023 in 1988 Service Boundary
LAND USE	Acres	Acres
AG	3960.0	6.9
GC	672.0	599.43
NCC	491.8	396.3
CR	0.0	0
PEC	0.0	0
CMU	255.0	211.6
HI	909.9	197.2
LI	1024.1	384.5
BIP	258.0	14.8
BP	133.0	137.5
HDR (15.1 to 25 du/ac)	442.0	343.4
MDR (8.1to 15 du/ac)	546.6	379.6
LDR (2.1 to 8 du/ac)	6427.6	4307.5
VLDR (0.5 to 2 du/ac)	357.8	182.2
P/QP/Schools/Utilities	1105.9	1037.6
OS	543.0	33.6
P	518.1	456.8
Subtotal	17644.8	8688.9
Urban Uses	12623.7	8191.6

Source : Wade Associates, May 2003

The proposed General Plan 2023 Primary Urban Service boundary encompasses 13,414 acres, but this includes 1,908 in the Southwest Plan Area, as well as the Manteca Water Quality Control Facility. Therefore, the proposed Service boundary would encompass 11,506 acres compared to the 1988 Primary Urban Service boundary that encompasses 11,551 acres. If the proposed General Plan 2023 land use plan and policies were applied only to the area defined by the 1988 Primary Urban Service Boundary, the development land area would be restricted.

Under this alternative the urban land uses would be reduced from 12,623.7 acres to 8191.6 acres, a thirty-five percent (35%) reduction in the total land area allocated in the General Plan.

16.6 COMPARISON OF ALTERNATIVE PLANS

Table 16-3 provides a comparison of the land uses allocated in each alternative. The “No Growth-No Development” alternative is not included in the table because it would provide no land development at all and is not feasible.

Table 16-3
Summary of Land Use Alternatives

	Total 2023 Land Use	1988 GP	High Density	GP2023 in 1988 Service Boundary
LAND USE	Acres	Acres	Acres	Acres
AG	3960.0	1,572.3	3,960.0	6.9
GC	672.0	827.9	672.0	599.43
NCC	491.8		491.8	396.3
CR	0.0	656.3	0.0	0
PEC	0.0	1,063.0	0.0	0
CMU	255.0		255.0	211.6
HI	909.9	335.9	909.9	197.2
LI	1024.1	777.6	1,024.1	384.5
BIP	258.0		258.0	14.8
BP	133.0		133.0	137.5
HDR (15.1 to 25 du/ac)	442.0	266.9	391.0	343.4
MDR (8.1 to 15 du/ac)	546.6	170.3	474.8	379.6
LDR (2.1 to 8 du/ac)	6427.6	5,481.7	5,689.7	4307.5
VLDR (0.5 to 2 du/ac)	357.8	280.0	308.2	182.2
P/QP/Schools/Utilities	1105.9	856.0	1,105.9	1037.6
OS	543.0	24.8	543.0	33.6
P	518.1	324.3	518.1	456.8
Subtotal	17644.8	12,637.6	16734.5	8688.9
Urban Uses	12623.7	10,716.2	11713.4	8191.6

Source: Wade Associates, May 2003

Table 16-3 indicates a broad range of alternatives for evaluation. Table 16-4 considers the effects of each of these alternatives in the context of the project purposes and objectives identified above.

Table 16-4
Summary of Alternatives Analysis

Criteria	Logical Growth of the City		
GP 2023 Land Use	1988 General Plan	2023 Land Use in 1988 Service Boundary	High Density
Good	Good	Good	Good
The Plan directs growth around the historic core.	The Plan directs growth around the historic core.	The Plan directs growth around the historic core.	The Plan directs growth around the historic core. This alternative would also restrict the geographic area.
Criteria	Community Form, Scale and Identity		
GP 2023 Land Use	1988 General Plan	2023 Land Use in 1988 Service Boundary	High Density
Good	Poor	Good	Good
the Plan provides direction for establishing the neighborhood scale.	The plan emphasizes single family residential with poor identity.	The plan enhances the 1988 plan by providing higher intensity land use in the core.	The plan would provide sufficient density to establish small neighborhood centers.

