

Final Environmental Impact Report
Mariposa Lakes Specific Plan
State Clearinghouse #2006022035



**Volume VIII: Final EIR
Responses to Comments on the Draft Environmental Impact Report
Revisions to the Draft Environmental Impact Report
Errata to DEIR Appendices**

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Prepared for:
City of Stockton



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Sacramento, CA 95814

June 2008

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ACRONYMS AND ABBREVIATIONS

af	acre-feet
af/ac/yr	acre-feet/acre/year
afy	acre-feet per year
APN	assessor's parcel number
ARB	California Air Resources Board
AST	aboveground storage tanks
ATV	all-terrain vehicles
BMP	best management practices
BNSF	Burlington Northern Santa Fe
CACWD	Calaveras County Water District
Cal Water	California Water Service Company
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CALVIN	California Value Integrated Network
CAPCOA	California Air Pollution Control Officers Association
CCCC	California Climate Change Center
CCG	Campaign for Common Ground
CDE	California Department of Education
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CO ₂	carbon dioxide
CO _{2-e}	carbon dioxide equivalent
COSMA	City of Stockton Metropolitan Area
COSMUD	City of Stockton Municipal Utilities Department
CSJWCD	Central San Joaquin Water Conservation District
CVP	Central Valley Project
DEIR	draft environmental impact report
Delta	Sacramento–San Joaquin Delta
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
DWSP	Delta Water Supply Project
EPA	U.S. Environmental Protection Agency
EPAP	Existing Plus Approved Projects
ESA	Environmental Site Assessment
FEIR	final environmental impact report

GCM	general circulation models
GHG	greenhouse gas emissions
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
HI	hazard indices
HRA	Health Risk Assessment
ICU	Intersection Capacity Utilization
IGSM	integrated groundwater surface model
IPCC	Intergovernmental Panel on Climate Change
IWMP	Integrated Water Management Plan
LOS	levels of service
M&I	municipal and industrial
maf	million acre-feet
mgd	million gallons per day
MLSP	Mariposa Lakes Specific Plan
MOU	Memorandum of Understanding
NGVD	National Geodetic Vertical Datum
NOD	notice of determination
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
OEHHA	Office of Environmental Health Hazard Assessment
OID	Oakdale Irrigation District
PA&ED	Project Approval and Environmental Document
PCM	parallel climate model
PG&E	Pacific Gas and Electric Company
PIER	Public Interest Energy Research
PMI	Point of Maximum Impact
PSR	Project Study Report
Reclamation	U.S. Bureau of Reclamation
REL	Reference Exposure Levels
ROG	reactive organic gases
RWQCB	regional water quality control board
SEWD	Stockton East Water District

SFPD	School Facilities Planning Division
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
SJRTD	San Joaquin Regional Transit District
SJVAPCD	San Joaquin Valley Air Pollution Control District
SPA	specific plan area
SR	State Route
SSJID	South San Joaquin Irrigation District
SUSD	Stockton Unified School District
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF/year	thousand acre-feet per year
tpd	tons per day
USACE	U.S. Army Corps of Engineers
USGS	United States Geological Survey
UST	underground storage tanks
UV	ultraviolet
WID	Woodbridge Irrigation District
WSA	water supply assessment
WSE	water supply evaluation

1 INTRODUCTION

1.1 OVERVIEW

On March 8, 2007, the City of Stockton (City) distributed to public agencies and the general public a draft environmental impact report (DEIR) for the Mariposa Lakes Specific Plan Project in accordance with the requirements of the California Environmental Quality Act (CEQA). The project applicant, PCCP Mariposa Lakes, LLC, is proposing to construct a mixed-use community and supporting infrastructure and roadway improvements. Mariposa Lakes would consist of approximately 3,810 acres of urban development, comprising approximately 11.5 million square feet of industrial and business/professional development; 1.0 million square feet of commercial development; approximately 10,566 low-, medium-, and high-density residential units; and schools, parks, recreation areas, open spaces, and other amenities. The project site is located immediately adjacent to and south of the Stockton city limits, south of State Route 4 (SR 4) and east of Mariposa Road. The project site would require annexation to the City of the Stockton.

In accordance with Section 15105 of the State CEQA Guidelines, a 45-day public review period was provided for the DEIR. The review period began on March 8, 2007 and ended on April 23, 2007. The DEIR evaluated the potential environmental effects of the proposed project and four alternatives: the No Project Alternative, Reverse Residential/Industrial Uses Alternative, Site Design Alternative, and Reduced Project Alternative. Written comments were received from state and local agencies and from organizations and individuals.

This final EIR (FEIR) has been prepared to respond to comments received on and to make appropriate revisions to the DEIR. The FEIR has been prepared by the City in accordance with Sections 15089 and 15132 of the State CEQA Guidelines. The City is the lead agency under CEQA.

The FEIR consists of the entire DEIR (Volumes I through VII) and the comments, responses to comments, and revisions to the DEIR that are contained in this volume (Volume VIII).

1.2 PURPOSE OF THE FINAL EIR

Public Resources Code Section 21091 requires a lead agency that has completed a DEIR to consult with and obtain comments from public agencies that have legal jurisdiction with respect to the proposed action, and to provide the general public with opportunities to comment on the DEIR. This FEIR has been prepared to respond to comments received from agencies and members of the public on the DEIR for the Mariposa Lakes Specific Plan Project.

1.3 CEQA REQUIREMENTS FOR RESPONDING TO COMMENTS

The State CEQA Guidelines, Section 15088(a), state that written responses to comments received on the DEIR must describe the disposition of significant environmental issues. In particular, the major environmental issues raised when the lead agency's position differs from recommendations and objections raised in the comments must be addressed.

1.4 REQUIREMENTS FOR CERTIFICATION AND FUTURE STEPS IN PROJECT APPROVAL

The EIR is intended to be used by the Stockton City Council when considering approval of the proposed project or an alternative to the proposed project.

In accordance with CEQA, the DEIR was circulated for public and agency review and comment on March 8, 2007. The comment period closed on April 23, 2007. Comments were received from federal, state, and local

agencies, and from private organizations and individuals. Following completion of the FEIR, the Stockton City Council will hold a public meeting(s) to consider certification of the FEIR and to decide whether or not to approve the proposed project or an alternative. A notice of determination will then be filed. If the city council approves the proposed project (or an alternative), it will prepare and adopt written findings of fact for each significant environmental impact identified in the EIR; a statement of overriding considerations, if needed; and a mitigation monitoring and reporting program.

Based on the available information, the No Project Alternative would be the environmentally superior alternative under CEQA. Of the “build” alternatives, the Reduced Project Alternative would be the environmentally superior alternative.

1.5 ORGANIZATION AND FORMAT OF THE FINAL EIR

This FEIR is organized as follows:

- ▶ Chapter 1, “Introduction,” describes the purpose and content of the FEIR.
- ▶ Chapter 2, “Minor Modifications to the Project,” describes minor modifications to the proposed project and whether there are any affects to any of the issue areas analyzed or mitigation measures identified in the DEIR.
- ▶ Chapter 3, “Master Responses,” presents responses to environmental issues raised in multiple comments. They are organized by topic to provide a more comprehensive response than may be possible in responding to individual comments, and so that reviewers can readily locate all relevant information pertaining to those issues that appear to be of greatest public concern.
- ▶ Chapter 4, “Comments and Individual Responses,” contains a list of all agencies, organizations, and persons who submitted comments on the DEIR during the public review period, copies of the comment letters submitted, cross references to relevant master responses, and individual responses to the comments that are not addressed in master responses.
- ▶ Chapter 5, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices,” presents corrections, clarifications and other revisions to the DEIR text based on issues raised by the comments on the DEIR. Changes in the text are indicated by strikeouts where text is removed and by underline where text is added. This section contains errata to the DEIR appendices.
- ▶ Chapter 6, “New Chapter 23 of the DEIR” presents an analysis of the impacts of global climate change on the project.
- ▶ Chapter 7, “Revised Summary of Project Impacts and Mitigation Measures,” is a revised version of Table 2-2 that was circulated with the DEIR. This table summarizes the project impacts and mitigation measures, as revised based on changes shown in this FEIR.
- ▶ Chapter 8, “References,” includes the references to documents used to support the comment responses.
- ▶ Chapter 9, “List of Final EIR Preparers,” lists the individuals who assisted in the preparation of this FEIR.

The DEIR consisted of seven volumes. Volume I contained the EIR text, and Volumes II through VII contained the appendices. This document is Volume VIII of the EIR. Together, the eight volumes constitute the FEIR.

2 MINOR MODIFICATIONS TO THE PROJECT

2.1 INTRODUCTION

This chapter contains a summary of changes to the proposed project that have occurred after circulation of the draft environmental impact report (DEIR) for public review and comment. Actual edits to DEIR text are contained in Chapter 5 of this final EIR (FEIR), “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.”

2.2 SUMMARY OF CHANGES TO THE PROJECT DESCRIPTION

2.2.1 COMMUNITY PARKS

The proposed 30-acre regional sports complex discussed on page 3-31 is no longer part of the proposed project. Instead, that area would be planned for additional industrial land uses. There would still be a total of six community parks in the specific plan area (SPA). The total acreage of community and neighborhood parks has been reduced from 206.3 acres to 196.5 acres. As discussed on page 15–19 of the DEIR, to meet the City of Stockton (City) park standards, the proposed project would be required to provide approximately 165.9 acres of parkland. Therefore, the reduced parkland acreage of 196.5 acres would still meet the City’s standards, and the conclusions in the DEIR regarding public park facilities remain unchanged. Noise and air quality impact conclusions and mitigation measures in the DEIR also remain unchanged, because these impacts are already identified as potentially significant and mitigation measures are included that would, in some cases, reduce the impact to less than significant. In other cases, the impact would be significant and unavoidable after implementation of mitigation. See DEIR Chapter 6, “Air Quality,” and Chapter 13, “Noise,” for a discussion of these impacts. Impact 4-4, related to new light and glare and nighttime skyglow effects, would still be significant and unavoidable with the change from sports park to industrial land uses, because the project as a whole would still generate a substantial amount of nighttime skyglow effects as compared to existing conditions. Traffic impacts related to this land use change are discussed below in Section 2.2.2.

2.2.2 MEASURES INCORPORATED INTO THE SPECIFIC PLAN TO REDUCE GREENHOUSE GAS EMISSIONS

In March 2008, the California Attorney General’s (AG’s) office published information to assist local government agencies in carrying out their duties under the California Environmental Quality Act (CEQA) as they relate to global warming. This publication, titled *The California Environmental Quality Act—Addressing Global Warming Impacts at the Local Agency Level*, identifies various measures that can be incorporated into development projects to help combat the adverse effects of global warming. Accordingly, a list of the AG’s “Generally Applicable” measures to reduce greenhouse gas emissions that have been incorporated into the MLSP has been added to the project description (see FEIR Chapter 5). The Mariposa Lakes Specific Plan (MLSP) achieves a compliance rating of over 90% for these project-specific measures. As discussed in detail in Impact 6-4 (FEIR Chapter 5), an individual project by itself cannot generate enough greenhouse gas emissions to substantially influence global climate change. A project participates in this impact by its incremental contribution which, when combined with the cumulative contributions of all other sources of greenhouse gases, cause global climate change impacts. As noted in the AG’s memo, specific measures should not be considered in isolation, but as part of a larger set of measures implemented by all projects for the reduction of greenhouse gas emissions and the subsequent effects of global warming.

Furthermore, the builders of residential construction in the Mariposa Lakes SPA would comply with “Build-It-Green,” green point rated guidelines in effect at the time of construction. The builders of non-residential construction (i.e., commercial, industrial) in the Mariposa Lakes SPA would comply with LEED-certified

standards in effect at the time of construction. The builders of non-residential construction would not be required to participate in the formal LEED inspection and certification process, but would be required to demonstrate to the City the ability to be certified to LEED standards.

