

Notice of Preparation and Initial Study
for the
Oleander, Sundance, and Sundance 2 Development Projects



Prepared for:
City of Manteca

January 6, 2006



Notice of Preparation and Initial Study
for the
Oleander, Sundance, and Sundance 2 Development Projects



Prepared for:

City of Manteca
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January 6, 2006



NOTICE OF PREPARATION



NOTICE OF PREPARATION

DRAFT ENVIRONMENTAL IMPACT REPORT

TO: REVIEWING AGENCIES

**FROM: CITY OF MANTECA
Community Development Dept.
1001 W. Center Street
Manteca, CA 95337**

Subject: Notice of Preparation of a Draft Environmental Impact Report

The City of Manteca will be the Lead Agency and will prepare an environmental impact report (EIR) for the project identified below. We need to know your views as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities or your interests in connection with the proposed project. Your agency will need to use the EIR when considering your permit or other approval for the project.

The project description, location, and a summary of the environmental issues to be evaluated in the EIR are contained in the attached materials.

Because of the time limits mandated by State law, your responses must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to **Kathy Wold, Planning Manager**, at the address shown above. We will need the name for a contact person in your agency.

Project Title: Oleander, Sundance, and Sundance 2 Development Projects

Project Applicants: Raymus Homes (Oleander) and FCB Homes (Sundance and Sundance 2)

SCOPING MEETING: Date & Time: January 19, 2006 at 3:00 p.m.

Location: COUNCIL CHAMBERS
CITY OF MANTECA
1001 W. CENTER STREET
MANTECA, CA 95337

Date 1/16/2006

Signature

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1. INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) and the State CEQA guidelines, the City of Manteca (as lead agency) will be preparing an Environmental Impact Report (EIR) to evaluate the environmental effects associated with the proposed Oleander, Sundance, and Sundance 2 Development Projects. The proposed project consists of three separate, but geographically related, residential subdivision development projects. In general, these developments are proposed to provide single-family residences and related amenities (e.g., services, parks, roadways) in the southern portion of the City of Manteca, south of State Route (SR) 120. The EIR will identify any significant environmental impacts of the project, as well as recommend mitigation measures to reduce the project's environmental impacts where feasible.

In accordance with Section 15082 of the CEQA Guidelines, the City of Manteca has prepared this Notice of Preparation to provide responsible and trustee agencies and other interested parties with information describing the project and the issue areas that will be evaluated in the EIR.

2. PROJECT LOCATION AND CURRENT USE

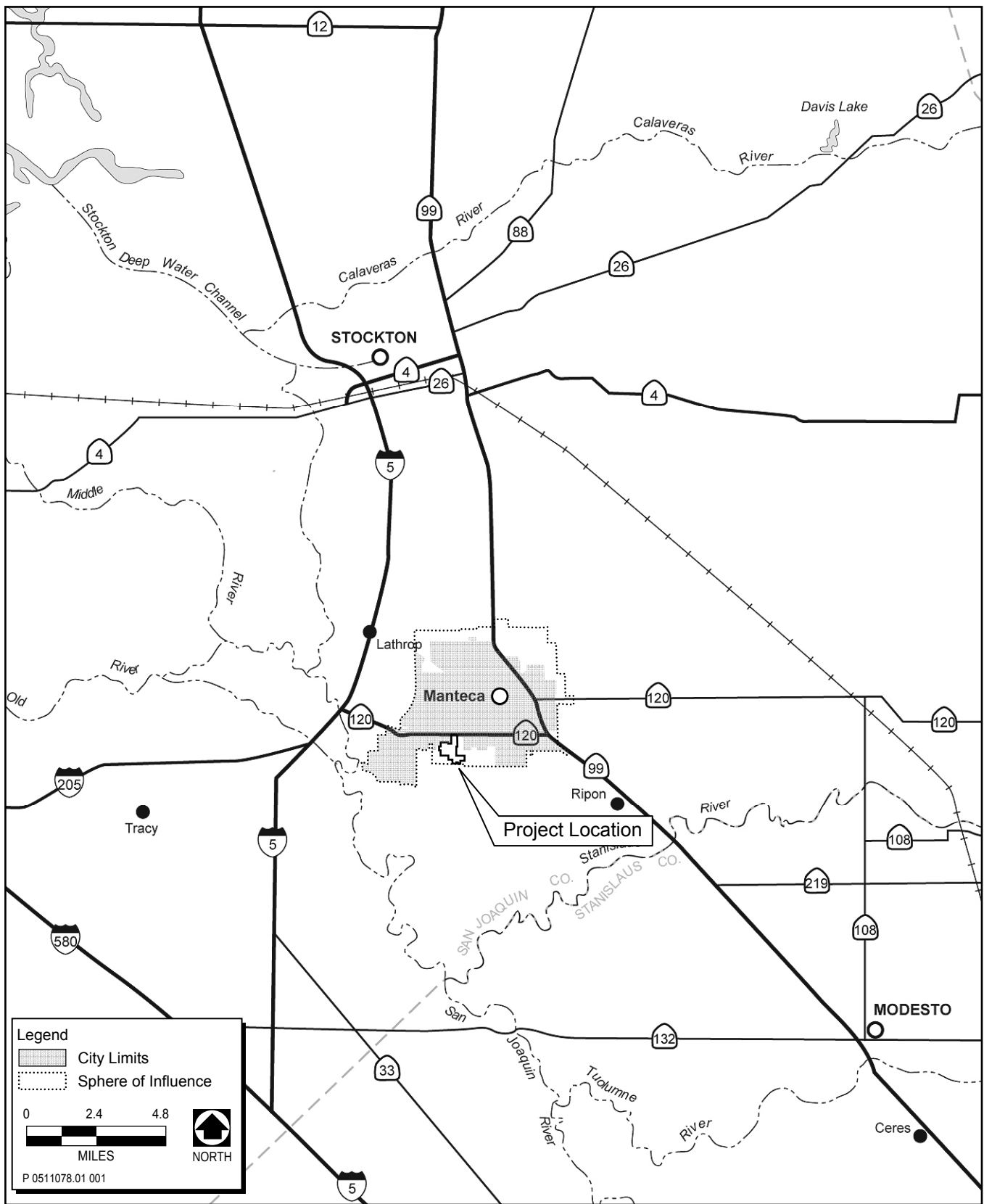
The project is located on approximately 230 acres within the City of Manteca, which is located near the northern end of the San Joaquin Valley of central California, at the junction of SR 99 and SR 120, approximately 75 miles east of San Francisco and 55 miles south of Sacramento. Exhibit 1 shows the project's regional location.

The project area is located along the SR 120 corridor. Regional access to the project area is provided by Interstate 5 (I-5) to the west, SR 120 to the north, and SR 99 to the east. Local roadways in the project area include Woodward Avenue, Oleander Avenue, Peach Avenue, Union Road, Airport Way, and Atherton Drive, as shown in Exhibit 2.

The project area is located outside of the city limits, but within the City of Manteca's Sphere of Influence (SOI) and the city's Primary Urban Service Boundary. As a result, implementation of the project would require the annexation of the project area to the City. An annexation is the incorporation of land and water area into an existing community (e.g., City of Manteca) with a resulting change in the boundaries of that community. The State of California has delegated the authority for approving annexations to the San Joaquin County Local Agency Formation Commission (LAFCO). LAFCO would be the agency responsible for approving the annexation of the project to the city. Once annexed, the project would be subject to the City's discretionary land use authority.

In general, existing land uses within the project area include small agricultural and rural residential properties. The area north of SR 120 is substantially developed with conventional residential neighborhoods. Many of these established neighborhoods include community parks and associated amenities. A small residential neighborhood is located adjacent and northwest of the project area.

The area to the west of the project area is currently in agricultural use, consisting of row and field crops, grazing, and fallow land; however, applications have been submitted to the City for the development of this area with residential development. With adoption of the City's General Plan (2003) and designation of the area for urban land uses, the area is experiencing an increasing number of development applications to convert agricultural lands to urban development. The area south of the project area also consists of small agricultural and rural residential properties, similar to those found at the project area. Areas to the east of the project area consist of fallow and active agricultural lands. The site immediately adjacent to and east of the Sundance 2 site is designated as General Commercial (GC) and is intended for wholesale, warehousing, and heavy commercial uses, highway-oriented commercial retail, public and quasi-public uses, and similar and compatible uses. Additional residential development similar to the project is proposed further to the east.



Source: EDAW 2005

Regional Location Map

Exhibit 1

The properties that make up the project area are currently zoned AU-20 (Agriculture Urban Reserve) by San Joaquin County, with the expectation that this land would develop with urban land uses. The San Joaquin County General Plan designates the properties as Low Density Residential (R/L), appropriate for single-family neighborhoods. The proposed project would be generally consistent with the County's R/L designation, with the exception of the proposed Medium Density Residential land uses for the Sundance 2 development. The proposed project would also be consistent with the County's AU-20 (Agriculture Urban Reserve) zoning, which indicates that the County has planned for, or at least anticipated, conversion of this land to urban uses. The proposed project includes the pre-zoning and annexation of the site to the City of Manteca. Once annexed, the project area would be subject to the planning jurisdiction of the City of Manteca.

2.1 OLEANDER ESTATES SITE

The site is located on 112.36 acres at an elevation of approximately 27 feet above mean sea level (msl) in an area of very low topographic relief. The regional slope of the area is relatively gentle and dips toward the north. The property currently supports agricultural land (including orchards), residences, barns, a dairy, and other agricultural support facilities (e.g., wells, outbuildings).

2.2 SUNDANCE AND SUNDANCE 2 SITES

The sites, 117.53 acres in total, are at an elevation of approximately 25 feet above msl and in an area of very low topographic relief. The regional slope of the area slopes to the west and site topography is relatively flat. The property currently contains vacant land, agricultural land (used for livestock grazing and crop production), several residences, and other agricultural support facilities (e.g., barns, corrals, and animal shelters).

3. PROJECT CHARACTERISTICS

The project consists of three separate, but geographically linked subdivisions south of the city limits. These subdivisions would consist of: single-family residential units, park land, and commercial space. Additionally, a traffic and vehicular access plan and other site improvements are proposed. These elements are described in greater detail below.

3.1 SINGLE-FAMILY RESIDENTIAL

The proposed developments would include the following:

- ▶ Oleander Estates: 544 units developed on a 112.36-acre site,
- ▶ Sundance: 451 units developed on a 110-acre site, and
- ▶ Sundance 2: 79 units developed on a 7.53-acre site.

All units would be for sale at the market rate. Additional details regarding these proposed developments are described in Table 1 and a lot diagram is presented in Exhibit 2.

3.2 COMMERCIAL SPACE

The project (part of the Sundance 2 subdivision) includes the development of 2.29 acres of commercial space located in the northeast corner of the proposed Sundance development, north of Atherton Parkway and just south of SR 120. No additional details regarding proposed tenants for this space are available as of this writing.

Table 1 Proposed Project Characteristics							
Project Name	Location	Total Site Acreage	Proposed Number of Single-Family Residences	Estimated Number of Residents	Proposed Unit Size (Square Feet)	Proposed Parks and Boys and Girls Club	Proposed Commercial Land Uses
Oleander Estates	South of Woodward Avenue and bounded by Woodward Avenue, Oleander Avenue, Peach Avenue, and Union Road	112.36 acres	544	1,795	1,400–3,000	Two parks (4.79 and 2.12 acres) and a Boys and Girls Club (1.95 acres)	None
Sundance	North of Woodward Avenue and adjacent to Woodward Avenue, Union Road, SR 120, and Airport Way	110 acres	451	1,488	1,200–3,000	Two parks (5.62 and 4.71 acres)	2.29 acres (no particular development proposed)
Sundance 2	North of Woodward Avenue and bounded by Atherton Drive	7.53 acres	79	380	1,400–2,100	None	None
Totals		229.89 acres	1,074	3,663	N/A	19.19 acres	2.29 acres

3.3 PARKS AND BOYS AND GIRLS CLUB

As described in Table 1, four parks are included as part of the project. Two parks (4.79 and 2.12 acres) are associated with the Oleander Estates development, and two parks (5.62 and 4.71 acres) are associated with the Sundance development. Additionally, a 1.95-acre Boys and Girls Club facility is proposed within the Oleander Estates development.

OLEANDER ESTATES PARKS AND BOYS AND GIRLS CLUB

A 4.79-acre park would be located in the vicinity of Union Road and Woodward Avenue, and would include play equipment areas, picnic areas, shade trees and other landscaping, sports fields/courts, grassy areas, and an outdoor amphitheater.

A Boys and Girls Club facility would be located directly adjacent to and east of the 4.79-acre park. The facility would be located on a 1.95-acre site and would include approximately 45 parking spaces. The site would be landscaped and would also include hard-surface sports courts, shade structures, and an outdoor patio. In-door amenities could include a multi-purpose hall, offices, meeting rooms, exercise/sports areas, storage, and a kitchen facility.

A 2.12-acre park would be located in the vicinity of Woodward Avenue and Airport Way, and would include a play equipment area, picnic area, shade trees and other landscaping, and grassy areas.

SUNDANCE PARKS

A 5.62-acre park would be located in the northeastern portion of the Sundance development, bounded by Sparrowhawk Street to the north, Street E to the west, Street C to the east, and Street F to the south. The park would include play areas, sports courts, picnic areas, shade trees and other landscaping, and grassy areas.

A 4.71-acre park would be an expansion of an existing park that is bounded by Red Pheasant Lane to the west, Sparrowhawk Street to the north, and Blue Bird Avenue to the east. The park would include grassy areas, shade trees, and other landscaping.

3.4 TRAFFIC AND VEHICULAR ACCESS PLAN

New public roadways would be constructed to provide pedestrian and vehicular access within the proposed developments and to allow for connections to existing roadways. These roadways would be accessible by the general public and would be maintained by the City.

The proposed circulation plan is shown in Exhibit 2. In general, the circulation plan would consist of existing roads, improved roads along existing roadway alignments, and new roads to provide internal circulation within the project area. The project area is located along the SR 120 corridor. Regional access to the project area is provided by Interstate 5 to the west, SR 120 to the north, and SR 99 to the east. Local roadways in the project area include Woodward Avenue, Oleander Avenue, Peach Avenue, Union Road, Airport Way, and Atherton Drive. These existing roads would prioritize the movement of through traffic while providing some access to adjacent properties.

Some of the existing roadways (i.e., Woodward Avenue, Oleander Avenue, Peach Avenue, and Union Road) would be improved along portions of their existing alignments. Such improvements would include a center median with curb and gutter, bicycle lane, sidewalk, and landscaping. Atherton Drive would be extended in its existing alignment to provide access to the Sundance and Sundance 2 sites from the north and east.

A network of small local neighborhood streets ranging from 47 feet to 60 feet wide would provide access to residential areas within the new developments. Access to the proposed commercial site would be provided from SR 120 and Atherton Drive.

3.5 OTHER IMPROVEMENTS

Other improvements at the project area would include water supply, storm drainage, and sewer facilities, and the provision of on-site landscaping. All utilities would be located underground. Public utility easements would be provided along all street frontages.

Domestic water supply would be provided by the City and would be looped throughout the project area via an existing 12-inch water main located in Woodward Avenue. New 12-inch mains are proposed to be installed in Atherton Drive, Union Road, and Oleander Road, with 8-inch mains installed in the neighborhood streets.

Sewage disposal would be provided via connection to the City's sewer system, specifically, via the existing force main in Woodward Avenue.

Storm drainage would be provided via the City's collection system. Detention basins would be installed on-site, and would pump into the South San Joaquin Irrigation District (SSJID) outfall lines.

4. REQUESTED ENTITLEMENTS

Implementation of the Oleander Estates, Sundance, and Sundance 2 developments would require the following entitlements from the City of Manteca. Such approvals required for the project include, but are not limited to, the following:

- ▶ Adoption of pre-zoning designations for the site (one action);
- ▶ LAFCO approval of annexation of the project area (all three sites) to the City of Manteca (one action);

- ▶ Approval of tentative subdivision maps;
- ▶ Approval of development agreements between the City and developers;
- ▶ Approval of phasing plans for development; and
- ▶ Adoption of design guidelines for the projects.

Additionally, a General Plan Amendment would be required for implementation of the Sundance development. This General Plan Amendment would be needed to:

- ▶ Reduce the amount of land designated as General Commercial (CG), from 12 acres to 2.3 acres;
- ▶ Reduce the amount of land designated as Low Density Residential (LDR), from 95.7 acres to 87.5 acres; and
- ▶ Increase the amount of land designated as Medium Density Residential (MDR), from 4.4 acres to 12 acres.

5. POTENTIAL ENVIRONMENTAL EFFECTS

The Initial Study completed for this project evaluated the potential environmental effects of the proposed project. A copy of the Initial Study is attached. Based on the results of the Initial Study, the proposed project was determined to have less-than-significant impacts, with mitigation, on the following resource areas, which will therefore not require further evaluation in the EIR:

- | | | |
|------------------------|-----------------------------------|--------------------------|
| ▶ Aesthetics | ▶ Hazards and Hazardous Materials | ▶ Population and Housing |
| ▶ Biological Resources | ▶ Land Use and Planning | ▶ Public Services |
| ▶ Geology and Soils | ▶ Mineral Resources | ▶ Recreation |

The proposed project was determined to have potentially significant impacts on the following environmental resources, which therefore require further evaluation in the EIR:

- | | | |
|--------------------------|---------------------------|----------------------------------|
| ▶ Agricultural Resources | ▶ Hydrology/Water Quality | ▶ Transportation and Circulation |
| ▶ Air Quality | ▶ Noise | ▶ Utilities and Service Systems |
| ▶ Cultural Resources | | |

The EIR will identify and describe the potential environmental impacts associated with implementation of the proposed project. Mitigation measures will be recommended where appropriate to reduce potentially significant and significant impacts. The following issues are proposed for analysis.

5.1 AGRICULTURAL RESOURCES

The project area is located southwest of the existing urban core and currently contains agricultural uses such as orchards, livestock grazing, crop production (primarily alfalfa and corn), fallow farmland, dairy operations, other agricultural support facilities (e.g., barns, corrals, and animal shelters), and rural residences and associated outbuildings.

The EIR will describe existing agricultural resources on the project site and in the surrounding area including a description of types of farming activities and description of on-site soils that are suitable for farming activities. The Important Farmland map for San Joaquin County designates the project area as Prime Farmland and

Farmland of Statewide Importance. Implementation of the proposed project would result in the direct conversion of agricultural land to nonagricultural urban use. Mitigation will be recommended where feasible.

5.2 AIR QUALITY

The San Joaquin Valley air basin has been designated as “extreme” non-attainment for ozone standards. Current regional and local air quality conditions in the vicinity of the project site will be described. The discussion of existing conditions will include a summary of historical air quality data, and current air quality planning efforts. Applicable air quality regulatory framework, standards, and significance thresholds will also be addressed.

The EIR will describe regional and local air quality in the vicinity of the project site and evaluate construction and operational impacts to air quality. The project’s estimated air emissions will be quantified and compared to emissions thresholds of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The EIR will evaluate the construction, stationary source, mobile source, and CO emissions that would be generated by project activities.

A list of mitigation measures will be prepared for any impacts found to be significant or potentially significant. The effectiveness of mitigation measures will be assessed in accordance with the SJVAPCD Air Quality Thresholds of Significance.

5.3 CULTURAL RESOURCES

The Manteca area is known to contain a wide variety of prehistoric and historic-era cultural resources including Native American habitation and interment sites, and the remains of early historic ranching and agricultural operations. A record search conducted by the Central California Information Center (CCIC) indicates that no such sites, features, or artifacts have been documented within the project area. However, several cultural resources have been recorded in the general vicinity including the early 20th century Rustic School presently serving as a private residence and situated on the west side of Durham Ferry Road, adjacent to the southwestern-most extent of the project area.

According to the CCIC, a total of three cultural resource investigations have been conducted within the project area. These studies and additional information provided by the CCIC, did not identify any resources in the project area but did note the presence, in archival sources, of several roadways; none of which are currently in existence nor were any traces of these grades documented during the previous studies.

The EIR will include a cultural resource impact assessment for the project site and will consider historic resources in connection with existing buildings on the project site. Field surveys of the project site and a literature review will be completed and summarized in the EIR.

5.4 HYDROLOGY AND WATER QUALITY

The proposed project would increase the amount of impermeable surfaces within the project site, which could cause localized flooding. An increase in storm water runoff could also exacerbate downstream flood hazards, destabilize stream banks, and adversely affect fish, wildlife, and riparian habitat supported by the creeks.

The EIR will summarize the results of a hydrology/water quality report prepared for the proposed project and describe the project’s effect on alteration of drainage patterns, erosion, stormwater discharges, and flooding.

5.5 NOISE

The existing noise environment in and surrounding the project area is influenced by surface transportation noise emanating from vehicular traffic on area roadways (e.g., SR 120). Intermittent noise from surrounding operations in addition to noise from outdoor activities at nearby land uses (e.g., people talking, dogs barking, operation of

landscaping equipment) also contribute, to a lesser extent, to the existing noise environment. Noise-sensitive land uses in the project area consist primarily of residential dwellings. A residential neighborhood is located to the northwest of the project boundary, immediately adjacent to the project area. The area to the south also includes rural residential dwellings.

The EIR will describe the project's construction and operational noise impacts including noise generated from existing and proposed traffic and will compare these impacts to applicable noise thresholds.

5.6 TRANSPORTATION/TRAFFIC

The project is located in southern Manteca, south of SR 120. The project area is generally bounded by SR 120 to the north, Union Road to the east, Peach Avenue to the south, and Airport Way to the west.

The EIR will evaluate the project's impact to regional and local transportation facilities based on a transportation analysis that will assess daily trips, access, and parking.

5.7 UTILITIES AND SERVICE SYSTEMS

The EIR will evaluate the following public utilities: water supply and conveyance, wastewater collection and treatment, and storm drainage. The focus of the analysis will be on whether the proposed project creates demands on services or utilities such that physical changes are needed to address the demands, leading to potential impacts. Specifically, the utility impact assessments will focus on supply, treatment, or generation capacity; distribution or collection infrastructure requirements; and adverse physical changes to the environment from infrastructure improvements.

INITIAL STUDY

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ACRONYMS AND ABBREVIATIONS

APN	Assessor's Parcel Number
ARB	California Air Resources Board
AST	aboveground storage tanks
AFY	acre-foot per year
BMP	best management practices
BP	Business Park
CAA	Federal Clean Air Act
CAAA	Clean Air Act Amendment
CAAQS	California ambient air quality standards
Cal-OSHA	California Occupational Health and Safety Administration
Caltrans	California Department of Transportation
CBC	California Building Standards Code
CCAA	California Clean Air Act
CCIC	Central California Information Center
CCR	California Code of Regulations
Central Valley RWQCB	Central Valley Regional Water Quality Control Board
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CHP	California Highway Patrol
City General Plan	City of Manteca General Plan
CIWMB	California Integrated Waste Management Board
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon dioxide
CWA	Clean Water Act
DFG	California Department of Fish and Game
DWR	Department of Water Resources
EIR	environmental impact report
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessments
ESJCGB	Eastern San Joaquin County Groundwater Basin
FCB	Frontiers Community Builders
federal ESA	Federal Endangered Species Act
FEMA	Federal Emergency Management Agency

FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
GC	General Commercial
gpm	gallons per minute
GO	general obligation
I-5	Interstate 5
ISA	International Society of Arboriculture
kWh	kilowatt-hour
LAFCO	Local Agency Formation Commission
LDR	Low Density Residential
LOS	level of service
MBTA	Migratory Bird Treaty Act
MFD	Manteca Fire Department
mgd	million gallons per day
MLD	Most Likely Descendent
mph	Miles per hour
msl	mean sea level
MUSD	Manteca Unified School District
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NO ₂	nitrogen dioxide
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRCS	U.S. Soil Conservation Service (now called the Natural Resources Conservation Service)
NWP	nationwide permit
OEHHA	Office of Environmental Health Hazard Assessment
P	Park
PCB	polychlorinated biphenyls
PG&E	Pacific Gas and Electric
PM ₁₀	respirable particulate matter
PM _{2.5}	fine particulate matter
ppm	Parts per million
psi	pounds per square inch
R/L	Low Density Residential
SCSWSP	South County Surface Water Supply Project

SIP	State Implementation Plan
SJCDEH	San Joaquin County Department of Environmental Health
SJCOG	San Joaquin Council of Governments
SJMSCP	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO ₂	sulfur dioxide
SOI	Sphere of Influence
SR	State Route
SSJID	South San Joaquin Irrigation District
SWAT	Special Weapons and Tactics
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TPY	tons per year
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
VMT	vehicle miles traveled
WDR	waste discharge requirement
WQFC	Wastewater Quality Control Facility

1 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This document is the Initial Study for the proposed Oleander Estates, Sundance, and Sundance 2 development projects in the City of Manteca, California. This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et seq.*, and the State CEQA Guidelines, Title 14 California Code of Regulations (CCR) Section 15000 *et seq.* An initial study is prepared by a lead agency to determine if a project may have a significant effect on the environment, and thus, is the appropriate environmental documentation. The initial study may rely on expert opinion based on facts, technical studies, or other substantial evidence to document its findings. However, an initial study is neither intended nor required to include the level of detail included in an environmental impact report (EIR).

In accordance with State CEQA Guidelines Section 15064(a), an EIR must be prepared if there is substantial evidence that a project may have a significant effect on the environment. This consideration includes whether a project may contribute considerably to a cumulatively significant impact. Although each of the projects are individual, stand alone developments, they are adjacent to each other, and their impacts, for the most part, accumulate. Thus, this Initial Study addresses all three projects together to determine if the cumulative impacts have the potential to be significant. Further, to avoid segmentation of the three projects and evaluation of their potential environmental impacts, these three project applications are considered together and are analyzed as one “project” in this Initial Study. Preparation of an initial study helps to identify the environmental issues that should be addressed in the EIR (i.e., items identified in the Initial Study as having a potentially significant impact) and those that need not be addressed (i.e., items identified in the initial study as having a less-than-significant impact with mitigation, a less-than-significant impact, or no impact).

1.2 RELATIONSHIP TO THE CITY OF MANTECA GENERAL PLAN AND GENERAL PLAN EIR

The City of Manteca General Plan (City of Manteca 2003a) and General Plan EIR (City of Manteca 2003b) address program-level impacts associated with the anticipated future physical development of the City. This Initial Study describes the site-specific impacts associated with development of the proposed project and compares the project-specific impacts with impacts identified in the City of Manteca General Plan and General Plan EIR. Consistent with Section 15183 of the CEQA Guidelines, this Initial Study also identifies impacts that are “peculiar” or different from those identified in the General Plan EIR. Section 15183 of the Guidelines explains:

- (a) Mandates that projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies.
- (b) In approving a project meeting the requirements of this section, a public agency shall limit its examination of environmental effects to those which the agency determines, in an initial study or other analysis:
 - (1) Are peculiar to the project or the parcel on which the project would be located,
 - (2) Were not analyzed as significant effects in a prior EIR on the zoning action, general plan, or community plan, with which the project is consistent,

- (3) Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action, or
 - (4) Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR.
- (c) If an impact is not peculiar to the parcel or to the project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards, as contemplated by subdivision (e) below, then an additional EIR need not be prepared for the project solely on the basis of that impact.