Criteria	Attractive, Sustainable Neighborhoods That Support of Public Transit and Bicycle and Pedestrian Circulation		
GP 2023 Land Use	1988 General Plan	2023 Land Use in 1988 Service Boundary	High Density
Good	Poor	Good	Excellent
Residential density can support of public transit by clustering higher density.	Relatively low density and poor pedestrian systems.	Higher intensity use concentrated around the core area.	Density would support public transit and pedestrian system.
Criteria	Housing Opportunity		
GP 2023 Land Use	1988 General Plan	2023 Land Use in 1988 Service Boundary	High Density
Good	Poor	Good	Excellent
Higher density and broader zoning designations allow for flexible development.	Detached single family is the dominant residential type.	Housing variety centered around the historic core area.	Density range provides opportunity for affordable housing types.
Criteria	Employment and Economic Development		
GP 2023 Land Use	1988 General Plan	2023 Land Use in 1988 Service Boundary	High Density
Good	Fair	Good	Good
Land use plan includes a mix of employment land uses.	The plan establishes the Planned Employment Center, but provided no implementation. Premature designation.	Provides same employment base as GP 2023.	Provides same employment base as GP 2023. Housing density may support more employees.

Criteria	Live/Work Housing		
GP 2023 Land Use	1988 General Plan	2023 Land Use in 1988 Service Boundary	High Density
Excellent	Poor	Excellent	Excellent
The plan provides policies and land use designations to support live/work housing.	Live/work housing was not anticipated in the 1988 plan.	The plan would provide the same land uses and policies as the GP 2023 plan.	The plan would provide the same land uses and policies as the GP 2023 plan. Higher density may create conflicts with some live/work situations.
Criteria	Access to Open Space		
GP 2023 Land Use	1988 General Plan	2023 Land Use in 1988 Service Boundary	High Density
Good	Poor	Good	Not Applicable
The plan provides policies for protecting open space and including open space corridors in urban areas.	The plan does not provide specific policies and has produced very poor access to open space.	The plan would provide the same land uses and policies as the GP 2023 plan.	The high density concept is not location specific. Higher density may include more common area open space than other land use densities.
Criteria	Agricultural Productivity		
GP 2023 Land Use	1988 General Plan	2023 Land Use in 1988 Service Boundary	High Density
Good/Fair	Fair	Good	Good
The plan provides a land use pattern that generally, but not always, directs growth away from the Prime Farmland.	The plan does not provide clear direction on avoidance of farmland.	Concentration of urban uses will reduce the land area required to accommodate the projected population.	Concentration of urban uses will reduce the land area required to accommodate the projected population.

16.7 ENVIRONMENTALLY PREFERRED ALTERNATIVE

Based on the above evaluation of the comparative merits of each alternative, and the environmental analysis of implementation of the General Plan 2023, the environmentally-superior alternative is the “High Density Alternative.” This conclusion is based on the beneficial effect gained by using less land to accommodate the planned growth General Plan 2023. However, it should be noted that the density ranges described in the High Density Alternative are approximately twenty percent higher than conventional market driven housing. The General Plan 2023 encourages the use of higher densities, but the market for such housing has not been tested in the Manteca area.

The Higher Density Alternative is one of a range of possible development scenarios under the proposed General Plan 2023.

17. OTHER CEQA CONSIDERATIONS

This section addresses other California Environmental Quality Act (CEQA) considerations that are required as part of an EIR.

17.1 GROWTH INDUCING IMPACTS

The State CEQA Guidelines (§15126.2[d]) require that an EIR evaluate the growth-inducing impacts of a proposed project. Specifically, an EIR must:

“Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth... Increases in the population may tax existing community service facilities, so consideration must be given to this impact. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”

Growth inducement, by itself, is not an environmental effect but may indirectly lead to environmental effects. Such environmental effects may include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or wildlife habitats, or conversion of agricultural and open space land to urban uses.

17.1.1 Growth Inducing Impacts of the Proposed General Plan

By definition, the General Plan is intended to provide for and address future growth in the City. However, the proposed General Plan is not proposing any specific development projects, so it would not have direct growth-inducing impacts. Indirect growth-inducing impacts would occur, however, because the land use map and designations, as well as the goals and policies, of the General Plan are designed to provide a framework to accommodate future population growth and economic growth, particularly in employment centers designed to accommodate a net influx of workers. The analysis of these indirect growth-inducing impacts for the proposed General Plan focuses on two main factors: (1) promotion of economic or population growth, and (2) elimination of obstacles to growth.