2.2.3 TRAFFIC ANALYSIS FOR INCREASED INDUSTRIAL ACREAGE

TJKM Transportation Consultants performed a traffic analysis to determine if the proposed 30-acre increase in industrial land use (from 614.4 acres to 644.6 acres) from the removal of the regional sports park would result in any changes to the significance conclusions or mitigation measures related to traffic contained in the DEIR. The proposed project at full buildout would generate 161,012 daily trips. The additional 30 acres of industrial land use would generate the following trips: 783 total per day (0.48% increase), with 266 trips during a.m. peak hour (1.6% increase) and 355 trips during the p.m. peak hour (1.6% increase). Based on the assumptions used for the traffic study (DEIR Appendix U), approximately 80% of these 783 new trips would originate from or be destined for locations outside the SPA. In the near-term traffic scenarios studied in Appendix U and analyzed in Chapter 16, “Transportation and Circulation” of the DEIR, no study intersections would operate at or near unacceptable levels of service (LOS), and therefore the additional 783 trips would not result in any changes to the current significance conclusions or mitigation requirements. In the long-term scenarios, the “plus project” traffic scenarios result in five intersections with unacceptable LOS, and the DEIR concludes these impacts would be significant and unavoidable. The addition of 783 trips to these five intersections would contribute to the projected significant and unavoidable impacts. None of the other intersections evaluated under the long-term “plus project” scenarios would operate at or near unacceptable LOS, and therefore the additional 783 trips would not result in any changes to the significance conclusions contained in the DEIR or result in any new mitigation measures.

2.2.4 TRAFFIC ANALYSIS FOR STATE ROUTE 4 REALIGNMENT STUDY

Since the time the DEIR was prepared, the California Department of Transportation (Caltrans) authorized TJKM Transportation Consultants to prepare a *Traffic Forecast and Traffic Operations Report* (February 15, 2008) to evaluate nine alternative configurations of State Route (SR) 4 between Jack Tone Road (in San Joaquin County) and the City of Stockton. This work is associated with the Project Study Report (PSR) being prepared for the SR 4 project, which is separate from the MLSP project. The SR 4 project is being implemented because without improvement or realignment, SR 4 would degrade to LOS “F” conditions under full buildout of the City’s 2035 General Plan Update. The *Traffic Forecast and Traffic Operations Report* prepared by TJKM includes modeling that uses the same traffic scenarios examined in the *Traffic Study for the Proposed Mariposa Lakes Development* (DEIR Appendix U) and uses the same 2035 General Plan Update traffic data as was used for the proposed project. While the traffic analysis contained in DEIR Chapter 16, “Transportation and Circulation” and in Appendix U focused on a realignment of SR 4 through the MLSP project site, any of the other eight alternatives being evaluated in the SR 4 PSR process could be selected and implemented by Caltrans. The *Traffic Forecast and Traffic Operations Report* includes an analysis of traffic that would be generated under the MLSP within each of the nine alternative configurations and specifies the required improvements associated with each configuration. The text of the *Traffic Forecast and Traffic Operations Report* is attached to the FEIR as new Appendix EE.

In the event that Caltrans selected an alternative that did not involve realignment of SR 4 through the MLSP project site, the roadway alignment that has been analyzed in the DEIR would still be implemented as a new arterial/collector within the SPA. This roadway would not be extended west over the BNSF railroad.

Since the DEIR was prepared, Caltrans has conducted additional studies on the proposed SR 4 alternatives, and it appears likely that Caltrans will select the alternative identified in Appendix EE as “Alternative 2A – Martin Luther King Interchange.” That alternative would include the following work:

- ▶ Reconstruct Mariposa interchange to Type L-9 partial cloverleaf;
- ▶ Realign frontage roads south of Mariposa interchange;

- ▶ Construct combination Type L-7/L-8 interchange at Golden Gate Avenue;
- ▶ Realign and improve Golden Gate Avenue;
- ▶ Shoofly structure over SR 99 for BNSF Railroad. Shoofly structure would be utilized as permanent Martin Luther King/Charter Way overcrossing;
- ▶ Reconstruct BNSF UP to provide standard vertical clearance and accommodate 8-line SR 99;
- ▶ Widen Mormon Slough bridge;
- ▶ Cul-de-sac Farmington Road at Stagecoach Road A at-grade connection to Farmington Road over the BNSF (under consideration); and
- ▶ Cul-de-sac Olive Avenue at SR 4.

As stated above, the major east-west roadway alignment through the SPA that has been analyzed in the DEIR entitled as “SR Realignment” would still be constructed—it would become a new arterial/collector road within the SPA, and selection of the Caltrans “Alternative 2A” would not result in any new significant traffic impacts at the project site.

2.2.5 REVISED FIGURES

Figures 3-8, 3-11, and 3-16 have been revised to show changes that have occurred as a result of removal of the 30-acre regional sports complex. Figures 3-9, 3-31, 3-37 have been revised to show the correct city limit boundary. Figure 3-10 has been revised to show the parcels within the SPA that are not controlled by the project applicant. The owners of these parcels have indicated they do not wish to participate in the proposed project and therefore, would not be annexed to the City. Figure 3-20 has been revised to show additional street details; to indicate an increase in the right-of-way of the proposed SR 4 alignment from 174 to 180 feet; to show an additional proposed Class I bike path west of the SRA; and to show the correct City limit boundary. Figure 3-35 has been revised to show the project’s connection with the existing System No. 8 sewer force main.

2.2.6 TYPOGRAPHICAL ERRORS

Pages 3-26 and 3-84 contain typographical errors. The number of jobs in the business/professional areas should be 2,995 rather than 615. The number of residential units in development Phase 5 should be 400 rather than 904. These changes have no effect on the analysis contained in the DEIR because the number of jobs and numbers of residential units used for the DEIR analyses was correct; these changes are merely typographical errors in descriptive portions of DEIR Chapter 3, “Project Description.”

3 MASTER RESPONSES

This chapter presents responses to environmental issues raised in multiple comments. These have been termed “master responses.” They are organized by topic so that reviewers can readily locate all relevant information pertaining to an issue of concern and streamline the FEIR.

When issues are addressed in the broader context provided by master responses, the interrelationships between some of the individual issues raised can be better clarified. It is also possible to provide a single explanation of an issue that is more thorough and comprehensive than separate, narrowly focused responses without any context.

MASTER RESPONSE 1: NUMBER OF LANES ANALYZED ON STATE ROUTE 99

Various draft environmental impact report (DEIR) comments question whether the requirement for 10 lanes on State Route (SR) 99 is appropriate given the ultimate configuration of eight lanes planned by the California Department of Transportation. SR 99 currently has four lanes south of SR 4. Funding is now available to widen SR 99 to six lanes between SR 4 in Stockton and SR 120 in Manteca. The DEIR evaluated long-term traffic impacts using a 10-lane configuration, as well as six- and eight-lane configurations, because future traffic forecasts from various models have shown a need for an ultimate width of 10 or more lanes south of SR 4 to meet applicable level of service (LOS) standards.

As stated by the City of Stockton (City) in its 2035 General Plan Update EIR, analyses conducted by the City for the general plan update indicate that the 10-lane sections proposed on SR 99 are crucial to achieving the City’s desired overall LOS objectives. Without the additional lanes, congestion and air quality would increase to a level greater than already analyzed by the City in its 2035 General Plan Update EIR, and the level of regional traffic diverting through the City’s neighborhoods and onto local streets would reach unacceptable levels. The City also recognizes that SR 99 is a facility of statewide significance that funnels substantial amounts of regional traffic through the City each day. This amount of traffic will consume a portion of the available capacity of SR 99, regardless of how many lanes the roadway provides. Therefore, the City believes that the provision of 10 through lanes will yield the proper balance between accommodating both the local and regional needs. Finally, the City believes that 10 through lanes on major multi-modal corridors in urban areas such as these will be more commonplace throughout California by 2035. This view is based on recent trends of similarly-sized segments of major freeways in larger urban areas such as Sacramento and the San Francisco Bay Area. The City recognizes the current right-of-way restrictions in the roadway corridor, but believes that construction of 10 lanes is feasible and that any widening of SR 99 beyond a six-lane roadway will require acquisition of additional right-of-way. The City believes that it would be short-sighted not to plan accordingly in terms of right-of-way preservation and construction to meet future needs.

The DEIR traffic analysis included both near-term and long-term roadway scenarios. In the near-term scenarios, SR 99 was evaluated both as a four-lane freeway (existing) and as a six-lane freeway (funded project). In these scenarios, most of the six-lane freeway sections operated at LOS D or better with full buildout of the proposed project plus all approved projects.

In the long-term scenarios using the 1990 City of Stockton General Plan (1990 City General Plan) model (showing full buildout), the traffic analysis examined six-lane conditions (funded project) and 10-lane conditions (general plan scenario). In these scenarios, a six-lane freeway south of Arch Road would operate acceptably, but between Arch Road and Mariposa Road the six-lane sections would operate at LOS F, while the 10-lane section would operate at LOS D or better. Under the 1990 City General Plan model, an eight-lane section of SR 99 would operate at LOS E north of Mariposa Road, a 10-lane section of SR 99 would operate at LOS E, while the section of SR 99 with fewer than 10 lanes would operate at LOS F.

Using the newer 2035 City General Plan model to evaluate SR 99, higher traffic volumes would occur along with lower levels of service. For example, south of Arch Road, a six-lane section would produce LOS E and LOS F conditions while an eight-lane section would generally operate at LOS D or E. Between Arch Road and Mariposa Road, an eight-lane freeway would operate at LOS F while a 10-lane freeway would generally operate acceptably. North of Mariposa Road, the freeway would operate at LOS F even with 10 lanes.

In most cases, conditions are similar with or without the proposed project. Widening SR 99 in south Stockton to six lanes can be accomplished relatively simply because of the availability of a wide median in most places. However, widening SR 99 to either eight lanes or 10 lanes would be substantially more difficult.

MASTER RESPONSE 2: POTABLE WATER SUPPLY FROM THE NEW MELONES PROJECT

The water supply assessments (WSAs) prepared by the City of Stockton (City) (DEIR Appendix R) and the California Water Service Company (Cal Water) (DEIR Appendix S) explicitly state there will be deficiencies in the contract amounts of water from New Melones in dry and critically dry years. The WSAs do not rely on this unavailable water. However, water from New Melones will be available in wet years, and the WSAs do rely, in part, on this water. Despite the fact that the U.S. Bureau of Reclamation has not delivered the full contractual water supply to the Stockton East Water District (SEWD), SEWD has in the past—and does at the present time—receive some water from the New Melones project, which in part becomes available to the City and Cal Water. The City of Stockton Metropolitan Area (COSMA) will continue to use New Melones water to the extent it is available.

MASTER RESPONSE 3: RELIANCE ON WATER FROM PHASE I OF THE DELTA WATER SUPPLY PROJECT

The Stockton City Council certified the Delta Water Supply Project (DWSP) EIR on November 8, 2005. The DWSP EIR contains a project-level environmental analysis of Phase I of the DWSP, and a program-level analysis of Phase II of the DWSP. The State Water Resources Control Board (SWRCB) has issued water rights Permit 21176 (Application 30631A) for a total annual diversion of 33,600 acre-feet per year (see page 8 of the City's WSA, DEIR Appendix R), which constitutes the entire capacity of Phase I of the DWSP. The City, Cal Water, and SEWD WSAs prepared for the proposed project do not rely on water from Phase II of the DWSP; rather, they rely on water from Phase I of the DWSP. The project site is within the Place of Use set forth in SWRCB Permit 21176. With respect to the construction of the DWSP Phase I, the City has applied for a Department of the Army Section 404 of the Clean Water Act permit from the U.S. Army Corps of Engineers, has obtained the necessary stormwater and wastewater National Pollutant Discharge and Elimination System (NPDES) permits, and is in the construction bid process. Construction is anticipated to begin in 2008 and conclude in 2010 or 2011.

Furthermore, as a retail water service provider, the City may commingle its water supplies to provide service to all customers within its service area, notwithstanding Place of Use limitations placed by certain supply sources. Commingling of supplies is common practice among water service retailers, and does not violate water law restrictions provided that the water service provider allocates its supplies, on an accounting basis, entirely within its retail service area. If necessary, the City may divert DWSP water to its existing customers who are currently served by SEWD water, thereby freeing up SEWD water to serve the proposed project or any other existing customer. California water law does not require the tracing of each source of each molecule of water to its end user. The California Water Code allows for the commingling of water, so long as the appropriate quantity of water is accounted for. See California Water Code Section 7075; *Hansen v. City of San Buenaventura*, (1986) 42 Cal 3d 1172; *Crane v. Stevinson*, 5 Cal. 2d. 387, 395–396 (1936); *Evans Ditch Co. v. Lakeside Ditch Co.*, 13 Cal. App. 119, 130 (Cal. Ct. App. 1910).