1.3 LEAD AGENCY/PROJECT APPLICANTS

The lead agency is the public agency with primary responsibility over the proposed project. The lead agency for the proposed project is the City of Manteca. The project applicants are Raymus Homes (for Oleander Estates) and Frontiers Community Builders (FCB) Homes (for Sundance and Sundance 2).

1.4 SUPPLEMENTAL INFORMATION REFERENCED IN THE INITIAL STUDY

Numerous studies have been prepared by the applicants for the proposed project in support of the application. These studies are referenced in respective sections of this Initial Study and are available for public review at the City of Manteca Community Development Department, 1001 West Center Street, Manteca, California. They include:

- ▶ Environmental site assessments, prepared for Sundance and Sundance 2 (ATC Associates 2002, 2003a, 2003b, 2003c),
- ▶ Phase I Environmental Site Assessment prepared for Oleander Estates (Advanced GeoEnvironmental 2004),
- ▶ Geotechnical Services Reports prepared for Sundance and Sundance 2 (Kleinfelder 2002, 2004a, 2004b, 2004c),
- ▶ Draft Geotechnical Investigation prepared for Oleander Estates (Neil O. Anderson and Associates 2005).

Other key documents referenced in this Initial Study include the City of Manteca General Plan 2023 and the Manteca General Plan 2023 Draft Environmental Impact Report.

Chapter 5 of this Initial Study includes a complete References Cited listing.

1.5 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is to evaluate the potential environmental impacts of the proposed project. Mitigation measures have been recommended, where available, to reduce or eliminate identified significant and/or potentially significant impacts.

This Initial Study is divided into the following 5 chapters:

- ▶ Chapter 1 provides an introduction and describes the purpose and organization of this document;
- ▶ Chapter 2 provides a detailed description of the proposed project;

- ▶ Chapter 3 describes the environmental setting for each of the environmental subject areas; evaluates a range of impacts identified as “no impact,” “less-than-significant,” “less-than-significant with mitigation incorporated,” or “potentially significant” in response to the environmental checklist; and provides mitigation measures, where appropriate, to mitigate potentially significant impacts to a less-than-significant level;
- ▶ Chapter 4 identifies the preparers of this Initial Study; and
- ▶ Chapter 5 identifies the references used in preparation of this Initial Study.

2 PROJECT DESCRIPTION

The proposed project consists of three separate, but geographically related, residential subdivision development projects. In general, these developments are proposed to provide single-family residences and related amenities (e.g., services, parks, roadways) in the southern portion of the City of Manteca, south of State Route (SR) 120.

2.1 PROJECT LOCATION

The project is located on approximately 230 acres within the City of Manteca, which is located near the northern end of the San Joaquin Valley of central California, at the junction of SR 99 and SR 120, approximately 75 miles east of San Francisco and 55 miles south of Sacramento. Stockton is located 12 miles to the north of Manteca. Exhibit 2-1 shows the project's regional location.

The project area is located along the SR 120 corridor. Regional access to the project area is provided by Interstate 5 (I-5) to the west, SR 120 to the north, and SR 99 to the east. Local roadways in the project area include Woodward Avenue, Oleander Avenue, Peach Avenue, Union Road, Airport Way, and Atherton Drive, as shown in Exhibit 2-2.

The project area is located outside of the city limits, but within the City of Manteca's Sphere of Influence (SOI) and the city's Primary Urban Service Boundary (see Exhibit 2-1). As a result, implementation of the project would require the annexation of the project area to the City. An annexation is the incorporation of land and water area into an existing community (e.g., City of Manteca) with a resulting change in the boundaries of that community. The State of California has delegated the authority for approving annexations to the San Joaquin County Local Agency Formation Commission (LAFCO). LAFCO would be the agency responsible for approving the annexation of the project to the city. Once annexed, the project would be subject to the City's discretionary land use authority.

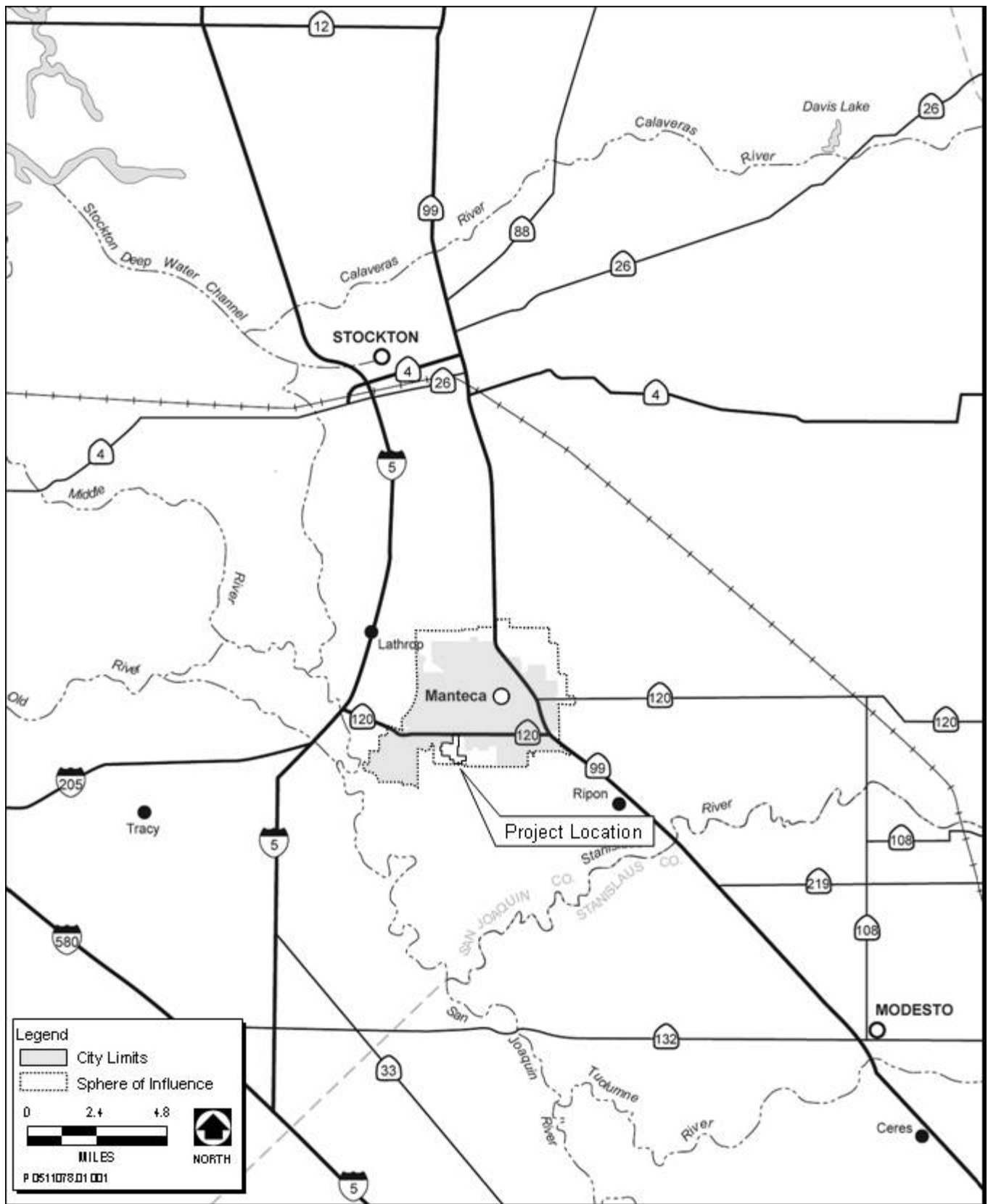
2.2 PROJECT SETTING

In general, existing land uses within the project area include small agricultural and rural residential properties. The area north of SR 120 is substantially developed with conventional residential neighborhoods. Many of these established neighborhoods include community parks and associated amenities. A small residential neighborhood is located adjacent and northwest of the project area.

The area to the west of the project area is currently in agricultural use, consisting of row and field crops, grazing, and fallow land; however, applications have been submitted to the City for the development of this area with residential development. The area south of the project area also consists of small agricultural and rural residential properties, similar to those found at the project area. Areas to the east of the project area consist of fallow and active agricultural lands. The site immediately adjacent to and east of the Sundance 2 site is designated as General Commercial (GC) and is intended for wholesale, warehousing, and heavy commercial uses, highway-oriented commercial retail, public and quasi-public uses, and similar and compatible uses. Additional residential development similar to the project is proposed further to the east.

2.2.1 OLEANDER ESTATES SITE

The site is located on 112.36 acres at an elevation of approximately 27 feet above mean sea level (msl) in an area of very low topographic relief. The regional slope of the area is relatively gentle and dips toward the north. The property currently supports agricultural land (including orchards), residences, barns, a dairy, and other agricultural support facilities (e.g., wells, outbuildings). (Advanced GeoEnvironmental 2004).



Source: EDAW 2005

Regional Location Map

Exhibit 2-1

2.2.2 SUNDANCE AND SUNDANCE 2 SITES

The sites, 117.53 acres in total, are at an elevation of approximately 25 feet above msl and in an area of very low topographic relief. The regional slope of the area slopes to the west and site topography is relatively flat. The property currently contains vacant land, agricultural land (used for livestock grazing and crop production), several residences, and other agricultural support facilities (e.g., barns, corrals, and animal shelters) (ATC Associates 2002, 2003).

2.3 PROJECT CHARACTERISTICS

The project consists of three separate, but geographically linked subdivisions, south of the city limits. These subdivisions would consist of: single-family residential units, parkland, and commercial space. Additionally, a traffic and vehicular access plan and other site improvements are proposed. These elements are described in greater detail below.

2.3.1 SINGLE-FAMILY RESIDENTIAL

The proposed developments would include the following:

- ▶ Oleander Estates: 544 units developed on a 112.36-acre site,
- ▶ Sundance: 451 units developed on a 110-acre site, and
- ▶ Sundance 2: 79 units developed on a 7.53-acre site.

All units would be for sale at the market rate. Additional details regarding these proposed developments are described in Table 2-1 and a lot diagram is presented in Exhibit 2-2.

Table 2-1 Proposed Project Characteristics							
Project Name	Location	Total Site Acreage	Proposed Number of Single-Family Residences	Estimated Number of Residents	Proposed Unit Size (Square Feet)	Proposed Parks and Boys and Girls Club	Proposed Commercial Land Uses
Oleander Estates	South of Woodward Avenue and bounded by Woodward Avenue, Oleander Avenue, Peach Avenue, and Union Road	112.36 acres	544	1,795	1,400–3,000	Two parks (4.79 and 2.12 acres) and a Boys and Girls Club (1.95 acres)	None
Sundance	North of Woodward Avenue and adjacent to Woodward Avenue, Union Road, SR 120, and Airport Way	110 acres	451	1,488	1,200–3,000	Two parks (5.62 and 4.71 acres)	2.29 acres (no particular development proposed)
Sundance 2	North of Woodward Avenue and bounded by Atherton Drive	7.53 acres	79	380	1,400–2,100	None	None
Totals		229.89 acres	1,074	3,663	N/A	19.19 acres	2.29 acres

2.3.2 COMMERCIAL SPACE

The project (part of the Sundance 2 subdivision) includes the development of 2.29 acres of commercial space located in the northeast corner of the proposed Sundance development, north of Atherton Parkway and just south of SR 120. No additional details regarding proposed tenants for this space are available as of this writing.

2.3.3 PARKS AND BOYS AND GIRLS CLUB

As described in Table 2-1, four parks are included as part of the project. Two parks (4.79 and 2.12 acres) are associated with the Oleander Estates development, and two parks (5.62 and 4.71 acres) are associated with the Sundance development. Additionally, a 1.95-acre Boys and Girls Club facility is proposed within the Oleander Estates development.

OLEANDER ESTATES PARKS AND BOYS AND GIRLS CLUB

A 4.79-acre park would be located in the vicinity of Union Road and Woodward Avenue, and would include play equipment areas, picnic areas, shade trees and other landscaping, sports fields/courts, grassy areas, and an outdoor amphitheater.

A Boys and Girls Club facility would be located directly adjacent to and east of the 4.79-acre park. The facility would be located on a 1.95-acre site and would include approximately 45 parking spaces. The site would be landscaped and would also include hard-surface sports courts, shade structures, and an outdoor patio. In-door amenities could include a multi-purpose hall, offices, meeting rooms, exercise/sports areas, storage, and a kitchen facility.

A 2.12-acre park would be located in the vicinity of Woodward Avenue and Airport Way, and would include a play equipment area, picnic area, shade trees and other landscaping, and grassy areas.

SUNDANCE PARKS

A 5.62-acre park would be located in the northeastern portion of the Sundance development, bounded by Sparrowhawk Street to the north, Street E to the west, Street C to the east, and Street F to the south. The park would include play areas, sports courts, picnic areas, shade trees and other landscaping, and grassy areas.

A 4.71-acre park would be an expansion of an existing park that is bounded by Red Pheasant Lane to the west, Sparrowhawk Street to the north, and Blue Bird Avenue to the east. The park would include grassy areas, shade trees, and other landscaping.

2.3.4 TRAFFIC AND VEHICULAR ACCESS PLAN

New public roadways would be constructed to provide pedestrian and vehicular access within the proposed developments and to allow for connections to existing roadways. These roadways would be accessible by the general public and would be maintained by the City.

The proposed circulation plan is shown in Exhibit 2-2. In general, the circulation plan would consist of existing roads, improved roads along existing roadway alignments, and new roads to provide internal circulation within the project area. The project area is located along the SR 120 corridor. Regional access to the project area is provided by Interstate 5 to the west, SR 120 to the north, and SR 99 to the east. Local roadways in the project area include Woodward Avenue, Oleander Avenue, Peach Avenue, Union Road, Airport Way, and Atherton Drive. These existing roads would prioritize the movement of through traffic while providing some access to adjacent properties.

Some of the existing roadways (i.e., Woodward Avenue, Oleander Avenue, Peach Avenue, and Union Road) would be improved along portions of their existing alignments. Such improvements would include a center median with curb and gutter, bicycle lane, sidewalk, and landscaping. Atherton Drive would be extended in its existing alignment to provide access to the Sundance and Sundance 2 sites from the north and east.

A network of small local neighborhood streets ranging from 47 feet to 60 feet wide would provide access to residential areas within the new developments. Access to the proposed commercial site would be provided from SR 120 and Atherton Drive.

2.3.5 OTHER IMPROVEMENTS

Other improvements would include water supply, storm drainage, and sewer facilities, and the provision of on-site landscaping. All utilities would be located underground. Public utility easements would be provided along all street frontages.

Domestic water supply would be provided by the City and would be looped throughout the project area via an existing 12-inch water main located in Woodward Avenue. New 12-inch mains are proposed to be installed in Atherton Drive, Union Road, and Oleander Road, with 8-inch mains installed in the neighborhood streets.

Sewage disposal would be provided via connection to the City's sewer system, specifically, via the existing force main in Woodward Avenue.

Storm drainage would be provided via the City's collection system. Detention basins would be installed on-site, and would pump into the South San Joaquin Irrigation District (SSJID) outfall lines.

2.4 PROJECT CONSTRUCTION

Construction of the three developments would likely begin in 2006. Construction would proceed in phases with development of approximately 100 lots at a time for both the Oleander Estates and Sundance developments. From the start of road grading construction activities to the final house completion, Oleander Estates and Sundance are anticipated to be completed in approximately 6 to 7 years.

No imported fill material is anticipated, and all native soils materials required for construction activities would be obtained on-site. While estimates of the volume of material to be moved are not known at this stage of project design, the on-site movement of material is expected to be minimal, as the plan would be to achieve a balanced site that matches the surrounding areas and follows, when possible, the natural topography of the land. Grading plans will be prepared following tentative map submittal, in accordance with the City's requirements.

2.5 ENTITLEMENTS

Implementation of the Oleander Estates, Sundance, and Sundance 2 developments would require the following entitlements from the City of Manteca:

- ▶ Adoption of pre-zoning designations for the site (one action);
- ▶ LAFCO approval of annexation of the project area (all three sites) to the City of Manteca (one action);
- ▶ Approval of tentative subdivision maps;
- ▶ Approval of development agreements between the City and developers;
- ▶ Approval of phasing plans for development; and
- ▶ Adoption of design guidelines for the projects.

Additionally, a General Plan Amendment would be required for implementation of the Sundance development. This General Plan Amendment would be needed to:

- ▶ Reduce the amount of land designated as General Commercial (CG), from 12 acres to 2.3 acres;
- ▶ Reduce the amount of land designated as Low Density Residential (LDR), from 95.7 acres to 87.5 acres; and
- ▶ Increase the amount of land designated as Medium Density Residential (MDR), from 4.4 acres to 12 acres.

3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION	
1. Project Title:	Oleander, Sundance, and Sundance 2 Development Projects
2. Lead Agency Name and Address:	City of Manteca, 1001 West Center Street, Manteca, CA 95337
3. Contact Person and Phone Number:	Ben Cantu, City of Manteca Planning Director, (209) 239-8424
4. Project Location:	City of Manteca, San Joaquin County, CA
5. Project Sponsor's Name and Address:	Oleander Estates: Raymus Homes, 544 East Yosemite Avenue, Manteca, CA 95336 Sundance and Sundance 2: FCB Homes, 10100 Trinity Parkway, Suite 420, Stockton, CA 95219
6. General Plan Designation:	See Chapter 2, Project Description
7. Zoning:	See Chapter 2, Project Description
8. Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)	See Chapter 2, Project Description
9. Surrounding Land Uses and Setting: (Briefly describe the project's surroundings)	See Chapter 2, Project Description
10. Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement)	City of Manteca and LAFCO
ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:	
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.	
☐ Aesthetics	☒ Agriculture Resources
☐ Biological Resources	☒ Cultural Resources
☐ Hazards & Hazardous Materials	☒ Hydrology / Water Quality
☐ Mineral Resources	☒ Noise
☐ Public Services	☐ Recreation
☒ Utilities / Service Systems	☒ Mandatory Findings of Significance
	☒ Air Quality
	☐ Geology / Soils
	☐ Land Use / Planning
	☐ Population / Housing
	☒ Transportation / Traffic
	☐ None With Mitigation

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared. ☐

I find that although the proposed project **COULD** have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared. ☐

I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required. ☐

I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed. ☒

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. ☐

Kathleen Wold
Signature

1/6/2006
Date

Kathleen Wold
Printed Name

Planning Manager
Title

City of Manteca
Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less-Than-Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
9. The explanation of each issue should identify: the significance criteria or threshold, if any, used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
I.	Aesthetics. Would the project:				
	a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
	b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
	c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
	d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

The project area is located in a rural farm community, southwest of the developing urban core of the City of Manteca, with small agricultural and rural residential properties located throughout the site.

The topography of the land is generally flat with an elevation of 25–27 feet above mean sea level (msl). The Oleander Estates site currently contains agricultural land (including orchards), residences, barns, a dairy, and other agricultural support facilities (e.g., outbuildings). The Sundance and Sundance 2 site currently contains vacant land, agricultural land (used for livestock grazing and crop production), several residences, and other agricultural support facilities (e.g., barns, corrals, and animal shelters). Views from roadways near the project area consist of scattered homesteads, fallowed land, orchards, and row crops.

In general, land surrounding the project area is mostly agricultural and rural residential. However, some areas are being converted to commercial and residential land uses and several residential and commercial development projects, in various planning and design stages, are proposed in the general vicinity of the project area. SR 120 forms the northern boundary of the site, with residential development located to the north.

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) indicated that buildout of the General Plan Study Area, including the project area, would result in significant and unavoidable impacts to aesthetics and visual resources with no feasible mitigation because the new development would degrade existing views of open space and agricultural land.

a) Have a substantial adverse effect on a scenic vista?

Less-than-significant impact. A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. The project area does not contain any aesthetic resources that would be considered a scenic vista, as it primarily consists of agricultural lands and rural residences that are relatively common in other areas of the County and are not unique in the surrounding visual setting. Further, because the on-site agricultural production activities have altered the natural landscape, the project area does not provide views of the indigenous natural landscape.

The project area is generally flat and no areas that would qualify as a scenic vista are located on or near the project area. Because the project would not have a substantial adverse affect on a scenic vista, this impact would be less than significant.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less-than-significant impact. There are no state-designated highways or eligible routes or roadways in the immediate project area. The nearest state-designated highway segment is a less-than-one-mile segment of I-5, from the San Joaquin County/Stanislaus County line to Interstate 580, southwest of the project area. The project area would not be visible from this scenic highway segment and would not alter views from this segment. Therefore, this impact would be less than significant.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less-than-significant impact. The project area currently consists of agricultural land and rural residential uses. Implementation of the project would result in conversion of these uses to urban development and supporting land uses (e.g., roadways and parks), which would result in substantial alteration of the visual character of the site.

The new residential developments would be visible from various locations within the community, from local roadways and highways, and from nearby agricultural areas. The primary viewer groups would be the residents of the new subdivisions, residents at nearby residential developments, and motorists traveling on local project area roadways and SR 120. While this new development would alter the current views of the site, which are primarily views of agricultural fields, orchards, and rural residences, it is anticipated that views of the new residential developments would be similar to views of established urban settings found elsewhere in the project vicinity. Further, the visual design of the project would be consistent with the City of Manteca's aesthetic principles for residential developments and the City does not consider the project as proposed to represent a substantial visual impact. Therefore, this impact would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than significant with mitigation. Existing nighttime lighting sources in the project vicinity primarily include the existing adjacent residential neighborhoods, and street and highway lighting. Development of the proposed project would introduce a new source of nighttime lighting that could be visible to nearby land uses. Specifically, the proposed project would require lighting of roadways, parks, residences, and the commercial site. This new lighting would be generally consistent with existing lighting associated with nearby development. Moreover, the proposed project would be designed to comply with General Plan Policy CD-P-44, which requires the provision of minimal levels of street, parking, building, site, and public area lighting to meet safety standards and provide direction; and Policy CD-P-45, which requires the provision of directional shielding for all exterior lighting to minimize the annoyance of direct or indirect glare (City of Manteca 2003a). However, implementation of the project would result in the introduction of a new source of substantial light and glare. This would be a significant impact. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

Mitigation Measure VISUAL 1: Submit a Detailed Lighting Plan.

The project applicants shall submit a detailed lighting plan, in conformance with City of Manteca standards, to minimize the encroachment of project-related lighting to the maximum degree feasible to adjacent areas before project approval. The lighting plan shall specify protective measures such as down- and side-shielding, and/or the use of directional lighting. Other features such as low-sodium filaments may also be incorporated into the lighting plan to minimize the encroachment of glare on off-site areas.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
II. Agricultural Resources.					
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.					
Would the project:					
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☒	☐	☐	☐
b)	Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☒	☐
c)	Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☒	☐	☐	☐

ENVIRONMENTAL SETTING

The project area is located southwest of the existing urban core and currently contains agricultural uses such as orchards, livestock grazing, crop production (primarily alfalfa and corn), fallow farmland, dairy operations, other agricultural support facilities (e.g., barns, corrals, and animal shelters), and rural residences and associated outbuildings.

Farmlands are mapped by the State of California Department of Conservation under the Farmland Mapping and Monitoring Program (FMMP), which was created to provide data for decision makers for use in planning for the current and future use of the State's agricultural lands. Farmlands are classified using the following eight categories: Prime Farmland; Farmland of Statewide Importance; Unique Farmland; Farmland of Local Importance; Grazing Land; Urban or Built-Up Land; Other Land; and Water. Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance are often described together under the term "Important Farmland." Mapping is conducted on a county-wide scale, with minimum mapping units of 10 acres unless otherwise specified. Most of the Project Site (approximately 228 acres of the total of 230-acre site) is designated as Important Farmland (approximately 42 acres), Farmland of Statewide Importance (approximately 174 acres), and Farmland of Local Importance (approximately 12 acres).

The properties that make up the proposed project area are currently zoned AU-20 (Agriculture Urban Reserve) by San Joaquin County. This zoning category is appropriate for areas expected to become urban, and includes areas currently undeveloped or devoted to agriculture, but within the logical path of urban development or an urban community. The maximum density within the AU zone is one dwelling unit per 20 gross acres. Typical uses include crop production, feed and grain storage and sales, and animal raising. Agricultural processing and animal feeding and sales activities are not permitted. (San Joaquin County 1992). The General Plan further states:

Lands designated Agriculture-Urban Reserve shall be preserved in agricultural use until the need for additional urban land is demonstrated and infrastructure is available to service the development. A General Plan amendment shall be required before urban development is permitted.

DISCUSSION

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Potentially significant impact. The Important Farmland map for San Joaquin County designates the majority of the project site as Important Farmland. Implementation of the proposed project would result in the direct conversion of agricultural land to nonagricultural urban use.

The City General Plan designates the majority of the project area for Low Density Residential (LDR, 2.1 to 8 dwelling units per acre) uses, with smaller portions designated for Park (P), Business Park (BP), and GC uses. These designations indicate that the City has planned for conversion of this agricultural land to urban uses, and that the General Plan does not envision nor designate this area for permanent agricultural uses. The EIR for the City General Plan found that conversion of prime agricultural land, including the project area, to urban uses would be a significant and unavoidable impact with no feasible mitigation. As part of adopting the General Plan, the City Council adopted Findings of Fact and a Statement of Overriding Considerations that indicated urban development was of greater benefit to the community than preserving agricultural land within city limits (City of Manteca 2003b).

Although conversion of this land to urban uses would be consistent with the General Plan, the project would result in significant farmland impacts. Implementation of the following mitigation measure would reduce the project's impacts to farmland resources, but not to a less-than-significant level.

Mitigation Measure AG 1: Participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

The project applicants shall participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Appropriate fees shall be paid by the project applicants to the City for forwarding to the San Joaquin Council of Governments (SJCOG) on a per-acre basis for lost agricultural land during development of the proposed project and associated off-site utility infrastructure. The SJCOG will use these funds to purchase conservation easements on agricultural and habitat lands in the project vicinity (in the Central Index Zone identified in the SJMSCP). The preservation in perpetuity of agricultural lands through the SJMSCP, a portion of which would consist of Prime Farmland, would ensure the continued protection of farmland in the project vicinity, partially offsetting project impacts.