Encouraging and Facilitating Other Activities

This CEQA issue addresses the extent to which implementation of the General Plan 2023 would cause increased development in the area through stimulation of economic activity.

Implementation of the General Plan 2023 would directly affect growth in Manteca by allowing for construction of residential and non-residential uses. Increased employment is necessary to support increased population, so as the General Plan accommodates the expected growth to one degree or another, related job growth would result.

The General Plan 2023 is designed to promote job creation in the service, light industrial, and finance, insurance and real estate sectors in major planned employment centers. The objective of these facilities is, in part, to provide resident workers an opportunity to work in their community, thereby avoiding the long commute to work.

The land use policies encourage the development of mixed uses to promote a variety of housing and job types. The Economic Development Element goals and policies also address increasing the number of jobs in the City to help reduce vehicular trips commuting into the Silicon Valley. Indirectly, then, increases in employment and population would generate a secondary demand for other services, but could have a beneficial effect on traffic and air quality.

Removing Obstacles to Population Growth

This CEQA issue addresses the extent to which regulatory changes and/or infrastructure capacity provided to support the implementation of the General Plan, allowing additional, unforeseen development in the surrounding areas.

Whether or not growth obstacles are eliminated relates to the extent to which the proposed General Plan would increase infrastructure capacity or change the regulatory structure such that additional development in the county and region would be allowed. A physical obstacle to growth typically involves the lack of public service infrastructure or insufficient infrastructure capacity. The extension of public service infrastructure (e.g., roadways, water, and sewer lines) into areas that are not currently provided with these services would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth.

The adoption of the General Plan 2023 is a precursor to the update of the Public Facilities Implementation Plan, a Recreation Master Plan, and other City improvement plans that enable development to occur.

17.2 SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

CEQA Guidelines, Section 15126(b) states that an EIR must:

“Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance.”

Those impacts, which cannot be feasibly mitigated to less-than-significant impacts, would remain as significant and unavoidable adverse impacts. The significant and unavoidable adverse impacts addressed in this EIR are listed below in Table 17-1.

Table 17-1

Significant and Unavoidable Adverse Impacts

AESTHETICS AND VISUAL RESOURCES

- POTENTIAL IMPACT AV-1: Buildout of the proposed General Plan 2023 would degrade the existing scenic vistas found in the General Plan Study Area.
- POTENTIAL IMPACT AV-2: The existing visual character or quality of the area will be degraded.

AGRICULTURAL RESOURCES

- POTENTIAL IMPACT AG-1: Implementation of the City of Manteca General Plan 2023 (Project) will result in conversion of Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance to non-agricultural use.
- POTENTIAL IMPACT AG-2: Implementation of the General Plan 2023 will cause a conflict with existing zoning for agricultural use, or a Williamson Act contract.

AIR QUALITY

- POTENTIAL IMPACT AQ-2: Implementation of the General Plan 2023 could violate air quality standards or contribute substantially to the current nonattainment status for ozone and PM10.
- POTENTIAL IMPACT AQ-3: Implementation of the General Plan 2023 would result in a cumulatively considerable net increase in ozone and PM10 air pollutants.

BIOLOGICAL RESOURCES

POTENTIAL IMPACT B-5: Impacts on biological resources from the buildout of the General Plan 2023 may be cumulatively significant. (SIGNIFICANT)

POPULATION AND HOUSING

POTENTIAL IMPACT H-1: Implementation of the General Plan 2023 would increase the City's population over existing conditions.

PUBLIC FACILITIES AND SERVICES

POTENTIAL IMPACT PFS-7: The General Plan 2023 would require expanded energy sources and infrastructure for expanded urban development.

17.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) of the State CEQA Guidelines requires that this EIR consider significant irreversible environmental changes that would be caused by the General Plan. An impact would be determined to be a significant and irreversible change in the environment if:

- development enabled by the General Plan would involve a large commitment of nonrenewable resources;
- the primary and secondary impacts of development would generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- development of the General Plan would involve uses in which irreversible damage could result from any potential environmental accidents associated with the plan;
- or the development of the General Plan land uses would result in an unjustified consumption of resources (e.g., the wasteful use of energy).