MASTER RESPONSE 4: GROUNDWATER USE AT THE PROJECT SITE

A description and evaluation of impacts related to the water supplies for the proposed project's potable and nonpotable water needs is provided in DEIR Chapter 17, "Utilities and Energy," on pages 17-11 through 17-18. A description and evaluation of impacts related to the proposed recharge project is provided in DEIR Chapter 11, "Hydrology and Water Quality," on pages 11-33 through 11-42 and pages 11-59 through 11-62. Amendments to text of the DEIR regarding potable water supply, nonpotable water supply, and groundwater recharge, are contained in Chapter 5, "Corrections and Revisions to the DEIR and Errata to the DEIR Appendices" of this FEIR. A detailed evaluation of the availability and sources of potable water supplies, including groundwater, is provided in the WSAs prepared by the City (DEIR Appendix R) and by Cal Water (DEIR Appendix S). A detailed evaluation of the availability and sources of nonpotable water supplies is provided in the WSA prepared by SEWD on behalf of SEWD and the Central San Joaquin Water Conservation District (CSJWCD) (attached to this FEIR as the new Appendix Y). As stated on page 11-6 of the DEIR, "The City's Master Water Plan calls for the continued construction of wells in areas of new development to help meet peaking demands and pressure maintenance requirements." Peaking demands during critically dry years may result in pumping of groundwater to meet potable water needs. Figure 3-31 of the DEIR shows proposed locations for two City of Stockton water wells and one Cal Water water well. Those wells are intended to serve three potential functions: (1) provide water system pressure; (2) serve as a supplement for fire flow requirements (if needed); and (3) provide a source of groundwater supply to meet potable water needs during critically dry years (if needed). The following text is provided to clarify groundwater use at the project site.

The project site currently consists of over 3,800 acres of irrigated, agricultural land. Approximately 11,000 acre-feet per year (afy) of water, pumped from the groundwater aquifer, has historically been used to irrigate the project site. This translates to a use factor of approximately 3.0 acre-feet/acre/year (af/ac/yr), annually. The City's stated goal for safe-yield withdrawals from the groundwater aquifer is 0.60–0.75 af/ac/yr (DEIR Appendix R). Therefore, existing agricultural groundwater use at the project site is approximately four to five times more than the City's safe-yield factor. Construction of impervious surfaces on the project site as a result of proposed development would reduce the amount of surface water and runoff that currently recharges the groundwater aquifer by approximately 2,180 afy. However, because the approximately 11,000 afy of historical groundwater pumping would cease when the project is constructed, implementation of the proposed project would result in a reduction in groundwater pumping. (DEIR at 11-33 and 11-39.)

All of the proposed project's nonpotable water needs would be met by surface water, and except for critically dry years (when the project's water retailers may elect to pump groundwater to their customers), the proposed project's potable water needs would be met by surface water supplies as well. As discussed at length in Chapters 11, "Hydrology and Water Quality," and 17, "Utilities and Energy," of the DEIR, nonpotable water needs (landscape irrigation and lake level maintenance) would be met primarily by the purchase of surplus surface water from CSJWCD and/or SEWD, and to a lesser extent by the capture of on-site stormwater runoff and precipitation. The purchased surplus water would not take away from supplies being used for existing customers; rather, the water would be unappropriated, surplus water that is already flowing down North Little Johns Creek and/or Duck Creek. This unappropriated surplus water would be diverted to the proposed Arbini recharge facility and allowed to percolate through the ground to recharge the aquifer and create a bank of stored groundwater that can be withdrawn as needed. The City requires that 2 af of water be applied to the groundwater bank for every 1 af of water that is withdrawn, thus providing an additional benefit to the aquifer. Thus, the project's nonpotable water supply needs would not be met by the use of any existing groundwater, but rather by surface water that is placed into the aquifer and then withdrawn for use when needed. Also, as noted above, withdrawals from the groundwater bank would be limited to 50% of the surface water that is placed into the bank.

Regarding potable water, the WSAs prepared by the City and Cal Water discuss the various potable water sources and availability at length. The City's WSA makes it clear that the COSMA relies primarily on surface water to meet the needs of its water users (DEIR Appendix R, pages 17-22). As discussed in the City and Cal Water WSAs, and in Chapter 17, "Utilities and Energy," of the DEIR, once the City receives its allocation of water from

Phase I of the DWSP, anticipated in 2010 or 2011, it will be able to meet the project's potable water needs at full buildout. Because the DWSP will supply additional surface water, the City believes that use of water from the DWSP will further reduce reliance on groundwater underlying the COSMA service area.

The DWSP would benefit the regional groundwater system by providing 'in-lieu recharge'; that is, by allowing more rapid recovery of existing groundwater aquifers by replacing existing groundwater withdrawals with new surface water supplies. In addition, DWSP waters would be injected into the groundwater system for later recovery (groundwater banking) (SMUD et al. 2004). (DEIR page 11-12.)

Additional information about the DWSP is contained in the DEIR for the 2035 City General Plan (December 2006) and in the certified and approved DWSP EIR (City of Stockton 2005), which have been incorporated by reference into the Mariposa Lakes Specific Plan DEIR. Both of these documents are available for public review at the City of Stockton Community Development Department, Planning Division, located at 345 North El Dorado Street in Stockton. As discussed in Master Response 3 above, the City believes the DWSP is a secured source of surface water that can and would be used to meet the proposed project's potable water needs.

Various comments received on the DEIR question the City's policy of supplying groundwater to its customers (including the proposed project) to meet potable water needs during critically dry years. The information below responds only to these comments related to groundwater use for the proposed project during critically dry years.

The City's WSA (DEIR Appendix R, page 9) prepared for the proposed project contains the following information regarding the data used to perform the analysis required under California Water Code Sections 10910 through 10915:

The water demands associated with new growth in the COSMA were evaluated to 2015 as part of the April 2003 DWSP Feasibility Report and have been evaluated to 2035 as part of a Water Supply Evaluation (WSE) completed in May 2006 on behalf of three COS water retail providers (COSMUD, California Water Company (Cal Water), and San Joaquin County (County)) in order to provide information relevant to the City's pending General Plan Update process. The WSE, which is hereby incorporated by reference herein, has been relied on in this WSA in order to provide information regarding a scenario where growth and water demands are beyond the existing and projected growth contemplated in the required WSA analysis. ...

As the WSE itself explains on pages 55 through 59, the WSE reflects the City's most recent and best information regarding the amounts of groundwater on which it can reliably depend, and the amounts of surface water from SEWD on which it can reliably depend. This information supercedes previously available information found in the DWSP Feasibility Study and in other documents, such as the City's Urban Water Management Plan (UWMP), that relied on the Feasibility Study for information regarding the reliability of these supplies. [Emphasis added.]

Page 10 of the City's WSA concludes:

In short, while this WSA does not assume approval of the proposed General Plan update but instead recognizes that the 2015 General Plan remains in place at present, the WSA nevertheless relies on the WSE prepared for the General Plan Update because it (i) includes the best available information and projections currently available about (a) the reliability of groundwater supplies, (b) the reliability of SEWD surface supplies, and (c) the length of time that the first phase of the DWSP project will suffice to serve growth that might be approved under the General Plan update, and (ii) provides a 30-year time horizon that more than satisfies the need for a 20-year planning horizon in a WSA.

Water Code Section 10910(d) requires that the WSA identify existing water supplies for the proposed project. Pages 17–22 of the City’s WSA contain information regarding surface water supplies (see also Errata to the City’s WSA contained in Chapter 5, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices” of this FEIR). Pages 22–27 of the City’s WSA discuss existing groundwater supplies and the water retailers’ rights to use groundwater from the basin underlying the COSMA service area for water delivery to COSMA customers through conjunctive use:

Conjunctive use implies that groundwater will be preserved as the last source of supply that is used if surface water supplies are insufficient to meet demands. Careful planning and study has and will continue to take place to insure that groundwater extraction yields, on average, do not pose any risk of salinity intrusion or undue risk to private domestic or agricultural wells in the City of Stockton area. In wet years, when surface water is more plentiful, the groundwater basin is allowed to recover through in-lieu recharge (i.e., allowing natural recharge to occur from streams and rivers by pumping at lower extraction amounts), and in the dry years, groundwater is extracted at higher amounts to meet the shortfall of surface water supplies in meeting M&I [municipal and industrial] demands.

While the WSA discusses the decline in groundwater elevations that occurred beginning 1947, the WSA also explains that the City has performed hydrologic studies that indicate groundwater levels in recent years have recovered, primarily because of the decrease in groundwater pumping for agricultural use, and also because of active recharge projects. “The behavior of the groundwater basin during the drought [late 1980s and early 1990s] and subsequent normal year hydrology of the late 1990’s indicate that the basin is recovering and is stabilized and operating within a manageable range.” (City’s WSA, page 23.)

Pages 30–36 of the City’s WSA contain (1) information required by Water Code Section 10910(f)(2) regarding information about the groundwater basin and the efforts being taken to prevent long-term overdraft, and (2) information required by Water Code Section 10910(f)(3) regarding a description of the volume and geographic distribution of groundwater extractions from the basin for the last 5 years.

Regarding groundwater overdraft, page 31 of the City’s WSA states:

In the past, the groundwater basin underlying San Joaquin County has been classified by DWR as being in overdraft...The COSMA, however, has been instrumental through its voluntary participation in funding the existing conjunctive use program for the portion of the basin underlying the COSMA that groundwater elevations have stabilized and no significant declines have been recorded since the late 1980s.

In addition to its historical contributions, the COSMA’s long-term plan for preventing overdraft of the groundwater basin are embedded in the objectives of the proposed future DWSP to insure systematic, incremental implementation of the on-going conjunctive use program to provide a benefit to the groundwater basin.

Pages 46–54 of the City’s WSA contain information summarizing the groundwater supplies that could be used by COSMA water retailers to serve existing and future customers, the City’s plans for future conjunctive management of COSMA water supplies, and the projected impacts to the groundwater basin based on hydrologic modeling results.

The City’s summary of groundwater supplies that could be used by COSMA water retailers to serve existing and future customers was prepared to determine the City’s ability to supply water to all customers based on full buildout of the 2035 City General Plan (including the proposed project). Page 46 of the City’s WSA indicates that while a conservative 0.60 af/ac/year groundwater extraction rate is the general rule, “a deviation from the lower extraction rate can occur if lands within the General Plan Planning Area Boundary are converted from agricultural uses irrigated with groundwater to urban uses (this agricultural credit concept is not in effect until after 2010

when the DWSP becomes fully operational).” This concept is intended to “acknowledge that the aquifer was sustaining the agricultural use prior to urbanization and at a rate that was likely 2 or 3 times that of the self-imposed maximum of 1.0 AF/ac/year.” (City’s WSA page 46.) The project site would qualify for this agricultural credit after the DWSP becomes operational.

Pages 47–48 of the City’s WSA provide a further discussion of the sufficiency of groundwater by “evaluating the groundwater basin as a whole for purposes of providing for existing growth, foreseeable growth (i.e., proposed and approved growth), the WSA Project growth [i.e., Mariposa Lakes Specific Plan] and projected growth based on the 2035 General Plan Update. The general approach taken to determine the adequacy of groundwater from a basinwide perspective, assuming all existing and future users of the groundwater basin to 2035, is based on using the integrated groundwater surface model (IGSM) for San Joaquin County....” Page 47 goes on to provide a detailed description of the model inputs and results, which indicate “a significant overall improvement in the southeast portion of the 2035 General Plan Update area [which would include the project site] due to reduced groundwater extractions through retirement of agricultural lands....” Page 48 of the City’s WSA states “The conclusion from the above-described evaluation is that use of groundwater under full buildout conditions of the General Plan Update at a level of 0.87 af/ac/year or lower (i.e., 0.75 af/ac/year is the maximum set in this WSA) will not impact the larger groundwater basin; therefore the Project’s use of groundwater, if held to the same constraint, will not have a negative effect on regional groundwater elevations, water quality or groundwater quantity [emphasis added].”

Pages 49–50 of the City’s WSA explain the City’s management of water supplies on the basis of conjunctive use: “The operation of the DWSP and SEWD surface WTPs [water treatment plants] is assumed to occur simultaneously, and if water supply is available, the water demand is met first by SEWD, then by the DWSP, and lastly by groundwater.” The City used a 70-year historic model of hydrology to determine the adequacy of the sum total of water supplies in any given year type and stated:

The objective is that over the 70 years, the groundwater use does not exceed the predefined sustainable yield of the basin as described below. Figure 21 [page 55 of the City’s WSA] below shows the results based on 2035 water supplies and on how water demands are met from the above mentioned sources. This figure shows that, in even the driest historical hydrologic periods (say 1976 to 1978 or 1987 to 1991) there is sufficient water supply to meet 2035 water demands.