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

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

Less-than-significant impact. The project would involve the development of urban uses on existing agricultural land. The properties that make up the project area are currently zoned AU-20 (Agriculture Urban Reserve) by San Joaquin County, with the expectation that this land would become urban. None of the project area is currently under a Williamson Act contract (City of Manteca 2003b). The proposed project would be consistent with the intent of the County's AU-20 (Agriculture Urban Reserve) zoning, which indicates that the County has planned for, or at least anticipated, conversion of this land to urban uses. The project includes the pre-zoning and annexation of the site to the City of Manteca. Once annexed, the project area would be subject to the planning jurisdiction of the City of Manteca, which does not designate the project area for agricultural use. Therefore, this impact would be less than significant.

c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

Potentially significant impact. As noted above in item a), implementation of the project would result in the direct conversion of agricultural land to nonagricultural urban use. While implementation of Mitigation Measure AG 1, which directs the project applicants to participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, would reduce this impact, full compensation for the loss of agricultural land would not be achieved. Thereafter, this impact would remain significant and unavoidable after mitigation.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
III. Air Quality.					
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.					
Would the project:					
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed project area is located in San Joaquin County, California, which is under the local jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). San Joaquin County is within the San Joaquin Valley Air Basin (SJVAB), which also includes all of Fresno, Kings, Madera, Merced, Stanislaus, and Tulare counties, and the western portion of Kern County.

EXISTING AIR QUALITY CONDITIONS

The California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone, carbon dioxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable and fine particulate matter (PM₁₀ and PM_{2.5}), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health and extensive health-effects criteria documents are available, they are commonly referred to as “criteria air pollutants.”

The EPA has established primary and secondary national ambient air quality standards (NAAQS) for the following criteria air pollutants: ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead. The primary standards protect the public health and the secondary standards protect public welfare. In addition to the NAAQS, the ARB has established California ambient air quality standards (CAAQS) for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard setting process and the interpretation of the studies. In addition, the

CAAQS incorporate a margin of safety to protect sensitive individuals. The NAAQS and CAAQS as discussed above are listed in Table 3.3-1.

Table 3.3-1 Ambient Air Quality Standards and Designations						
Pollutant	Averaging Time	California		National Standards ¹		
		Standards ^{2,3}	Attainment Status ⁴	Primary ^{3,5}	Secondary ^{3,6}	Attainment Status ⁷
Ozone ⁸	1-hour	0.09 ppm ¹² (180 µg/m ³)	N (Severe)	0.12 ppm (235 µg/m ³)	Same as Primary Standard	N (Extreme)*
	8-hour	0.07 ppm (137 µg/m ³) ¹¹	–	0.08 ppm (157 µg/m ³)		N (Serious)
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m ³)	A	35 ppm (40 mg/m ³)	–	U/A
	8-hour	9 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)		
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	–	–	0.053 ppm (100 µg/m ³)	Same as Primary Standard	U/A
	1-hour	0.25 ppm (470 µg/m ³)	A	–		–
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	–	–	0.030 ppm (80 µg/m ³)	–	U
	24-hour	0.04 ppm (105 µg/m ³)	A	0.14 ppm (365 µg/m ³)	–	
	3-hour	–	–	–	0.5 ppm (1300 µg/m ³)	
	1-hour	0.25 ppm (655 µg/m ³)	A	–	–	–
Respirable Particulate Matter (PM ₁₀) ⁸	Annual Arithmetic Mean	20 µg/m ³ *	N	50 µg/m ³ ⁹	Same as Primary Standard	N (Serious)
	24-hour	50 µg/m ³		150 µg/m ³ ⁹		
Fine Particulate Matter (PM _{2.5}) ⁹	Annual Arithmetic Mean	12 µg/m ³ *	N	15 µg/m ³	Same as Primary Standard	N
	24-hour	–	–	65 µg/m ³		
Lead ¹⁰	30-day Average	1.5 µg/m ³	A	–	–	–
	Calendar Quarter	–	–	1.5 µg/m ³	Same as Primary Standard	–
Sulfates	24-hour	25 µg/m ³	A	No National Standards		
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m ³)	U			
Vinyl Chloride ¹⁰	24-hour	0.01 ppm (26 µg/m ³)	U/A			
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient of 0.23 per kilometer—visibility of 10 miles or more (0.07—30 miles or more for Lake Tahoe) because of particles when the relative humidity is less than 70%.	U			

**Table 3.3-1
Ambient Air Quality Standards and Designations**

Pollutant	Averaging Time	California		National Standards ¹		
		Standards ^{2,3}	Attainment Status ⁴	Primary ^{3,5}	Secondary ^{3,6}	Attainment Status ⁷
¹ The 1-hour ozone NAAQS was revoked on June 15, 2005.						
¹ National standards (other than ozone, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM ₁₀ 24-hour standard is attained when 99% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. The PM _{2.5} 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the EPA for further clarification and current federal policies.						
² California standards for ozone, CO (except Lake Tahoe), SO ₂ (1- and 24-hour), NO ₂ , PM, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.						
³ Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.						
⁴ Unclassified (U): a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.						
Attainment (A): a pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a 3-year period.						
Nonattainment (N): a pollutant is designated nonattainment if there was a least one violation of a state standard for that pollutant in the area.						
Nonattainment/Transitional (NT): is a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the standard for that pollutant.						
⁵ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.						
⁶ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.						
⁷ Nonattainment (N): any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.						
Attainment (A): any area that meets the national primary or secondary ambient air quality standard for the pollutant.						
Unclassifiable (U): any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.						
⁸ New federal 8-hour ozone and fine particulate matter standards were promulgated by the EPA on July 18, 1997.						
⁹ On June 20, 2002, ARB approved staff recommendation to revise the PM ₁₀ annual average standard to 20 µg/m ³ and to establish an annual average standard for PM _{2.5} of 12 µg/m ³ . These standards took effect on July 5, 2003. Information regarding these revisions can be found at http://www.arb.ca.gov/research/aaqs/std-rs.htm .						
¹⁰ ARB has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.						
¹¹ This concentration was approved by the ARB on April 28, 2005 and is expected to become effective in early 2006.						
¹² ppm = parts per million						
Source: California Air Resources Board 2005, U.S. Environmental Protection Agency 2005						

Criteria air pollutant concentrations are measured at several monitoring stations in San Joaquin County.

Table 3.3-2 summarizes the annual ambient air quality data (2002–2004) from the stations in closest in proximity to the proposed project area. Both ARB and the EPA use this type of monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. Unclassified is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of the nonattainment designation, called nonattainment-transitional. The nonattainment-transitional designation is given to nonattainment areas that are progressing and nearing attainment. Attainment designations for the year 2004 with respect to San Joaquin County are shown in Table 3.3-1 for each criteria air pollutant.

**Table 3.3-2
Summary of Annual Ambient Air Quality Data (2002–2004) ¹**

	2002	2003	2004
OZONE			
Maximum concentration (1-hr/8-hr avg, ppm)	0.107/ 0.096	0.103/ 0.089	0.109/ 0.097
Number of days state standard exceeded 1-hr	11	5	4
Number of days national 1-hr/8-hr standard exceeded	0/3	0/2	0/1
FINE PARTICULATE MATTER (PM_{2.5})			
Maximum concentration (µg/m ³)	64.0	45.0	41.0
Number of days national standard exceeded	0	0	0
RESPIRABLE PARTICULATE MATTER (PM₁₀)			
Maximum concentration (µg/m ³)	87.0	88.0	60.0
Number of days state standard exceeded (measured/calculated ²)	10/58.4	3/17.3	3/18.0
Number of days national standard exceeded (measured/calculated ²)	0/0	0/0	0/0
¹ Measurements from the Tracy – 24371 Patterson Pass Road or Stockton – Hazelton Street stations. ² Measured days are those days that an actual measurement was greater than the level of the state daily standard or the national daily standard. Measurements are typically collected every 6 days. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year. Sources: California Air Resources Board 2005, U.S. Environmental Protection Agency 2005			

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, could violate air quality standards or contribute substantially to the current nonattainment status for ozone and PM₁₀. This impact was determined to be significant and unavoidable. The San Joaquin Valley is currently designated as “severe attainment” for the state ozone 1-hour standard, and “serious nonattainment” for the federal 1-hour ozone and 24-hour PM₁₀ standards. It was determined that because any additional sources of these pollutants would contribute to this nonattainment status, there are no mitigation measures that would reduce the increase of these pollutants to a less-than-significant level.

As a program-level analysis, the City of Manteca General Plan EIR did not evaluate the site-specific impacts related to individual development projects (e.g., toxic air emissions), which would result from implementation of the proposed project. Item d) below, addresses this issue.

a) Conflict with or obstruct implementation of the applicable air quality plan?

Potentially significant impact. The SJVAPCD has adopted several nonattainment plans to achieve state and federal air quality standards in compliance with the requirements of the Federal Clean Air Act (CAA) and amendments thereof Clean Air Act Amendment (CAAA); and the California Clean Air Act (CCAA). These air quality attainment plans, the most recent of which are the 2003 PM₁₀ and 2004 Extreme Ozone Attainment Demonstration Plans, present comprehensive strategies to reduce ozone precursor, PM, and CO emissions from

stationary, area, mobile, and indirect sources. Such strategies include the adoption of rules and regulations; enhancement of CEQA participation; implementation of a new and modified indirect source review program; adoption of local air quality plans; and stationary, mobile, and indirect-source control measures. In coordination with the ARB and other north/central California air districts, preliminary work has begun on developing the 8-hour Ozone Attainment Demonstration Plan for the San Joaquin Valley. The anticipated date for submitting the Valley's 8-hour ozone attainment demonstration plan to EPA is projected to be June 15 2007. The 2006 PM₁₀ Plan is also under development and due to EPA by March 31, 2006.

Additionally, the region's transportation plan must conform with or demonstrate that it does not hinder the region's chances of attaining air quality standards. Transportation planners must analyze the emissions anticipated from transportation plans and improvement programs and ensure that they remain within the plan's emissions budget for mobile sources. The plan's emissions budget is based on the population growth levels and distribution identified in the local plans combined with the cumulative impacts from current and proposed development projects. Thus, projects that result in an increase in population or employment growth beyond that identified in the local plans may result in a substantial increase in vehicle miles traveled (VMT), leading to an increase in mobile source emissions, which may conflict with SJVAPCD's air quality planning efforts. Consequently, an increase in VMT beyond projections in local plans could result in a significant adverse incremental effect on the region's ability to attain and/or maintain state and national ambient air quality standards.

Because project implementation would require a General Plan Amendment (see Chapter 2.5, "Entitlements") and because the project would result in a potentially significant impact with respect to long-term regional (operational) emissions (see discussion in item b) below), the project could potentially conflict with implementation of the applicable SIP. This impact would be potentially significant.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Short-term Construction Air Pollutant Emissions

Potentially significant impact. Construction emissions are described as "short term" or temporary in duration and have the potential to represent a significant impact with respect to air quality, especially in the case of PM₁₀. Fugitive dust emissions are associated primarily with site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT on- and off-site. ROG and NO_x emissions are associated primarily with construction equipment exhaust and the application of architectural coatings.

With respect to the proposed project, construction activity would temporarily generate emissions of ROG, NO_x, and PM₁₀ from site grading and excavation, paving, demolition, motor vehicle exhaust associated with construction equipment, employee commute trips, and material transport (especially on unpaved surfaces), and other construction operations.

Specific construction information is not available at this time. However, because the project size is approximately ten times greater than SJVAPCD's small project analysis levels, short-term unmitigated construction-generated emissions would be anticipated to exceed SJVAPCD's significance thresholds for ROG and NO_x (10 tons per year [TPY]). In addition, the project description does not specifically indicate that implementation would comply with SJVAPCD's Regulation VIII (Fugitive Dust Prohibitions). As a result, such emissions of ozone precursors (ROG and NO_x) and PM could violate or contribute substantially to concentrations that exceed the ambient air quality standards, especially when considering the existing nonattainment conditions of San Joaquin County (see Table 3.3-1). This impact would be potentially significant.

Implementation of the following mitigation measure would reduce this impact, but not to a less-than-significant level. This is because mitigation measure AQ-1 would reduce impacts related to PM₁₀, but not ROG. Even with

this mitigation, impacts related to ROG would exceed SJVAPCD's significance threshold and would therefore remain significant and unavoidable.

Mitigation Measure AQ-1: Comply with all Applicable Requirements of SJVAPCD Regulation VIII (Fugitive Dust Prohibitions).

It is recognized that SJVAPCD Regulation VIII, upon which the following control measures are based, has recently undergone revision and that these control measures are subject to future periodic revision. Therefore, the project applicants shall annually contact the SJVAPCD to identify the most recent fugitive dust measures and implement them accordingly during project construction.

- ▶ All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- ▶ All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- ▶ All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by pre-soaking.
- ▶ When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- ▶ All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.
- ▶ Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
- ▶ Trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
- ▶ Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.
- ▶ On-site vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- ▶ Install sandbags or other erosion control measures to prevent silt runoff to public roadways from adjacent project areas with a slope greater than one percent.
- ▶ Suspend excavation and grading activity when winds exceed 20 mph. (Regardless of wind speed, an owner/operator must comply with the 20 percent opacity limitation specified in Regulation VIII.)
- ▶ Limit area subject to excavation, grading, and other construction activity at any one time.
- ▶ Use of alternative fueled or catalyst equipped diesel construction equipment, where reasonable available, such as equipment capable of using biodiesel or emulsified fuel.
- ▶ When not in use, on-site equipment shall not be left idling.

- ▶ Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use at any one time.
- ▶ Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).
- ▶ Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways or on Spare the Air Days.
- ▶ Before construction contracts are issued, the project applicants would perform a review of new technology, as it relates to heavy-duty equipment, to determine what (if any) advances in emissions reductions are available for use and are economically feasible. Construction contract and bid specifications shall require contractors to utilize the available and economically feasible technology on an established percentage of the equipment fleet. It is anticipated that in the near future both NO_x and PM₁₀ control equipment will be available. The SJVAPCD shall be consulted with on this process.

Long-term Regional (Operational) Emissions

Potentially significant impact. Regional area- and mobile-source emissions of ROG, NO_x, and PM₁₀ associated with the operation of the proposed project were estimated using URBEMIS 2002 Version 8.7.0 computer program, which is designed to model emissions for land use development projects. URBEMIS allows land use selections that include project location specifics and trip generation rates along with double-counting and pass-by trip options. The double-counting option is designed to minimize double-counting of internal vehicle trips between residential and non-residential land uses. The pass-by trip option estimates vehicle-trip emissions based on the percentage of primary trips, diverted linked trips, and pass-by trips assumed for specific land uses. URBEMIS accounts for area emissions from the usage of natural gas, wood stoves, fireplaces, landscape maintenance equipment, and consumer products; and mobile sources emissions due to trip generation.

Input parameters for URBEMIS were taken directly from information contained in the Project Description (see Table 2-1) and Section 3.15, "Transportation/Traffic"; and default model settings for San Joaquin County. Based on the modeling conducted, operation of the proposed project would result in unmitigated long-term regional emissions of approximately 29.50 TPY of ROG, 24.47 TPY of NO_x, and 18.68 TPY of PM₁₀, as summarized in Table 3.3-3.

Table 3.3-3 Summary of Modeled Long-Term Regional Emissions			
Source	TPY		
	ROG	NO _x	PM ₁₀
Area	15.30	2.65	0.02
Mobile Vehicle	14.20	17.82	18.66
Total Unmitigated	29.50	24.47	18.68
SJVAPCD Significance Threshold	10	10	-
See Appendix A, "Air Quality Modeling Analyses," for detailed input parameters and modeling results. Source: Data provided by EDAW in 2005.			

Unmitigated emissions of ROG and NO_x would exceed the SJVAPCD's significance threshold of 10 TPY. As a result, such emissions of ozone precursors (ROG and NO_x), and PM could violate or contribute substantially to concentrations that exceed the ambient air quality standards, especially when considering the existing nonattainment conditions of San Joaquin County (see Table 3.3-1). This impact would be potentially significant. In addition, because the long-term operation of the proposed project would result in a substantial increase in

vehicle traffic (approximately 14,312 daily trips) on the local roadway system and resultant impacts to the level of service (LOS) of intersections in the project vicinity, project implementation, in accordance with SJVAPCD's screening level analysis, could result in a potential CO impact. A detailed air quality analysis would be required to determine these impacts.

Although implementation of the following mitigation measures would reduce this impact, it is unknown at this time whether this impact would be reduced to a less-than-significant level. Therefore, this impact would remain potentially significant.

Mitigation Measure AQ-2: Incorporate Feasible Emission Control Measures into Project Design and Operation.

Such measures may include, but are not limited to, the following items as recommended in the SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts (SJVAPCD 2002) and other sources. It should be noted that many of these measures may already be included in the proposed project design; however, they are repeated here to allow a complete listing.

- ▶ **Transit Infrastructure:** Provide transit enhancing infrastructure that includes transit shelters, benches, street lighting, route signs and displays, and/or bus turnouts/bulbs.
 - ▶ **VMT Infrastructure:** Provide park-and-ride lots and/or satellite telecommuting centers.
 - ▶ **Pedestrian Infrastructure:** Provide pedestrian enhancing infrastructure that includes sidewalks and pedestrian paths, direct pedestrian connections, street trees to shade sidewalks, pedestrian safety designs/infrastructure, street furniture and artwork, street lighting, and/or pedestrian signalization and signage.
 - ▶ **Bicycle Infrastructure:** Provide bicycle enhancing infrastructure that includes bikeways/paths connecting to a bikeway system, secure bicycle parking, and/or employee lockers and showers.
 - ▶ **Rideshare Operational:** Implement carpool/vanpool program such as carpool ride matching for employees, assistance with vanpool formation, provisions of vanpool vehicles, etc.
 - ▶ **Services Operational:** Provide on-site shops and services for employees such as cafeteria, bank/ATM, dry cleaners, convenience market, etc. Provide on-site childcare, or contribute to off-site child care services within walking distance.
 - ▶ **Parking Operational:** Provide preferential parking for carpool and vanpool vehicles.
 - ▶ **Transit Operational:** Provide transit incentives.
 - ▶ **Other Operational:** Implement compressed work schedule and home-based telecommuting program.
 - ▶ **Area Source:** Provide electric maintenance equipment, use solar, low-emissions, or central water heaters (residential and commercial), increase wall and attic insulation beyond Title 24 requirements (residential and commercial), and orient buildings to take advantage of solar heating and natural cooling and use passive solar designs (residential, commercial, and industrial).
- c) **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

Potentially significant impact. As discussed above, unmitigated construction and operational emissions would be anticipated to exceed SJVAPCD's significance thresholds for ROG and NO_x (10 TPY). In addition, the project

description does not specifically indicate that implementation would comply with SJVAPCD's Regulation VIII (Fugitive Dust Prohibitions). As a result, such emissions of ozone precursors (ROG and NO_x) and PM could result in a cumulatively considerable net increase for which San Joaquin County is nonattainment under applicable ambient air quality standards. This impact would be potentially significant. Implementation of Mitigation Measures AQ-1 and AQ-2 as listed above would reduce this impact, but not to a less-than-significant level.

d) Expose sensitive receptors to substantial pollutant concentrations?

Criteria Air Pollutant Emissions (e.g., ROG, NO_x, PM, and CO)

Potentially significant impact. As discussed above, unmitigated construction and operational emissions would be anticipated to exceed SJVAPCD's significance thresholds for ROG and NO_x (10 TPY). In addition, the project description does not specifically indicate that implementation would comply with SJVAPCD's Regulation VIII (Fugitive Dust) and the substantial increase in vehicle traffic on the local roadway system could result in a potential CO impact. As a result, project implementation could expose sensitive receptors to substantial pollutant concentrations. This impact would be potentially significant. Implementation of Mitigation Measures AQ-1 and AQ-2 as listed above would reduce this impact, but not to a less-than-significant level.

Toxic Air Emissions

Less-than-significant impact. Construction of the proposed project would result in short-term diesel exhaust emissions from on-site heavy duty equipment. Particulate exhaust emissions from diesel-fueled engines (diesel PM) were identified as a toxic air contaminant by the ARB in 1998. Construction of the project would result in the generation of diesel PM emissions from the use of off-road diesel equipment required for site grading and excavation, paving, and other construction activities. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (Salinas, pers. comm., 2004). Thus, the duration of the proposed construction activities would only constitute approximately less than 10% of the total exposure period. Because the use of mobilized equipment would be temporary, diesel PM from construction activities would not be anticipated to result in the exposure of sensitive receptors to levels that exceed applicable standards. In addition, the long-term operation of the project would not result in the operation of any major sources of toxic air emissions. As a result, exposure of sensitive receptors to substantial toxic air emissions would be a less-than-significant impact.

e) Create objectionable odors affecting a substantial number of people?

Less-than-significant impact. The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

Construction of the project would result in odorous diesel emissions from the exhaust of on-site equipment. Such emissions would be intermittent and would dissipate rapidly from the source. In addition, mobile diesel equipment would only be present on-site temporarily during construction activities. With respect to the long-term operation of the proposed project, implementation would not include any major odorous emission source, and no major existing sources have been identified in the project area. As a result, neither the construction nor the operation of

the proposed project would create objectionable odors affecting a substantial number of people. This impact would be less than significant.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
IV.	Biological Resources. Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c)	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?	☐	☒	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

This biological resources investigation involved the following: 1) baseline data collection and literature review, 2) a reconnaissance-level field survey, and 3) evaluation of potentially-occurring special-status species and other sensitive biological resources.

An EDAW biologist conducted a reconnaissance-level field survey of the project area on July 22, 2005. The purpose of this survey was to characterize general biological resources and to determine the potential for sensitive biological resources to occur in the project area.

VEGETATION

Most of the 229.89-acre project area is currently used for growing field crops. A row of large mature cottonwood (*Populus freemontii*) trees is present along the northern border of the site adjacent to SR 120, and a mix of native and ornamental trees is located around the rural residential properties and the two dairies present on the site (see

Exhibit 3-1). Cattle grazing occurs on pastures located on the two dairy properties. Adjacent land uses include: agricultural and rural residential properties to the east, south, and southwest; agricultural, rural residential, and residential development to the west; and SR 120 to the north.

Two wide irrigation ditches are located along the eastern border near the center of the site (see Exhibit 3-1). One ditch lies north of Woodward Avenue and the other ditch lies south of Woodward Avenue. Both ditches run in a north-south direction and are perpendicular to Woodward Avenue. The northern ditch is approximately 30 feet wide, 8 feet deep, and 300 feet long. Although not confirmed, it is presumed that the northern ditch supports surface water for at least a portion of the growing season. Sparse weedy vegetation is present on the banks of the ditch. The bottom of the ditch mostly supports short emergent vegetation, with a small patch of cattails (*Thypha* sp.) and tules (*Scirpus* sp.) present at the northern end of the ditch. A fence prohibited access to the northern ditch during the July field survey. The southern ditch is approximately 30 feet wide, 8 feet deep, and 600 feet long, and supports water. The banks support 3 to 4-foot tall non-native weedy vegetation with patches of Himalayan blackberry (*Rubus discolor*). The channel bottom supports a mixture of short emergent vegetation and tall patches of tules and cattails. An approximately 50-foot wide patch of 3 to 4-foot tall non-native weeds, which also supports two short orchard trees, lies adjacent to the west bank of the southern drainage ditch. Patches of Himalayan blackberry and a few small, shallow areas of ponded water are located along the barbed-wire fence that is perpendicular to the south end of the southern ditch and extends westward toward Oleander Road. These ponded areas appeared to be depressions created from agricultural activities and may be connected to the southern drainage ditch.

WILDLIFE

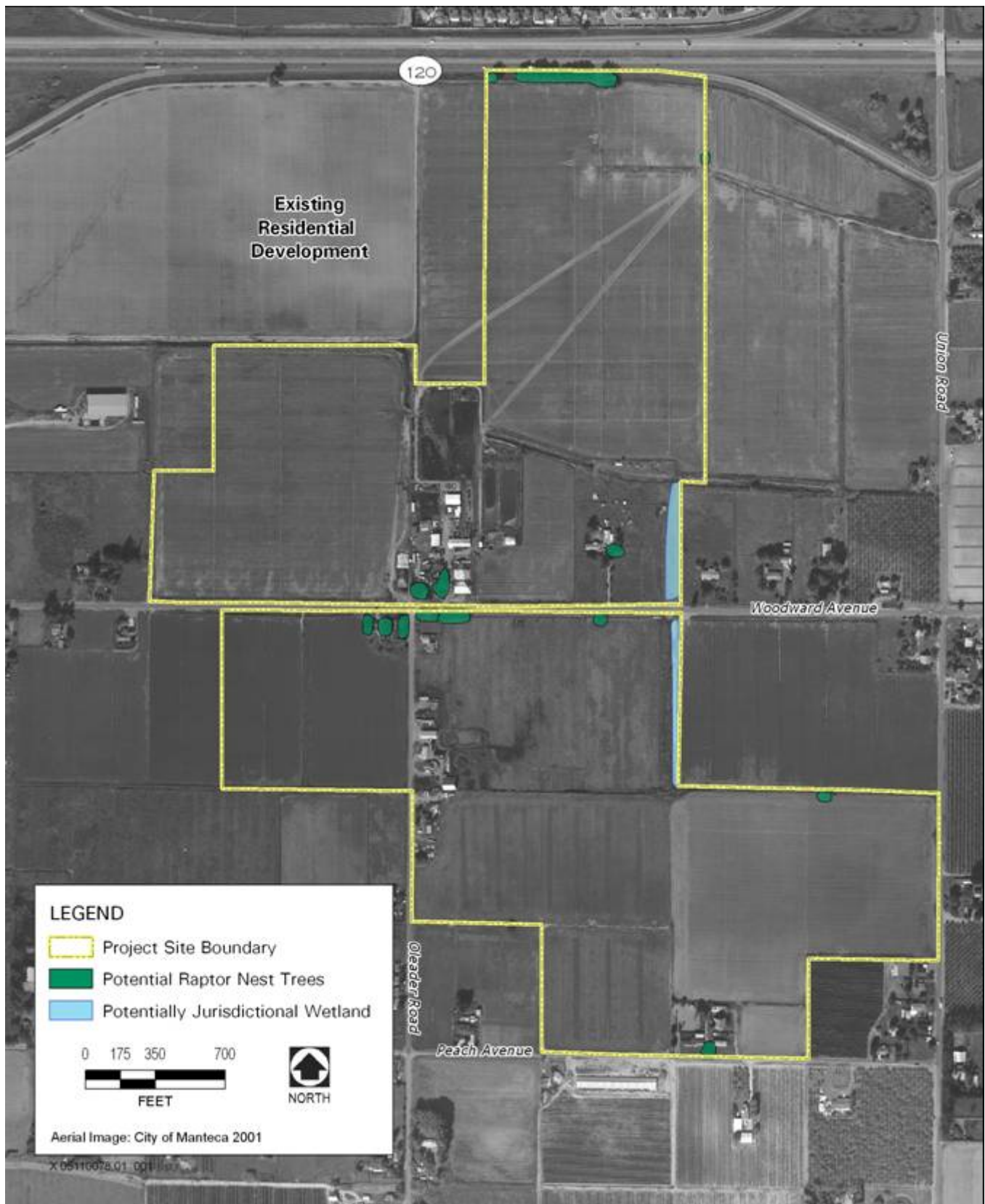
Wildlife diversity on the project area is typical of agricultural regions in San Joaquin County. Wildlife species observed or expected in the agricultural fields include yellow-billed magpie (*Pica nuttalli*), American crow (*Corvus brachyrhynchos*), red-winged blackbird (*Agelaius phoeniceus*), Brewer's blackbird (*Euphagus cyanocephalus*), western kingbird (*Tyrannus verticalis*), and rock pigeon (*Columba livia*). Raptors are expected to frequent the project area because the agricultural fields provide excellent foraging habitat and the mature cottonwood trees and other mature ornamental and nonnative trees on and adjacent to the site provide suitable nesting habitat. Raptors expected to occur on the project area include red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), northern harrier (*Circus cyaneus*), and white-tailed kite (*Elanus leucurus*).

