

5 CUMULATIVE IMPACTS

5.1 INTRODUCTION

This section provides an analysis of overall cumulative impacts of the project taken together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the State CEQA Guidelines. The goals of this analysis are to first determine whether the overall long-term impacts of all such projects would be cumulatively significant and second to determine whether the project itself would cause a “cumulatively considerable” (and thus significant) incremental contribution to any such cumulatively significant impacts. (See State CEQA Guidelines Sections 15130[a]-[b], Section 15355[b], Section 15064[h], Section 15065[c]; *Communities for a Better Environment v. California Resources Agency* [2002] 103 Cal.App.4th 98, 120.) This analysis creates a broad context in which to assess the project’s incremental contribution to anticipated cumulative impacts, as viewed on a geographic scale beyond the project site itself, and to determine whether the project’s incremental contribution to any significant cumulative impacts is itself significant (i.e., “cumulatively considerable” as defined by CEQA).

Cumulative impacts are defined in State CEQA Guidelines Section 15355 as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” A cumulative impact occurs from “the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (State CEQA Guidelines Section 15355[b]).

Consistent with State CEQA Guidelines Section 15130(a), the discussion of cumulative impacts in this Draft EIR focuses on significant and potentially significant cumulative impacts. State CEQA Guidelines Section 15130(b), in part, provides the following:

The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

5.2 PROJECTS CONTRIBUTING TO POTENTIAL CUMULATIVE IMPACTS

The State CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the project is to be considered: the use of a list of past, present, and probable future projects or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. For this Draft EIR, both the list and the plan approach have been combined to generate the most reliable future projections possible. A list approach is used to define the local project environment and includes projects within the City of Manteca (City). Because the project directly influences and is influenced by regional development activities, the plan approach is also used to allow a cumulative analysis on a regional scale. Projects and plans included in these two approaches are described below.

5.2.1 CUMULATIVE CONTEXT

Agriculture has been the driving force over the decades in the conversion of natural lands in Manteca and the surrounding region. This conversion of natural land removed biological habitat and has resulted in such environmental effects as air quality degradation attributable to dust from cultivation and emissions from farm equipment, as well as water quality degradation from runoff of irrigation water containing traces of pesticides.

According to U.S. Census records, the population in Manteca grew from around 40,800 in 1990 to more than 49,200 in 2000 (U.S. Census Bureau 1990, 2000a). This increase in population has come as a result of moderate urbanization over the decade, particularly the development of single-family residences and commercial and office buildings. Urbanization has also resulted in increased traffic, particularly on increasingly crowded local roadways, increased air pollution from vehicles and construction, and loss of farmland. Even with this growth, however, Manteca accounted for only 9% of the total San Joaquin County population in the year 2000 (approximately 563,600 persons).

San Joaquin County has grown substantially in recent years, particularly in the cities of Tracy and Stockton. Between 1990 and 2000, Tracy grew by more than 23,000 residents and Stockton grew by 33,000 residents. Together, these two cities represent 69% of the County’s population gain between 1990 and 2000. In comparison, Manteca’s growth equaled 10% of the total County population gain. Growth in Tracy and Stockton has resulted in environmental changes similar to those occurring in Manteca, although at more pronounced levels than in Manteca. The County is addressing numerous regional issues pertaining to severe air quality degradation, traffic congestion, biological habitat loss, loss of farmland, and other urban-related environmental changes.

5.2.2 LIST OF RELATED PROJECTS

The list of past, present, and probable future projects used for this cumulative analysis is restricted to those projects that have occurred or are planned to occur within the City. For the purposes of this discussion, the projects that may have a cumulative effect on the resources in the project area will often be referred to as the “related projects.” Related projects are identified in Exhibit 5-1 and Table 5-1; the numbering corresponds to the numbers used in the exhibit and table.

Table 5-1 Related Cumulative Projects in the City of Manteca				
Project No. in Exhibit 5-1	Project Name	Status	Acreage	Proposed Residential Units/(Acreage)
1	Antigua	Under construction	36	120
2	Bella Vista	Built	66.8	262
3	Bianchi Ranch / Paseo	Built	104.5	454
4	Dutra Estates	Under construction	77.3	423
5	Dutra Estates West	In review	23.1	188
6	Dutra Farms S.E.	Built	105	272
7	Dutra Farms S.W.	Built	61	194
8	Emerald Glen	Built	39	78
9	Evans Estates	In review	159	586
10	Jasmine Hollow	Under construction	61.45	245
11	Ken Hill Estates	Approved / Not yet building	4.7	12
12	Lundbom Estates	Approved / Not yet building	5	21
13	Machado Estates	In review	158	564
14	Silva Estates	In review	60	217
15	Morse Estates	Built	6.3	23