The operational yield objective of the groundwater basin is based on not allowing the groundwater elevations to drop to a point where impacts could occur as described above or that the annual yield in any given year over the 70-year hydrologic period will not exceed the 0.75 AF/ac/year plus an agricultural credit.

Pages 51 and 52 of the City’s WSA present the results of the 70-year hydrologic modeling and conclude that, “From this figure [Figure 19], it shows that during no time does the groundwater yield approach the targeted goal of 0.60 AF/ac year [emphasis added].” Page 52 concludes:

The remaining question is whether the groundwater yield in any given dry year exceeds the DWSP goal of having a maximum of 0.75 AF/ac/year plus the agricultural credits determined above. For the 70 years of historical hydrology, the maximum groundwater yield is extracted for each year of the Project model. This is then compared to the maximum yield of the basin underlying the COSMA. The results of this are shown in Figure 20 [of the City’s WSA]. This graph is the “worst” case scenario and it is anticipated that beyond 2020 there will be active groundwater recharge programs (e.g., aquifer storage and recovery, recharge basins, in-lieu surface water irrigation to agriculture) to make up for the dry year dependency on groundwater. While these programs are very likely to occur and are a component of the Project, this WSA conservatively assumes that there will be no contribution to COS water supplies. The conclusion from the figure [Figure 20] is that the 0.75 AF/ac/year is not exceeded and no agricultural credits are required. [Emphasis added].

Finally, the City’s “Determination of Sufficiency” on page 57 of its WSA concludes in part:

The existing near-term and long-term reliable supplies of SEWD surface water supplies and indigenous groundwater supplies can deliver a sustainable reliable water supply to meet existing and foreseeable water demands without impacting environmental values and/or impacting the current stabilization of the groundwater basin underlying the COSMA.

Therefore, the City disagrees with the comments received on the DEIR claiming that the groundwater basin remains in a current state of severe overdraft and that the proposed project would exacerbate the rate of groundwater decline and associated impacts such as saline intrusion, drying up of private wells, and similar consequences. For the reasons summarized above from the WSA that was prepared by the City for this project, the City believes that the surface water supplies from SEWD and DWSP, when operated in the planned conjunctive use manner with groundwater supplies during critically dry years, would not adversely affect the environment or the current stabilization of the groundwater basin underlying the COSMA.

All of the information in this master response is contained either in the City’s WSA (DEIR Appendix R) or in the DEIR text itself in Chapters 11, “Hydrology and Water Quality,” and/or 17, “Utilities and Energy.” This master response does not reach any new significance conclusion or require any new mitigation measures that would have significant environmental effects.

MASTER RESPONSE 5: NONPOTABLE WATER SUPPLY AND THE PROPOSED RECHARGE PROJECT

As discussed at length in Chapter 11, “Hydrology and Water Quality,” and Chapter 17, “Utilities and Energy,” of the DEIR, nonpotable water needs (landscape irrigation and lake level maintenance) would be met primarily by the purchase of surplus surface water from CSJWCD and/or SEWD, and to a lesser extent by the capture of on-site stormwater runoff and precipitation. The purchased surplus water would not take away from supplies being used for existing customers; rather, the water would be unappropriated surplus water that is already flowing down North Little Johns Creek and/or Duck Creek. This unappropriated surplus water would be diverted to the Arbini recharge facility and allowed to percolate through the ground to recharge the aquifer and create a bank of stored groundwater that can be withdrawn as needed. The City requires that 2 af of water be applied for every 1 af of water that is withdrawn, thus providing an additional benefit to the aquifer. Because the water is already flowing down the creeks, no improvements to channel conveyance capacity would be needed, and no impacts would occur related to flooding or erosion hazards. Potential environmental effects from installation of diversion facilities in the creeks are evaluated in Impacts 7-10 and 7-20 of the DEIR.

DEIR Impact 17-3 evaluated the potential impacts related to the demand for nonpotable water. As shown in Table 17-2 on page 17-16 of the DEIR, the project applicant originally estimated that at full project buildout, the project’s total nonpotable water demand would be 3,089 afy. However, since the DEIR was circulated for public review, Stantec, Inc. (2007a) recalculated the project’s nonpotable water demand based on updates to the proposed land use plan reflecting changes to the configuration of parks and open space areas, and in the total area of lakes and canals (190 acres). The recalculated nonpotable water demand is estimated to be approximately 2,593 af/yr, or approximately 496 af/yr less than originally estimated (see Table 3-1). Stantec’s calculations are attached to this FEIR as new Appendix AA. A gross application rate of 3 af/acre was used to estimate the irrigation demand. Lake evaporation losses were calculated using the evaporation rate (5.4 feet per year) published for the Stockton Weather Station, located at the Stockton Airport. The total demand for makeup water to the lakes caused by evaporation losses averages 1,025 af/yr. The revised nonpotable water demand for the proposed project, by phase, is shown in Table 3-1, below.

Table 3-1 Mariposa Lakes Annual Nonpotable Water Demand				
Development Phase	Lake Level Maintenance (af/yr)	Irrigation (af/yr)	Total Nonpotable Demand (af/yr)	2:1 Application Rate (af/yr)
1	400	512	912	1,824
2	193	162	355	710
3	338	604	942	1,884
4	95	189	284	568
5	0	100	100	200
Total	1,026	1,567	2,593	5,186

Note: af/yr = acre-feet per year
Source: Stantec 2007a (Appendix AA)

As discussed in the Integrated Water Management Plan attached to the DEIR as Appendix P, studies for the proposed recharge project are ongoing, and would continue in the future (see DEIR Mitigation Measure 11-6a). Since the DEIR was circulated for public review, Kleinfelder (2007) performed a *Supplemental Geotechnical Investigation, Groundwater Recharge Feasibility Assessment* to further evaluate the recharge potential of the Arbini site. The Kleinfelder report is attached to this FEIR as new Appendix BB. The results of that study indicate that the Arbini site can receive up to 8,500 af of water per year for recharge purposes. The City requires that 2 af of purchased surface water be applied for every 1 af of water later withdrawn from the groundwater bank. Therefore, with a total project nonpotable water demand of 2,593 af/yr, at full project buildout, a total of 5,186 af/yr of purchased surplus water would be banked into the groundwater aquifer (see Table 3-1, above). As indicated in Table 3-1 above, the total nonpotable demand of 2,593 af/yr does not have to be met until full project buildout, at the end of development Phase 5. As such, the Arbini facility size and recharge volume would be adjusted to meet the annual demands and groundwater banking goals for each development phase. As indicated in Chapter 11, “Hydrology and Water Quality,” of the DEIR, enough extra water would be applied to the aquifer as part of the groundwater banking program to supply the project’s nonpotable water demand for a 3-year period in the event of a prolonged drought. The amount of water necessary to meet the 3-year drought condition changes with each phase of the project as a larger area of the project site is developed under each phase. The following calculations show the total amount of water that would need to be banked to meet the 3-year drought demand at full project buildout:

$3 \times 5,186 \text{ af/yr} = 15,558 \text{ af water}$ $+ 5\% \times 15,558 = 778 \text{ af water (to account for estimated unrecoverable banked groundwater)}$ $\text{Total} = 16,336 \text{ af water (full project buildout, 3-year drought demand)}$

During critically dry years, when little or no surface water is available from SEWD or CSJWCD, water would be pumped from the banked reserve. As wet years follow, and surface water is again available from SEWD or CSJWCD, the banked storage would be returned to the desired reserve amount (16,336 af at full project buildout, smaller amounts for each development phase). To meet the 3-year drought demand for each phase of the project, extra water would be applied during wet years, up to a total of 8,500 af/yr, as necessary to accumulate the appropriate banked reserve for each development phase. As required by Mitigation Measure 11-6d (DEIR page 11-41), a suitable entity with groundwater recharge experience would be established to operate and maintain the recharge program. It is currently anticipated that CSJWCD would operate the proposed recharge program.

Since the DEIR was circulated for public review, SEWD, on behalf of SEWD and CSJWCD, has completed a *Non-Potable Water Supply Assessment for the Proposed Mariposa Lakes Development* (Kennedy/Jenks 2007),

which is attached to this FEIR as new Appendix Y. Stantec's (2007a) memorandum regarding revisions to the project's nonpotable water demand and the *Supplemental Geotechnical Investigation, Groundwater Recharge Feasibility Assessment* by Kleinfelder (2007) were both provided to SEWD and CSJWCD and were used by Kennedy/Jenks Consultants in preparation of the nonpotable WSA. The nonpotable WSA (page 36) makes the following determination of sufficiency of supply:

This WSA determines that there is sufficient water supply available from CSJWCD and, as necessary, SEWD to supply the project proponent's groundwater banking and non-potable supply delivery proposal. To avoid additional overdraft on the underlying groundwater basin, the project proponent will need to construct and operate groundwater recharge facilities capable of banking 5,000 AF of water annually when available.

As discussed above, the project applicant plans to recharge a minimum of 5,186 af/yr of nonpotable water, and may recharge up to 8,500 af/yr of nonpotable water. Therefore, the City believes there is a secured source of nonpotable water available to meet the project's nonpotable water demand.

Impacts 11-6, 17-3, and 17-12 are hereby revised as shown in Chapter 5, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices" of this FEIR to reflect the information discussed above. As a result of these revisions, the significance conclusions of Impacts 17-3 and 17-12 (program and project level impacts related to nonpotable water supply) are changed from potentially significant and unavoidable to less than significant with no required mitigation. No new mitigation measures are required. The significance conclusion of Impact 11-6 (impacts related to groundwater recharge) remains the same.

MASTER RESPONSE 6: DISAGREEMENT REGARDING THE CONCLUSIONS OF THE DEIR

Several commentors expressed their disagreement with the City's reliance on surface water from various sources such as the New Melones project and the DWSP; with the City's application of its program to issue agricultural credits for land converted from agricultural to urban use; with scientific calculations related to the proposed recharge project; and with the City's conclusion that no adverse effects to the groundwater basin would result from the use of groundwater to meet the project's potable water needs in critically dry years.

The State CEQA Guidelines require that decisions regarding the significance of environmental effects addressed in an EIR be based on substantial evidence and recognize that other evidence suggesting a different conclusion may exist. The DEIR provides a comprehensive evaluation of the project's environmental impacts in compliance with CEQA and the State CEQA Guidelines and in accordance with professionally accepted methodology for the evaluation of environmental resources. The DEIR and this FEIR present substantial evidence to support the conclusions drawn within these documents regarding the significance of the project's environmental effects. When commentors disagree about environmental conclusions, the EIR need only summarize the main points of disagreement and explain the lead agency's reasons for accepting one set of judgments instead of another. Section 15151 of the State CEQA Guidelines states that "Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts." See also *Greenbaum v. City of Los Angeles* (2nd Dist. 1984) 153 Cal.App.3d 391, 413 (200 Cal.Rptr. 237) and *Browning-Ferris Industries v. City Council* (6th Dist. 1986) 181 Cal.App.3d 852, 862-863 (226 Cal.Rptr. 575). The lead agency will ultimately determine which conclusion is appropriate, based on the substantial evidence presented in the EIR and other documents in the whole of the record.

The comment letters and responses to them present summaries of the areas of disagreement. In some cases, there is no substantial evidence offered by commentors to support that a different conclusion should be drawn. As such, no further response to disagreements presented in the comment letters is necessary. If evidence is provided by the commentor to support the disagreement with the EIR's conclusion, the evidence is summarized and considered in making the EIR's conclusion. The City of Stockton will review and consider all the substantial evidence in the whole of the record in making its decisions about the project and its environmental effects.

4 COMMENTS AND INDIVIDUAL RESPONSES

4.1 INTRODUCTION

This chapter contains the comment letters received on the draft environmental impact report (DEIR) followed by individual responses to those comments not addressed in Chapter 3, “Master Responses.” Section 4.2 describes the format of the responses to comments. Commentors, their associated agencies, and assigned letter identifications are listed in Section 4.3. Section 4.4 presents the comment letters received on the DEIR, and the responses to those comments that are not addressed in master responses.

4.2 FORMAT OF COMMENTS AND RESPONSES

Comment letters and responses to comments are arranged in the following order:

- ▶ Section A: Federal Agencies
- ▶ Section B: State Agencies
- ▶ Section C: Local Agencies
- ▶ Section D: Individuals and Organizations

Each letter and each comment within a letter have been given an identification number. Responses are numbered so that they correspond to the appropriate comment. Where appropriate, responses are cross-referenced between letters or with a master response.