Mammals expected on the project area include California vole (*Microtus californicus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and coyote (*Canis latrans*).

The northern ditch does not provide adequate cover for most wildlife species typically associated with emergent marsh habitat. No wildlife species were observed in the northern irrigation ditch during the July field survey. The southern irrigation ditch provides higher quality habitat for wildlife species. The tall non-native weedy vegetation and Himalayan blackberry along the banks and the mixture of short emergent vegetation and tall, dense patches of tules and cattails along the channel bottom provide good cover and food resources for wildlife. Red-winged blackbird, brewer's blackbird, and barn swallow (*Hirundo rustica*) were observed in and adjacent to the southern irrigation ditch during the July field survey. Aquatic species that could occur in both the southern and northern drainages include pacific tree frog (*Pseudacris regilla*), bullfrog (*Rana catesbeiana*), raccoon, and opossum (*Didelphus virginiana*).

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources include special-status species and sensitive natural habitats as identified by the California Department of Fish and Game (DFG), the California Native Plant Society (CNPS), and the U.S. Fish and Wildlife Service (USFWS). Sensitive biological resources also include those afforded protection under the City of Manteca's General Plan or by San Joaquin County.



Source: City of Manteca 2001, EDAW 2005

Sensitive Biological Resources

Exhibit 3-1

SPECIAL-STATUS SPECIES

Special-status species include plants and animals in the following categories:

- ▶ species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (federal ESA) or the California Endangered Species Act (CESA);
- ▶ species considered as candidates for listing as threatened or endangered under federal ESA or CESA;
- ▶ wildlife species identified by DFG as California Species of Special Concern;
- ▶ animals fully protected in California under the California Fish and Game Code;
- ▶ plants listed as Endangered or Rare under the California Native Plant Protection Act; and,
- ▶ plants on CNPS List 1B (plants rare, threatened, or endangered in California and elsewhere) or List 2 (plants rare, threatened, or endangered in California but more common elsewhere). The CNPS lists are used by both DFG and USFWS in their consideration of formal species protection under federal ESA or CESA.

Recent and historical reports of special-status species in the vicinity of the project area were identified through a search of the California Natural Diversity Database (CNDDDB) (CNDDDB 2005) and the CNPS Inventory (CNPS 2005). The CNDDDB is a statewide inventory managed by DFG, which is continually updated with the locations and condition of the state's rare and declining species and habitats. Although the CNDDDB is a reliable tool for site-specific information on sensitive biological resources, it should be noted that it contains only those records that have been submitted to DFG and is not always up to date or comprehensive.

A CNDDDB and CNPS database search was conducted for the Manteca, Lathrop, Vernalis, and Ripon 7.5-minute USGS quadrangles. Table 3.4-1 lists the special-status species potentially occurring on the project area. Based on a review of the CNDDDB search, the CNPS inventory, and the reconnaissance-level survey, it was determined that potential habitat occurs on the project area for slough thistle (*Cirsium crassicaule*), rose-mallow (*Hibiscus lasiocarpus*), Delta tule-pea (*Lathyrus jepsonii* var. *jepsonii*), Sanford's arrowhead (*Sagittaria sanfordii*), Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*), Swainson's hawk (*Buteo swainsonii*), tricolored blackbird (*Agelaius tricolor*), Northern harrier, and white-tailed kite. During the July field survey, a Swainson's hawk was observed flying above the site and a northern harrier was observed foraging on-site. None of the other remaining species were observed or have otherwise been documented on the project area.

SPECIAL-STATUS PLANTS

Slough Thistle

Slough thistle is an annual or perennial herb that typically grows in chenopod scrub, freshwater marshes and swamps (usually sloughs), or riparian scrub habitats. The freshwater marsh habitat within the irrigation ditches on the project site provides potentially suitable habitat for this species.

Rose-mallow

Rose-mallow is an aquatic, emergent perennial herb. This species grows in freshwater marshes and swamps. The freshwater marsh habitat within the irrigation ditches on the project site provides potentially suitable habitat for this species.

**Table 3.4-1
Special-Status Species Potentially Occurring on the Project Area**

Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence
	USFWS	DFG	CNPS		
Plants					
Lesser saltscale <i>Atriplex minuscule</i>	--	--	1B	Chenopod scrub, playas, valley and foothill grassland in alkali sink and grassland in sandy, alkaline soils; blooms May–Oct	Not expected to occur; the soil on the project area has been repeatedly disturbed by cultivation of crops
Slough thistle <i>Cirsium crassicaule</i>	--	--	1B	Freshwater marshes, sloughs, and slow-moving water; blooms May–August	Could occur; potentially suitable habitat present in irrigation ditches
Delta button-celery <i>Eryngium racemosum</i>	--	E	1B	Seasonally flooded clay depressions in riparian scrub; blooms Jun–Sep	Not expected to occur; no suitable habitat is present
Rose-mallow <i>Hibiscus lasiocarpus</i>	--	--	2	Freshwater marshes and swamps; blooms June–September	Could occur; potentially suitable habitat present in irrigation ditches
Delta tule pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	--	--	1B	Brackish and freshwater marshes; blooms May–September	Could occur; potentially suitable habitat present in irrigation ditches
Sanford’s arrowhead <i>Sagittaria sanfordii</i>	--	--	1B	Shallow freshwater marshes and swamps; blooms May–October	Could occur; potentially suitable habitat present in irrigation ditches
Wright’s trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	--	--	2	Meadows, seeps, marshes, swamps, riparian scrub, and vernal pools; blooms May–September	Could occur; potentially suitable habitat present in irrigation ditches
Invertebrates					
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	E	--		Vernal pools and swales	Not expected to occur; no suitable habitat is present
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T	--	--	Vernal pools and swales	Not expected to occur; no suitable habitat is present
California linderiella <i>Linderiella occidentalis</i>	FSC	--	--	Vernal pools	Not expected to occur; no suitable habitat is present
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T	--	--	Elderberry shrubs	Not expected to occur; no elderberry shrubs are present
Amphibians					
California tiger salamander <i>Ambystoma californiense</i>	T	--	--	Vernal pools and permanent waters in grasslands	Not expected to occur; no suitable habitat is present
Birds					
Swainson’s hawk <i>Buteo swainsoni</i>	FSC	T	--	Nest in riparian forest and scattered trees; forage in grasslands and agricultural fields	Could occur; suitable foraging and nesting habitat is present, observed above project area during EDAW field survey

**Table 3.4-1
Special-Status Species Potentially Occurring on the Project Area**

Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence
	USFWS	DFG	CNPS		
Tricolored blackbird <i>Agelaius tricolor</i>	--	CSC	--	Freshwater marsh with dense cattails and tules, riparian scrub, and other dense shrubs and herbs for nesting, grasslands and agricultural fields for foraging	Could occur; suitable foraging habitat is present
Burrowing owl <i>Athene cunicularia</i>	FSC	CSC	--	Grasslands and agricultural fields with low-growing vegetation and the presence of small rodent burrows	Not expected to occur; no suitable burrowing habitat observed
Northern harrier <i>Circus cyaneus</i>	--	CSC	--	Grasslands and freshwater marsh	Observed on-site during EDAW field survey; suitable foraging and nesting habitat is present
White-tailed kite <i>Elanus leucurus</i>	FSC	FP	--	Forage in grasslands and agricultural fields; nest in isolated trees or small woodland patches	Could occur; suitable foraging and nesting habitat is present
Aleutian Canada Goose <i>Branta Canadensis leucopareia</i>	FSC	--	--	Forage in agricultural fields and roost in aquatic habitats	Not expected to occur; no suitable aquatic habitat is present
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	C	E	--	Nests in riparian jungles of willow, often mixed with cottonwoods	Not expected to occur; no suitable habitat and considered by DFG to be possibly extirpated from San Joaquin County
Mammals					
Riparian woodrat <i>Neotoma fuscipes riparia</i>	E	CSC	--	Riparian areas along the San Joaquin, Stanislaus, and Tuolumne Rivers	Not expected to occur; no suitable habitat is present
Riparian brush rabbit	E	E	--	Riparian forest with dense understory along the San Joaquin River	Not expected to occur; no suitable habitat present
San Joaquin kit fox	E	T	--	grasslands with loose – textured soils for burrowing	Not expected to occur; no suitable habitat is present
¹ Legal Status Definitions U.S. Fish and Wildlife Service (USFWS) E Endangered (legally protected) T Threatened (legally protected) FSC Federal Species of Concern (no formal protection) C Candidate for listing				California Department of Fish and Game (DFG) E Endangered (legally protected) T Threatened (legally protected) FP Fully Protected (legally protected, no take allowed) CSC California Species of Concern (no formal protection)	
California Native Plant Society (CNPS) Categories 1B Plant species considered rare or endangered in California and elsewhere (but not legally protected under federal ESA or CESA) 2 Plant species considered rare or endangered in California but more common elsewhere (but not legally protected under federal ESA or CESA)					
Source: Data compiled by EDAW in 2005					

Sanford's Arrowhead

Sanford's arrowhead is a perennial, emergent herb. This species grows in assorted shallow freshwater marshes and swamps. The freshwater marsh habitat within the irrigation ditches on the project site provides potentially suitable habitat for this species.

Delta Tule Pea

Delta tule pea is a perennial herb that grows in freshwater and brackish marshes and swamps. The freshwater marsh habitat within the irrigation ditches on the project site provides potentially suitable habitat for this species.

Wright's Trichocoronis

Wright's trichocoronis is an annual herb that typically grows in moist, alkaline habitats including meadows and seeps, marshes and swamps, riparian scrub and vernal pools. The freshwater marsh habitat within the irrigation ditches on the project site provides potentially suitable habitat for this species.

SPECIAL-STATUS WILDLIFE

Swainson's Hawk

Swainson's hawks typically nest in riparian habitats or isolated trees bordered by suitable foraging habitat (i.e., grasslands and agricultural fields). Agricultural fields provide important foraging habitat for Swainson's hawks. Alfalfa, fallow fields, dry and irrigated pastures, and other low-growing row crops are preferred foraging habitats. Swainson's hawk could nest in the large mature trees located on and adjacent to the project site (see Exhibit 3-1). The agricultural fields on the project site provide potential Swainson's hawk foraging habitat. A Swainson's hawk was observed flying over the project area during the reconnaissance-level field survey.

Other Raptors

Raptors are protected under Section 3503.5 of the California Fish and Game Code, which prohibits take or destruction of raptors, including their nests and eggs. Raptors that occur or could occur on the project site include white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*). Large trees located on and adjacent to the project area provide suitable nesting habitat for raptors. Northern harrier, red-tailed hawk, and American kestrel were observed foraging on the project site during the reconnaissance-level field survey.

Tricolored Blackbird

Tricolored blackbird is a California Species of Special Concern. Tricolored blackbirds are colonial nesting birds that nest in emergent or riparian vegetation, or tall vegetation supporting spines or thorns, and primarily forage in grasslands, pastures, and agricultural fields. The irrigation ditches on the project site support emergent wetland and riparian vegetation; however, the bands of vegetation associated with these ditches are narrower and lack the structure that characterizes higher quality tricolored blackbird nesting habitat. There are no nesting records from the project vicinity since 1991 (CNDDDB 2005). The agricultural fields and two dairies located on the project site provide potential foraging habitat for tricolored blackbird.

SENSITIVE HABITATS

Sensitive habitats include those that are of special concern to resource agencies; are addressed in regional and local plans, policies, and ordinances; or are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, and/or Section 404 of the Clean Water Act. The freshwater marsh habitat within the irrigation ditches on the project site could be considered sensitive habitat by regulatory agencies and protected

under the County General Plan and Development Title 9-1505. The irrigation ditches may qualify as Waters of the United States, which are under the jurisdiction of the U.S. Army Corps of Engineers (USACE). Oak trees could be eligible for protection under the County General Plan and Development Title 9-1505, as well as Sections 17.61.030 and 17.19.060 of the City Municipal Code. All existing trees on the site could be eligible for protection under Sections 17.19.060 and 12.08.07 of the City Municipal Code.

REGULATORY SETTING

Biological resources in California are protected and/or regulated by a variety of federal and state laws and policies. In addition, in many parts of California, there are local or regional habitat and species conservation planning efforts in which project applicants may participate. Key regulatory and conservation planning issues applicable to the project are discussed below.

FEDERAL REGULATIONS

SECTION 404 OF THE CLEAN WATER ACT

Section 404 of the Clean Water Act (CWA) establishes a requirement for a project applicants to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into “waters of the United States,” including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Many surface waters and wetlands in California meet the criteria for waters of the United States, including intermittent streams and seasonal lakes and wetlands.

Under Section 404 of the CWA, the USACE regulates and issues permits for activities that involve the discharge of dredged or fill materials into waters of the United States. Fills of less than ½ acre of nontidal waters of the United States for residential, commercial, or institutional development projects can generally be authorized under the USACE’s nationwide permit (NWP) program, provided the project satisfies the terms and conditions of the particular NWP. Fills that do not qualify for a NWP require a letter of permission or an individual permit.

CALIFORNIA ENDANGERED SPECIES ACT

Pursuant to the CESA and Section 2081 of the California Fish and Game Code, a permit from DFG is required for projects that could result in the take of a state-listed threatened or endangered species (i.e., species listed under CESA), except that plants may be taken without a permit pursuant to the terms of the California Native Plant Protection Act (Fish and Game Code, Section 1900 et seq.). Under CESA, the definition of “take” is understood to apply to an activity that would directly or indirectly kill an individual of a species, but the definition does not include “harm” or “harass,” as the federal ESA does. As a result, the threshold for take under the CESA is typically higher than that under the federal ESA.

STATE REGULATIONS

SECTION 401 WATER QUALITY CERTIFICATION

Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredge or fill activity is consistent with the state’s water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State

Water Resources Control Board to the nine regional boards. Each of the nine Regional Water Quality Control Boards must prepare and periodically update basin plans for water quality control in accordance with the Porter-Cologne Act. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. Under the Porter-Cologne Act, wetlands and drainages that are considered waters of the United States by USACE are often classified as waters of the state as well.

CALIFORNIA FISH AND GAME CODE SECTION 3503.5 (PROTECTION OF RAPTORS)

Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations include destruction of active raptor nests as a result of tree removal and failure of nesting attempts, resulting in loss of eggs and/or young, because of disturbance of nesting pairs by nearby human activity.

REGIONAL AND LOCAL PLANS, POLICIES, AND ORDINANCES

SAN JOAQUIN COUNTY MULTI-SPECIES HABITAT CONSERVATION AND OPEN SPACE PLAN

The SJMSCP provides a strategy for balancing the desires to conserve open space, maintain the agricultural economy, and allow development in San Joaquin County. It was developed to avoid, minimize, and mitigate impacts on plant and wildlife habitat projected to occur in San Joaquin County between 2001 and 2051, resulting from the anticipated conversion of as much as 109,300 acres of open space land to non-open space uses (San Joaquin County 2000). Ninety-seven species are covered by the SJMSCP, which is intended to provide comprehensive mitigation, in accordance with local, state, and federal regulations, for impacts on these species from SJMSCP-permitted activities. USFWS and DFG participated in development of the SJMSCP, approved the mitigation, and agreed to issue incidental take permits for species and activities covered by the SJMSCP. Therefore, participation in the SJMSCP confers authorization for activities that result in (or may result in) incidental take of covered state-listed or federally listed species, as well as other covered but non-listed sensitive species, that may otherwise require a federal or state incidental take authorization.

The approach of the SJMSCP is to minimize the potential for take through implementation of take avoidance and minimization measures and compensation for incidental take and habitat conversion through payment of fees (or in-lieu land dedication) for conversion of open space lands. These fees shall be used to preserve and create natural habitats to be managed in perpetuity through the establishment of habitat preserves.

Participation in the SJMSCP is voluntary for local jurisdictions and project proponents. The City of Manteca adopted the SJMSCP on February 5, 2001, and has signed the implementation agreement. As a result, a Section 10(a)(1)(B) permit was issued by USFWS to the City of Manteca. This Section 10 permit also constitutes a special purpose permit for species covered by the federal Migratory Bird Treaty Act (MBTA). A Section 2081 permit was also issued by DFG to the City of Manteca. As a result of the City of Manteca's participation in the SJMSCP and issuance of these permits, project proponents within the City of Manteca's jurisdiction have the opportunity to seek coverage under the SJMSCP.

SAN JOAQUIN COUNTY GENERAL PLAN AND DEVELOPMENT TITLE 9-1505

The San Joaquin County General Plan 2010 (County General Plan) includes two primary objectives related to terrestrial biology:

- Protect and improve the County’s vegetation, fish, and wildlife resources; and
- Provide undeveloped open space for nature study, protection of endangered species, and preservation of wildlife habitat.

Specific Resource Protection and Management policies outlined in the County General Plan that are relevant to implementation of this project include the following:

1. Resources of significant biological and ecological importance in San Joaquin County shall be protected. These include wetlands; riparian areas; rare, threatened and endangered species and their habitats as well as potentially rare or commercially important species; vernal pools; significant oak groves and heritage trees.
2. Development in the vicinity of significant oak groves shall be designed and sited to maximize the long-term preservation of the trees and the integrity of their natural setting.
5. No net loss of riparian or wetland habitat or values shall be caused by development.
7. The County shall support feeding areas and winter habitat for migratory waterfowl.
8. Strips of land along waterways shall be protected for nesting and foraging habitat and for protection of waterway quality.

In addition, San Joaquin County Development Title 9-1505 includes specific policies designed to preserve riparian vegetation and native and heritage oak trees. Among these are restrictions on removal of historical and heritage trees and mitigation requirements for removal of protected trees and riparian vegetation.

SAN JOAQUIN COUNTY TREE ORDINANCE

San Joaquin County Development Title 9-1505 includes specific policies designed to preserve riparian vegetation and native and heritage oak trees. Among these are restrictions on removal of historical and heritage trees and mitigation requirements for removal of protected trees and riparian vegetation. Tree protection under Title 9-1505 prohibits construction activities that would change grades within 6 feet of the tree trunk of heritage, historical, or native oak trees. No more than 6 inches of soil may be added or removed within the 6-foot buffer. A 5-foot chain link fence must be installed around the driplines of protected trees and no grading, trenching, or equipment storage may occur within the fenced areas. Paving within the driplines of trees should be minimized and only porous materials should be used. Title 9-1505 also requires approval of an Improvement Plan application before the removal of any native oak. Native oaks must be replaced at a ratio of 3 to 1 and plantings must be monitored for 3 years. Heritage oaks may only be removed if it is in the public interest and must be replaced at a ratio of 5 to 1 with monitoring for 3 years. A performance bond is required.

CITY OF MANTECA GENERAL PLAN

The following Biological Resources policies, identified in the Resource Conservation Element of the City of Manteca General Plan (City General Plan), are relevant to this project:

- **Policy RC-P-31:** Minimize impact of new development on native vegetation and wildlife.
- **Policy RC-P-33:** Discourage the premature removal of orchard trees in advance of development, and discourage the removal of other existing healthy mature trees, both native and introduced.
- **Policy RC-P-34:** Protect special-status species and other species that are sensitive to human activities.
- **Policy RC-P-35:** Allow contiguous habitat areas.

- **Policy RC-P-36:** Consider the development of new drainage channels planted with native vegetation, which would provide habitat as well as drainage.

CITY OF MANTECA TREE ORDINANCE

Manteca Municipal Code calls for the avoidance of heritage trees. Heritage trees are defined under section 17.61.030 of the code as any natural woody plant rooted in the ground and having a diameter of 30 inches or more when measured 2 feet above the ground. Section 17.19.060 calls for protection of all existing trees having a diameter of 6 inches or more when measured 4½ feet above the ground. The city planning department must be notified of planned construction or grade changes. Existing trees must be protected from construction equipment, grade changes, excavation for utilities, paving, and footers for the proposed structure of walls. Replacement of existing trees is subject to approval from the planning director and must be with a minimum 24-inch box tree of compatible species for the development site. Agricultural and farming orchard areas of 1 acre or more are exempt from section 17.19.060.

Section 12.08.07 of the municipal code prohibits cutting, pruning, removing, injuring or interference with any tree, shrub, or plant, upon or in any street tree area or other public place in the city without prior permission and approval therefore from the superintendent. The superintendent is authorized to grant such permission at his discretion and where necessary. Excepting and with reference to utility companies, as provided in Section 12.08.080, no such permission granted shall be valid for a longer period than thirty days after its issuance.

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, could result in potentially significant impacts to biological resources, including special-status species, riparian habitat and other sensitive natural communities, wetlands, and wildlife corridors. These impacts would be reduced to less-than-significant levels with conformance with the various policies and measures in the Resource Conservation Element of the General Plan. With respect to cumulative biological impacts, the City's participation in the SJMSCP was determined to reduce this impact, but not to a less-than-significant level because participation is voluntary and it could not be assumed that all project proponents would opt to participate.

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the DFG or USFWS?

Less than significant with mitigation incorporated. Five special-status plant species and four special-status wildlife species have the potential to occur on the project site.

Slough thistle, rose-mallow, Delta tule-pea, Sanford's arrowhead, and Wright's trichocoronis could be present in the freshwater marsh habitat within the two irrigation ditches on the project site. No special-status plant occurrences have been reported on the project site; however, the potential for their occurrence on the project site cannot be dismissed because protocol-level surveys have not been conducted and suitable habitat is present. Implementation of the project would result in the loss or disturbance of freshwater marsh habitat that could support special-status plant species. The potential loss of special-status plants as a result of project implementation would be a significant impact.

Swainson's hawk, white-tailed kite, northern harrier, and tricolored blackbird could occur on the project site. Trees on and adjacent to the site provide potential nest sites for Swainson's hawk and white-tailed kite. Herbaceous cover on the site provides potential nesting habitat for northern harrier. There is also suitable foraging habitat on-site for these species. Other raptors such as red-tailed hawk could also nest on or adjacent to the site. Although they are not considered special-status species, red-tailed hawk and other raptors are protected under

Section 3503.5 of the California Fish and Game Code, which prohibits the destruction of raptors and their nests. Construction activity on the project site could result in destruction of active raptor nests. It could also disturb nearby nesting pairs, potentially resulting in nest abandonment. Loss of an active raptor nest would be a significant impact. Loss of Swainson's hawk foraging habitat near an active nest would also be a significant impact. Because suitable foraging habitat is abundant in the area surrounding the project area, loss of habitat provided by the site is only expected to have the potential to substantially affect Swainson's hawk if an active nest is located on or immediately adjacent to the site.

The southern irrigation ditch on the project site supports a small amount of foraging habitat for tricolored blackbird; however, the bands of vegetation associated with this ditch are narrow and lack the structure that characterizes higher quality tricolored blackbird nesting habitat. Therefore, tricolored blackbird is not expected to nest on the project site. Implementation of the proposed project would have a less-than-significant impact on tricolored blackbird.

Implementation of the following mitigation measures, which require the project applicants to participate in the SJMSCP, would reduce the project's impacts to special-status plants and animals to a less-than-significant level. Specific requirements are detailed below.

Mitigation Measure BIOLOGY 1: Comply with SJMSCP Requirements for Special-Status Plant Species.

- (1) The project applicants shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the project. SJCOG may also determine, based on an independent review by a qualified biologist, that the following mitigation shall be implemented to reduce impacts to special-status plants:
 - (a) Before project construction, surveys for the special-status plants listed in Table 3.4-1 shall be conducted by a qualified botanist at the appropriate time of year when the target species would be in flower or otherwise clearly identifiable. Surveys shall be conducted in accordance with specific methodologies described in Section 5.2.2.5 of the SJMSCP. If special-status plants are found, the following measures shall be implemented:
 - ▶ Sanford's arrowhead and slough thistle: The SJMSCP requires complete avoidance for these species; therefore, potential impacts on these species could not be covered through participation in the plan. If these species are present in the project area and cannot be avoided, a mitigation plan shall be developed, with review and input from the regulatory agencies (e.g., DFG). The mitigation plan shall identify mitigation measures for any populations affected by the project, such as creation of off-site populations through seed collection or transplanting, preserving and enhancing existing populations, or restoring or creating suitable habitat in sufficient quantities to compensate for the impact. All mitigation measures that the City determines through this consultation to be necessary shall be implemented by the project proponent. These measures shall be designed to ensure that the project does not result in a net reduction in the population size or range of Sanford's arrowhead and slough thistle.
 - ▶ Rose mallow and Delta tule pea: These species are considered widely distributed species by the SJMSCP, and dedication of conservation easements is the preferred option for mitigation. If these species are found in the project area, the possibility of establishing a conservation easement shall be evaluated. If dedication of a conservation easement is not a feasible option, payment of SJMSCP development fees may be used to mitigate impacts on these species. Use of conservation easements or development fees for establishment of habitat preserves, or a combination of the two mechanisms, shall be sufficient to avoid an overall net reduction in the population size or range of rose-mallow and Delta tule pea.

- ▶ Wright's trichocoronis: This species is considered narrowly distributed by the SJMSCP, and dedication of conservation easements is the preferred option for mitigation. If this species is found in the project area, the possibility of establishing a conservation easement shall be evaluated. If dedication of a conservation easement is not an option, the SJMSCP requires consultation with the permitting agency representatives on the Technical Advisory Committee to determine the appropriate mitigation measures. These may include seed collection or other measures and would be determined on a population basis, taking into account the species type, relative health, and abundance. After the appropriate mitigation has been determined, it shall be implemented by the project applicants.

Mitigation Measure BIOLOGY 2: Comply with SJMSCP Requirements for Swainson's Hawk.

- (1) The project applicants shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the project. SJCOG may also determine, based on independent review by a qualified biologist, that the following mitigation shall be implemented to reduce impacts to Swainson's hawks:
 - (a) If the project applicants elect to remove nest trees, then nest trees shall be removed between September 1 and February 15, when the nests are unoccupied.
 - (b) If the project applicants elect to retain a tree with an active nest or a nest becomes established in a suitable nest tree during the construction period, a setback shall be established that excludes all construction activities within a distance of two times the dripline of the tree, measured from the nest. This setback shall be maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave the nest. Setbacks shall be marked by brightly colored temporary fencing or other obvious markers.