**Table 5-1
Related Cumulative Projects in the City of Manteca**

Project No. in Exhibit 5-1	Project Name	Status	Acreage	Proposed Residential Units/(Acreage)
16	Oleander Estates	In review	112	544
17	Paseo West	Under construction	50.8	191
18	Pillsbury Estates	In review	80	275
19	Rose Garden	Built	48	206
20	Sundance	In review	110	451
21	Sundance 2	In review	7.53	79
22	Tara Park	In review	160	583
23	Terra Bella	Under construction	45	158
24	Terra Ranch	In review	74.8	269
25	Tesoro	Under construction	128	485
26	Union Ranch	Under construction	356	1,960
27	Villa Ticino West	Approved / Not yet building	127	711
28	Westport	Approved / Not yet building	5	24
29	Woodward Park	Built	118	276
30	Woodward West	Built	38.5	116
31	Yosemite Park	In review	29.5	253
32	Assieh Industrial	Under construction	Industrial complex	(79.89)
33	Big League Dreams	Built	Commercial soft ball complex	(45)
34	Stadium Plaza	Under construction	Retail (Costco, Old Navy, Chili's etc.)	(54.4)
35	Union Commercial	In review, no known tenants	Retail	(51.06)
36	Promenade Shops	Approved / Not yet building	Retail	(72)
37	Austin Road Annexation	In review	Industrial	(967.5)
38	Manteca Water Quality Control Facility 2005 Master Plan Treatment Plant and Collection System Expansion*	In review	Public/Quasi Public	(210)
39	Microtel	In review	Commercial	
40	Proposed Project	In review	Retail	(16)
41	Manteca Marketplace	In review	Retail	
42	Oakwood Shores**	In review	360	480

*This project is not identified on Exhibit 5-1 as improvements would occur throughout the City.

** This project is not located in the City of Manteca.

Source: Data provided by the City of Manteca in 2006 and 2007

5.2.3 REGIONAL PLANNING ENVIRONMENT

Because the project would directly influence and be influenced by regional development activities, the “plan” approach was used to evaluate cumulative impacts on a regional scale. The regional cumulative analysis area covers San Joaquin County and includes an evaluation of the following plans:

- ▶ *San Joaquin County General Plan 2010*, adopted in 1992 and as amended (San Joaquin County 1992);
- ▶ *San Joaquin County Multi-Species Habitat Conservation and Open Space Plan* (SJMSCP) (San Joaquin County 2000);
- ▶ *Manteca General Plan*, adopted in 1988 and as amended through 2003 (City of Manteca 2003a);
- ▶ *Manteca General Plan 2023 Draft EIR* (City of Manteca 2003b); and
- ▶ *2001 Regional Transportation Plan* (San Joaquin Council of Governments [SJCOG] 2001).

Much of the information on the overall planning and project environment in San Joaquin County was found in the SJMSCP, which evaluated current conditions and anticipated future development throughout the County based on the individual City and County general plan documents listed above. Additional information on conditions in the County was obtained from SJCOG’s Research and Forecasting Center (RFC). A summary of the cumulative planning environment in the County used for the regional cumulative impact analysis is provided below.

San Joaquin County covers approximately 909,000 acres with approximately 808,000 acres, or nearly 90% of the County, used or available for agriculture (row and field crops, orchards, vineyards, and grazing lands). The remaining lands are dominated by various types of urban development (approximately 60,000 acres), natural habitats (e.g., woodlands, riparian), and open water (e.g., lakes, rivers, Delta waterways). The County population in the year 2000 was approximately 563,600 (U.S. Census Bureau 2000b) with most County residents and development located in the incorporated cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy.

As stated in the SJMSCP, it is anticipated that 109,000 acres of various categories of open space lands (e.g., agriculture, natural areas, open space lands) in the County, including the City of Manteca, will be converted to non-open space uses between the years 2001 and 2051 based on full buildout of each of the general plans in the County and construction of all anticipated transportation and other public projects. In addition, approximately 59,000 acres of infill developments would occur in this 50-year timeframe. Population in the County is also expected to more than double by 2040, increasing to 1.46 million (California Department of Finance 2004).

Residential development constitutes the majority of planned future developed uses in San Joaquin County. New residential development is expected to occur in four primary areas of San Joaquin County including incorporated cities (e.g., Escalon, Lathrop, Manteca, Stockton, Tracy), unincorporated areas near cities where services are available, new communities (e.g., Mountain House, New Jerusalem), and existing unincorporated communities (e.g., Acampo, Banta, Chrisman, Glennwood, French Camp, Lockeford, Linden, Thornton, Vernalis). Commercial development would be concentrated in these same areas as well as along major transportation routes (SJMSCP 2000).