4.3 LIST OF COMMENTORS

Table 4-1 provides a list of all agencies, organizations, and persons who submitted comments on the DEIR during the public review period.

Table 4-1 List of Commentors			
Agency	Commentor	Letter ID	Date Received
Section A: Federal Agencies			
Federal Aviation Administration	Joseph Rodriguez	FAA	March 29, 2007
Section B: State Agencies			
California Department of Conservation	Brian Leahy	CONSERVATION	April 23, 2007
California Department of Health Services	Peter Ruggerello	DHS	March 30, 2007
California Department of Highway Patrol	S. J. Coutts	CHP	March 21, 2007
California Department of Toxic Substances Control	Tim Miles	DTSC	April 21, 2007
California Department of Transportation	Tom Dumas	CALTRANS	April 23, 2007
California Department of Water Resources	Christopher Huit	DWR	March 21, 2007
California Public Utilities Commission	Kevin Boles	CPUC	April 24, 2007
State Water Resources Control Board	Katherine Mrowka	SWRCB	March 29, 2007
Section C: Local Agencies			
Calaveras County Water District	David Andres	CCWD	April 23, 2007
Central San Joaquin Water Conservation District	Reid Roberts	CSJWCD	April 23, 2007
Montezuma Fire District	Edward Martel	MONTEZUMA	March 26, 2007

**Table 4-1
List of Commentors**

Agency	Commentor	Letter ID	Date Received
Section C: Local Agencies (continued)			
Northeastern San Joaquin County Groundwater Banking Authority	C. Mel Lytle	NSJCGBA	undated
San Joaquin County Department of Environmental Health	Donna Heran	SJCDEH	May 21, 2007
San Joaquin County Department of Public Works	Andrea Vallejo	SJCPW	April 23, 2007
San Joaquin County Mosquito & Vector Control District	John Stroh	SJCMVCD	April 23, 2007
San Joaquin Regional Transit District	Karl Knodt	SJRTD	April 23, 2007
San Joaquin Valley Air Pollution Control District	Daniel Barber	SJVAPCD	April 25, 2007
Stockton East Water District	Melvin Panizza	SEWD	April 24, 2007
Section D: Individuals and Organizations			
Danamark	Craig Podesta	DANAMARK-A	March 14, 2007
Danamark	Craig Podesta	DANAMARK-B	March 15, 2007
Danamark	Craig Podesta	DANAMARK-C	April 22, 2007
Morada Area Association	William and Amber Fields	MORADA	April 23, 2007
Joy Neas	N/A	NEAS	April 23, 2007
Pacific Gas and Electric Company	Alfred Poon	PG&E	April 24, 2007
James Pilkington	N/A	PILKINGTON-A	April 12, 2007
James Pilkington	N/A	PILKINGTON-B	April 26, 2007
Sanguinetti Ranch	Paul Sanguinetti	SANGUINETTI	April 23, 2007
Sierra Club	Eric Parfrey	SIERRA	April 23, 2007
Sharon Stewart	N/A	STEWART	April 23, 2007
Law Office of J. William Yeates on behalf of Morada Area Associates	Jason Flanders (includes attachment from Morris Allen)	YEATES	April 23, 2007

4.4 COMMENTS AND RESPONSES

The written comments on the DEIR and the responses to those comments are provided in this section. All comment letters are reproduced in their entirety, and each is followed by responses to comments on substantive environmental issues.

SECTION A: FEDERAL AGENCIES



U.S Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports Division
San Francisco Airports District Office

831 Mitten Road, Suite 210
Burlingame, CA 94010-1300

March 23, 2007

Mr. Michael M. Niblock
Director Community Development Department
City of Stockton
345 North El Dorado Street
Stockton, CA 95202

Dear Mr. Niblock:

RE: March 8, 2007, Notice of Availability & Notice of Completion Draft
Environmental Impact Report, for the Mariposa Lakes Specific Plan
Project ((DEIR 11-03)

We have reviewed the information included in your March 8, 2007 Notice
of Availability (NOA) and Notice of Completion (NOC) for impacts the
Federal Aviation Administration (FAA) programs and the Stockton
Metropolitan Airport (SCK).

We have reviewed the subdivision mapping provided in the document and
agree that the southerly boundary of the proposed development area
(Mariposa Road) is approximately 2.5 nautical miles north of the
threshold of Runway 29R of SCK. We recommend that local zoning and
building code regulations require notification of project development
in accordance with Federal Aviation Regulation, Part 77, *Objects
Affecting Navigable Airspace*. Notification requirements are covered
under Part 77 Subpart B, ¶ 77.11, 77.13, and 77.15. We recommend that
your staff obtain a copy of the SCK Airport Layout Plan (ALP) to assure
that the Mariposa Lakes Specific Plan has the most current information
regarding the SCK runway system.

We encourage your staff to use the guidance contained in State of
California, Department of Transportation, Division of Aeronautics, Land
Use Handbook. The State handbook provides land use compatibility
guidance consistent with FAA airport design standards for airports.

If you have additional questions please contact me at (650) 876-2778,
extension 610.

Sincerely,

Joseph R. Rodriguez
Supervisor, Environmental Planning and Compliance Section

CC: Caltrans, Ms. Sandy Hessnard
SCK Airport Manager

FAA-1

The commentor suggests that “local zoning and building code regulations require notification of project development” as required by federal law. The San Joaquin Council of Governments (SJCOG) Airport Land Use Plan provides policies for compatible land uses and restrictions near airports, in conjunction with Federal Aviation Administration Regulation Part 77, and the California Department of Transportation (Caltrans) Division of Aeronautics 2002 California Airport Land Use Planning Handbook.

Implementation of the proposed project would result in development of business and light-industrial uses within the Stockton Metropolitan Airport Area of Influence. These are considered compatible uses according to the current SJCOG Airport Land Use Plan, as amended in 1993. In addition, Mitigation Measure 12-4 (page 12-18 of the DEIR) would require all Mariposa Lakes Specific Plan (MLSP) development within the Stockton Metropolitan Airport Area of Influence to meet the standards of the SJCOG Airport Land Use Plan. No revisions to the DEIR are necessary.

SECTION B: STATE AGENCIES



DEPARTMENT OF CONSERVATION

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • FAX 916 / 327-3430 • TDD 916 / 324-2555 • WEBSITE conservation.ca.gov

April 17, 2007

RECEIVED

APR 22 2007

Mr. David Stagnaro, AICP, Senior Planner
City of Stockton
Community Development Department
345 North El Dorado Street
Stockton, CA 95202-1997

Subject: Mariposa Lakes Specific Plan Draft Environmental Impact Report (DEIR) -
SCH# 2006022035, San Joaquin County

Dear Mr. Stagnaro:

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the DEIR for the referenced project. The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the project's impacts on agricultural land and resources.

Project Description

The project is a mixed-use urban community development of 3,810 acres plus related off-site infrastructure improvements by PCCP Mariposa Lakes, LLC, on the southeastern edge of the City of Stockton (City), San Joaquin County (County). The Mariposa Lakes Specific Plan (MLSP) project will be implemented in five phases over 20 years. The DEIR is a first-tier, program-level review of the entire project and a project-level review of the 1,000-acre Phase 1, which is planned for build-out over a 9-year period.

The project site is located between Farmington Road on the north and Mariposa Road on the south and between Kaiser Road on the east and the Burlington Northern Santa Fe railroad tracks on the southwest. It lies outside the City's urban services boundary and sphere of influence according to the 1990 General Plan, but within those boundaries according to the proposed 2035 General Plan Update. The project involves City annexation of the project site and will require a general plan amendment. Urban development lies west of the site, which is otherwise surrounded by mostly agricultural land.

*The Department of Conservation's mission is to protect Californians and their environment by:
Protecting lives and property from earthquakes and landslides; Ensuring safe mining and oil and gas drilling;
Conserving California's farmland; and Saving energy and resources through recycling.*

With the exception of 146 acres in residential use, approximately 3,664 acres of the project site are in agricultural use, including corn, tomatoes, onions, beans wheat, alfalfa, walnuts and cherries. The land is designated Prime Farmland (30%) or Farmland of Statewide Importance (65%) by the Department's Farmland Mapping and Monitoring Program. The project site includes 3,218 acres enforceably restricted by Williamson Act contracts, many of which have been placed in nonrenewal and due to expire in 2012 and 2013.

Project Impacts on Agricultural Land and Mitigation Measures

The DEIR concludes that project impacts on agricultural land in terms of the conversion of agricultural land and cumulative and growth-inducing effects are significant. Proposed mitigation is participation in a City mitigation program if adopted or fee payment of \$4,800 per acre subject to development within the project site. Fee payments would be used to purchase agricultural conservation easements on land outside the project site. In addition, developers would participate in the San Joaquin Multi Species Conservation Plan (SJMSCP) that may protect agricultural land that involves habitat protection.

On February 27, 2007, the City Council voted to adopt the referenced City agricultural mitigation program involving a \$9,600 per acre fee. The Department applauds the City's decision and recommends that it revise the above mitigation measure in its Final EIR (FEIR) to reflect participation in the adopted program. In addition we recommend consideration in the FEIR of a buffer to the north, east and south of the project site to mitigate conflicts with agricultural land use. Such a buffer would appear to be consistent in spirit with the required 200-foot setback for subdividing Williamson Act land.

Finally, given that the Reduced Project Alternative proportionately reduces conversion of agricultural land and conflict with Williamson Act contracts, we recommend consideration of this alternative if the project is approved.

Williamson Act Lands

The DEIR explains that the City will succeed to the Williamson Act contracts upon annexation of the project site and will entertain petitions for cancellation of the contracts on an as-needed basis for development. The DEIR has presented an explanation for making the required findings for cancellation. No additional mitigation is proposed beyond those noted above and continuing agriculture until development is required.

If cancellation is proposed, notification must be submitted to the Department when the County or City accepts the application as complete (Government Code §51284.1). The council must consider the Department's comments prior to approving a tentative cancellation. Required findings must be made by the board or council in order to

Mr. David Stagnaro, AICP, Senior Planner
April 17, 2007
Page 3 of 3

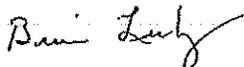
approve tentative cancellation. Cancellation involving FSZ contracts include additional requirements. Notification must be submitted separately from the CEQA process and CEQA documentation. (The notice should be mailed to Bridgett Luther, Director, Department of Conservation, c/o Division of Land Resource Protection, 801 K Street MS 18-01, Sacramento, CA 95814-3528.)

Some of the contracted land has not been placed in nonrenewal, which is the preferred method of contract termination under the Williamson Act. Given the project's 20-year build-out time frame, it appears that all land subject to contract should be placed in nonrenewal in order to allow for contract expiration prior to development. It has been held in Sierra Club v. City of Hayward that "cancellation is inconsistent with the purposes of the (Williamson) act if the objectives to be served by cancellation should have been predicted and served by nonrenewal at an earlier time, or if such objectives can be served by nonrenewal now." The Department recommends that the FEIR propose a schedule for termination of contracts by nonrenewal without use of cancellation.

If land for the proposed school or recharge basin or other uses within the project site will be acquired by a public agency prior to contract termination by nonrenewal or cancellation, the agency must notify the Department in advance of the acquisition pursuant to Government Code §51291(b). Specific findings must be made. The property must be acquired in accordance with eminent domain law by eminent domain or in lieu of eminent domain in order to void the contract (§51295). The public agency must consider the Department's comments prior to taking action on the acquisition. School districts are precluded from acquiring land under FSZ contract. Notification must be submitted separately from the CEQA process and CEQA documentation to the address noted above. (Please find enclosed Notification Provisions)

Thank you for the opportunity to comment on this DEIR. Pursuant to Public Resources Code §21092.5(a), the Department looks forward to receiving your response and a copy of the FEIR. If you have questions on our comments or require technical assistance or information on agricultural land conservation, please contact Bob Blanford at 801 K Street, MS 18-01, Sacramento, California 95814; or, phone (916) 327-2145.

Sincerely,



Brian Leahy
Assistant Director

Enclosure

cc: State Clearinghouse
San Joaquin County Resource Conservation District

ACQUISITION NOTIFICATION PROVISIONS OF THE WILLIAMSON ACT

Notification provisions of the Williamson Act (Government Code Section 51291) require an agency to notify the Director of the Department of Conservation of the possible acquisition of Williamson Act contracted land for a public improvement. Such notification must occur when it **appears** that land enrolled in a Williamson Act contract may be required for a public use, is **acquired**, the original public improvement for the acquisition is **changed**, or the land acquired is **not used** for the public improvement. The local governing body responsible for the administration of the agricultural preserve must also be notified.