Mitigation Measure BIOLOGY 3: Comply with SJMSCP Requirements for Nesting Raptors.

- (1) The project applicants shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the project. SJCOG may also determine, based on independent review by a qualified biologist, that the following mitigation shall be implemented to reduce impacts to nesting raptors:
 - (a) If project activity would occur during the raptor nesting season (February 15 through September 15), preconstruction surveys shall be conducted during the nesting season in suitable nesting habitat within 100 feet of areas of project activity. Large trees throughout the project area provide suitable habitat. The survey shall be conducted within 1 week before the beginning of construction or tree removal.
 - (b) A setback of 100 feet from active nesting areas shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of nests that are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS?

Less than significant with mitigation incorporated. Freshwater marsh habitat is present in the two irrigation ditches located on the project site. Freshwater marsh is considered a sensitive habitat type under Section 1602 of the Fish and Game Code of California. Freshwater marsh habitat could be converted or filled as a result of project implementation. Disturbance or removal of freshwater marsh habitat would be a significant impact.

Impacts to freshwater marsh would be sufficiently mitigated under environmental issue c) (Impacts to jurisdictional waters of the United States). This impact would therefore be less than significant with mitigation incorporated.

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means?

Less than significant with mitigation incorporated. The two irrigation ditches that are present on the project site could be converted or filled as a result of project construction. The irrigation ditches are potentially subject to USACE jurisdiction under Section 404 of the CWA. Conversion and/or fill of waters of the United States would be a significant impact. Implementation of the following measures would reduce impacts to jurisdictional waters of the United States, including wetlands, to a less-than-significant level.

Mitigation Measure BIOLOGY 4: Wetland Delineation, USACE Verification, and Permitting.

- (1) Before project implementation, a delineation of waters of the United States, including wetlands, that would be affected by the project shall be made by qualified biologists through the formal Section 404 wetland delineation process. The delineation shall be submitted to and verified by USACE.
- (2) If, based on the verified delineation, it is determined that fill of waters of the United States would result from implementation of the project, authorization for such fill shall be secured from USACE through the Section 404 permitting process.
- (3) The project applicants shall also consult with DFG to determine whether a Section 1602 Streambed Alteration Agreement may be required for alteration of irrigation ditches and impacts to freshwater marsh habitat.
- (4) The acreage of waters of the United States and freshwater marsh habitat that would be removed shall be replaced or restored/enhanced on a “no net loss” basis in accordance with USACE and DFG regulations and Development Title 9-1505. Habitat restoration, enhancement, and/or replacement shall be at a location and by methods agreeable to USACE and DFG, as determined during the permitting processes for CWA Section 404 and California Fish and Game Code Section 1602.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No impact. The project area does not serve as an important wildlife movement corridor or nursery site. Wildlife corridors are features that provide connections between habitat patches that would otherwise be isolated and unusable. Based on EDAW’s biological resources investigation, there are no wildlife corridors or nursery sites present within the study area. Therefore, construction of the proposed project would not interfere with the movement of wildlife or impede the use of a wildlife nursery site. No impact would occur.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than significant with mitigation incorporated. There are a number of federal, state and local policies and ordinances that protect biological resources in the vicinity of the project area, the majority of which are generally only applicable to *sensitive* biological resources. Sensitive biological resources include special-status plants and wildlife, sensitive natural communities, and waters of the United States. Although the project has the potential to affect special-status species and waters of the United States, these impacts would be addressed and mitigated in accordance with federal, state and local policies (i.e., CESA, CWA Sections 404 and 401, California Fish and Game Code Sections 1602 and 3503.5, San Joaquin General Plan, City of Manteca General Plan). The proposed

project would also involve the disturbance or removal of mature native and/or non-native trees and heritage trees on the project area that are protected by tree preservation ordinances that have been adopted by San Joaquin County and the City of Manteca. These trees are protected under the San Joaquin County Code and the Manteca Municipal Code. Disturbance or removal of protected trees on the project area would be a significant impact. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

Mitigation Measure BIOLOGY 5: Conduct a Tree Survey.

- (1) Before project implementation, a tree survey shall be conducted by an arborist certified by the International Society of Arboriculture (ISA) to enumerate and evaluate all trees on the site that meet the standards in the City or County Codes.
 - (2) All trees that meet the following criteria shall be avoided and protected during all construction activity:
 - ▶ Native Oak Trees with a trunk at least 6 inches in diameter at a height of 4.5 feet above the ground.
 - ▶ Heritage trees (all trees with a trunk diameter of 30 inches at a height of 2 feet above the ground).
 - (3) Trees that are subject to protection but must be removed as a result of project implementation shall be replaced with in-kind species in accordance with tree planting specifications established by City and County tree ordinances. Native oak trees shall be replaced at a ratio of 3 to 1 and heritage trees shall be replaced at a ratio of 5 to 1.
 - (4) Replacement tree plantings shall be monitored for 3 years in accordance with monitoring protocols set forth in the City and County tree ordinances.
 - (5) If monitoring indicates that replacement plantings are not meeting performance standards, remedial measures shall be implemented. Appropriate measures shall be determined in coordination with the City and County.
- f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

Less than significant with mitigation incorporated. The project area is located within the SJMSCP area. The special-status species potentially affected by the project are covered in the SJMSCP, which was adopted by the City of Manteca on February 5, 2001.

If the project were to conflict with the SJMSCP, this impact would be significant. As noted under item a), the project applicants would be required to participate in the SJMSCP and ensure that the project is consistent with its provisions. Participation in the SJMSCP would reduce this impact to a less-than-significant level.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
V.	Cultural Resources. Would the project:				
	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?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

CULTURAL RESOURCES

The Manteca area is known to contain a wide variety of prehistoric and historic-era cultural resources including Native American habitation and interment sites, and the remains of early historic ranching and agricultural operations. A record search conducted by the Central California Information Center (CCIC) indicates that no such sites, features, or artifacts have been documented within the project area. However, several cultural resources have been recorded in the general vicinity including the early 20th century Rustic School presently serving as a private residence and situated on the west side of Durham Ferry Road, adjacent to the southwestern-most extent of the project area.

According to the CCIC, a total of three cultural resource investigations have been conducted within the project area; they are presented in Table 3.5-1. These studies and additional information provided by the CCIC, did not identify any resources in the project area but did note the presence, in archival sources, of several roadways; none of which are currently in existence nor were any traces of these grades documented during the previous studies.

PALEONTOLOGICAL RESOURCES

Paleontological resources (fossils) are the remains or traces of prehistoric animals and plants. The potential paleontologic importance of a site can be assessed by identifying the paleontologic importance of the exposed rock unit. The project area is located in Pleistocene-age sediments of the Modesto Formation. A vertebrate fossil site at Mormon Slough (UCMP V-5107), approximately 6 miles northeast of the project area, has been recorded in sediments of the Modesto Formation. This site yielded seven specimens from Rancholabrean-age Columbian mammoth, horse, and an unidentified carnivore. In addition, the occurrence of numerous Pleistocene vertebrate fossil remains in sediments referable to the Modesto Formation from the nearby cities of Stockton and Tracy suggests that the potential exists for uncovering additional similar fossil remains during construction-related earth-moving activities at the project area.

Table 3.5-1 Cultural Resource Studies Previously Conducted within the Project Area			
CCIC Report Number	Report Title	Date	Author
1900	A Preliminary Cultural Resources Investigation of the South Manteca Area Plan, 7,800 Acres in San Joaquin County, California.	1993	L. Kyle Napton
4786	City of Manteca General Plan Update Background Reports – Archaeological Resources, Historical Resources, Records Search Results	2002	Ric Windmiller and Donald S. Napoli
5309	Cultural Resources Investigations for the South San Joaquin Irrigation District in San Joaquin County, California.	2004	Mary Clark Baloian, Randy M Baloian, and Wendy M. Nettles
Source: Data compiled by EDAW in 2005			

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, could result in potentially significant impacts to cultural resources, including known and unknown archaeological or historical resources, unique paleontological resources or geologic features, and human remains. These impacts would be reduced to less-than-significant levels with conformance with the various policies and measures in the Resource Conservation Element of the General Plan.

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Potentially significant impact. Although three cultural resource studies were conducted in the project area, these studies consisted primarily of overview research and did not include survey of the lands to identify previously unrecorded prehistoric or historic-era sites. Consequently, a cultural resources survey would be required to determine if any potential historical resources are present on-site and could be adversely affected by the project. Because it is unknown whether cultural resources are present on-site, this impact would be potentially significant.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Potentially significant impact. As noted above in item a), an inventory must be conducted to determine if any potential archaeological resources are present that could be adversely affected by the proposed project. Because it is unknown whether cultural resources are present on-site, this impact would be potentially significant.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than significant with mitigation incorporated. No previously recorded paleontological sites were observed or are known to occur at the project area. However, the project area is located within sediments of the Modesto Formation, which is a paleontologically sensitive rock unit under the Society of Vertebrate Paleontology guidelines (1995, 1996). Because the potential exists for earth-moving activities at the project area to uncover or disturb previously undiscovered paleontological resources, this would be a potentially significant. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

Mitigation Measure CULTURAL 1: Provide Paleontological Resources Training.

Before the start of construction activities, construction personnel involved with earth-moving activities shall be informed of the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction activities, and proper notification procedures should fossils be encountered. This training shall be prepared and presented by a qualified paleontologist.

If paleontological resources are discovered during earth-moving activities, the construction crew shall immediately cease work in the vicinity of the find. The City or the project applicants shall retain a qualified paleontologist to evaluate the resource and prepare a proposed mitigation plan in accordance with Society of Vertebrate Paleontology guidelines (1995). The proposed mitigation plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations determined by the City to be necessary and feasible shall be implemented by the project applicants before construction activities can resume at the site where the paleontological resources were discovered.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less than significant with mitigation incorporated. It is possible that unidentified archaeological resources, including human remains, may be uncovered during grading and construction operations. This impact would be a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

Mitigation Measure CULTURAL 2: Protect Human Remains from Vandalism and Inadvertent Destruction.

California law recognizes the need to protect interred human remains, particularly Native American burials and associated items of patrimony, from vandalism and inadvertent destruction. The procedures for the treatment of discovered human remains are contained in California Health and Safety Code Section 7050.5 and Section 7052 and California Public Resources Code Section 5097.

In accordance with the California Health and Safety Code, if human remains are uncovered during ground disturbing activities all such activities in the vicinity of the find shall be halted immediately and the Agency or the Agency's designated representative shall be notified. The Agency shall immediately notify the county coroner and a qualified professional archaeologist. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). The responsibilities of the Agency for acting upon notification of a discovery of Native American human remains are identified in detail in the California Public Resources Code Section 5097.9. The Agency or their appointed representative and the professional archaeologist will consult with a Most Likely Descendent (MLD) determined by the Native American Heritage Commission (NAHC) regarding the removal or preservation and avoidance of the remains and determine if additional burials could be present in the vicinity.

Assuming an agreement can be reached between the MLD and the Agency or their representative with the assistance of the archaeologist, these steps will result in minimizing or eliminating adverse impacts to the uncovered human remains.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
VI.	Geology and Soils. Would the project:				
	a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	☐	☐	☒	☐
	ii) Strong seismic ground shaking?	☐	☐	☒	☐
	iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
	iv) Landslides?	☐	☐	☒	☐
	b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
	c) 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?	☐	☒	☐	☐
	d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	☐	☐	☒	☐
	e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

This setting description and subsequent environmental analysis is based on Geotechnical Services Reports prepared for the Sundance and Sundance 2 site by Kleinfelder in December 2002 and January and February 2004 (Kleinfelder 2002, 2004a, 2004b, and 2004c) and a Draft Geotechnical Investigation prepared for the Oleander Estates site by Neil O. Anderson and Associates in July 2005 (Neil O. Anderson and Associates 2005).

Because the project area topography is relatively level, cuts and fills during earthwork are anticipated to be minimal (2–4 feet or less). Further, excavations for underground utilities are not anticipated to exceed 10 feet below final site grade.

SEISMICITY

The project area is located within the California Building Standards Code's (CBC) Seismic Zone 3, which implies a minimum horizontal acceleration of 0.3g (where "g" is the acceleration of gravity) for use in earthquake

resistant design. Based on the Fault Activity Map of California, the nearest active fault (Great Valley Fault System) is located greater than 23 miles east of the project area (Jennings 1996).

SOIL RESOURCES

Identification of soil types and their distribution was accomplished primarily through a review of maps provided by the U.S. Soil Conservation Service (now called the Natural Resources Conservation Service [NRCS]). The project area contains the following soil series: Delhi loamy sand, Timor loamy sand, Tinnin loamy coarse sand, and Veritas fine sandy loam (NRCS 1992).

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, could result in potentially significant impacts related to geology and soils. These impacts would be reduced to less-than-significant levels with conformance with the various policies and measures in the Safety Element and the Conservation and Open Space Resource Conservation Element of the General Plan.

- a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**

Less-than-significant impact. Review of geologic data indicates there are no active faults located on or adjacent to the project area. The project area is not located in an Alquist-Priolo Earthquake Special Study Zone. The Fault Activity Map of California and Adjacent Areas (Jennings 1996) indicates that the closest active fault (Great Valley Fault system) is located approximately 23 miles from the project area. Therefore, the potential for fault ground rupture at the project area would be less than significant.

- ii) **Strong seismic ground shaking?**

Less-than-significant impact. As described above, no active faults are located on-site, nor is the project area located within an Alquist-Priolo Earthquake Special Study Zone. However, seismic activity in the San Francisco Bay Area (San Andreas, Hayward, and Calaveras faults) and the Great Valley Fault System could generate strong ground shaking on the project area. The closest active faults are located more than 20 miles east of the project area. Intensity of the ground shaking would depend on the magnitude of the earthquake, the distance from the epicenter, and the duration of shaking.

The project area is located within CBC Seismic Zone 3, indicating that a horizontal ground surface acceleration of 0.3g at the project area would have a 10% probability of being exceeded in a 50-year project design life. This estimate incorporates the possibility of a seismic event associated with the Great Valley Fault System. Because project facilities would be designed in conformance with CBC standards, the probability of substantial adverse effects from strong seismic ground shaking would be low and this impact would be less than significant.

- iii) **Seismic-related ground failure, including liquefaction?**

Less than significant with mitigation incorporated. The geotechnical reports prepared for the project indicate that the project area is underlain by loose sandy soils and shallow groundwater, thereby rendering the site's soils potentially susceptible to liquefaction. This would be a potentially significant impact. Implementation of the following mitigation would reduce this impact to a less-than-significant level.

Mitigation Measure GEO 1: Adhere to the Recommendations in the Geotechnical Services Reports.

The project applicants and construction contractors shall adhere to the recommendations provided in the geotechnical reports that were prepared for the proposed project to minimize or avoid damage from liquefaction. Possible measures would include, but shall not be limited to, over-excavating and recompacting the area with engineered fill or in-place soil densification. In-place soil densification measures could include deep dynamic compaction, compaction grouting, vibro-compaction, and the use of nonliquefiable caps.

iv) Landslides?

Less-than-significant impact. Given the relatively level topography of the project area, the possibility of landslides is low. As such, this would be a less-than-significant impact.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant with mitigation incorporated. The project area is located on undeveloped agricultural land. Project development would include substantial construction activity over a 230-acre area, including soil removal, trenching, pipe installation, concrete channel fabrication, grading, and revegetation. Construction activities would remove vegetative cover and could expose disturbed areas to winter storm events depending on the timing of construction activities. Further, wind erosion at the project area could result in a loss of topsoil during the spring and summer months. This would be a potentially significant impact. Implementation of the following mitigation measures would reduce this impact to a less-than-significant level.

Mitigation Measure GEO 2: Develop and Implement an Erosion Control Plan.

The project applicants shall develop and implement an Erosion Control Plan. A grading and erosion control plan shall be prepared by a California registered civil engineer and submitted to the Manteca Department of Public Works for all new development. The plan shall be consistent with the CBC grading requirements and shall include the site-specific grading proposed for the new development. The project applicants shall ensure that the construction contractor is responsible for securing a source of transportation and deposition of excavated materials.

Mitigation Measure GEO 3: Implement Best Management Practices.

To ensure that soils do not directly or indirectly discharge sediments into surface waters as a result of construction activities, water quality protection measures shall be implemented by the project applicants/construction contractor during construction. The mitigation measures shall be in accordance with Central Valley Regional Water Quality Control Board (Central Valley RWQCB) regulations regulating control of stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) program which requires the applicant to:

- ▶ File a Notice of Intent (NOI) to discharge stormwater with the Central Valley RWQCB;
- ▶ Prepare a Storm Water Pollution Prevention Plan (SWPPP) that identifies best management practices (BMPs) that would be employed to prevent or minimize the discharge of sediments and other contaminants with the potential to affect beneficial uses or lead to violation of water-quality objectives;
- ▶ Complete a self-implemented annual monitoring program and prepare a report on BMP performance; and
- ▶ BMPs shall include dust control measures such as wetting the top layer of exposed soils and covering soil stockpiles, as necessary.

- c) **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?**

Less than significant with mitigation incorporated. As noted above, because of the relatively level topography of the project area, the potential for landslides on-site is low. The geotechnical reports prepared for the project indicate that the project area is underlain by loose sandy soils and shallow groundwater, thereby rendering the site's soils potentially susceptible to liquefaction. This would be a potentially significant impact. No other hazards are associated with on-site soils (Kleinfelder 2002, 2004a, 2004b and 2004c; Neil O. Anderson and Associates 2005). Implementation of Mitigation Measure GEO 1, which requires adherence to the recommendations in the Geotechnical Services Reports, would reduce this impact to a less-than-significant level.

- d) **Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?**

Less-than-significant impact. Identification of soil types and their distribution was accomplished primarily through a review of maps provided by the NRCS. The project area contains the following soil series: Delhi loamy sand, Timor loamy sand, Tinnin loamy coarse sand, and Veritas fine sandy loam (NRCS 1992). Expansive soils shrink and swell as a result of moisture change and the presence of clay materials. All of the project area soil types have very low clay content and, therefore, have a low shrink-swell potential. Thus, the proposed project would not create substantial risks to life or property related to expansive soils. This impact would be less than significant.

- e) **Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

No impact. Sewage disposal would be provided to the project area via connection to the City's sewer system, specifically, via the existing force main in Woodward Avenue. The project would not involve the use of septic tanks or alternative waste water disposal systems that could be affected by poor soils. Therefore, no impact would occur related to adequate support of such facilities.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
VII.	Hazards and Hazardous Materials. Would the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h)	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

This setting description and subsequent environmental analysis is based on the Phase I Environmental Site Assessments (ESA) prepared for the various properties that make up the project area by Advanced GeoEnvironmental, Inc. in December 2004 for the Oleander Estates site and by ATC Associates, Inc. in November 2002 and August and December 2003 for the Sundance and Sundance 2 sites (Advanced GeoEnvironmental 2004; ATC Associates 2002, 2003a, 2003b, 2003c).

SOIL/GROUNDWATER

Most of the properties that make up the project area have been in agricultural use since at least 1914. Based on the results of the ESA's, agricultural use of the project area could have resulted in elevated pesticide concentrations in on-site soils. In addition, dairy operations on one of the parcels could have resulted in contaminated on-site soils with fecal coliform and bacteria from animal wastes. The ESAs recommend that soil and groundwater samples and testing be conducted to determine the concentrations of contaminants in on-site soils and groundwater wells. Any animal wastes should be removed from the site.

Several groundwater wells are located on the project site. The ESAs recommend that these wells should be demolished/abandoned in accordance with applicable regulations before project construction.

SEPTIC TANKS AND LEACH FIELDS

Several septic tanks and leach fields are located on the project site. The ESAs recommend that these septic tanks and leach fields should be demolished/abandoned in accordance with applicable regulations before project construction.

ASBESTOS AND LEAD PAINT

Many of the on-site structures, including residences, barns, and other structures, were built before the 1980s and may have building materials containing asbestos and lead-based paints. The ESAs recommend that an asbestos survey and a lead-based paint survey be performed on these structures by a qualified professional before demolition activities.

PCBs

Several pole-mounted transformers were observed on the project site. Pole-mounted transformers may contain polychlorinated biphenyls (PCBs). The transformers were observed to be in good condition and there was no apparent leaking. The transformers are served by Pacific Gas and Electric (PG&E), which would be responsible for their removal.

PETROLEUM HYDROCARBONS

One underground storage tank (UST) was previously removed from Assessor's Parcel Number (APN) 226-160-07. A second UST was found on the Oleander Estates site; it has been empty for nine years.

A total of 14 aboveground storage tanks (ASTs) are located at the project site:

- ▶ One 55-gallon storage drum AST and one 80-gallon diesel AST were found on the Oleander Estates site;
- ▶ Seven ASTs of varying sizes were observed on APN 226-160-07, with evidence of hydrocarbon staining observed on the ground beneath some of the ASTs.
- ▶ Four ASTs of varying sizes were observed on APNs 226-160-06 and 226-160-13, with no evidence of leakage or spills and no staining on the ground; and
- ▶ One AST was observed on APN 226-160-11, with no evidence of staining on the ground.

In addition, numerous empty and partially filled drums, and various areas with soil stains, were noted on the project site. These areas could potentially contain petroleum-type products. The ESAs recommend that any

contaminated soils should be removed and properly disposed of in accordance with appropriate local, state, and federal regulations. Additionally, any tanks not in use should be decommissioned and properly disposed.

The following information was gleaned from the ESAs. A computer search of federal, state, and regional regulatory agency databases was performed by EDR to identify and locate properties near the project area that have been reported as sites known or suspected to contain UST's, or to have been the scene of hazardous materials spills. Additionally, sites permitted to manufacture, use, generate, store, treat, or dispose of hazardous materials and/or hazardous wastes were identified. None of the properties that make up the project site were listed on any of the searched environmental databases. Further, no sites in the project vicinity have the potential to create a hazardous condition on the project site or in groundwater beneath the site.

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, could result in potentially significant impacts related to hazardous materials. These impacts would be reduced to less-than-significant levels with conformance with the various policies and measures in the Safety Element and the Air Quality Element of the General Plan.

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less-than-significant impact. Development of the project site with residential and commercial uses would involve the storage, use, and transport of hazardous materials (e.g., asphalt, fuel, lubricants, paint) during construction activities. In addition, commercial uses associated with project operation could include facilities, such as gas stations and dry cleaners, which could use and routinely transport hazardous materials on and off the project area. Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). The project applicants, builders, contractors, business owners, and others would be required to use, store, and transport hazardous materials in compliance with local, state, and federal regulations, including the California Occupational Health and Safety Administration (Cal-OSHA) requirements and manufacturers instructions, during project construction and operation. Facilities that would use hazardous materials on-site after project construction would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. Because the proposed project would implement and comply with existing hazardous material regulations, impacts related to the creation of significant hazards to the public through routine transport, use, disposal, and risk of upset would be unlikely. Therefore, this would be less-than-significant impact.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Less than significant with mitigation incorporated. The ESA's identify areas of the project site where past operations could have resulted in elevated concentrations of hazardous constituents (i.e., petroleum hydrocarbons, pesticides, herbicides, and fertilizers) in surface soils and potentially groundwater. Further, lead-based paint, asbestos, and PCBs are also likely to be present in on-site structures and transformers because of their age.

Development of the project would involve site grading, excavation for utilities, backfilling, demolition of existing facilities, and construction of new residences and other facilities. During construction activities, construction workers could come in contact with and be exposed to hazardous material present in on-site structures, soils, and groundwater. Further, the presence of contaminated soils could create a significant environmental or health hazard if left in place. Because construction workers could be exposed to hazardous materials present on-site during construction activities, and contamination in on-site soils and groundwater could create a significant

environmental or health hazard if left in place, this would be a potentially significant impact. Implementation of the following mitigation measures would reduce this impact to a less-than-significant level.

Mitigation Measure HAZARD 1: Prepare a Site Health and Safety Plan.

To avoid health risks to construction workers, the contractor shall prepare a site health and safety plan. This plan will outline measures that shall be employed to protect construction workers and the public from exposure to hazardous materials during demolition and construction activities. These measures could include, but would not be limited to posting notices, limiting access to the site, air monitoring, watering, and installation of wind fences. Development contractors shall be required to comply with state health and safety standards for all demolition work. If necessary, this shall include compliance with federal Occupational Health and Safety Administration and Cal-OSHA requirements regarding exposure to asbestos and lead-based paint.

Mitigation Measure HAZARD 2: Sample and Test On-site Soils and Groundwater.

Before demolition of any structures associated with past and current farming operations (e.g., buildings, USTs, ASTs, tanks, etc.), the project applicants shall investigate the extent to which soil and/or groundwater has been contaminated from these past operations. This investigation shall follow the ESAs and/or other appropriate testing guidelines and shall include, as necessary, analysis of soil and/or groundwater samples taken at or near the potential contamination sites. If the results indicate that contamination exists at levels above regulatory action standards, then the San Joaquin County Department of Environmental Health (SJCDEH) shall be notified and the site shall be remediated in accordance with recommendations made by appropriate federal, state, or local regulatory agencies. The agencies involved would depend on the type and extent of contamination. Remediation activities could include, but would not be limited to, the excavation of contaminated soil areas and hauling of contaminated soil materials to an appropriate off-site disposal facility, mixing of on-site soils, and capping (i.e., paving or sealing) of contaminated areas.

Mitigation Measure HAZARD 3: Prepare a Site Plan that Identifies Remediation Activities.

The project contractors shall prepare a site plan that identifies any necessary remediation activities appropriate for proposed land uses, including excavation and removal of on-site contaminated soils, and redistribution of clean fill material on the project site. The plan shall include measures that ensure the safe transport, use, and disposal of contaminated soil and building debris removed from the site. In the event that contaminated groundwater is encountered during site excavation activities, the contractor shall report the contamination to the appropriate regulatory agencies, dewater the excavated area, and treat the contaminated groundwater to remove contaminants before discharge in the sanitary sewer system. The development contractors shall be required to comply with the plan and applicable local, state, and federal laws and the requirements of the City of Manteca for dewatering discharge. The plan shall outline measures for specific handling and reporting procedures for hazardous materials, and disposal of hazardous materials removed from the site at an appropriate off-site disposal facility.

In addition, the following measures shall apply to construction activities as appropriate.