5.3 ANALYSIS OF CUMULATIVE IMPACTS

The following sections contain a discussion of the cumulative effects anticipated from project implementation along with the related projects and regional development for each of the 12 environmental issue areas evaluated in this Draft EIR. The analysis conforms with Section 15130 of the State CEQA Guidelines, which specifies that the “discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great a detail as is provided of the effects attributable to the project alone.”

5.3.1 LAND USE

As described in Section 4.1 of this Draft EIR, implementation of the project would not physically divide a community. Impacts involving land use plans or policies and zoning generally would not combine to result in cumulative impacts. The determination of significance for impacts related to these issues, as considered in Appendix G of the State CEQA Guidelines, is whether a project would conflict with any applicable land use plan or policy adopted for the purpose of reducing or avoiding environmental impacts. Such a conflict is site specific; it is addressed on a project-by-project basis. As described in Section 4.1, implementation of the project would not result in significant land use planning impacts, and the project's ultimate consistency with City land use plans, policies, and zoning is ensured through entitlements to revise the City general plan. Because no land use impacts would occur on a project-specific basis, the project would not contribute to any potential cumulative land use impacts.

5.3.2 VISUAL

Past and current development in the vicinity of the project has increasingly changed the visual character along SR 120 and Airport Way from agricultural and open space uses to urban uses, thus altering and limiting the views available to motorists on these roadways. This trend would continue as future projects are implemented in the region and the project would contribute to this cumulative change in views. As development proceeds in the Manteca region as a whole, substantial changes in visual conditions would continue as agricultural lands and open space are replaced by urban development. Increased urban development would also lead to increased nighttime light and glare in the region and more limited views of the night sky. The cumulative effect of these changes on aesthetic resources from past and planned future projects, as well as the contribution from the project, is considered significant. Although these cumulative impacts can be minimized to a degree through vegetative and topographic screening of structures, use of downward emitting outdoor lighting, appropriate building design, and other measures, the significant cumulative impact cannot be fully mitigated. Therefore, the cumulative change of agricultural and open space views in the project region to urban land uses and the associated increase in nighttime light and glare are considered significant and unavoidable impacts. In addition, the project's incremental contribution to these impacts is cumulatively considerable.

5.3.3 AIR QUALITY

San Joaquin County is a federal and state nonattainment area for ozone, PM_{10} , and $PM_{2.5}$. Emissions of ozone precursors ROG or NO_x , or of PM_{10} or $PM_{2.5}$ in a considerable quantity would be a significant cumulative air quality impact.

Short-term construction emissions were estimated as shown in Table 4.3-4 in Section 4.3, "Air Quality." ROG and NO_x emissions do not exceed 21 percent of the SJVAPCD significance thresholds of 10 TPY. These quantities are less than considerable. There are no SJVAPCD thresholds for PM_{10} and $PM_{2.5}$. Guidance is taken from the federal rule requiring federal projects to conform to SIPs; this rule is known as the General Conformity Rule. The General Conformity Rule states that, in areas classified as Serious Nonattainment for PM_{10} , projects with PM_{10} emissions of less than 70 TPY are considered de minimis and assumed to conform to the SIP (Code of Federal Regulations 2006). As shown in Table 4.3-4, short-term project emissions would be less than one ton per year. Therefore, PM_{10} would not be considerable. The General Conformity Rule de minimis threshold for $PM_{2.5}$ is 100 TPY. Project short-term emissions of $PM_{2.5}$ would be less than one ton per year and would not be considerable. In summary, the short term emissions of the proposed project would contribute to the regional concentrations of nonattainment pollutants, along with completed projects in the region and other projects that may be concurrently under construction, but the project contributions not be considerable and the cumulative air quality impact would be less than significant.

Long-term operations emissions were estimated as shown in Table 4.3-5 in Section 4.3, "Air Quality." ROG and NO_x emissions in 2010 would exceed the SJVAPCD significance thresholds of 10 TPY. These quantities, being

greater than the thresholds, are considerable and would contribute to a significant cumulative air quality impact. In years subsequent to 2010, the implementation of SJVAPCD Rule 9510 and the reduction of vehicle emissions due to the phase in of cleaner vehicles would reduce ROG and NOx emissions, but not demonstrably below levels that may be considered considerable. In 2010 PM₁₀ emissions would be less than 8 TPY and PM_{2.5} emissions would be less than 2 TPY. When compared with the General Conformity Rule thresholds of 70 and 100 TPY respectfully, these emissions would not be considerable. In summary, the long-term emissions of the proposed project would contribute to the regional concentrations of nonattainment pollutants, along with completed projects in the region and new projects that may be concurrently under construction; the project contributions of ozone precursors ROG and NOx would be considerable and the cumulative air quality impact would be significant. There are no feasible mitigation measures beyond those described in Mitigation Measures 4.3-2a and 4.3-2b. Therefore the long-term cumulative ozone precursor air quality impact would be significant and unavoidable.