This EIR addresses the commitment of nonrenewable resources (e.g., development vs. retention of agricultural resources), commitment of future generations to similar uses (e.g., development of designated land uses), the potential for environmental accidents (e.g., exposure to hazards), and the consumption of energy (e.g., the use of electricity).

The implementation of the proposed General Plan would likely result in or contribute to the following irreversible environmental changes:

1. Relatively low-density (primarily residential) suburban land use patterns that would likely preclude future higher density development except where designated. This could limit opportunities for efficient, cost-effective full-service transit services.
2. Conversion of existing undeveloped land and open vistas to developed land uses, thus precluding other alternate land uses in the future, and precluding preservation of the existing land use pattern and vistas.
3. Irreversible loss of agricultural land (see Section 4.).
4. Commitment of water resources to serve development and degradation of water quality from suburban runoff (see Section 10).
5. Commitment of municipal resources to the provision of services and operations of infrastructure for future development (see Sections 14).
6. Increased ambient noise and background air emissions (Sections 12 and 5, respectively).
7. Conversion of existing habitat and irreversible loss of wildlife (see Section 6).
8. In addition to these irreversible changes, other more general irreversible changes would be expected, and the magnitude would be generally tied to population growth. General, population related, irreversible changes would include:
 - Irreversible consumption of goods and services associated with the future population.
 - Irreversible consumption of energy and natural resources associated with the future population.
 - Possible demand for and use of goods, services, and resources by the county to the exclusion of development in other locations in the region.

17.4 CUMULATIVE IMPACTS

17.4.1 Requirements for Cumulative Impact Analysis

This EIR provides an analysis of cumulative impacts of the proposed General Plan, as required by §15130 of the CEQA Guidelines (State CEQA Guidelines). Cumulative impacts are defined in State CEQA Guidelines §15355 as two or more individual effects that together create a considerable environmental impact or that compound or increase other impacts. “A cumulative impact occurs from the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (Guidelines §15355[b]). By requiring an

evaluation of cumulative impacts, CEQA attempts to ensure that large-scale environmental impacts will not be ignored. Consistent with State CEQA Guidelines §15130(a), the discussion of cumulative impacts in this EIR focuses on significant and potentially significant cumulative impacts. According to State CEQA Guidelines §15130(b), “The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.”

All of the following elements are necessary to an adequate discussion of cumulative impacts (Guidelines §15130[b]):

Either: (A) a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency; or: (B) a summary of projections contained in an adopted general plan or related planning document that is designed to evaluate regional or areawide conditions. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available.

A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable options for mitigating or avoiding any significant cumulative effects of the proposed projects.

The environmental impact analysis in this EIR is citywide in scope, so it already presents detailed analysis of environmental effects over a broad area, comprising most of the contribution relevant to cumulative environmental effects. For instance, significance conclusions and mitigation measures described for the impacts of the General Plan alternatives may also be applicable to cumulative impacts. Therefore, when warranted, cross-references to analysis or mitigation measures in Sections 3 through 15 (inclusive) are provided to avoid repetition.

17.4.2 Local and Regional Context of Cumulative Impacts

As described above, the State CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the project is to be considered: the use of a list of past, present, and reasonably anticipated future projects, or the use of adopted projections from a general plan or other regional planning document. The evaluation of the cumulative environment for this EIR is based on projections in existing county-wide planning documents.

Regional Planning Documents

The regional cumulative analysis prepared covers the incorporated cities within San Joaquin County and includes the following plans:

San Joaquin County Council of Governments Regional Transportation Plan

San Joaquin County General Plan

City of Lathrop General Plan

City of Ripon General Plan

City of Stockton General Plan

Projected Growth in the South San Joaquin County Area

The County's population, housing, and employment have increased over the past decade as a result of statewide trends, the expansion of employment opportunities in the San Francisco Bay Area, and continued growth throughout the region. The following sections discuss the existing setting and future trends with regard to population, housing, and employment in San Joaquin County. (1)

The population in San Joaquin County increased from 480,628 persons in 1990 to 563,598 in 2000 according to the U.S. Census. This represents an increase of 17 percent over the 10-year period, and 62 percent since 1980. Most of this growth has occurred in the southern portion of the County and in the City of Stockton. That growth has been the result of dramatic job growth in Silicon Valley during the last 10 years. The City of Tracy has experienced the most dramatic growth of any jurisdiction of the County, increasing its population by over 23,000 residents or 70 percent since 1990; while, the City of Stockton experienced the largest numerical increase of almost 33,000 residents.