- (1) The SJCDEH shall be notified if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil and odorous groundwater) is encountered during excavation. Any contaminated areas shall be remediated in accordance with recommendations made by appropriate federal, state, or local regulatory agencies as generally described above.
- (2) Before demolition of any on-site structures, the project applicants shall hire a qualified consultant to investigate whether any of these structures contain asbestos-containing materials and lead that could become friable or mobile during demolition activities. If found, the asbestos-containing materials and lead shall be removed by an accredited inspector in accordance with EPA and Cal-OSHA standards. In addition, all activities (construction or demolition) in the vicinity of these materials shall comply with Cal-OSHA asbestos

and lead worker construction standards. The asbestos-containing materials and lead shall be disposed of properly at an appropriate off-site disposal facility.

- c) **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

Less than significant with mitigation incorporated. No schools are located within one-quarter mile of the project area. The nearest school, Veritas Elementary School, is located at 6647 East Woodward Avenue, which is less than 0.5 mile east of the project area. Implementation of mitigation measures (HAZARD 1, 2, and 3) listed under item b) (above) would render this impact less than significant.

- d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

Less-than-significant impact. According to a computer search of federal, state, and regional regulatory agency databases performed by EDR, none of the properties that make up the project site are included on any lists of hazardous materials sites. Therefore, this impact would be less than significant.

- e) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

No impact. The project site is not located within an airport land use plan, or within 2 miles of a public airport. The nearest airports to the project area include: the Stockton Metropolitan Airport, located approximately 7 miles north of the project area, and the Tracy Municipal Airport, located approximately 14 miles southwest of the project area. No impacts related to safety hazards at these airports would result from the project.

- f) **For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

No impact. The project site is not located within the vicinity of a private airstrip. As such, no impacts related to safety hazards at private airstrips would result from the project.

- g) **Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

Less-than-significant impact. The City of Manteca maintains and periodically updates its Emergency Plan, which contains emergency procedures required for rescue operations, medical assistance, fire fighting, and evacuation of residents, visitors, and personnel during a natural or man-made disaster within the City (City of Manteca 2003a; 2003b). The proposed project is not located near an evacuation route. Implementation of the proposed project would not interfere with implementation of the City's Emergency Plan. Therefore, this would be a less-than-significant impact.

- h) **Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

Less-than-significant impact. The California Department of Forestry and Fire Protection identifies wildland fire areas and Very High Fire Hazard Severity Zones for all counties in California. None of these areas or zones are located in or near the City of Manteca (California Resources Agency 2003). In addition, the project area is located adjacent to an established urban area. Therefore, the proposed project would not expose people or structures to significant risk of loss of injury involving wildland fires. This impact would be less than significant.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
VIII.	Hydrology and Water Quality. Would the project:				
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 that 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 on- or off-site erosion or siltation?	☐	☐	☒	☐
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 on- or off-site flooding?	☒	☐	☐	☐
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 area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐
h)	Place within a 100-year flood hazard area structures that 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)	Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The City of Manteca is located in the Eastern San Joaquin County Groundwater Basin (ESJCGB), which is a sub-basin of the San Joaquin Valley Groundwater Basin. The Department of Water Resources (DWR) classified the ESJCGB as a basin in a state of overdraft in DWR Bulletin 160-98 (DWR 1998). Basin groundwater modeling

predicts a continued decline in groundwater levels if the overdraft continues. The most recent model results reported in the Flood Control District's Comprehensive Water Management Plan Report of 2001 predicted a groundwater decline of 10 feet from the 2000 levels by 2030 if there is no change in groundwater pumping (City of Manteca 2002). The groundwater aquifers underlying the City have been identified to include four geologic formations. In increasing depth from the surface, the identified aquifers are Victor Formation, Laguna Formation, Mehrten Formation, and Valley Springs Formation. The City's wells primarily withdraw water from the Victor and Laguna Formations (City of Manteca 2002).

Within the project area there are several irrigation ditches, agricultural drainages, and some large ponds that collect runoff and manure from dairy operations. The nearest significant body of water is the San Joaquin River, located approximately 3–4 miles west of the project area.

Domestic and irrigation groundwater wells are present on the site. A high groundwater table is typical of the project area and surrounding area. Based on preliminary geotechnical surveys, groundwater was encountered at depths of approximately 3 to 10 feet from the existing ground surface.

The City of Manteca currently provides domestic water to its customers via a network of wells and transmission lines that extract groundwater from the underlying aquifers and distribute it throughout the City. The City does not currently obtain any municipal water supplies from surface water; however, construction is underway on a project that would convey surface water to the City for municipal use. The SSJID's South County Surface Water Supply Project (SCSWSP) is a joint project of SSJID and the cities of Manteca, Lathrop, Escalon, and Tracy to supply treated potable water to these cities. This project involves construction and operation of a new surface water treatment plant near Woodward Reservoir in Stanislaus County and a 36.5-mile water transmission pipeline with pumping facilities to transport treated water to turnouts at each city. Construction is currently underway, with initial deliveries expected in 2005.

DISCUSSION

a) Violate any water quality standards or waste discharge requirements?

Less than significant with mitigation incorporated. This impact discussion is divided into two components: project construction and project operation.

PROJECT CONSTRUCTION

Construction activities at the project site would be extensive. Grading, earth moving, excavation and utility installation, infrastructure development, and building construction would disturb the site's existing vegetative cover, soil, and drainage systems. Construction activities are anticipated to occur on- and off-site in various locations across the project area over multiple phases. During this period, disturbed portions of the project site would be subject to wind erosion, rainfall, and winter stormwater runoff events. Construction activities could result in substantial soil erosion and stormwater discharges of suspended solids, increased turbidity, and potential mobilization of other pollutants from project construction sites as contaminated runoff or direct discharges to drainage channels. Although the project area is relatively flat and the potential for soil erosion is considered low, intense rainfall and associated stormwater runoff could result in short periods of sheet erosion within areas of exposed or stockpiled soils. If this erosion is uncontrolled, these soil materials could cause sedimentation and blockage of drainage channels. Further, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase the potential for runoff and erosion. Consequently, the potential surface water quality impacts on off-site drainage channels from construction activities would be potentially significant. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

Mitigation Measure HYDRO 1: Acquire Appropriate Regulatory Approvals.

The project applicants shall consult with the Central Valley RWQCB to acquire the appropriate regulatory approvals that may be necessary to obtain Section 401 water quality certification, the State Water Resources Control Board (SWRCB) statewide NPDES stormwater permit for general construction activity, Central Valley RWQCB NPDES permit for construction dewatering activity, and any other necessary site-specific waste discharge requirements (WDRs) or waivers under the Porter-Cologne Act. As required under the NPDES stormwater permit for general construction activity, the project applicants shall prepare and submit the appropriate NOIs and prepare the SWPPP and any other necessary engineering plans and specifications for pollution prevention and control. The SWPPP and other appropriate plans shall identify and specify the use of erosion and sediment control BMPs, means of waste disposal, implementation of approved local plans, nonstormwater management controls, permanent postconstruction BMPs, and inspection and maintenance responsibilities. The SWPPP would also specify the pollutants that are likely to be used during construction that could be present in stormwater drainage and nonstormwater discharges. A sampling and monitoring program would be included in the SWPPP that meets the requirements of SWRCB Order 99-08-DWQ to ensure that the BMPs are effective.

Construction techniques shall be identified that would reduce the potential for runoff, and the plan shall identify the erosion and sedimentation control measures to be implemented. The SWPPP shall also specify spill prevention and contingency measures, identify the types of materials used for equipment operation, and identify measures to prevent or clean up spills of hazardous materials used for equipment operation and hazardous waste. Emergency procedures for responding to spills shall also be identified. BMPs identified in the SWPPP shall be used in all subsequent site development activities. The SWPPP would identify personnel training requirements and procedures that would be used to ensure that workers are aware of permit requirements and proper installation and performance inspection methods for BMPs specified in the SWPPP. The SWPPP shall also identify the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP. All construction contractors shall retain a copy of the approved SWPPP on the construction site.

The project applicants shall also prepare and submit an NOI and acquire authorization for the Central Valley RWQCB NPDES permit for construction dewatering activities that may be necessary for foundation and utility installations.

Under SWRCB Order 99-08-DWQ, as amended, the SWRCB has determined that implementation of a SWPPP, the BMPs identified in the SWPPP, and the monitoring and sampling program required in the SWPPP are considered to meet the water quality requirements of the Porter-Cologne Act, barring a violation identified by the monitoring or sampling procedures.

PROJECT OPERATION

Proposed residential activities could contribute to water quality degradation through maintenance of yards associated with the use of fertilizers, herbicides, and pesticides; motor vehicle operation and maintenance; and animal waste. In addition, the increased area of impervious surfaces would increase the volume of runoff coming from the project area. Runoff from developed uses would typically contain contaminants such as oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals), nutrients, sediment, and other pollutants, and these pollutants could be carried to downstream waterways including the San Joaquin River.

Stormwater runoff generated within the project area would be collected in new stormwater drainage systems that would include structural water quality treatment measures (e.g., oil water separators, drainage swales) consistent with the City's standards and ordinances and as outlined in the City's Storm Drain Master Plan. Stormwater would pass through these treatment measures before discharge in on-site detention facilities. Under appropriate hydraulic flow conditions, detained stormwater would be pumped to South San Joaquin Irrigation District (SSJID) stormwater facilities. The structural BMPs listed above, which are designed to remove pollutant constituents from runoff, would maintain runoff water quality. The implementation of nonstructural BMPs, through various public

education and outreach programs maintained by the City under the municipal NPDES stormwater permit and as authorized by the Central Valley RWQCB, would also serve to limit the types, amounts, and likely discharges of contaminants into stormwater. Therefore, stormwater runoff from the project area would result in less-than-significant water quality impacts.

- 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 that would not support existing land uses or planned uses for which permits have been granted)?**

Less-than-significant impact. The project would increase demands for water supply. Because the project would construct more than 500 residential units (Oleander: 544 units, Sundance/Sundance2: 530 units), it would be required to request the preparation of a water supply assessment from the Manteca Public Works Department. This assessment would evaluate whether water supplies are available to serve the project and the sources of those supplies. As noted previously, the City is currently participating in the SCSWSP, which would provide surface water supplies to the City. This new surface water supply would be used as the base supply and groundwater facilities would be used to meet peak water demands. City wells would be used only as necessary and would be consistent with the City's operational policies. As such, impacts to groundwater would be less than significant.

The City of Manteca General Plan EIR (City of Manteca 2003b) found that continued use of groundwater as the City's primary source of domestic water would constitute a significant impact. However, this impact would be reduced to a less-than-significant level when surface water supplies are available through the new SCSWSP, which is expected to provide treated surface water to the City in 2005. Because surface water would be available for the project, this would be a less-than-significant impact.

- 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 on- or off-site erosion or siltation?**

Less-than-significant impact. As discussed above under item a), the project would alter the existing site drainage pattern by constructing residences and roadways on agricultural land, thereby increasing the amount of impervious surfaces. Stormwater runoff would be collected in an on-site drainage system that would connect to the City's existing stormwater collection system under appropriate hydraulic conditions. Implementation of Mitigation Measure HYDRO 1, which requires the project applicants to develop and implement an erosion control plan, would reduce impacts related to off-site erosion. Therefore, this would be a less-than-significant impact.

- 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 on- or off-site flooding?**

Potentially significant impact. As discussed above under item a), the project would alter the existing site drainage pattern by constructing residences and roadways on agricultural land, thereby increasing the amount of impervious surfaces and thus the volume of runoff coming from the project area. Details regarding the sizing of on-site facilities and the ability of SSJID's facilities to accommodate project-related flows area not available. If proposed facilities are not sized appropriately, the project could result in surface runoff that causes on- or off-site flooding. This would be a potentially significant impact. The project applicants would be required to prepare a detailed drainage study consistent with City requirements.

- 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?**

Potentially significant impact. Construction of the project would involve the installation of new storm drainage facilities to convey project area stormwater to the City's existing stormwater runoff collection system. Design and final alignment of the new system would be approved by the City before project construction. It is unknown at this time whether the new stormwater drainage system would be designed to adequately accommodate all project stormwater and whether SSJID's facilities could accommodate project-related flows. Therefore, this impact would be potentially significant. The project applicants would be required to prepare a detailed drainage study consistent with City requirements.

- f) **Otherwise substantially degrade water quality?**

Less than significant with mitigation incorporated. As discussed above under item a), construction and implementation of the proposed project would have the potential to degrade water quality; however, implementation of the mitigation measures identified above (i.e., HYDRO 1) would lessen water quality impacts to a less-than-significant level.

- g) **Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

Less-than-significant impact. The Federal Emergency Management Agency (FEMA) categorizes flood prone areas based on the frequency of occurrence. According to FEMA, the project area is located within the 500-year area of potential inundation (City of Manteca 2003b). The primary flood hazard to the project area is the San Joaquin River and its tributaries, most notably Walthall Slough, located approximately 3–4 miles southwest of the project area. A levee extending from Williamson Road east to Airport Way provides flood protection for the land north and east of Walthall Slough. The project area is not located within a 100-year flood zone and as such would not place housing within a 100-year flood hazard area. Further, adequate flood protection is in place to protect the project area from 500-year flood events. Therefore, this impact would be less than significant.

- h) **Place within a 100-year flood hazard area structures that would impede or redirect flood flows?**

Less-than-significant impact. As noted above, the project would not construct structures within a 100-year flood hazard area. Existing levees are in place to protect this site from 500-year flood events. Further, the project is substantially distant from the San Joaquin River such that proposed housing would not impede or redirect flood flows. Therefore, this impact would be less than significant.

- 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?**

Less-than-significant impact. As noted above, the project is protected by a levee system for the San Joaquin River from 500-year flood events. Further, the project is not located within a designated 100-year flood zone. Therefore, the project would not expose people or structures to a significant risk of loss, injury, or death involving flooding. This would be a less-than-significant impact.

- j) **Result in inundation by seiche, tsunami, or mudflow?**

Less-than-significant impact. The EIR for the City of Manteca General Plan states that it is highly unlikely that inundation from a seiche or tsunami would affect the General Plan Study Area, which includes the project area (City of Manteca 2003b). The nearest body of inland water is the San Joaquin River, which is located approximately 3–4 miles west of the project area and the project area is protected by a levee system. Therefore,

the potential for inundation by a seiche would be low. The project area is not located in a coastal area and, therefore, would not be subject to a tsunami. Additionally, given that the project area is relatively flat, the potential for site inundation by mudflows is not expected. Therefore, this impact would be less than significant.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
IX.	Land Use and Planning. Would the project:				
	a) Physically divide an established community?	☐	☐	☒	☐
	b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
	c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

The project area is located outside of the city limits, but within the City of Manteca's SOI and the city's Primary Urban Service Boundary.

Table 3.9-1 identifies the existing land use and zoning designations for the project area, as designated by the San Joaquin County General Plan and the City of Manteca General Plan.

Table 3.9-1 Existing Land Use Designation and Zoning				
Development	San Joaquin County General Plan		City of Manteca General Plan	
	Land Use Designation	Zoning	Land Use Designation	Zoning
Oleander Estates	R/L	AU-20	LDR, P	None
Sundance and Sundance 2	R/L	AU-20	LDR, BP, GC	None
Notes: R/L: Low Density Residential AU-20: Agriculture Urban Reserve LDR: Low Density Residential P: Park BP: Business Park GC: General Commercial				
Source: San Joaquin County 1992; City of Manteca 2003a				

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, would result in less-than-significant impacts related to land use and planning.

a) Physically divide an established community?

Less-than-significant impact. The project would not physically divide an established community. The proposed residential subdivisions would be located in an agricultural area southwest of Manteca's urban core. In general, land surrounding the project area is mostly agricultural and rural residential. SR 120 forms the northern boundary of the site, with residential development located to the northwest. Future residential and commercial development is proposed nearby the project area. There are a limited number of rural residences located within the project area. These residences do not constitute a defined community. The proposed project would establish a new residential community, thus unifying the area. Therefore, this would be a less-than-significant impact.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less-than-significant impact. The project would involve the development of urban uses on existing agricultural land. The properties that make up the project area are currently zoned AU-20 (Agriculture Urban Reserve) by San Joaquin County, with the expectation that this land would develop with urban land uses. The San Joaquin County General Plan designates the properties as Low Density Residential (R/L), appropriate for single-family neighborhoods. The proposed project would be generally consistent with the County's R/L designation, with the exception of the proposed Medium Density Residential land uses for the Sundance 2 development. The proposed project would also be consistent with the County's AU-20 (Agriculture Urban Reserve) zoning, which indicates that the County has planned for, or at least anticipated, conversion of this land to urban uses. The proposed project includes the pre-zoning and annexation of the site to the City of Manteca. Once annexed, the project area would be subject to the planning jurisdiction of the City of Manteca.

The project area is located outside the City limits, but within the City of Manteca's SOI. The City General Plan designates the majority of the project area for Low Density Residential (LDR, 2.1 to 8 dwelling units per acre) uses, with smaller portions designated for P, BP, and GC uses. The existing land use designations in the City General Plan indicate that the City, like the County, has planned for conversion of this land to urban uses.

Development of the proposed project would require various entitlements from the City of Manteca, including pre-zoning, to allow development of the project. The proposed land use designations for the project area would primarily be LDR, with smaller portions of the site designated for Park, MDR, and GC. Proposed zoning would include R-1, R-3 (limited multiple family), Park, and GC.

The project's land use plan is anticipated to meet the general requirements for annexation established by state law. Availability of organized community services and water supplies is analyzed in Section 3.16, "Utilities and Service Systems." Following approval of the project and annexation to the City of Manteca, the project would be consistent with the City's land use and zoning designations. This impact would be less than significant.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Less than significant with mitigation incorporated. The project area is located within the SJMSCP area (for additional details, refer to Section 3.4, "Biological Resources"). The special-status species potentially affected by the project are covered in the SJMSCP, which was adopted by the City of Manteca on February 5, 2001. The project applicants would work with the City of Manteca to ensure that the proposed project is consistent with the provisions outlined in the SJMSCP. Therefore, this impact would be less than significant with implementation of Mitigation Measures BIOLOGY 1, 2, and 3, which require the project applicants to participate in the SJMSCP.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
X.	Mineral Resources. Would the project:				
	a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
	b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The California Division of Mines and Geology has identified one location within the City of Manteca General Plan Study Area (which includes the project area) as a Zone MRZ-2, signifying a significant mineral resource zone. This location is near the San Joaquin River and the designation refers to sand deposits that are considered to be of regional significance. The closest sand and gravel mines in the vicinity of the project are both owned by Brown Sand, Inc., and have recently ceased operations: (1) the Oakwood Lake Pit located on Woodward Avenue in Manteca, approximately 2 miles west of the project area, and (2) the Mossdale Ranch site located in Lathrop, approximately 5 miles west of the project area. (City of Manteca 2003b). No other known mineral resources are located in the vicinity of the project area.

DISCUSSION

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No impact. No mineral resources that would be of value to the region or state are known to underlie the project area. As such, development of the project would have no effect on the availability of known mineral resources.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No impact. As noted above, two sites that were previously used for mineral resource (i.e., sand and gravel) recovery are located in the vicinity of the project, with one site located 2 miles to the west. Mining operations have recently ceased at this location. Development of the proposed project would not affect these sites or any other mineral resource recovery sites. No impact would occur.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
XI.	Noise. Would the project result in:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☒	☐	☐	☐
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

NOISE-SENSITIVE LAND USES

Noise-sensitive land uses generally include those uses where exposure to noise would result in adverse effects, as well as uses where quiet is an essential element of the intended purpose (e.g., schools and libraries). Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels.

Noise-sensitive land uses in the project area consist primarily of residential dwellings. A residential neighborhood is located to the northwest of the project boundary, immediately adjacent to the project area. The area to the south also includes rural residential dwellings.

EXISTING NOISE SOURCES

The existing noise environment in and surrounding the project area is influenced by surface transportation noise emanating from vehicular traffic on area roadways (e.g., SR 120). Intermittent noise from surrounding operations in addition to noise from outdoor activities at nearby land uses (e.g., people talking, dogs barking, operation of landscaping equipment) also contribute, to a lesser extent, to the existing noise environment.

As described in Section 3.15, “Transportation/Traffic,” existing average daily traffic volumes on segments of Airport Way, Union Road, and Woodward Avenue in the project area are approximately 9,300, 17,100, and 3,700 vehicles, respectively. In addition, the 2004 average daily traffic count for SR 120 east of Airport Way was 60,000 vehicles (Caltrans 2005). Existing roadway traffic noise levels were calculated for these roadway segments using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model (FHWA 1988). Additional input data included day/night percentages of autos, medium and heavy trucks, vehicle speeds, ground attenuation factors, and roadway widths.

Table 3.11-1 summarizes the existing L_{dn} /CNEL at 50 feet from the near travel lane centerline and distance from roadway centerline to the 55, 60, 65, and 70 dBA L_{dn} /CNEL contours for existing average daily traffic volumes.

Table 3.11-1 Summary of Modeled Existing Traffic Noise Levels					
Roadway Segment and Location	Distance (ft) from Roadway Centerline to L_{dn} /CNEL (dBA)				L_{dn} /CNEL (dBA) 50 ft from Centerline of near Travel Lane
	70 CNEL	65 CNEL	60 CNEL	55 CNEL	
Airport Way	-	122.6	263.8	568.0	70.14
Union Way	87.1	184.4	395.7	851.6	71.71
Woodward Avenue	-	66.5	142.8	307.4	66.13
SR 120	373.3	800.4	1,722.3	3,709.1	79.95
See Appendix B, “Noise Modeling Analyses,” for traffic noise modeling input and output. Source: Data provided by EDAW in 2005					

PLANS, POLICIES, REGULATIONS, AND ORDINANCES

SAN JOAQUIN COUNTY GENERAL PLAN NOISE ELEMENT

The San Joaquin County General Plan Noise Element (1992) establishes specific policies to ensure acceptable noise environments for each land use. Applicable policies include the following:

- ▶ **Policy 1.** The following exterior noise levels shall be considered acceptable:
 - 65 dB L_{dn} or less for residential development.
 - 60 dB L_{dn} or less for schools, group care facilities and hospitals.
- ▶ **Policy 4.** Development shall be planned and designed to minimize noise impacts on neighboring noise-sensitive areas and to minimize noise interference from outside noise sources.
- ▶ **Policy 6.** The county shall seek to alleviate existing community noise problems.
 - Implementation 8 (Setbacks). Setbacks should be established along the major noise sources that would ensure that noise-sensitive land uses are outside the 60 L_{dn} contour of the noise sources.

San Joaquin County Development Title

Chapter 9 of the San Joaquin County Development Title includes the following provisions related to noise that are applicable to the proposed project.

Section 1025.9 (Noise Standards): Maximum noise exposure levels permitted at noise sensitive land uses from transportation (Part I) and stationary (Part II) noise sources are specified in Table 4.6-2 [reproduced as Table 3.11-2 in this document].

Section 1025.9 (Transportation and Stationary Noise Sources):

(a) Transportation Noise Sources

- (1) Excluding proposed noise sensitive land uses on infill lots, proposed noise sensitive land uses that will be affected by existing or planned transportation noise sources shall be required to mitigate the noise levels from these transportation noise sources so that the resulting noise levels on said proposed noise-sensitive land uses do not exceed the standards specified in Table 9-1025.9, Part I [reproduced as Table 3.11-2 in this document].*
- (2) Private development projects that include the development of new transportation facilities or the expansion of existing transportation facilities shall be required to mitigate the noise levels from these transportation facilities so that the resulting noise levels on noise-sensitive land uses within and adjacent to said development projects do not exceed the standards specified in Table 9-125.9, Part I [reproduced as Table 3.11-2 in this document].*

(b) Stationary Noise Sources

- (1) Excluding proposed noise-sensitive land uses on infill lots, proposed noise-sensitive land uses that will be affected by stationary noise sources shall be required to mitigate the noise levels from these stationary noise sources so that the resulting noise levels on said proposed noise-sensitive land uses do not exceed the standards specified in Table 1025.9, Part II [reproduced as Table 3.11-2 in this document].*
- (2) Proposed projects that will create new stationary noise sources or expand existing stationary noise sources shall be required to mitigate the noise levels from these stationary noise sources so as not to exceed the noise level standards specified in Table 1025.9, Part II [reproduced as Table 3.11-2 in this document].*

(c) Exemptions. The following shall be exempt from the provisions of 9-1025.9, Noise.

- (1) Activities conducted in public parks, public playgrounds, and public or private school grounds, including, but not limited to, school athletic and school entertainment events;*
- (3) Noise sources associated with construction, provided such activities do not take place before 6:00 a.m. or after 9:00 p.m. on any day;*
- (4) Noise sources associated with the maintenance of residential property located in a residential zone, provided such activities shall take place between the hours of 8:00 a.m. and 9:00 p.m. on any day;*
- (5) Noise sources emanating from any agricultural operation, including activities associated with the processing or transportation of crops when such activities are conducted on agriculturally zoned lands;*
- (6) Noise sources associated with residential air conditioning equipment, provided such equipment is in good repair.*

(d) Acoustical Study. The Review Authority [of San Joaquin County] shall require the preparation of an acoustical study in instances where it has determined that a project may expose existing or proposed noise-sensitive land uses to noise levels exceeding the noise standards specified in Table 1025.9 [reproduced as Table 3.11-2 in this document]. This determination shall be based on the existing or future sixty-five (65) dBA

L_{dn} noise contour in the General Plan, the proximity of new noise sensitive land uses to known noise sources, or the knowledge that a potential for adverse noise impacts exists.

Table 3.11-2 San Joaquin County Maximum Allowable Noise Exposure		
PART I: TRANSPORTATION NOISE SOURCES		
Noise Sensitive Land Use (Use Types)	Outdoor Activity Areas¹ dBA L_{dn}	Interior Spaces dBA L_{dn}
Residential	65	45
Administrative Office	–	45
Child Care Services, Child Care Centers	–	45
Community Assembly	65	45
Cultural & Library Services	–	45
Educational Services: General	–	45
Funeral & Interment Services – Undertaking	65	45
Lodging Services	65	45
Medical Services	65	45
Professional Services	–	45
Public Services (excluding Hospitals)	–	45
Hospitals	65	45
Recreation – Indoor Spectator	–	45
PART II: STATIONARY NOISE SOURCES		
	Outdoor Activity Areas	
	Daytime¹ (7 a.m. to 10 p.m.)	Nighttime² (10 p.m. to 7 a.m.)
Hourly Equivalent Sound Level (L _{eq}), dBA	50	45
Maximum Sound Level (L _{max}), dBA	70	65
¹ Where the location of outdoor activity areas is unknown or is not applicable, the noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or to the property line noise mitigation measures. ² Each of the noise level standards specified shall be reduced by 5 dBA for impulsive noise, single tone noise, or noise consisting primarily of speech or music. Source: San Joaquin County 2003		

CITY OF MANTECA GENERAL PLAN

The Noise Element of the City of Manteca General Plan (City General Plan) identifies goals, standards, and policies designed to ensure that City residents are not subjected to noise beyond acceptable levels. A general objective of the Noise Element is to protect existing noise-sensitive development (e.g., hospitals, schools, churches, and residences) from new uses that would generate noise levels incompatible with those uses and, conversely, discourage noise-sensitive uses from locating near sources of high noise levels. The Noise Element establishes noise criteria for determining land use compatibility for new land uses affected by transportation noise sources. The Noise Element also establishes maximum allowable noise performance standards for stationary noise sources. The City's General Plan noise performance standards are summarized in Table 3.11-3.