As described in Section 4.3, the proposed project would be a source of TACs that would cause a less-than-significant exposure impact to the residential receptors to the north of the project site. There are no other projects that are existing or potential future sources of TACs near the residential receptors immediately north of the project site. Therefore, the cumulative TAC exposure air quality impact would be less than significant.

A cumulative direct impact to global warming would occur if the project would result in a considerable net increase in greenhouse gases. The effect of GHG emissions as they relate to global climate change is inherently a cumulative impact issue. While the emissions of one single project will not cause global climate change, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. In the case of the proposed project, if the size of the increase in emissions from the project is considered to be substantial, then the impact of the project would be cumulatively considerable.

At this time, there is no strict definition, and no regulatory standards, to determine the quantity of GHG that would be considered considerable. For context, a quantity of 10,000 metric tons/year of equivalent CO₂ (equivalent) emissions is considered by some to be a minimum reporting threshold, because it captures the majority of project emissions that would occur worldwide attributable to new development (West and Pena, 2003). This is not to suggest that projects smaller than this total are not considered to contribute considerably or that 10,000 metric tons should be an absolute threshold. Other important factors come into play, such as the efficiency of a project (i.e., does it produce a relatively high or low amount of GHG based on the project size). As can be surmised, there is no easy answer to the question of what constitutes a cumulatively considerable increase in GHGs.

While AB 32 focuses on stationary sources of emissions, the primary objective of AB 32 is to reduce California's contribution to global warming by reducing California's total annual production emissions. The impact that emissions of GHGs have on global climate change is not dependent on whether they were generated by stationary, mobile, or area sources; or whether they were generated in one region or another. Thus, the net change in total levels of GHGs generated by a project or activity is the best metric for determining whether the proposed project would contribute to global warming.

As shown in Section 4.3, "Air Quality," the proposed project would generate an equivalent of approximately 9,500 tons/year of CO₂ (equivalent) greenhouse gases. This is less than the 10,000 ton/year suggested reporting limit, but this is not an absolute threshold for determining if a project is cumulatively considerable and therefore significant. Because these emissions are approximately equal to the suggested reporting limit, for purposes of this EIR the impact is considered cumulatively significant.

If all measures included in mitigation measure 4.3-2a are adopted, then the project would not only produce even fewer emissions, it will be highly energy efficient. Further, it would be consistent, in concept, with the long-term goals embodied in AB 32. To achieve the targets in AB 32, projects will be required to be designed to maximize energy efficiency. Thus, it would be mitigated to a less-than-significant contribution to GHG emissions.

5.3.4 NOISE

Construction activities occurring during daytime hours are exempt from the provisions of the city's noise ordinance if all construction equipment is fitted with factory installed muffling devices and maintained in good working order. The noise impact analysis conducted in this Draft EIR (see Section 4.4, "Noise") determined that adherence to these noise regulations and implementation of Mitigation Measure 4.4-1 would reduce construction noise levels at sensitive receptors near the project site and eliminate potential construction noise during more noise-sensitive evening and nighttime hours. Construction noise sources associated with related projects would also be considered exempt during daytime hours, but there is no guarantee that all construction equipment associated with related projects would incorporate similar noise restricting devices. Therefore, cumulatively significant noise impacts associated with construction noise sources could occur. However, the project would not result in significant construction noise impacts and would not contribute to any cumulatively significant noise impacts because all noise from project-related construction activities would be consistent with the City's noise ordinance and City general plan noise exposure and performance standards.

Transportation related noise has the potential to extend beyond the project site along existing roadways and result in significant traffic noise impacts to sensitive land uses (i.e., residential) located along these roadways. However, as described under Impact 4.4-2, "Long-Term Operational Traffic Noise", project implementation would not result in significant long-term traffic-generated noise impacts under existing plus project conditions. Because buildout of the area would not result in a perceptible increase in traffic noise on roadway segments in the project study area, the project would not contribute to a cumulatively significant impact. This is considered a less-than-significant cumulative traffic noise impact and the project's contribution would not be cumulatively considerable.