NOTIFICATION (Government Code Section 51291 (b))

The following information must be included in the notification correspondence.

1. The total number of acres of Williamson Act contracted land to be acquired and whether the land is considered prime agricultural land according to Government Code Section 51201.
2. The purpose for the acquisition and why the land was identified for acquisition. (If available, include documentation of eminent domain proceedings or a property appraisal and written offer in lieu of eminent domain per GC §§7267.1 and 7267.2 to void the contract per GC §51295; include a chronology of steps taken or planned to effect acquisition by eminent domain or in lieu of eminent domain.)
3. A description of where the parcel(s) is located.
4. Characteristics of adjacent land (urban development, Williamson Act, noncontract agricultural, etc.)
5. A vicinity map and a location map (may be the same as #8).
6. A copy of the contract(s) covering the land.
7. CEQA documents for the project.
8. **The findings required under GC §51292, documentation to support the findings and an explanation of the preliminary consideration of §51292.** (Include a map of the proposed site and an area of surrounding land identified by characteristics and large enough to help clarify that no other, noncontract land is reasonably feasible for the public improvement.)

ACQUISITION (Government Code Section 51291 (c))

The following information must be included in the notification when land within an agricultural preserve has been **acquired**. The notice must be forwarded to the Director within **10 working days** of the acquisition of the land. The notice must also include the following:

1. A general explanation of the decision to acquire the land, and why noncontracted land is not available for the public improvement.
2. Findings made pursuant to Government Code Section 51292, as amended.
3. If the information is different from that provided in the previous notice sent upon consideration of the land, a general description of the land, and a copy of the contract covering the land shall be included in the notice.

SIGNIFICANT CHANGE IN PUBLIC IMPROVEMENT (Government Code Section 51291 (d))

Once notice is given as required, if the public agency proposed any significant change in the public improvement, the Director must be notified of the **changes** before the project is completed.

LAND ACQUIRED IS NOT USED FOR PUBLIC IMPROVEMENT (Government Code Section 51295)

If the acquiring public agency does not use the land for the stated public improvement and plans to return it to private ownership, **before** returning the land to private ownership the Director must be notified of the action. **Additional requirements apply.** The mailing address for the Director is: **Bridgett Luther, Director, Department of Conservation, 801 K Street, MS 18-01, Sacramento, CA 95814; phone (916) 324-0850.**

(April 2002)

CONSERVATION-1

The commentor suggests that the DEIR be revised to reflect the City of Stockton's (City's) agricultural mitigation program. The City agrees that the DEIR should be revised to reflect the agricultural mitigation program and fee payment of \$9,600 per acre, which was adopted after the DEIR was circulated for public review. As such, Mitigation Measure 5-1 is hereby revised as described in Chapter 5 of this final EIR (FEIR), "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." This change does not alter the conclusions of the DEIR.

The commentor also suggests that the FEIR consider the addition of buffers to the north, east, and south as part of the proposed project between proposed development and existing agricultural land. As shown in Figure 3-8 of the DEIR, the specific plan area (SPA) would be buffered from nearby agricultural land by adjoining street rights-of-way and proposed greenways. To some extent, the proposed Arbin recharge area would provide a buffer between the urban development within the SPA and surrounding agricultural uses to the east.

CONSERVATION-2

The commentor expresses a preference for the Reduced Project Alternative (Option 2) since that alternative would result in fewer agricultural impacts. The City agrees that adoption of the Reduced Project Alternative (Option 2) would reduce the proposed conversion of agricultural land as compared to the proposed project. However, as stated on page 19-19 of the DEIR, the proposed density of project development would also be reduced under this alternative, with the likely result that the same development that would have been accommodated within the larger SPA would be displaced to other undeveloped locations in the Stockton area. This displacement could result in environmental effects comparable to those of the proposed project, including conversion of agricultural lands and potential conflicts with Williams Act contracts. No revisions to the DEIR are necessary.

CONSERVATION-3

Thank you for your comment indicating that notification must be submitted to the California Department of Conservation when the City accepts the application for cancellation of Williamson Act contracts. No revisions to the DEIR are necessary.

CONSERVATION-4

The commentor suggests that all properties within the SPA be "placed in nonrenewal" in order for the Williamson Act contracts to expire by their own terms within the proposed development phasing of the project. Of the 28 parcels within the SPA subject to Williamson Act contracts, only three are not currently covered by filed notices of nonrenewal (see Table 3.1 of the MLSP [p. 3-26]) (Note: Parcel 179-020-08 is not within the MLSP project area; see Figure 3.9 of the MLSP [p. 3-23]). These three parcels are not owned or controlled by the project applicant (see Figure 3.9 of the MLSP [p. 3-23], and Figure 5-1 of the DEIR [p. 5-4]). Only the landowners can file notices of nonrenewal for these properties and, to date, the landowners for these three properties have not filed such notices. However, none of these three properties are within Phase 1 of the proposed phasing plan (see Figure 13.1 of the MLSP [p. 13-7] and Figure 3-37 of the DEIR [p. 3-81]). Under the phasing plan proposed for the project, Phase 1 buildout is expected to occur between 2007 and 2016, and subsequent phases are expected to occur over 4- to 5-year periods. Because these three properties are designated for development in later

phases of the MLSP buildout plan, the landowners may still file notices of nonrenewal that would allow their contracts to expire and development to proceed without the need for cancellations of the contracts. If these landowners fail to timely file notices of nonrenewal for their properties, such failures would be a factor for the City to consider in determining whether to cancel the Williamson Act contracts for those properties or defer development of these properties until expiration of the contracts.

Moreover, approval of the project would not result in the cancellation of any Williamson Act contracts. As explained on page 5-12 of the DEIR, if the project is approved, “future Williamson Act cancellation requests would be submitted for areas of planned development within the SPA on an as-needed basis, in conjunction with tentative map or other entitlement actions for future development phases.” As the DEIR explains, notices of nonrenewal have been filed on the majority of the lands covered by Williamson Act contracts (as illustrated in Figure 5-1 [p. 5-4]), so these contracts will expire in 2012 and 2013 respectively. (See DEIR, page 5-12.) Therefore, most Williamson Act contracts would expire under the filed notices of nonrenewal before the time such lands would be needed for the planned development. The combination of phasing and the previous filing of notices of nonrenewal would minimize the number of contracts that must be cancelled. No revisions to the DEIR are necessary.

CONSERVATION-5

Thank you for your comment indicating that if land for the proposed school or recharge basins or other uses within the project site would be acquired by a public agency before Williamson Act contract termination, that agency must notify the California Department of Conservation in advance of the acquisition. No revisions to the DEIR are necessary.



California
Department of
Health Services
SANDRA SHEWRY
Director

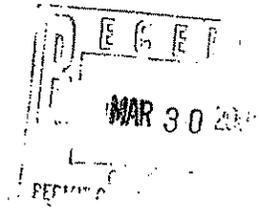
State of California—Health and Human Services Agency
Department of Health Services



ARNOLD SCHWARZENEGGER
Governor

March 28, 2007

David Stagnaro, Senior Planner
City of Stockton
345 North El Dorado Street
Stockton, CA 93202



RE: Mariposa Lakes Specific Plan – SCH #2006020035

Dear Mr. Stagnaro,

The California Department of Health Services (CDHS) Environmental Review Unit is in receipt of the Draft Environmental Information Report (DEIR) for this project. As a “responsible agency” under the California Environmental Quality Act (CEQA), we appreciate the opportunity to comment. The project proposes to annex 336+ acres to develop residential and commercial, RCO (parks), 1 (school). This includes approximately 1,412 dwellings, 272,000 sq ft of commercial, and parkland.

In Section 17 entitled, UTILITIES AND ENERGY, the document outlines the need for additional potable water supplies. Please be aware that any new drinking water source must be reviewed and approved through a water supply permit process in the CDHS Stockton District Office. These future developments will be subject to further CEQA if the water utilities are not described closer to actual project level (i.e. well locations, main sizes, and projected water usage and need for each lot. So if at all possible, please include the locations of any new wells and other pertinent information as part of the draft EIR. If these details are included, it will not be necessary to provide separate environmental review at a later date.

Please contact the Stockton office at (209) 948-7696 for further information.

Sincerely,

Peter Ruggirello
Peter Ruggirello
California Department of Health Services
Drinking Water Program
Environmental Review Unit

Cc: Office of Planning and Research - State Clearinghouse
DHS Merced District Office – Mr. Joe Spano

Environmental Management Division - Drinking Water Program, MS 7416, P.O. Box 997413, Sacramento, CA, 95899-7413
(916) 449-5600 (916) 449-5656 FAX
Internet Address: www.dhs.ca.gov

DHS-1

The commentor suggests that the location of water utilities and wells be described at a project level. The location of proposed wells and the projected sizes of associated water main lines at the project site are shown in Figure 3-31, "Proposed On- and Off-Site Potable Water Supply Infrastructure," on page 3-67 of the DEIR. Note that not all utilities and wells are contained in Phase 1 of the proposed project and therefore are not reviewed at a project level; some utilities are contained in later phases and are reviewed at a programmatic level. See Section 1.4 of the DEIR, describing the "Purpose and Scope of this EIR and Levels of Analysis," as well as Sections 3.4.2 and 3.4.3, describing project phasing. No revisions to the DEIR are necessary.

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

3330 Ad Art Road
Stockton, CA 95208
(209) 943-8666
(800) 735-2929 (TT/TDD)
(800) 735-2922 (Voice)



March 17, 2007

File No.: 265.11045.11485.MARIPOSA2

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MAR 21 2007

STOCKTON

Mr. David Stagnaro
City of Stockton Community Development Department
324 North El Dorado Street
Stockton, CA 95202

Dear Mr. Stagnaro:

Thank you for the opportunity to review the Draft Environmental Impact Report (EIR) for the Mariposa Lakes Specific Plan Project located in the area of State Route 4 and Mariposa Road (SCH# 2006022035). While the development area is adjacent to the City of Stockton, and anticipated to be annexed into the City of Stockton prior to completion, the project will have significant impacts on the surrounding county roads as well as State Routes (SR) 4, 99 and 120. As I indicated in our March 2, 2006, letter written in response to the Notice of Preparation for the Draft EIR, these roadways will see a dramatic increase in the average daily traffic volumes.

The EIR does indicate an attempt to mitigate the expected increased traffic volumes throughout the project and adjacent roadways by widening the major roadways and increasing the number of lanes to help maintain the City of Stockton's Level Of Service (LOS) standards for local roadways, as well as referencing the widening of State Route (SR) 99, realignment of SR-4, and other ingress and egress improvements. As previously suggested, it is important the City of Stockton continues to work closely with the Department of Transportation (Caltrans) as well as the California Highway Patrol in developing long range plans that are beneficial to all the citizens utilizing the highway system.

Should you have any questions, please me or Lieutenant Craig Oliver of my staff at (209) 943-8666.

Sincerely,

S. M. COUTTS, Captain
Commander

cc: Special Projects Section

CHP-1

The City agrees with the commentor that the proposed project would contribute to an increase in average daily traffic volumes on surrounding roadways, and this issue is discussed in Chapter 16, "Transportation and Circulation," of the DEIR. No revisions to the DEIR are necessary.

CHP-2

The City agrees with the commentor and will continue to work with Caltrans and the California Highway Patrol on long-range transportation planning. No revisions to the DEIR are necessary.



Linda S. Adams
Secretary for
Environmental Protection



Department of Toxic Substances Control

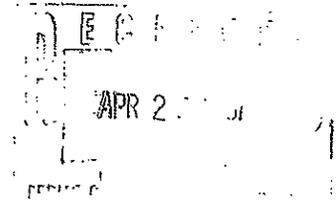
Maureen F. Gorsen, Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Arnold Schwarzenegger
Governor

April 20, 2007

Mr. David Stagnaro, AICP
Senior Planner
Community Development Department
345 North El Dorado Street
Stockton, California 95202-1997



DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR), MARIPOSA LAKES SPECIFIC PLAN, STATE CLEARINGHOUSE (SCH # 2006022035)

Dear Mr. Stagnaro:

The Department of Toxic Substances Control (DTSC) has reviewed the document described above that proposes rezoning agricultural property to residential and building residential housing on the land. The report states that 31 samples were taken randomly over the 3,665-acre Specific Plan area, analyzed for pesticides, and that the results indicate all chemicals detected were below their respective Preliminary Remediation Goals. The sample density of one sample per 118 acres may not be adequate to determine whether residual pesticides present a threat to public health. The DEIR also does not discuss where storage, mixing, rinsing and disposal of pesticides may have occurred and whether contamination exists. In addition, it does not indicate whether any sampling was performed to identify other possible contaminants of concern associated with the tanks, drums, colored-powders and discolored soil. Because the Phase I and II Environmental Site Assessments were not included as appendices to the report, DTSC is unable to determine whether site conditions may exist which present a threat to human health of the environment.