CITY OF MANTECA ZONING ORDINANCE

The City's zoning ordinance (2005) specifies maximum allowable sound pressure levels for various land uses. Normal household appliances and equipment operated between the hours of 7:00 a.m. to 7:00 p.m. are exempt from these standards. The maximum sound pressure levels radiated by any use or facility shall not exceed the computed noise level values specified in Table 3.11-4, after applying corrections.

Table 3.11-3 City of Manteca’s Maximum Allowable Noise Exposure and Performance Standards			
Mobile Noise Sources			
Land Use ⁴	Outdoor Activity Areas ¹ (dBA CNEL/L _{dn})	Interior Spaces (dBA)	
		CNEL/L _{dn}	L _{eq} ³
Residential	60 ²	45	
Transient Lodging	60 ²	45	
Hospitals, Nursing Homes	60 ²	45	
Theaters, Auditoriums, Music Halls			35
Churches, Music Halls	60 ²		40
Office Buildings	65		45
Schools, Libraries, Museums			45
Playgrounds, Neighborhood Parks	70		
Stationary Noise Sources ^{5, 6}			
Outdoor Activity Areas			
Noise Level Descriptor (dBA)	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)	
Hourly Equivalent Sound Level (L _{eq})	50	45	
Maximum Sound Level (L _{max})	70	65	
¹ Outdoor activity areas for residential development are considered to be backyard patios 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-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.			
² In areas where it is not possible to reduce exterior noise levels to 60 dB Ldn or below using a practical application of the best noise-reduction technology, an exterior noise level of up to 65 Ldn will be allowed.			
³ Determined for a typical worst-case hour during periods of use.			
⁴ 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.			
⁵ Each of the noise level standards specified above shall be reduced by 5 dBA 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 are a primary source of noise complaints.			
⁶ 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.			
Source: City of Manteca 2003			

Table 3.11-4 City of Manteca's Zoning Ordinance Noise Performance Standards		
Receiving Land Use Category	Time Period	Maximum Exterior Noise Level (dBA)
Single and Limited Multiple Family	10 p.m. to 7 a.m.	50
	7 a.m. to 10 p.m.	60
Multifamily residential, Public Institutional and Neighborhood Commercial	10 p.m. to 7 a.m.	55
	7 a.m. to 10 p.m.	60
Medium and Heavy Commercial	10 p.m. to 7 a.m.	60
	7 a.m. to 10 p.m.	65
Light industrial	Anytime	70
Heavy industrial	Anytime	75
Notes: The following corrections are applicable (apply only one correction): Daytime Operation Only (7am – 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 (hammering, etc.): -5 decibels Noise Rising or Falling in Pitch or Volume (hum, screech, etc.): -5 decibels Source: City of Manteca 2005		

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, could result in potentially significant impacts related to noise, including the exposure of persons to noise levels in excess of established thresholds and impacts of construction noise. These impacts would be reduced to less-than-significant levels with conformance with the various policies and measures in the Noise Element of the General Plan. However, noise impacts associated with individual developments, including single-event noise levels and roadway noise, were not addressed at the program level, and are addressed below.

- a) **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?**

SHORT-TERM CONSTRUCTION SOURCE NOISE

Less than significant with mitigation incorporated. Construction of the project would include site grading, clearing, and excavation associated with the site preparation phase; paving; building construction; and the application of architectural coatings, in addition to other miscellaneous activities. The types of on-site equipment is not known at this time, but would be anticipated to include cranes, dump trucks, scrapers, backhoes, dozers, loaders, and other miscellaneous pieces of equipment. According to the EPA, the noise levels of primary concern are typically associated with the site preparation phase because of the on-site equipment associated with clearing, grading, and excavation. Depending on the operations conducted, individual equipment noise levels can range from 78 to 91 dBA at 50 feet, as indicated in Table 3.11-5.

Table 3.11-5 Typical Equipment Noise Levels		
Type of Equipment	Noise Level in dBA at 50 feet	
	Without Feasible Noise Control	With Feasible Noise Control*
Loader	79	75
Dozer or Tractor	80	75
Crane	83	75
Scraper	88	80
Excavator	88	80
Compactor	82	75
Backhoe	85	75
Grader	85	75
Generator	78	75
Truck	91	75
*Feasible noise control includes the use of intake mufflers, exhaust mufflers, and engine shrouds in accordance with manufacturers' specifications. Source: EPA 1971, Federal Transit Administration 1995		

Noise from localized point sources (such as construction sites) typically decreases by approximately 6 dBA with each doubling of distance from source to receptor. Given this noise attenuation rate and assuming no noise shielding from either natural or human-made features (e.g., trees, buildings, fences), outdoor receptors within approximately 1,600 feet of the construction site could experience maximum instantaneous noise levels of greater than 60 dBA when on-site construction-related noise levels exceed approximately 90 dBA at the project area boundary. During project development, construction could result in increased levels of annoyance and sleep disruption for occupants of existing residential dwellings or planned dwellings constructed nearby. Depending on the activities being performed, as well as the duration and hours during which activities occur, construction-generated noise levels at nearby existing or planned residences could violate applicable noise standards. In addition, activities occurring during the evening and nighttime hours, when people are more sensitive to noise, could result in increased levels of annoyance and sleep disruption to occupants of nearby residences. As a result, this impact would be potentially significant.

Implementation of the following mitigation measures (NOISE-1 and -2) would reduce this impact to a less-than-significant level.

Mitigation Measure NOISE-1: Limit Construction Activities to the Least Noise-Sensitive Daytime Hours.

Construction activities shall be limited to the least noise-sensitive daytime hours of 7:00 a.m. to 7:00 p.m., for which related noise is exempt from the provisions of the above standards. Construction activities shall not be allowed on Sundays and legal holidays. These limitations shall be specified in all construction contracts and specifications entered into by the applicants and/or its successors in interest.

Mitigation Measure NOISE-2: Equip and Operate All Construction Vehicles and Equipment in Accordance with Manufacturers' Recommendations.

All construction vehicles or equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and acoustical shields or shrouds, in accordance with manufacturers' recommendations. Construction equipment and truck routes shall be arranged to minimize travel adjacent to occupied residences. Stationary construction equipment and staging areas shall be located as far as possible from sensitive receptors.

LONG-TERM OPERATIONAL STATIONARY, AREA, AND VEHICLE SOURCE NOISE

ON-SITE STATIONARY AND AREA SOURCE NOISE

Potentially significant impact. The project land use plan features a mix of various land uses, including residential, commercial, and recreational (e.g., parks and club). The noise levels typically associated with these land uses and associated noise impacts are discussed separately below.

RESIDENTIAL LAND USES

Noise from proposed residential dwellings would expose other nearby residences (both existing and planned) to minor increases in ambient noise levels. Noise typically associated with such development includes lawn and garden equipment, voices, and amplified music. Activities associated with these land uses would result in only minor increases in ambient noise levels, primarily during the day and evening hours and less frequently at night, as perceived at the closest residential receptors. Noise levels generated by stationary sources, primarily residential central air conditioning units, typically average approximately 60 dBA at 3 feet from the source (EPA 1971). Depending on the distance between dwellings, noise levels associated with air conditioning units located in residential side yard areas could potentially exceed the exterior daytime and nighttime noise standards of 50 dBA and 45 dBA, respectively, at neighboring residences. As a result, increased noise levels associated with proposed residential land uses would be a potentially significant impact.

COMMERCIAL USES

As discussed in the project description, the project includes plans for the development of commercial land uses on a total of 2.29 acres. However, the specific types of commercial uses to be developed have not yet been determined. Potential noise sources associated with these types of land uses can vary substantially. Noise associated with such uses can include occasional parking lot-related noise (e.g., opening and closing of vehicle doors, people talking), loading dock operations (e.g., use of forklifts, hydraulic lifts), trash compactors, and air compressors. Noise from such equipment can reach intermittent levels of approximately 90 dBA at 50 feet from the source (EPA 1971). Early morning truck deliveries also may be a source of elevated noise levels at nearby receptors.

Operational noise levels associated with the proposed commercial land uses could potentially exceed the maximum allowable exterior noise standards at nearby existing and planned noise-sensitive receptors. In addition, increases in single-event noise levels, such as backup alarms from delivery trucks, occurring during the nighttime and early morning hours, could result in increased levels of disturbance and sleep disruption to occupants of nearby residential dwellings. Increased noise levels associated with proposed commercial land uses would be potentially significant.

RECREATIONAL USES

As described in the project description, the proposed project includes plans for the development of various recreational uses, including parks and a Boys and Girls Club on a total of 19.19 acres. Noise typically associated with such uses and associated vehicle parking areas include the voices of adults and children and the occasional opening and closing of vehicle doors. Noise generated by such sources is often intermittent and typically results in substantial increases in daytime ambient noise levels or anticipated to exceed the land use compatibility standards at nearby receptors. However, recreational uses involving the use of amplified sound systems or activities occurring during the more noise-sensitive evening, nighttime, and early morning hours may result in substantial increases in ambient noise levels at nearby existing or proposed residences, resulting in potential increases in annoyance and sleep disruption. Increased noise levels associated with proposed recreational land uses would be potentially significant.

Implementation of the following mitigation measures (NOISE-3 and -4) would reduce this impact, but not to a less-than-significant level. Implementation of these mitigation measures, in addition to complying with applicable noise policies, would reduce stationary-source noise impacts. However, noise levels at some noise-sensitive land uses could potentially exceed applicable standards, even with implementation of all feasible mitigation measures. Single-event noise levels at residential land uses located adjacent to or within areas designated for commercial mixed-use would be of particular concern because of intermittent noise typically associated with truck deliveries and the loading/unloading of materials. Additional analysis would be required as site-specific information becomes available.

Mitigation Measure NOISE-3: Conduct Site-Specific Acoustical Analyses.

Site-specific acoustical analyses shall be conducted to determine predicted noise impacts attributable to the proposed project, taking into account various conditions (e.g., site design, location of structures, building characteristics). The acoustical analysis shall evaluate stationary and mobile source noise attributable to the proposed use and impacts to nearby noise-sensitive land uses, in accordance with the noise standards. Feasible measures shall be identified to reduce project-related noise impacts. Measures may include, but are not limited to, the following:

- ▶ use of increased noise-attenuation measures in building construction (e.g., dual-pane, sound-rated windows; mechanical air systems; exterior wall insulation);
- ▶ locating mechanical equipment (e.g., air conditioning and ventilation systems) at the farthest distance from and/or shielding such equipment from nearby existing and proposed noise-sensitive land uses; and
- ▶ limiting noise-generating operational activities associated with the proposed commercial land uses, including truck deliveries and the loading and unloading of materials.

Mitigation Measure NOISE-4: Limit Noise Associated with Proposed Recreational Land Uses.

The following measures shall apply to noise-generating activities associated with proposed recreational land uses:

- ▶ On-site landscape maintenance equipment shall be equipped with properly operating exhaust mufflers and engine shrouds, in accordance with manufacturers' specifications.
- ▶ The operation of on-site landscape maintenance equipment shall be limited to the least noise-sensitive daytime hours of 7:00 a.m. to 7:00 p.m.
- ▶ Use of on-site outdoor recreational facilities shall be limited to between the hours of 7:00 a.m. and dusk.

OFF-SITE TRAFFIC NOISE

As described in Section 3.15, "Transportation/Traffic," implementation of the proposed project would result in a substantial increase in daily traffic volumes (approximately 14,312 trips) on the local roadway system. Consequently, trip generation from project implementation could substantially increase vehicle traffic-generated noise levels along affected roadways. In fact, project implementation could result in a doubling of traffic volumes on surface street arterials (e.g., Airport Way, Peach Avenue, and Oleander Road) that are adjacent to existing sensitive receptors. In addition, implementation of the proposed project would result in the development of sensitive receptors near existing roadways, which, as mentioned above, generate traffic- noise levels that primarily influence the existing environment (see Table 3.11-1). As a result, operation of the proposed project could generate and expose people (existing and planned residents) to noise levels in excess of the applicable standards. This impact would be potentially significant.

Implementation of Mitigation Measure NOISE-4 (above) would reduce this impact, but not to a less-than-significant level. Implementation of this mitigation measure would evaluate measures to reduce traffic noise levels at existing and planned receptors which typically include construction of sound walls/barriers, as well as implementing sound insulation measures, including retrofit of existing windows and doors and increased insulation in wall cavities. Construction of a sound wall along some roadways, such as Union Road and Airport Road, may block access to existing dwellings and, consequently, may not be feasible mitigation. Usually, construction of sound walls is the most practical and cost-effective way to reduce traffic noise levels where such walls are feasible. Implementation of other noise-reduction methods (e.g., relocation or retrofit of structures) would be dependent on predicted noise levels and site-specific conditions (e.g., setback distances, location of outdoor activity areas, building construction characteristics, and intervening terrain/structures). This impact would remain significant and unavoidable.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less-than-significant impact. Construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Table 3.11-6 displays vibration levels for typical construction equipment.

Construction of the proposed project would not be anticipated to require the use of any equipment or processes that would result in high levels of vibration (e.g., pile driving). In fact, the maximum potential vibration levels would likely be attributable to the use of trucks and bulldozers. As shown in Table 3.11-6, these would result in vibration levels of less than 0.09 in/sec PPV and 87 VdB at 25 feet. Based on these equipment vibration levels and typical attenuation rates, construction of the proposed project would not result in levels above 0.2 in/sec PPV (the California Department of Transportation's recommended standard with respect to the prevention of structural building damage) or 80 VdB (the FTA's maximum acceptable vibration standard with respect to human response at residential uses) at the nearest land uses. In addition, no major existing sources of vibration have been identified at the project site. As a result, implementation of the proposed project would not generate or expose people to excessive groundborne vibration or noise levels. This impact would be less than significant.

Table 3.11-6 Vibration Source for Typical Construction Equipment			
Equipment		PPV at 25 feet (in/sec) ¹	Approximate L _v at 25 feet ²
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
	Typical	0.170	93
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58
¹ Where PPV is the peak particle velocity ² Where L _v is the velocity level in decibels (VdB) and based on the root mean square (RMS) velocity amplitude. Source: Federal Transit Administration 1995			

- c) **A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

Potentially significant impact. As discussed in item a) above, project implementation could generate or expose people to noise levels in excess of the applicable standards from the long-term operation of stationary, area, and vehicle noise sources. As a result, this impact would be potentially significant.

Implementation of Mitigation Measures NOISE-3 and -4 would reduce this impact, but not to a less-than-significant level. This impact would remain significant and unavoidable.

- d) **A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

Less than significant with mitigation incorporated. As discussed in item a) above, construction of the proposed project could generate or expose people to noise levels in excess of the applicable standards. As a result, this impact would be potentially significant.

Implementation of Mitigation Measures NOISE-1 and -2 would reduce this impact to a less-than-significant level.

- e, f) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No impact. The proposed project is located greater than 7 miles south of the Stockton Metropolitan Airport and 14 miles northeast of the Tracy Municipal Airport. As a result, the proposed project would not expose people residing or working in the project area to excessive noise levels. Therefore, no impacts would occur.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
XII.	Population and Housing. Would the project:				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b)	Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The population of the City of Manteca has increased from 40,773 residents in 1990 to 49,258 residents in 2000, a net change of about 21% (City of Manteca 2003b). Population growth, in both the City of Manteca and San Joaquin County as a whole, is expected to continue in the future, as presented in Table 3.12-1.

Table 3.12-1 Population Projections for the City of Manteca and San Joaquin County		
Year	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: City of Manteca 2003b

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, could result in a significant and unavoidable impact related to population growth in the City, and a potentially significant impact related to housing. The population growth impact could not be mitigated because no specific mitigation measures could reduce or eliminate the impact of increased population, whereas the housing impact was reduced to a less-than-significant level with conformance with the various policies and measures in the Land Use Element of the General Plan.

- a) **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

Less-than-significant impact. The proposed project, by definition, is a residential subdivision project that would provide new housing for an estimated 3,663 new residents. Based on the 2000 Census, which lists the population of the City of Manteca at 49,258, the project would increase the City's population by approximately 7.44% (3,663/49,258). The City of Manteca General Plan (2003a) and EIR provide for and address future growth in the City's Sphere of Influence. The project would be consistent with the City's growth plans and would not result in substantial growth above and beyond what is planned for in the City's General Plan. Therefore, this impact would be less than significant.

- b) **Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?**

Less-than-significant impact. A limited number of existing residences and outbuildings are located on the Oleander Estates and Sundance sites. These structures would be demolished prior to project construction. The project applicants would purchase the land from the current property owners at fair market value. It is anticipated that the current property owners would then acquire new residences elsewhere in the city or region. Because the property owners are voluntarily selling their properties, which would result in the demolition of on-site structures and homes, the number of demolished homes is few, and housing is available in the local area, displacement of these homes would not result in the construction of replacement housing. Therefore, this impact would be less than significant.

- c) **Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

Less-than-significant impact. As described above, a few structures and homes would be demolished with implementation of the project; and the project would substantially increase the number of available housing units on the project site. The project would not result in the displacement of substantial numbers of people resulting in the construction of replacement housing off-site. Therefore, this impact would be less than significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
XIII. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☒	☐	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

FIRE PROTECTION

Fire protection services for the proposed project would be provided by the Manteca Fire Department (MFD). The MFD's primary functions include response to fires, hazardous materials incidents, "first responder" medical response, and public fire education (City of Manteca 2003b). MFD maintains three fire stations located within the current City limits, and has entered into a cooperative agreement with the Stockton Fire Department for the consolidation of emergency dispatching services. The goal of the MFD is to maintain an average 5-minute response time for all emergencies, and to staff engine and ladder companies with a minimum of three personnel.

The following information on the MFD was obtained from the department's web site (City of Manteca 2005). The closest fire station to the project area is Fire Station 242, located at 1154 South Union Road, immediately north of SR 120 on Union Road, approximately one mile north of the project area. Two other fire stations, Station 241 at 290 South Powers Avenue and Station 243 at 399 West Louise Avenue, could provide additional back-up in an emergency. Stations 241 and 243 are located approximately 4 miles from the project area.

The MFD is equipped with three engines, three reserve engines, one support unit, one communications trailer, one command vehicle, seven staff vehicles, and two pickup trucks. Additional assistance can be summoned under mutual aid and automatic aid agreements with surrounding cities, the County, and state firefighting agencies.

POLICE PROTECTION

The Manteca Police Department is a full-service law enforcement agency consisting of over 70 sworn staff and 30 civilian support staff. The department is organized into two divisions: Operations and Services. The Operations Division is the largest division of the department and includes all uniformed officers and their support teams. The Operations Division's units include patrol, traffic, school resource officers, community service officers, special weapons and tactics (SWAT), crisis response team, mounted patrol, canine, gangs, and bomb squad. The Services Division includes all the teams and units that support the police function of the department, including dispatch, records, property and evidence, crime analysis, and animal services. In addition, the department has more than 200 volunteers working with its officers and employees.

The Manteca Police Department operates out of 1001 West Center Street in Manteca, CA, approximately 2 miles north of the project area. The department uses a staffing ratio of one patrol officer to every 1,000 residents.

SCHOOLS

The Manteca Unified School District (MUSD) provides educational services in the City for grades K–12. MUSD is considered a rural district and serves approximately 22,500 students. The school district has experienced considerable growth in the past few years with an increase in student population levels of 1,200 children each year for the past 3 years. The MUSD is operating at or near capacity for its elementary and high schools. With the introduction of year-round classes, the district can serve 20% more students than a traditionally scheduled school district. MUSD schools currently include 18 elementary schools, three high schools, two community day schools, and one continuation school. The teacher-student ratio is 1:20 for grades K–3 and 1:34 for grades 4–12.

Veritas Elementary School opened on August 1, 2005 at 6647 East Woodward Avenue, less than 0.5 mile east of the project area. The closest high school, Sierra High School, is located at 1700 Thomas Street, approximately 2 miles north of the project area. The Manteca General Plan (City of Manteca 2003a) Education Implementation Policy PF-I-20 states that the City shall cooperate with the MUSD to select a suitable location for a high school south of SR 120 and to select suitable locations within new residential development for neighborhood K–8 schools.

The school district funds new facilities with 50% state and 50% local sources. Under state law, the district can receive local funding through developer impact fees, tax revenue from Mello-Roos districts, and general obligation (GO) bonds. For MUSD, developer impact fees constitute the major source of local funding for the district. Currently, the developer is charged \$4.78 per square foot for residential development and \$0.36 per square foot for commercial development in the district's boundaries. Mello-Roos districts are areas, mainly new residential subdivisions, which have an additional voter-approved school tax imposed on them. For projects within a Mello Roos district (as the proposed project would be) the fees are \$2.24 per square foot of new residential development. The GO bonds require approval through a general vote by residents in the district boundary and have not been successful in the district.

PARKS

The City currently provides 28 neighborhood and five community parks. Many parks are co-located with a small detention basin that serves the surrounding neighborhood. The City's park facility standards require the provision of 5 acres of developed neighborhood and community park space per 1,000 residents (City of Manteca 2003a). The City acquires and improves parks through collection of in lieu fees as authorized under the Quimby Act. A developer may elect to dedicate or improve park sites in exchange for fee credits, or the City may use other collected fees to improve park sites.

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, could result in potentially significant impacts related to public services, including police and fire protection, schools, and parks. These impacts would be reduced to less-than-significant levels with conformance with the various policies and measures in the Public Facilities and Services Element of the General Plan.

- a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:**

Fire Protection and Police Protection

Less-than-significant impact. The proposed project would result in the construction of 1,074 new residences, which would increase the demand for public services, including police and fire protection services.

As stated above, the goal of the MFD is to maintain an average 5-minute response time for all emergencies, and to staff engine and ladder companies with a minimum of three personnel. The closest fire station to the project area is Fire Station 242, located approximately one mile north of the project area. The project area is located within a 5-minute response time from Fire Station 242, which is staffed by at least three personnel. Further, staff at Fire Station 242 has indicated that they would be able to serve the proposed project without constructing new facilities or hiring additional personnel (Queresma, pers. comm., 2005).

The Manteca Police Department consists of over 70 sworn staff and 30 civilian support staff, and would have sufficient staff to serve the proposed project while maintaining the department's staffing ratio goal of one patrol officer to every 1,000 residents (Cantu, pers. comm., 2005).

Emergency vehicular access to the project area would be provided via Woodward Avenue, Airport Way, and Union Road, as well as existing roads and new neighborhood roadways constructed as part of the project (see Section 3.15, "Transportation/Traffic," for further details regarding emergency access). Emergency response times are not likely to increase with development of the proposed project because of the site's proximity to existing fire and police stations. In addition, proposed residential street patterns would be reviewed by the City's Planning Commission and City Engineers to evaluate accessibility for fire engines and emergency response vehicles. Design and siting of all roadways and driveways would be done in consultation with the City of Manteca Public Works Department, Fire Department, and Police Department staff to ensure that the roadways and driveways provide adequate access for emergency vehicles (e.g., turning radii and lane width).

The project applicants would be required to pay a developers impact fee. This fee would be used by the City to fund the project's fair share of costs for required public services, which includes funding for any necessary facilities or equipment. Given that the City's Fire and Police departments have indicated that adequate capacity is available to serve the proposed project, new neighborhood streets would be designed to allow access for emergency response vehicles, and the project applicants would pay a developers impact fee for public services, impacts on fire and police protection would be less than significant.

Schools

Less than significant with mitigation incorporated. Development of the proposed project would increase the number of students entering the MUSD. Table 3.13-1 identifies the numbers of students anticipated as a result of project development.

Table 3.13-1 Projected Number of K-12 Students Generated by the Proposed Project					
Grades	Student Yield Rate Per Single-Family Unit *	Oleander Estates (544 units)	Sundance (451 units)	Sundance 2 (79 units)	Total Projected Number of New Students
K-6	0.503	274	227	40	541
7-8	0.136	74	61	11	146
9-12	0.258	140	116	20	276
Totals	0.897	488	404	71	963
* Student yield rates provided by the City of Manteca					

As noted in Table 3.13-1, the project is expected to generate 963 students, which would include 687 elementary and middle school students (K–8) and 276 high school students (9–12). Based on conversations with MUSD staff, Veritas Elementary School, located less than 0.5 mile east of the project area, would have adequate capacity to serve the project’s K–8 students because the project was anticipated and appropriate school capacity was planned for by the MUSD (Dwyer, pers. comm., 2005).

Sierra High School, the nearest high school to the project area, is currently overcrowded. Students in this area are being bused to other high schools that have available capacity (e.g., East Union and Manteca high schools). MUSD is in the planning stages for a new high school to be built south of SR 120 and a site has been selected. This new school would likely open in 2009. Until then, other high schools in the area would need to accommodate project-related students and would have adequate interim capacity to serve the project. (Dwyer, pers. comm., 2005).

Because the project would increase the student population at local schools and the closest high school is operating under overcrowded conditions, it would contribute to the need for construction of new school facilities. This would be a potentially significant impact. Implementation of Mitigation Measure PUB-1, below, would reduce this impact to a less-than-significant level.

Mitigation Measure PUB-1: Provide School Impact Fees.

As required by state law, the project applicants shall pay the state-mandated school impact fees to the appropriate school districts to fund the project’s fair share of impacts to school facilities. For MUSD, developer impact fees would be \$2.24 per square foot for residential development because the proposed project would be located in a Mello Roos district. Payment of these fees is deemed full and complete mitigation (see Government Code Section 65996).

Parks

Less than significant with mitigation incorporated. As noted in Chapter 2, “Project Description,” four parks are included as part of the proposed project. Two parks (4.79 and 2.12 acres) are associated with the Oleander Estates development, and two parks (5.62 and 4.71 acres) are associated with the Sundance development. Additionally, a 1.95-acre Boys and Girls Club facility is proposed; however, it would not be included when calculating the project’s provision of new parkland because it would be a privately-owned facility. In total, 17.24 acres of new parks would be developed. The proposed project would result in the addition of approximately 3,663 new residents, resulting in a demand for 18.3 acres of parkland $([3,663/1,000] \times 5)$, based on the City’s standard of 5 acres of parkland per 1,000 residents. The project would not meet the City’s requirements for parks and recreation services, thus resulting in a significant impact.

Construction of the new parks and Boys and Girls Club would result in environmental impacts, which are evaluated throughout this document. Mitigation measures are provided to reduce these impacts, as appropriate. Therefore, impacts associated with construction of park facilities would be less than significant.

Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

Mitigation Measure PUB 2: Convert the Proposed Boys and Girls Club to a City Park.