The south San Joaquin County area that includes the south area of Stockton, and Ripon, Lathrop, and Manteca have experienced substantial growth in population in recent decades. Population growth is driven by job growth outside of the area. Despite predictions for rapid and diversified employment growth in the Central Valley for many years, technology related employment had largely bypassed San Joaquin County in favor of areas like Sacramento. The location decisions of firms like Apple Computers, Hewlett-Packard, and Intel have demonstrated that proximity to the Silicon Valley is less important to high technology employers than access to other benefits, including a large and well educated labor force, a broad housing supply that meets the needs of both low income households and executives, and a host of recreational amenities. Central Valley cities like Manteca will need to provide similar amenities in order to compete with other employment centers in Northern California. (2)

Over the next 20 years, the San Joaquin area economy would likely be steered by three potential trends: 1) if transportation infrastructure capabilities continue to expand, major real estate investments will respond with growth in the high-end manufacturing sector; 2) if growth in the manufacturing sector occurs, associated R&D and administrative functions will also expand; and 3) as growth in Tri-Valley and Silicon Valley labor markets continues, residents will continue to “spillover” to San Joaquin County, increasing the number of skilled workers that will be considered in corporate location decisions.

Each of the cities in the south county area is poised to accommodate additional growth. General Plan updates are underway in Manteca, Ripon, and Stockton.

17.4.3 Assessment of Cumulative Impacts

Land Use and Housing

In the absence of a major new employment center the region is likely to continue to fulfill the role of housing workers from the Bay Area. The demand for housing remains strong. The housing market has demanded relatively large homes in residential subdivisions that consume large land areas. The cumulative effects include conversion of agricultural land.

Visual Resources

As the cities grow outward, they could ultimately connect to one another forming a contiguous urban area. Currently, the cities of Lathrop and Manteca share a common, urbanized boundary. As Ripon and Manteca continue to expand the undeveloped ground that separates them diminishes. Similarly, Stockton to the north has the potential to expand to Manteca’s northern boundary. The cumulative effect could be the loss of the open agricultural land that separates the communities and contributes to each community’s sense of identity and place.

Agriculture

The conversion of agricultural land to urban uses is unavoidable in the south San Joaquin area. Although the Prime Farmlands are more prevalent in other parts of the county, development in this area will inevitably impact Farmlands of Statewide Importance. The cumulative effect of incremental conversion of farmland is a continuing loss of farm operations due to the encroachment of urban uses that conflict with farm activities.

Air Quality

Air quality is inherently a regional consideration. As a non-attainment area, all incremental growth contributes to the degradation of air quality.

Biological Resources

The General Plan Study Area is within the area examined in the countywide Habitat Conservation Plan. The effects of implementing the General Plan 2023 and the other plans in the area are to further restrict the habitat options for the affected species.

Traffic and Circulation

Traffic analysis for the General Plan 2023 used the SJCOG regional traffic model. The results of that analysis reflect the cumulative effect of all traffic in the region.

References

- (1) 2001 RTP Program EIR, San Joaquin Council of Governments September 2001
- (2) Economic Planning Systems Draft Technical Memorandum, May 2003

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18. REPORT PREPARATION

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California State Department of Fish and Game, California Natural Diversity Database (CNDDDB)

California State Department of Toxic Substances Control

California State Integrated Waste Management Board

California State Central Valley Regional Water Quality Control Board

Pacific Gas and Electric Company, Inc.

San Joaquin County Council of Governments

San Joaquin County Library, Manteca Branch

San Joaquin County Public Health Services, Environmental Health Division

San Joaquin Valley Unified Air Pollution Control District

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