DTSC recommends that additional research and sampling be conducted prior to construction to address the concerns identified above. Guidance for conducting investigations and sampling agricultural fields is available on DTSC's web site at: http://www.dtsc.ca.gov/PublicationsForms/prog_pubs.cfm?prog=Site%20Cleanup.

If you have any questions, please contact me by email at tmiles@dtsc.ca.gov or by telephone at (916) 255-3710.

Sincerely,

Tim Miles

Tim Miles
Hazardous Substances Scientist

♻️ Printed on Recycled Paper

Mr. David Stagnaro, AICP
April 20, 2007
Page 2

cc: State Clearinghouse
Office of Planning and Research
1400 10th Street, Room 121
Sacramento, California 95814-0613

Ms. Donna Heran
REHS Director
Environmental Health Department
San Joaquin County
600 East Main Street
Stockton, California 95202

Planning & Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
1001 I Street, 22nd Floor
P.O. Box 806
Sacramento, California 95812-0806

DTSC-1

The commentor states that the sampling density for the environmental site assessments (ESAs) may not be adequate to determine whether residual pesticides present a threat to public health; that the DEIR does not discuss where storage, mixing, rinsing, and disposal of pesticides may have occurred and whether contamination exists; and contends that the California Department of Toxic Substances Control (DTSC) is unable to determine whether site conditions present a threat to public health or the environment because the ESAs were not included as appendices to the DEIR. The commentor also recommends that additional research and sampling be conducted prior to construction.

There were 31 soil samples taken in connection with the preparation of the Phase 1 ESAs. None of the samples revealed the presence of organochlorine pesticides at levels that exceed the U.S. Environmental Protection Agency's (EPA's) Preliminary Remediation Goals for residential sites. The locations of the various sources of potential soil contaminants identified in the Phase 1 ESA are illustrated at Figures 10-2 of the DEIR (p. 10-5), and the findings and conclusions of the ESAs are described at pages 10-2 through 10-7 and pages 10-15 through 10-16 of the DEIR. Based on the ESAs, additional sampling or remedial activities relevant to organochlorine pesticides within shallow soil at the project site was not recommended. This recommendation was based on the following assumptions: a normal application of pesticides as part of farming activities has occurred at the site; a lack of construction-type grading has occurred at the site prior to sampling; and the fact that pesticide mixing and storage areas were not identified in the findings of the Phase 1 ESA. Mobile aboveground storage tanks (ASTs) were identified in the Phase 1 ESA and are discussed in the DEIR. However, it was considered impractical to sample soils at all the locations where these ASTs had been located on the site because such locations could not be precisely determined due to the routine movement of the ASTs about the site.

Mitigation Measure 10-4(a) (page 10-16 of the DEIR) requires preparation of a remedial action plan, which includes provisions for safe removal and disposal of all contaminated soils on the site. Mitigation Measure 10-4(g) (page 10-17 of the DEIR) requires the project applicant(s) to notify the San Joaquin County Department of Environmental Health (SJCDEH) if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during construction activities. Furthermore, any contaminated areas must be remediated in accordance with recommendations made by SJCDEH, Central Valley Regional Water Quality Control Board (RWQCB), DTSC, or other appropriate federal, state, or local regulatory agencies. As stated on page 1-12 of the DEIR, a copy of the Phase 1 ESA is available for review at the City of Stockton Community Development Department, Planning Division, located at 345 North El Dorado Street in Stockton. A copy of the Phase 1 ESA is also hereby attached to the FEIR, as a new Appendix X, as noted in Chapter 5 of this FEIR. This change does not alter the conclusions of the DEIR.

For the reasons stated above, the City does not believe that additional research or soil samples are necessary prior to the start of construction activities.

DEPARTMENT OF TRANSPORTATION

P.O. BOX 2048 STOCKTON, CA 95201
 (1976 E. CHARTER WAY/1976 E. DR. MARTIN
 LUTHER KING JR. BLVD. 95205)
 TTY: California Relay Service (800) 735-2929
 PHONE (209) 941-1921
 FAX (209) 948-7194



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April 23, 2006

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 CITY OF STOCKTON

APR 23 2007

PERMIT CENTER
 PLANNING DIVISION

10-SJ-4-PM20.4
 SCH 2006022035 (DEIR)
 Mariposa Lakes Specific Plan

David Stagnaro
 City of Stockton
 Community Development Department
 Planning Division
 425 North El Dorado Street
 Stockton, CA 95202-1997

Dear Mr. Stagnaro:

The California Department of Transportation (Department) appreciates the opportunity to have reviewed the Draft Environmental Impact Report (DEIR) for the proposed 3,810-acre planned mixed-use development consisting of approximately 10,566 dwelling units, 1.0 million square feet of commercial floor space, and 10.7 million square feet of industrial floor space. This development also proposes an Amtrak multimodal station near the Mariposa and Austin Roads intersection, as well as a Delta College campus east of Mariposa Road between Austin and Farmington Road. This development is proposed to be located approximately between and adjacent to Kaiser Road, State Route 4 (SR-4), and the Burlington Northern Santa Fe Railroad (BNSF). And approximately 0.5 mile east from the State Route 99 (SR-99)/Mariposa Road interchange.

Mitigation measures proposed for the transportation impacts of this project include a railroad grade separation at Mariposa and Austin Roads, interchange improvements at SR-99/Mariposa Road, realigning SR-4 south of Farmington Road, realigning SR-4 onto Mariposa Road (to SR-99), a railroad grade separation at Viceroy Avenue.

The Department appreciates the efforts made by the project developer to coordinate the transportation impacts of this project with the Department's ongoing freeway project development process for South Stockton SR-99.

"Caltrans improves mobility across California"

However, due to the large amount of errors and missing analysis data in the Traffic Impact Study (TIS) used in this DEIR, the Department recommends that the City of Stockton (City) not Certify this DEIR at this time. The Department recommends to the City that the developer's consultant team correct or clarify the errors and missing items indicated below and resubmit the TIS for review. The Department offers to meet with the consultant team to clarify the items identified in this comment letter prior to the resubmission to help facilitate the process. Without this additional information the Department is unable to confirm the adequacy of the impact analysis performed or the proposed measures to mitigate those potential impacts.

The Department's detailed comments are as follows:

Trip Distribution

1. Figure 16 of the TIS, Project Trip Distribution, depicts that 28 percent of the project's trips use SR-99. The regional travel demand model indicates that 37.7 percent is closer to what is expected. Please indicate in writing how this reduction is achieved in the analysis.
2. Please justify in writing the use of 35% of the total projects trips being internalized in comparison to the internal trip Table B Internal Trip Calculation found in the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 7th Edition.

Travel Demand Model

3. A 10 lane SR-99 mainline cannot be assumed as part of the analysis. The Department has indicated this to the Mariposa Lakes consultant team during several South Stockton Project Development Team meetings. The Department does not concur with this project's TIS assumption of SR-99 as a 10 lane facility in the future. This 10 lane assumption is not part of any long range plan or transportation program (dedicating funds) or the project's mitigation measures.

Synchro Output Data

4. All intersection output results must be displayed using the HCM format not ICU. Please include this and resubmit.
5. Synchro output must show the 95% percentile queue for intersections. Please include this and resubmit.
6. Minimum Heavy Vehicles percent is 13.41 for SR-99 and 6.41 for SR-4 (please refer to 2005 Annual Average Daily Truck Traffic on the California State Highway System dated November 2006). Please correct this and resubmit.
7. Please clarify why two separate mitigation measure strategies are proposed for each of the AM and PM peak periods in the scenarios below. Mitigation measures are typically installed as permanent fixtures throughout the day and analyzed as such.

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Existing Condition (E)

8. At Intersection 24 the right-turn volume for both the AM and PM peaks are missing on all movements. Figure 4 does show the volume however, the Synchro output and Figure 49 do not. Please correct this and resubmit.

Existing Plus Approved Projects conditions (E+AP No Project)

9. Intersections 7 and 28 lane geometry, in Figure 49, does not match the Synchro output file. Please correct this and resubmit.
10. Intersection 27 LOS result does not match Table II. Please correct this and resubmit.

Existing Plus Approved Projects conditions, (E+AP No Project) with Mitigation

11. Intersection 31 lane geometry in figure 49 does not match the Synchro output. Please correct this and resubmit.

E+AP + Mariposa Lakes Phase 1 condition, (E+AP+Phase 1)

12. Intersections 3, 7, 23, 27, and 31 lane geometry of Figure 49 does not match AM Synchro output. Please correct this and resubmit.
13. Intersections 3, 6, 7, 10, and 11 are already mitigated for signal under *EPAP No Project*, why does the Synchro output show that the intersection is unsignalized in this scenario? Please correct this and resubmit.
14. Intersection 27 AM and 6 PM LOS results do not match Table IV. Please correct this and resubmit.

E+AP + Mariposa Lakes Project condition, (E+AP+P)

15. Intersections 17, 27, and 31 lane geometry of figure 49 does not match AM Synchro output. Please correct this and resubmit.
16. Intersection 27 AM LOS result does not match Table VII. Please correct this and resubmit.
17. Intersections 3, 16, and 27 PM LOS result does not match Table VII. Please correct this and resubmit.

E+AP + Mariposa Lakes Project condition, (E+AP+P) with Mitigation

18. Intersections 26 and 27 lane geometry of Figure 49 does not match AM Synchro output. Please correct this and resubmit.

1990 General Plan No Project, (Adopted in 1990 for yr 2025)

19. Intersections 8, 9, and 22 AM output are missing. Please correct this and resubmit.

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20. Intersections 12 and 27 AM and PM LOS result does not match Table IX. Please correct this and resubmit.
21. Intersections 18, 23, 27, and 31 lane geometry of Figure 49 does not match AM Synchro output. Please correct this and resubmit.
22. Intersection 12 eastbound (EB) right and westbound (WB) left turn volumes are missing, see Figure 22. Please include this and resubmit.

1990 General Plan No Project, (Adopted in 1990 for yr 2025) with Mitigation

23. Intersection 12 lane geometry of Figure 49 does not match Synchro output. Please correct this and resubmit.

1990 General Plan + Project, (Adopted in 1990 for yr 2025)

24. Intersections 3, 12, 23, 27, and 31 lane geometry of Figure 49 do not match AM Synchro output. Please correct this and resubmit.
25. Intersection 13 AM output is missing. Please included this and resubmit.
26. Intersection 12 in Figure 47 the Synchro output uses an incorrect lane configuration that does not match in Figure 47. Please correct this and resubmit.
27. Intersection 28 PM and PM LOS result does not match Table X. Please correct this and resubmit.

2035 Genera Plan No Project

28. Intersections 12, 17, and 23 lane geometry of Figure 49 do not match the AM Synchro output. Please correct this and resubmit.
29. Intersections 27 and 28 AM output are missing. Please include this and resubmit.

2035 Genera Plan No Project with Mitigation

30. Intersection 27 lane geometry in Figure 49 does not match the AM Synchro output. Please correct this and resubmit.
31. Please justify why Intcrsction 24 still indicates a PM LOS of F after mitigation. Please include this and resubmit.

2035 General Plan + Project

32. Intersections 12, 17, and 23 lane geometry in Figure 49 do not match the AM Synchro output. Please correct this and resubmit.

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Page 5

33. Intersections 27 and 28 AM output are missing. Please include this and resubmit.
34. Intersections 3 and 16 PM and PM LOS result does not match Table XII. Please correct this and resubmit.

Mitigation

35. Figures 19 and 27 BPAP Plus Project and 1990 General Plan Plus Project Lane Configuration show Intersection 10 "Stagecoach/East Mariposa" with a 14 lane cross section at the signalized intersection. This does not appear feasible. Please indicate how this is accomplished in writing and resubmit.
36. Similarly, to comment 35, Intersection 26 "South Airport/Arch Airport" indicates a 14 lane cross section. This also does not appear feasible. Please indicate how this is accomplished in writing and resubmit.