Stationary noise associated with the project and related projects (e.g., truck deliveries, forklifts, generators) could potentially result in the exceedance of the City's noise regulations at sensitive receptors. Noise originating from stationary noise sources associated with the related projects could be controlled at the source (e.g., noise walls, enclosures), but there is no guarantee that all related projects would incorporate noise reduction design features. Therefore, cumulatively significant noise impacts associated with stationary noise sources could occur. The noise impact analysis conducted in this Draft EIR (see Section 4.4, "Noise") determined that shielding or relocating on-site stationary-noise sources, or selecting quieter equipment models, and implementation of Mitigation Measure 4.4-3 would reduce stationary-source noise levels at sensitive receptors near the project site to comply with Maximum Allowable Noise Exposure and Performance Standards of the City's general plan and the noise performance standards of the City's zoning ordinance. Stationary noise sources associated with related projects would also be considered to implement similar measures, but there is no guarantee that all related projects would be designed to reduce noise. The project would not result in significant stationary noise impacts and would not contribute to any cumulatively significant noise impacts because all noise from project-related activities would be consistent with the City's noise ordinance and City general plan noise exposure and performance standards, and impacts would therefore be less-than-significant following implementation of Mitigation Measure 4.4-3. This is considered a less-than-significant cumulative stationary-source impact and the project's contribution would not be cumulatively significant.

Construction activities have the potential to result in varying degrees of temporary groundborne vibration and cause less-than-significant noise impacts to off-site residential receptors greater than 50 feet from the project site. As described under Impact 4.4-4, "Ground Vibration Levels," project implementation would not result in significant short-term -construction-generated ground vibration impacts under existing plus project conditions. Because buildout of the area would not result in a perceptible increase in groundborne vibrations in the project study area, the project would not contribute to a cumulatively significant impact. This is considered a less-than-significant cumulative ground vibration impact and the project's contribution would not be cumulatively considerable.

5.3.5 BIOLOGICAL RESOURCES

Most of the native vegetation in the project area and the larger region has been lost over the past 150 years, primarily as a result of conversion to agricultural and urban land uses. This habitat conversion has substantially affected numerous plant and wildlife species, resulting in various species being listed as threatened or endangered under the California and federal Endangered Species Acts; although, some species that use agricultural habitats and others that can thrive in developed areas have benefited. Future conversions of open space lands in San Joaquin County would primarily consist of converting agricultural lands to residential and urban development.

The SJMSCP anticipates conversion of up to approximately 109,000 acres of open space land to non-open space uses in the County between 2001 and 2051. The proposed project and related projects in the city would contribute to this county-wide conversion. The SJMSCP was developed to minimize and mitigate impacts on plant and wildlife habitat (and associated species) resulting from this regional loss of open space lands. The SJMSCP relies, in part, on compensation for such conversion through preservation of agricultural lands and preservation and creation of natural habitats to be managed in perpetuity through the establishment of conservation easements and preserves. The goal of the SJMSCP is to provide approximately 101,000 acres of agricultural and habitat preserve; the SJMSCP concludes that this would adequately compensate for cumulative impacts on plant and wildlife species covered by the plan. Because the SJMSCP potentially provides a streamlined mechanism to mitigate for impacts on resources covered under the plan, the proposed project would use the SJMSCP to mitigate for potential affects to special-status bird species (e.g., Swainson's hawk, white-tailed kite, northern harrier, burrowing owl, loggerhead shrike) and loss of foraging habitat. Therefore, cumulative impacts on terrestrial biological resources covered under the SJMSCP are considered less than significant because the project applicant would participate in the SJMSCP.

5.3.6 HAZARDS AND HAZARDOUS MATERIALS

The project and related projects would all involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction and operation. Impacts related to these activities are considered less than significant under the project because the storage, use, disposal, and transport of hazardous materials are extensively regulated by various federal, state, and local agencies and it is assumed that related projects would also comply with these hazardous materials regulations. Mitigation outlined in Section 4.6, "Hazards and Hazardous Materials," would reduce potential safety hazards for construction workers. Therefore, significant hazards to the public would not occur. Because these laws and regulations would also apply to each related project, this impact would be considered less than significant on both an individual project and cumulative basis.

5.3.7 GEOLOGY, SOILS, AND SEISMICITY

Various areas in the City of Manteca and the project region are subject to ground shaking, liquefaction, lateral spreading, settlement, levee failure, and other seismically induced hazards. Although the city is located in an area of low seismic activity, faults in the greater San Joaquin Valley could cause moderate ground shaking throughout the region. Implementation of related projects could expose additional structures and people to seismic hazards. The potential seismic and soil hazards in the City, therefore, could represent a significant cumulative impact if projects are not developed to the latest building standards and do not incorporate recommendations from site-specific geotechnical reports and grading/erosion plans prepared for these projects.

As discussed in Section 4.7, "Geology, Soils, and Seismicity," the project site would be exposed to potentially significant seismic hazard impacts. However, these impacts would be mitigated to less-than-significant levels through completion of site-specific geotechnical studies and implementation of construction and design measures developed in response to the studies. Each related project must individually meet building code requirements; therefore, additive effects would not result from the combination of the related projects and the proposed project. Implementation of the project would not create additional facilities under increased risk of hazards and would not

result in any cumulatively considerable incremental contributions to any significant cumulative impacts. This would be a less-than-significant cumulative impact.