The project applicants shall convert the 1.95-acre site proposed for construction of the Boys and Girls Club into a city park constructed with amenities consistent with City Park standards. These 1.95 acres, when added to the project’s proposed 17.24 acres of new parkland, would amount to approximately 19.2 acres of total new parkland, and would therefore fulfill the City’s requirements of 5 acres of parkland per 1,000 residents.

Other Public Facilities

Less-than-significant impact. The increase in population resulting from development of the proposed project would result in an increased use of existing public facilities such as libraries, roads, and parks. The increased usage would be covered by developer fees, taxes on new residents, homeowner association fees, or other common means of revenue generation. This impact would therefore be less than significant.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
XIV. Recreation.	Would the project:				
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☒	☐	☐
b)	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The City of Manteca currently provides 28 neighborhood and 5 community parks distributed throughout the City for public use. Many parks, typically located within walking distance of area residents, are co-located with a small detention basin that serves the surrounding neighborhood. The City is currently planning for a 50-acre active sports complex with baseball and softball fields, to be located northwest of the proposed project. (City of Manteca 2003b).

General Plan Policy PF-P-53 directs that 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 (City of Manteca 2003a).

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, could result in a potentially significant impact related to parks and recreation. This impact would be reduced to a less-than-significant level with conformance with the various policies and measures in the Public Facilities and Services Element of the General Plan.

- a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

Less than significant with mitigation incorporated. As noted in Chapter 2, “Project Description,” four parks are included as part of the proposed project. Two parks (4.79 and 2.12 acres) are associated with the Oleander Estates development, and two parks (5.62 and 4.71 acres) are associated with the Sundance development. Additionally, a 1.95-acre Boys and Girls Club facility is proposed; however, it would not be included when calculating the project’s provision of new parkland. In total, 17.24 acres of new parks would be developed.

The proposed project would result in the addition of approximately 3,663 new residents in the City of Manteca, resulting in a demand for 18.3 acres of parkland $([3,663/1,000] \times 5)$, based on the City’s standard of 5 acres per 1,000 residents. The project would not meet the City’s requirements for parks and recreation services, thus resulting in a significant impact. Implementation of Mitigation Measure PUB 2, which proposes that the project applicants convert the proposed 1.95-acre Boys and Girls Club to a city park and, thus, fulfill the City’s requirements of 5 acres of parkland per 1,000 residents, would reduce this impact to a less-than-significant level.

Although new parks would be constructed as part of the proposed project, existing parks and recreational facilities in the area would also likely be used by the residents of the project, resulting in routine wear and tear of existing facilities. The project could contribute to the deterioration of existing recreational facilities. This would be a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

Mitigation Measure REC 1: Provide Park Acquisition and Improvement Fee.

The project applicants shall comply with Policy PF-P-53 of the General Plan, which requires the payment of a park acquisition and improvement fee to fund system-wide improvements. Appropriate fees for the project will be determined by the City Community Services Department.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Less-than-significant impact. The project includes development of recreational facilities as an element of the project, the environmental impacts of which are evaluated throughout this document. The proposed recreational facilities would not result in any adverse physical environmental impacts in and of themselves. As such, this would be a less-than-significant impact.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
XV.	Transportation/Traffic. Would the project:				
a)	Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☒	☐	☐	☐
b)	Exceed, individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e)	Result in inadequate emergency access?	☐	☒	☐	☐
f)	Result in inadequate parking capacity?	☐	☐	☒	☐
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☒	☐	☐	☐

ENVIRONMENTAL SETTING

The project is located in southern Manteca, south of SR 120. The project area is generally bounded by SR 120 to the north, Union Road to the east, Peach Avenue to the south, and Airport Way to the west.

The regional circulation system in the area consists of freeways and several surface street arterials. North-south circulation is available along freeways to the east and west of the project area. I-5 is a major freeway providing access to Stockton and Sacramento to the north, Los Angeles to the south, and the San Francisco Bay Area to the west. SR 99 provides access to Stockton and Sacramento to the north and Modesto and Fresno to the south. SR 120, located directly north of the project area, is an east-west freeway, connecting I-5 to SR 99. Several arterials exist in the project area and are generally spaced about 1 mile apart. These provide access to SR 120 and downtown Manteca.

Airport Way is a 2-lane roadway providing north-south circulation and borders the project area on the west. Airport Way extends north of Lathrop Road in the north to south of Woodward Avenue in the south, where it is Road J3 in the San Joaquin County roadway system. Daily traffic volumes along Airport Way in the project vicinity are approximately 9,300 vehicles per day (north of SR 120).

Union Road is a 4-lane roadway north of SR 120. South of SR 120, Union Road is a 2-lane roadway. Union Road bisects the project area in a north-south direction and extends from Lathrop Road in the north to south of Woodward Avenue in the south. Daily traffic volumes along Union Road in the project vicinity are approximately 17,100 vehicles per day (north of SR 120).

Woodward Avenue is a 2-lane roadway south of SR 120 that extends in an east-west direction. This roadway currently extends from west of McKinley Avenue in the west to Austin Road in the east. Daily traffic volumes along Woodward Avenue in the project vicinity are approximately 3,700 vehicles per day (east of Union Road).

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, could result in potentially significant impacts related to traffic and circulation. These impacts would be reduced to less-than-significant levels with conformance with the various policies and measures in the Circulation Element of the General Plan. However, transportation and traffic impacts associated with individual developments, including increased traffic levels and the provision of adequate emergency access and parking capacity, were not addressed at the program level, and are addressed below.

- a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?**

Potentially significant impact. This impact discussion is divided into two components: project construction and project operation.

PROJECT CONSTRUCTION

Project construction would result in construction worker commute trips and truck haul trips (for delivery and transport of materials and equipment) to and from the project area, resulting in increased traffic levels on local roadways in the project vicinity. Although the volume of daily truck traffic associated with construction is not expected to vary widely during the construction period, the project could result in the generation of substantial construction-related traffic that could result in adverse roadway conditions in the project vicinity including decreased level of service, an increase in traffic hazards, and roadway degradation. A detailed traffic analysis has not been performed for the project and would be required before project approval. Because this analysis has not been performed, it is unknown whether the project could mitigate for its traffic impacts. Therefore, this impact would remain potentially significant.

PROJECT OPERATION

Implementation of the proposed project would result in a substantial increase in vehicle trips on local roadways, thereby increasing existing traffic levels as compared to existing conditions.

Table 3.15-1 presents the trip generation rates for each of the land uses that make up the proposed project. These rates were obtained from the *Traffic Study for the Woodward Ranch Specific Plan* prepared by KDAnderson in March 2004, which cites the Institute of Transportation Engineers' 2003 publication, *Trip Generation, Seventh Edition*.

Development of the proposed project would be anticipated to generate a total of 14,312 daily trips, with 1,421 trips during the evening peak hour (see Table 3.15-2).

- b) Exceed, individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?**

Potentially significant impact. As noted above under item a), implementation of the proposed project would result in a substantial increase in vehicle trips on local roadways, thereby increasing existing traffic levels as compared to existing conditions. A detailed traffic analysis has not been performed for the project. Because this

analysis has not been performed, it is unknown whether the project could mitigate for its traffic impacts. Therefore, this impact would remain potentially significant.

Table 3.15-1 Trip Generation Rates for the Proposed Project					
Trip Generation Parameters					
	Unit	Trip Generation Rates per Unit			
		Daily	P.M. Peak Hour		Rate
			Inbound	Outbound	
Low Density Single-Family Residential	Dwelling unit	9.57	63%	37%	1.01
Medium Density Single-Family Residential	Dwelling unit	5.86	67%	33%	0.52
General Commercial	Thousand square feet	42.94	48%	52%	3.75
Park	Acre	2.28	41%	59%	0.06
Source: Institute of Transportation Engineers 2003, cited in KDAAnderson 2004					

Table 3.15-2 Projected Trip Generation for the Proposed Project					
Trip Generation Parameters					
	Quantity	Trip Generation			
		Daily ¹	P.M. Peak Hour		Total ²
			Inbound	Outbound	
Low Density Single-Family Residential	995 units	9,522	633	372	1,005
Medium Density Single-Family Residential	79 units	463	27	14	41
General Commercial	2.29 acres (99.75 thousand square feet (ksf))	4,283	180	194	374
Park	19.19 acres	44	.41	.59	1
Total (All Trips)		14,312	840.41	580.59	1,421
Notes:					
¹ Daily = Daily Trip Generation Rate per Unit x Quantity					
² P.M. Peak Hour Total = P.M. Peak Hour Rate x Quantity					
Source: Data compiled by EDAW in 2005					

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No impact. No uses are proposed (e.g., tall buildings, intense nighttime lighting) that could affect air safety at the Stockton Metropolitan Airport, located approximately 7 miles north of Manteca, Tracy Municipal Airport, located approximately 14 miles southwest of Manteca, or other airports in the region. Therefore, no impact to air traffic safety would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less-than-significant impact. The project would not involve hazards due to design features, such as sharp curves or dangerous intersections. All roadways would be designed in accordance with the City of Manteca General Plan standards. Consequently, this impact would be less than significant.

e) Result in inadequate emergency access?

Less than significant with mitigation incorporated. Emergency vehicular access to the project area would be provided via Woodward Avenue, Airport Way, and Union Road, as well as other local roadways. Design and siting of all proposed project roadways and driveways would be done in consultation with the City of Manteca Public Works Department, City Fire Department, and City Police Department staff to ensure that the roadways and driveways provide adequate access for emergency vehicles (e.g., turning radii and lane width). Because the developers would be required to coordinate with the City Public Works Department, Fire Department, and Police Department to ensure adequate emergency access is provided, this would be a less-than-significant impact.

Construction activities at the project site could temporarily interfere with emergency access and, thus, the provision of emergency services to the project area. Much of the construction work would not affect emergency access to the surrounding area, because construction activities would be primarily focused on the project site. However, during construction, vehicles and equipment may block and/or slow through traffic in adjacent areas. Although this would be a temporary construction impact, this impact would be potentially significant because it involves protection of public safety. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

Mitigation Measure TRAFFIC 1: Provide Adequate Emergency Access During Construction.

The City of Manteca Fire Department shall have oversight on emergency access during construction of the proposed project. The Fire Department shall verify that adequate emergency access is maintained throughout project construction. The Fire Department and other emergency service providers shall be notified of any lane closures and detours at least one (1) week in advance so that alternate routes can be determined.

f) Result in inadequate parking capacity?

Less-than-significant impact. The City of Manteca Zoning Code requires the provision of two covered parking spaces for each dwelling. The proposed project would meet this requirement because all proposed housing units would include at least a two-car garage. As part of the proposed project, additional on-street parking would also be provided on all of the internal residential area roadways. Therefore, this would be a less-than-significant impact.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Potentially significant impact. Although the proposed project would include the installation of pedestrian and bicycle lanes throughout the project area that would connect to existing facilities in the area, it is unknown whether these facilities would meet the City's requirements. A detailed traffic analysis has not been preformed for the project. Because this analysis has not been performed, it is unknown whether the project could mitigate for its traffic impacts. Therefore, this impact would remain potentially significant.

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
XVI.	Utilities and Service Systems. Would the project:				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b)	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?	☒	☐	☐	☐
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☒	☐	☐	☐
e)	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	☒	☐	☐	☐
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐
h)	Require or result in the construction of new electrical facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Most required utilities, including water, sanitary sewer, storm drain, electrical, and communications would need to be developed for the project area. A description of the utilities that would be provided to the site, with project implementation, is provided below.

WASTEWATER/SEWER AND STORMWATER

The few existing residences within the project area currently rely on septic systems for wastewater disposal. These systems would be properly decommissioned before project implementation.

The City provides sanitary sewer service through a network of gravity and force main sewer lines. Several pump stations and lift stations are located throughout the City to augment this sewer line network. This conveyance system terminates at the City of Manteca Wastewater Quality Control Facility (WQCF). The WQCF has a current capacity of 6.95 million gallons per day (mgd) and treats an average of 6 mgd, with approximately 15% of the wastewater treated coming from the City of Lathrop. The facility has an ultimate expansion capacity of 25 mgd

and upgrades are currently underway to expand the capacity of the WQCF to 9.87 mgd by 2007. Treated wastewater (secondary effluent) from the Manteca WQCF is disinfected and then a majority of the wastewater is discharged into the San Joaquin River. A portion of the secondary effluent is used to irrigate crops. Sewage disposal within the project area would be via connection to the City's sewer system, specifically, via the existing force main in Woodward Avenue.

The City operates a storm drainage collection system. Existing detention basins pump into the SSJID outfall lines, which eventually drain into the San Joaquin River (City of Manteca 2003a). Individual development plans in the City are required to provide on-site detention designed to reduce peak stormwater flows to the City's system (City of Manteca 2003b). The City's target level of service is to provide 10-year storm drainage protection for all development and to provide 100-year storm drainage protection for all structures.

WATER SUPPLY

Groundwater is presently the only source of domestic water for the City. The City operates a system of wells interconnected with a transmission and distribution pipeline. Well depths range from 155 feet to 400 feet, and individual capacities of the operating wells range from 380 gallons per minute (gpm) to 2,300 gpm. The groundwater aquifers underlying the City extend to depths in excess of 600 feet, and the strata slope from the hills east of the City downward to the west. The groundwater basin safe yield was estimated at 1.0 acre-foot per year (AFY). 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 that allow filtration of water along streams, alluvial fans, and foothill areas; however, none of these features are present within the City, and there are no notable groundwater recharge areas within the City (City of Manteca 2003b).

The City's 2000 Urban Water Management Plan (2002) defines future water supply, storage, and delivery for the City. The City's water planning area is defined by the City's Sphere of Influence boundaries, which includes the project site. For water development planning, the City uses an annual growth rate of 3.9%, which is the maximum allowable growth rate specified in the City General Plan. The actual growth rate is expected to be approximately 2.7 percent annually (City of Manteca 2003a). The Urban Water Management Plan (2002) uses the population growth projections in the City's General Plan, which includes population growth resulting from the proposed project, to estimate water demands and plan water supplies and infrastructure accordingly.

The City is currently participating in the SCSWSP. In 1995, the City entered into an agreement with the 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; as a result, the SCSWSP will deliver up to 11,500 AFY of treated water through 2010. A subsequent phase would increase the City's water allocation to 18,500 AFY (City of Manteca 2003a).

The Urban Water Management Plan recommends a conjunctive use of surface water from the SCSWSP and groundwater. Surface water supply would be used as the base supply and groundwater facilities would be used to meet peak water demands. City wells would be used only as necessary. The City's level of service for water is to supply an average of 200 gallons per day per person at pressures no less than 40 pounds per square inch (psi) under average conditions, and 20 psi under emergency and peak demand conditions.

SOLID WASTE DISPOSAL

Pick up and disposal of solid waste is provided by the City of Manteca Solid Waste Division. The City provides the following solid waste services: residential, biweekly curbside pickup of compost materials; leaf and Christmas tree pickup; oil collection pickup; commercial recycling; and household hazardous waste collection.

Wastes are transported to the Lovelace Transfer Station, which is located approximately six miles north of the project area. Recyclable materials are stored at this facility, while other solid waste and green waste is transported to the Forward Landfill on Austin Road in Manteca. Currently, the landfill has a total capacity of 102 million cubic yards, a remaining capacity of 95 million cubic yards (CIWMB 2005a), and projected closure date of 2053 (City of Manteca 2003b).

ELECTRICITY AND NATURAL GAS

PG&E is responsible for the provision of electricity and natural gas to the City. PG&E delivers approximately 81,923 million kilowatt-hours (kWh) of electricity to its 13 million customers throughout the 70,000-square-mile service area in northern and central California. The service area is divided into seven distribution areas, with Manteca located in the Stockton Division of PG&E's Operations, Maintenance, and Construction Area 5.

DISCUSSION

The City of Manteca General Plan EIR (City of Manteca 2003b) found that buildout of the General Plan Study Area, including the project area, could result in potentially significant impacts related to public facilities, including those facilities related to the provision of domestic water supply, wastewater treatment and conveyance, stormwater drainage, and solid waste collection. These impacts would be reduced to less-than-significant levels with conformance with the various policies and measures in the Public Facilities and Services Element of the General Plan. A significant and unavoidable impact would occur related to energy sources and infrastructure because of the need for expanded energy sources and infrastructure.

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less-than-significant impact. Wastewater generated within the project area would be conveyed to the City of Manteca WQCF via the Woodward Avenue force main. Treatment of wastewater at the plant would not be affected by the proposed project and would be in accordance with RWQCB requirements. Therefore, this would be a less-than-significant impact.

b) 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?

Potentially significant impact. The SCSWSP will deliver up to 11,500 AFY of treated water to the City of Manteca through 2010. A subsequent phase would increase the City's water allocation to 18,500 AFY (City of Manteca 2003a). The Urban Water Management Plan recommends a conjunctive use of surface water from the SCSWSP and groundwater. Surface water supply would be used as the base supply and groundwater facilities would be used to meet peak water demands. City wells would be used only as necessary. Because the project would construct greater than 500 housing units, the project applicants would be required to request a water supply assessment from the City's Public Works Department. The assessment would determine if water supplies are available to serve the project. Although the Urban Water Management Plan (2002) included the General Plan population projections, and thus the proposed project, in its water planning forecasts, it is unknown at this time what water supplies would be available to serve the project. Therefore, the project could result in the need to construct new water supply facilities. This would be a potentially significant impact. The project applicants would be required to prepare a water supply assessment and evaluate the impacts associated with provision of the water supply to the project area.

The project's water infrastructure would be looped throughout the project area via an existing 12-inch water main located in Woodward Avenue. New 12-inch mains would be installed in Atherton Drive, Union Road, and Oleander Road and 8-inch mains would be installed in the new neighborhood streets. Construction of these

facilities would result in construction-related erosion, air quality, noise, and cultural resources impacts. These impacts are evaluated throughout this Initial Study. Mitigation measures are recommended to reduce these impacts, where appropriate.

The WQCF has a current capacity of 6.95 mgd and treats an average of 6 mgd; upgrades are currently being constructed to expand the WQCF to a 9.87-mgd-capacity by 2007. The project would be required to receive a “will serve” letter from the WQCF. Because the project has not received a “will serve” letter at this time, it is unknown whether capacity is available to serve the project. This would be a potentially significant impact.

The project would require the extension of the existing wastewater force main in Woodward Avenue to the proposed subdivisions. Construction of these facilities would require grading or excavation throughout the project area, which could include construction-related erosion, air quality, noise, and traffic impacts as well as impacts to as-yet unknown cultural resources. These impacts are evaluated throughout this Initial Study. Mitigation measures are recommended to reduce these impacts, where appropriate.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Potentially significant impact. Details regarding the sizing of on-site facilities and the ability of SSJID’s facilities to accommodate project-related flows are not available. The project applicants would be required to prepare a detailed drainage study consistent with City requirements. This would be a potentially significant impact.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Potentially significant impact. As described above, it is unknown whether adequate water supplies are available to serve the project. Although the Urban Water Management Plan (2002) included the General Plan population projections, and thus the proposed project, in its water planning forecasts, the project applicants would be required to request the preparation of a water supply assessment from the City’s Public Works Department. The assessment would evaluate whether water supplies are available to serve the project and the sources of those supplies. Therefore, this impact is potentially significant.

e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project’s projected demand, in addition to the provider’s existing commitments?

Potentially significant impact. The WQCF has a current capacity of 6.95 mgd and treats an average of 6 mgd; upgrades are currently being constructed to expand the WQCF to a 9.87-mgd-capacity by 2007. (City of Manteca 2003b). The facility has an ultimate expansion capacity of 25 mgd. The project would be required to receive a “will serve” letter from the WQCF. Because the project has not received a “will serve” letter at this time, it is unknown whether capacity is available to serve the project. This would be a potentially significant impact.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?

Less-than-significant impact. The California Integrated Waste Management Board (CIWMB) provides an average per-capita solid waste disposal rate for San Joaquin County of 0.36 ton per resident per year (CIWMB 2005b). The estimated total population for the proposed project at buildout is 3,663 residents; therefore, solid waste generation for the project would be approximately 1,319 tons per year, or 3.6 tons per day. In general, much lower generation rates would occur at project initiation, with gradual increases in disposal rate until full buildout. The Lovelace Transfer Station has a permitted capacity of 1,300 cubic yards per day. Non-recycled material

would be deposited at the Forward Landfill, which is permitted to accept 8,668 tons per day of solid waste. The landfill has a total capacity of 102 million cubic yards and a remaining capacity of 95 million cubic yards, with a projected closure date of 2053 (CIWMB 2005b). Adequate capacity is available to serve the project. As such, this impact would be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less-than-significant impact. The project would comply with federal, state, and local statutes and regulations related to solid waste. Assembly Bill 939 requires local agencies to implement source reduction, recycling, and composting. The countywide Integrated Waste Management Plan requires recycling programs, which are expected to result in a 50% diversion away from landfills, thereby extending the life of landfills. This impact would be less than significant.

h) Require or result in the construction of new electrical facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less-than-significant impact. Buildout of the project would increase electrical demands within the City. The energy demands created by the project are not substantial in relation to the total energy supplied by PG&E in its northern and central California service area (estimated in 2000 to be 81,923 million KW per day) or energy demands expected in the future. Electricity would be provided to the site via connections to existing main electrical feeder lines. The project would include replacement of above-ground electrical lines and installation of new lines throughout the project area. All proposed facilities would be placed underground. Because the proposed electrical improvements would be required to comply with existing City, PG&E, and applicable Uniform Building Code requirements, proposed improvements would be sufficient to serve the project. Further, construction-related impacts associated with construction of on-site electrical facilities have been evaluated throughout this Initial Study and mitigated where feasible. Therefore, this would be a less-than-significant impact.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XVII. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐
Authority: Public Resources Code Sections 21083 and 21087. Reference: Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.3, 21093, 21094, 21151; <i>Sundstrom v. County of Mendocino</i>, 202 Cal.App.3d 296 (1988); <i>Leonoff v. Monterey Board of Supervisors</i>, 222 Cal.App.3d 1337 (1990).				

DISCUSSION

- a) **Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?**

Potentially significant impact. The project has the potential to result in environmental impacts, as described in this Initial Study. Specifically, potentially significant impacts (after mitigation) have been identified for the following environmental resources: agricultural resources, air quality, cultural resources, hydrology/water quality, noise, transportation, and utilities and service systems. This impact would therefore be potentially significant.

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

Potentially significant impact. As described in this Initial Study, implementation of the project would generate traffic, air emissions, and noise; increase demands on public services and utilities; and create impacts in the areas of aesthetics and agricultural resources that, when taken together with the effects of past projects, other current

projects, and probable future projects, could result in cumulatively considerable environmental impacts. This impact would therefore be potentially significant.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially significant impact. The project has the potential to result in substantial adverse effects on human beings, either directly or indirectly. As described in this Initial Study, the project has the potential to result in impacts to air quality, hazards and hazardous materials, noise, traffic, public services, and utilities and service systems, which could potentially result in adverse effects on human beings. This impact would therefore be potentially significant.

4 REPORT PREPARATION

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APPENDIX A

AIR QUALITY MODELING ANALYSES

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\oleandersundance.urb
Project Name: Oleander/Sundance
Project Location: San Joaquin Valley
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Tons/Year)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	15.30	2.65	4.69	0.03	0.02

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	14.20	17.82	159.64	0.11	18.66

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	29.51	20.46	164.33	0.14	18.68

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\oleandersundance.urb
Project Name: Oleander/Sundance
Project Location: San Joaquin Valley
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Tons/Year)

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)	Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.20	2.63	1.19	0.00	0.01	
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.50	0.02	3.50	0.03	0.01	
Consumer Prdcts	9.59	-	-	-	-	-
Architectural Coatings	5.01	-	-	-	-	-
TOTALS (tpy, unmitigated)	15.30	2.65	4.69	0.03	0.02	

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	11.95	15.31	137.36	0.09	16.21
Park	0.05	0.03	0.29	0.00	0.03
General Commercial	2.20	2.48	22.00	0.01	2.42
TOTAL EMISSIONS (tons/yr)	14.20	17.82	159.64	0.11	18.66

Includes correction for passby trips.

Includes the following double counting adjustment for internal trips:

Residential trips: 21.67 % reduction. Nonresidential trips: 50.00 % reduction.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010

Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	229.89	7.28 trips/dwelling unit	1,074.00	7,821.47
Park		1.14 trips/acres	19.19	21.88
General Commercial		21.47 trips/1000 sq. ft.	99.75	2,141.63
Sum of Total Trips				9,984.98
Total Vehicle Miles Traveled				67,402.18

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Park				5.0	2.5	92.5
General Commercial				2.0	1.0	97.0

APPENDIX B

NOISE MODELING ANALYSES

RUN NAME: WOODWARD RUN DATE:

TRAFFIC DISTRIBUTION PERCENTAGES

DAY EVENING NIGHT

--- ----- -----

AUTOS

66.86 11.13 8.27

M-TRUCKS

5.82 0.34 0.71

H-TRUCKS

5.95 0.19 0.74

ADT: 3700 SPEED: 40 ACTIVE HALF WIDTH (FT): 6

SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 66.13

** DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL **

70 CNEL 65 CNEL 60 CNEL 55 CNEL

0.0 66.5 142.8 307.4

RUN NAME: SR 120 RUN DATE:

TRAFFIC DISTRIBUTION PERCENTAGES

DAY EVENING NIGHT

--- ----- -----

AUTOS

66.86 11.13 8.27

M-TRUCKS

5.82 0.34 0.71

H-TRUCKS

5.95 0.19 0.74

ADT: 60000 SPEED: 65 ACTIVE HALF WIDTH (FT): 40

SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 79.95

** DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL **

70 CNEL 65 CNEL 60 CNEL 55 CNEL

373.3 800.4 1722.3 3709.1

RUN NAME: AIRPORT RUN DATE:

TRAFFIC DISTRIBUTION PERCENTAGES

DAY EVENING NIGHT

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AUTOS

66.86 11.13 8.27

M-TRUCKS

5.82 0.34 0.71

H-TRUCKS

5.95 0.19 0.74

ADT: 9300 SPEED: 40 ACTIVE HALF WIDTH (FT): 6

SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 70.14

** DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL **

70 CNEL 65 CNEL 60 CNEL 55 CNEL

57.2 122.6 263.8 568.0

RUN NAME: UNION RUN DATE:

TRAFFIC DISTRIBUTION PERCENTAGES

DAY EVENING NIGHT

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AUTOS

66.86 11.13 8.27

M-TRUCKS

5.82 0.34 0.71

H-TRUCKS

5.95 0.19 0.74

ADT: 17100 SPEED: 40 ACTIVE HALF WIDTH (FT): 18

SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 71.71

** DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL **

70 CNEL 65 CNEL 60 CNEL 55 CNEL

87.1 184.4 395.7 851.6