5.3.8 AGRICULTURAL RESOURCES

Implementation of the proposed project would contribute incrementally to the cumulative conversion of Important Farmland to nonagricultural use in San Joaquin County. The incremental contribution of the project would be cumulatively significant.

Most of the land in San Joaquin County is in agricultural production. In the year 2004, San Joaquin County had a total of 624,115 acres of Important Farmland (California Department of Conservation 2007). Between the years 1990 and 2004, the total amount of Important Farmland in San Joaquin County decreased by 11,714 acres or approximately 2 percent (see Table 5-2). Prime Farmland and Farmland of Statewide Importance has decreased by 23,596 acres and 8,344 acres, respectively, since the year 1992. Designation of new areas as Unique Farmland and Farmland of Local Importance has resulted in net increases of 15,449 acres and 4,777 acres in these categories of farmland, respectively, since the year 1992.

Land Use Category	1992	1994	1996	1998	2000	2004
Prime Farmland	436,146	434,476	433,134	429,168	419,227	412,550
Farmland of Statewide Importance	99,566	99,148	98,148	96,795	93,739	91,222
Unique Farmland	47,086	47,206	48,759	52,715	59,118	62,535
Farmland of Local Importance	53,031	54,267	53,479	53,682	58,906	57,808
Total	635,829	635,097	633,535	632,360	626,402	624,115

Sources: FMMP 2007

The population of the City has increased from 40,773 residents in the year 1990 to 49,258 residents in the year 2000, which equates to a net change of approximately 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 shown in Table 5-3, putting continued pressure on agricultural lands for conversion.

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

With or without implementation of the project, the trend of land conversion from agricultural uses to urban and other nonagricultural uses (including wildlife habitat enhancement) in the Central Valley would continue. In San Joaquin County, the acreage of remaining Important Farmland is expected to substantially decrease from approximately 630,000 in the year 2000 to 520,000 in the year 2040 and 270,000 in the year 2080 as a result of urbanization (San Joaquin County 2000).

It is likely that other future projects would convert agricultural lands to nonagricultural uses. These agricultural lands may or may not be designated Important Farmland and/or be under Williamson Act contracts. Because the majority of these future projects are not yet in the environmental planning stage, the acreage of Important Farmland that could be converted by these projects is not known. However, it can be expected from various projections that the acreage of Important Farmland in San Joaquin County will decline. The project would contribute incrementally to this decline.

The permanent conversion of 16 acres of Important Farmland at the project site to non-agricultural use is considered a cumulatively considerable (i.e., significant) impact when considered in connection with the significant cumulative losses that will occur as a result of the project, past farmland conversions, and planned future development in the City of Manteca, surrounding communities, and San Joaquin County as a whole. The project applicant would pay the agricultural mitigation fee to the City of Manteca to assist in off-setting the conversion of Important Farmland. The city would use these fees to purchase conservation easements on agricultural lands and/or farmland deed restrictions, thus providing greater protection to these farmlands in San Joaquin County. However, implementation of this measure would not fully mitigate the project's cumulatively considerable contribution to the loss of agricultural land in San Joaquin County; therefore, cumulative impacts would be significant and the project's incremental contribution would also be significant.

5.3.9 HYDROLOGY AND WATER QUALITY

SURFACE WATER QUALITY

Construction activities at the project site would be extensive. Grading, earth moving, excavation and utility installation, infrastructure development, and building construction would disturb the existing vegetative cover, soil, and drainage systems. 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. Implementation of Mitigation Measure 4.9-1, which requires the project applicant to prepare and implement a stormwater pollution prevention plan (SWPPP) and comply with the Central Valley Regional Water Quality Control Board (RWQCB) requirements to protect water quality, would reduce construction-related water quality effects to less-than-significant levels. While there are no assurances that related projects would incorporate the same level of mitigation methods as the proposed project, each related project greater than 1 acre in size that would discharge stormwater runoff would be required to comply with National Pollutant Discharge Elimination System (NPDES) discharge permits from the RWQCB. Therefore, cumulative impacts of related projects on construction-related water quality effects would be expected to be less than significant and the project's incremental contribution would not be considerable and would be less than significant.

The project would change the amount and timing of potential waste discharges in stormwater runoff by converting agricultural land to an urban land use. Because specifics related to the stormwater drainage system and water quality treatment features (i.e., BMPs) that would be constructed and implemented to serve the project site are unknown at this time, the storm drain system would have the potential to discharge urban-related contaminants into SSJID water drainage facilities. Implementation of Mitigation Measure 4.9-2, which requires the project applicant to prepare and implement permanent water quality features (BMPs) designed in conformance with standards of the Central Valley RWQCB, the City of Manteca, and SSJID, would reduce urban-related water quality effects to less-than-significant levels. While there are no assurances that related projects would incorporate the same degree or mitigation methods as the proposed project, each related project that would discharge

stormwater runoff would be required to comply with standards of the Central Valley RWQCB, the City of Manteca, and SSJID. Therefore, cumulative impacts of related projects on urban-related water quality effects would be expected to be less than significant and the project's incremental contribution would not be considerable and would be less than significant.

GROUNDWATER SUPPLY AND QUALITY

The City is a participant in the South San Joaquin Irrigation District (SSJID) South County Water Supply Project (SCWSP), designed to ultimately reduce the City's dependence on groundwater resources which have historically been overdrafted. As a result, it is anticipated that providing potable water needed to serve land uses associated with the project (i.e., retail, commercial) would result in less-than-significant impacts to groundwater resources. However, cumulatively significant impacts could occur because of overdrafting or an increase of salinity intrusion resulting from cumulative groundwater usage by entities other than the City of Manteca. The City would continue to limit its contribution to this impact by limiting its own groundwater usage to what has been determined to be sustainable levels. Despite the City of Manteca's limitations on its own groundwater usage, groundwater impacts could be cumulatively considerable because the city cannot be certain that other groundwater users would similarly limit their own groundwater usage to sustainable levels. Implementation of the proposed project would contribute to this cumulatively significant impact. No feasible mitigation is available.

SURFACE DRAINAGE

Other projects in the city would be required to construct stormwater conveyance and detention facilities to control surface runoff. All stormwater management systems constructed to serve individual projects would be required to comply with the policies of the City's drainage master plans. In addition, cumulative impacts from related projects would undergo separate environmental review to ensure that adequate stormwater conveyance facilities would be constructed to serve those projects. Therefore, it is anticipated that future development would result in less-than-significant cumulative stormwater conveyance impacts. The project would construct an on-site stormwater management system that would convey surface runoff generated on the project site to an existing city stormwater detention basin that is sized to accommodate the project site and to stormwater pipes located in Daniels Street. As a result, no significant stormwater impacts would occur. Therefore, the project would not contribute to cumulative stormwater conveyance impacts, and this would be a less-than-significant cumulative impact.

FLOOD CONTROL

The project site is located outside the 100-year floodplain. Therefore, the project would not contribute to a cumulative increase in flood elevations through the removal of areas from the 100-year floodplain. This would be a less-than-significant cumulative impact.

5.3.10 UTILITIES AND SERVICE SYSTEMS

The City of Manteca is responsible for ensuring that water and wastewater services are adequately provided within its jurisdictional boundaries. The City general plan identifies goals and policies associated with providing water, wastewater, and stormwater flow. The 2000 Urban Water Management Plan and City of Manteca Sewer Master Plan provides for all the water and wastewater needs for cumulative development in the city.

WATER SUPPLY

In 2002, the City completed the 2000 Urban Water Management Plan, which plans for the provision of adequate water supply, storage, and delivery for the city. It is assumed that the development of related projects, and/or the development of the additional utility systems required to serve them, would be preceded by the required environmental impact review as required by CEQA. However, it cannot be assumed that all potential

environmental impacts associated with the development of the additional water capacity and infrastructure required to serve related projects would necessarily be mitigated to less-than-significant levels. Therefore, potentially significant cumulative utilities impacts could occur related to water supply and treatment capacity.

Future water supply for the City would consist of groundwater from the city's existing and planned municipal wells and surface water deliveries from the SSJID's SCWSP. Deliveries from the SCWSP began in the year 2005 and, assuming normal precipitation years, will range from 11,500 acre feet per year (AFY) in the year 2005 to 18,500 AFY after development of a subsequent phase. It is projected that future water demand (i.e., project plus existing plus future cumulative development) would range from 15,270 AFY in the year 2005 to 35,000 AFY in the year 2025. Future water supply available to the City from groundwater sources and the SCWSP would be adequate to meet future water demand during all horizon (2005, 2010, 2015, 2020, 2025) years. Therefore, the project and future related projects would not result in a significant cumulative impact related to water supply and the project would not result in any cumulatively considerable incremental contributions to any significant cumulative water supply impacts.

However, the EIR prepared for the SSJID's SCWSP identified construction and operation of the SCWSP could contribute to significant impacts for the following issue areas: hydrology, flooding, and water quality; air quality; geology, soils, and seismicity; biological resources; noise; hazardous materials/public health; visual resources; transportation and traffic circulation; public services and utilities/energy; cultural resources; and recreation. These impacts would be reduced to less-than-significant levels with implementation of mitigation measures identified in the SCWSP EIR and, therefore, the project's contribution to these impacts would not be cumulatively considerable.

WASTEWATER

The City of Manteca Wastewater Quality Control Facility Master Plan (1999) defines sewer facilities required to meet the city's level of service standard for serving future development. It is assumed that the development of future related projects and/or development of additional utility systems required to serve future projects would undergo environmental review as required by CEQA. However, it cannot be assumed that all potential environmental impacts associated with development of additional wastewater capacity and infrastructure required to serve these related projects would necessarily be mitigated to less-than-significant levels. Therefore, potentially significant cumulative utilities impacts could occur related to wastewater treatment and disposal capacity expansions, as needed, and the project's contribution to this significant cumulative impact would be cumulatively considerable. Because the impacts of the wastewater infrastructure is subject to independent review and mitigation, and the project would have no control over these impacts/mitigation, there is no feasible mitigation associated with development of the project.

SOLID WASTE DISPOSAL

Solid waste generated by development projects in the City of Manteca is disposed of at the Forward Landfill which has an estimated capacity to accept solid wastes through 2017. The proposed project and all cumulative projects create a demand for hauling solid wastes and the need for a location to dispose of solid wastes. Although the project contributes to a cumulative need for solid waste disposal, the Forward Landfill has sufficient capacity to serve the cumulative projects for at a minimum of 10 years. Therefore, the project's contribution to solid waste disposal services is considered a less-than-significant cumulative impact.

FIRE PROTECTION

Recent approval of Measure M increased the sales tax rate in the City of Manteca to provide funding for necessary public services including funding for additional fire protection services. The proposed project and cumulative projects create an increased demand for fire protection services. Although the project contributes to a cumulative need for fire protection in the city, the Manteca Fire Department has indicated that fire protection

services are sufficient to meet the needs of all development in the city from existing and future facilities and personnel because additional funding has been made available to the City from the approval of Measure M (see Section 4.10, “Public Services and Utilities”). Therefore, the project’s contribution to the need for fire protection services is considered a less-than-significant cumulative impact.

POLICE SERVICES

Recent approval of Measure M increased the sales tax rate in the City of Manteca to provide funding for necessary public services including funding for additional law enforcement services. The proposed project and cumulative projects create an increased demand for law enforcement services. Although the project contributes to a cumulative need for law enforcement in the city, the Manteca Police Department has indicated that police facilities and personnel are sufficient to meet the needs of all development in the city because of additional funding that is made available from the approval of Measure M and increased sales tax revenue from proposed commercial land uses (see Section 4.10, “Public Services and Utilities”). Therefore, the project’s contribution to the need for law enforcement services is considered a less-than-significant cumulative impact.

5.3.11 TRANSPORTATION AND CIRCULATION

Section 4.11, “Transportation and Circulation” of this Draft EIR evaluates both project-specific and cumulative traffic impacts. The proposed project would cause an increase in p.m. peak hour traffic volumes that would result in unacceptable levels of service and warrant the need for improvements at five intersections, including Airport Way and State Route 120 Westbound Ramps, Airport Way and State Route 120 Eastbound Ramps, Union Road and Daniels Street, Union Road and State Route 120 Westbound Ramps, and Union Road and State Route 120 Eastbound Ramps. Furthermore, the project would increase traffic volumes along freeway mainline segments and ramp junctions of SR 120, including SR 120 eastbound between Yosemite Avenue and Airport Way during the p.m. peak hour and in the opposite direction during a.m. peak hour.

The addition of project-generated traffic to freeway mainline segments would degrade currently acceptable LOS conditions to unacceptable conditions. Operational traffic conditions for cumulative conditions at most intersections in the project study area would operate at an unacceptable LOS. The project would also exacerbate unacceptable LOS that would exceed the City of Manteca’s LOS thresholds under cumulative conditions. In addition, the project would exacerbate existing unacceptable levels of service along roadway segments of Airport Way and Union Road. The applicant is contributing fair-share funding toward the unfunded portion of necessary transportation improvements to reduce these impacts (see Section 4.11, “Transportation and Circulation”). Further, it is legally infeasible to require an applicant to pay more than its fair share of the costs associated with a mitigation measure. However, this would be a significant cumulative impact and the project’s contribution would be considerable.

5.3.12 CULTURAL RESOURCES

Cumulative impacts to historic and unique archaeological resources are based on analysis of past, present, and reasonably foreseeable future actions in the vicinity of the proposed project in combination with potential effects of implementing the project. In general, archaeological resources in San Joaquin Valley result from thousands of years of human occupation. Previous development activities disturbed, destroyed, or compromised numerous archaeological resources and also resulted in a degradation of the historic fabric and integrity of the rural farming and ranching landscape surrounding the City of Manteca. This would be a cumulatively significant impact. However, because no significant historic properties or unique archaeological resources have been identified within the project area, the project’s incremental contribution would not be considerable and this would be less than significant cumulative impact.