Frcoway Level of Service

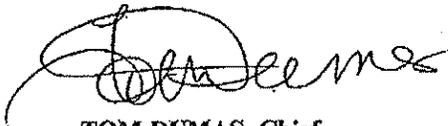
37. Mainline SR-99 Level of Service worksheets are missing. Please include these and resubmit.
38. SR-99 mainline cannot be assumed as a 10 lane facility as part of the analysis, since SR-99 is currently not on SJCOG TIER 1 list project. Please correct this assumption in the TIS and resubmit.

Ramp Merging and Diverging Level of Services

39. Frcoway input volume is incorrect for all scenarios. Please correct this assumption in the TIS and resubmit.
40. Need to provide ramp metering analysis worksheets. Please include this and resubmit.

If you have any questions or would like to discuss our comments in more detail, please contact Dan Brewer at (209) 948-7142 (e-mail: dan.brewer@dot.ca.gov) or mc at (209) 941-1921.

Sincerely,



TOM DUMAS, Chief
Office of Intermodal Planning

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Mr. Stagnaro
April 23, 2006
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c: SMorgan CA Office of Planning & Research

bc: TDumas IGR

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- CALTRANS-1** Since the City of Stockton is the lead agency on the proposed project, the City of Stockton traffic forecasting models were used for the proposed project. These are the same models that were used to analyze the 2035 City of Stockton General Plan Update (2035 City General Plan). The models were recently calibrated to reflect City of Stockton conditions. The roadway network in the City of Stockton model contains a proposed major north-south roadway parallel to and east of State Route (SR) 99. Its function is to serve growth and development on the east side of SR 99 and to relieve traffic on SR 99 itself. For this reason, on those models that include the new north-south roadway, it is logical to anticipate that less north-south traffic would use SR 99 (assuming the same land uses). Therefore, the traffic analysis for the proposed project determined that approximately 28% of project trips, rather than 37.7%, would use SR 99. No revisions to the DEIR are necessary.
- CALTRANS-2** The project relies on an internal trip capture rate of 20%, not 35% as stated by the commentator. The justification for use of the 20% capture rate is contained in the DEIR on pages 16-33 through 16-35. To avoid any potential for misunderstanding, the second sentence of the second paragraph on DEIR page 16-35 is hereby deleted, as described in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." This change does not alter the conclusions of the DEIR.
- CALTRANS-3** See Master Response 1 in Chapter 3, "Master Responses," of this FEIR. No revisions to the DEIR are necessary.
- CALTRANS-4** All Synchro output results for signalized intersections are provided in 2000 Highway Capacity Manual (HCM) format. Synchro output worksheets show Intersection Capacity Utilization level of service (LOS) results for unsignalized intersection by default. TJKM determined the HCM LOS for each unsignalized intersection by comparing the average delay results with the corresponding LOS provided in Exhibit 17-2 and Exhibit 17-22 of the 2000 HCM. This information is contained in Table E-VI of Appendix E to the traffic study. This comment is directed to the traffic study (attached as Appendix U to the DEIR) rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-5** Queuing data is summarized in Figure 52 of the traffic study (attached as Appendix U to the DEIR). Queues are based on 95th percentiles. This comment is directed to the traffic study (attached as Appendix U to the DEIR) rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-6** Caltrans used a rate of 13% for heavy vehicles on SR 99 for its recently completed Traffic Operation Analysis for the SR 4 Project Study Report (PSR) (November 1, 2006). Therefore, the traffic study (attached as Appendix U to the DEIR) for the proposed project also assumed a rate of 13% heavy vehicles on SR 99. For Farmington Road and SR 4, the traffic study assumed a heavy vehicle rate of 8–17% in the morning and 6–12% in the evening peak hour. Please see page 15 of the traffic study (attached as Appendix U to the DEIR) for a detailed description of how the truck percentages were derived and applied. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.

- CALTRANS-7** The commentor’s statement about the use of different mitigation measures for a.m. and p.m. peak periods is inaccurate. Some inconsistencies in lane geometry in the figures included in the traffic study (attached as Appendix U to the DEIR) may have led the reviewer to conclude as such. See traffic study errata sheet corrections attached to Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” These corrections do not change the conclusions of the DEIR.
- CALTRANS-8** Because right-turning traffic does not go through this single point interchange (Intersection 24), it is appropriate to exclude the right-turn volumes in the analysis. Therefore, right-turn traffic volumes are not presented in the figures. Furthermore, Figure 49 only shows turning movements, not traffic volumes. This comment is directed to the traffic study (attached as Appendix U to the DEIR) rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-9** Regarding Intersection 7, it appears the commentor compared the mitigated lane geometry presented in Figure 49 with the unmitigated lane geometry in the worksheets. This comment is directed to the traffic study (attached as Appendix U to the DEIR) rather than the text of the DEIR. No revisions to the DEIR are necessary.
- Regarding Intersection 28, the updated Synchro worksheets for Intersection 28 and Table II of the traffic study (attached as Appendix U to the DEIR) are included in the attached traffic study errata sheet in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” Furthermore, Table 16-3 of the DEIR is hereby revised as shown in Chapter 5. This change does not alter the conclusions of the DEIR.
- CALTRANS-10** The results for Intersection 27 (Existing Plus Approved Projects [EPAP]) do match Table II of the traffic study (attached as Appendix U to the DEIR), and therefore it appears the commentor compared the incorrect worksheet results with the results presented in Table II. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-11** The lane geometry for Intersection 31 (EPAP) has been corrected by removing the eastbound through lane in Figure 49 of the traffic study (attached as Appendix U to the DEIR). See traffic study errata sheet in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” Furthermore, revisions to DEIR Figure 16-4.2 are also made as described in Chapter 5. These changes do not alter the conclusions of the DEIR.
- CALTRANS-12** For Intersections 3, 7, 23, 27, and 31 (EPAP plus Phase 1), the lane geometry in Figure 49 does match the a.m. Synchro output. Therefore, it appears the reviewer incorrectly compared the mitigated lane geometry presented in Figure 49 with unmitigated lane geometry in the worksheets. This comment is directed to the traffic study (attached as Appendix U to the DEIR) rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-13** The EPAP No Project and EPAP plus Phase I traffic scenarios were analyzed independent of each other. Both unmitigated and mitigated worksheets for EPAP plus Phase I are provided in Appendix H to the traffic study (attached as Appendix U to the DEIR) since mitigation measures are triggered by either a.m. or p.m. peak hour traffic volumes. It appears the commentor incorrectly compared unmitigated worksheets to mitigation measures provided in the traffic study. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.

- CALTRANS-14** The Intersection 27 a.m. and Intersection 6 p.m. results (EPAP plus Phase 1) do match Table IV; therefore, it appears the commentor compared the incorrect worksheet results with the results presented in Table IV of the traffic study (attached as Appendix U to the DEIR). This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-15** Regarding Intersection 27 (EPAP plus Full Buildout), the lane geometry of Figure 49 does match the a.m. Synchro output; therefore, it appears the commentor incorrectly compared the mitigated lane geometry presented in Figure 49 of the traffic study (attached as Appendix U to the DEIR) with unmitigated lane geometry in the worksheets for Intersection 27. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- Regarding Intersection 17 (EPAP plus Full Buildout), the southbound approach lane geometry has been corrected in Figure 49 of the traffic study. See traffic study errata sheet in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." Furthermore, revisions to DEIR Figure 16-5.2 are also made as described in Chapter 5. These changes do not alter the conclusions of the DEIR.
- Regarding Intersection 31 (EPAP plus Full Buildout), the unmitigated condition worksheets were intentionally excluded from Appendix I of the traffic study because existing lane geometry cannot be used to analyze volume forecast, because of roadway network changes under EPAP plus Full Buildout conditions. Intersection 31 was analyzed as part of a newly designed freeway interchange (see note 1 in Table VII of the traffic study). This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-16** The Intersection 27 a.m. LOS result (EPAP plus Full Buildout) does match Table VII of the traffic study (attached as Appendix U to the DEIR); therefore, it appears the commentor incorrectly compared the worksheet results with the results presented in Table VII. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-17** The Intersection 3, 16, and 27 p.m. LOS results (EPAP plus Full Buildout) do match Table VII of the traffic study (attached as Appendix U to the DEIR); therefore, it appears the commentor incorrectly compared the worksheet results with the results presented in Table VII. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-18** The lane geometry of Intersections 26 and 27 (EPAP plus Full Buildout) in Figure 49 of the traffic study (attached as Appendix U to the DEIR) do match the a.m. Synchro output; therefore, it appears the commentor incorrectly compared the mitigated lane geometry presented in Figure 49 with unmitigated lane geometry in the worksheets for Intersections 26 and 27. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-19** Please see note (1) under Table IX contained in the traffic study (attached as Appendix U to the DEIR). The worksheets were intentionally excluded from Appendix J of the traffic study because existing lane geometry cannot be used to analyze volume forecast for Intersections 8, 9, and 22 because of roadway network changes under the 1990 No Project Conditions. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.

- CALTRANS-20** The Intersection 27 a.m. and p.m. peak hour LOS results (1990 General Plan No Project) do match Table IX contained in the traffic study (attached as Appendix U to the DEIR); it is unclear as to the basis of this comment. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- Regarding Intersection 12 (1990 General Plan No Project), the a.m. and p.m. peak hour LOS results in Table IX of the traffic study (attached as Appendix U to the DEIR) have been changed to match the worksheets. See traffic study errata sheet in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” Furthermore, revisions to DEIR Table 16-25 are also made as described in Chapter 5. These changes do not alter the conclusions of the DEIR.
- CALTRANS-21** The lane geometry of Intersections 18, 23, 27, and 31 (1990 General Plan No Project) in Figure 49 of the traffic study (attached as Appendix U to the DEIR) does match the a.m. Synchro output; therefore, it appears the commentor incorrectly compared the mitigated lane geometry presented in Figure 49 with unmitigated lane geometry presented in the worksheets. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-22** The volumes have been corrected for Intersection 12 (1990 General Plan No Project) in the Synchro file and the LOS results in Table IX of the traffic study (attached as Appendix U to the DEIR) have been updated accordingly. See the traffic study errata sheet contained in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” Furthermore, revisions to DEIR Table 16-25 are also made as described in Chapter 5. These changes do not alter the conclusions of the DEIR.
- CALTRANS-23** The Intersection 12 lane geometry (1990 General Plan No Project) in Figure 49 of the traffic study (attached as Appendix U to the DEIR) has been corrected to match the Synchro output. See the traffic study errata sheet contained in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-24** The lane geometry of Intersections 3, 12, 23, 27, and 31 (1990 General Plan Plus Project) in Figure 49 of the traffic study (attached as Appendix U to the DEIR) do match the a.m. Synchro output; therefore, it appears the commentor incorrectly compared the mitigated lane geometry presented in Figure 49 with the unmitigated lane geometry presented in the worksheets. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-25** See note (1) in Table 4 in the traffic study (attached as Appendix U to the DEIR). The worksheets were intentionally excluded from Appendix K of the traffic study because existing lane geometry cannot be used to analyze volume forecast for Intersection 13 due to roadway network changes under the 1990 General Plan Plus Project conditions. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-26** The Intersection 12 lane geometry (1990 General Plan Plus Project) in Figure 49 of the traffic study (attached as Appendix U to the DEIR) has been corrected to match the Synchro output. See the traffic study errata sheet contained in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.

- CALTRANS-27** The Intersection 28 p.m. and p.m. LOS result (1990 General Plan Plus Project) does match Table 4 in the traffic study(attached as Appendix U to the DEIR); it is unclear as to the basis of this comment. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-28** The lane geometry of Intersections 12, 17, and 23 (2035 General Plan No Project) in Figure 49 of the traffic study (attached as Appendix U to the DEIR) do match the a.m. Synchro output; therefore, it appears the commentor incorrectly compared the mitigated lane geometry presented in Figure 49 with the unmitigated lane geometry presented in the worksheets. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-29** See note (1) in Table XII of the traffic study (attached as Appendix U to the DEIR). The worksheets were intentionally excluded from Appendix L of the traffic study because existing lane geometry cannot be used to analyze volume forecast for Intersections 27 and 28 due to roadway network changes under the 2035 General Plan No Project conditions. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-30** The lane geometry for Intersection 27 (2035 General Plan No Project) in Figure 49 of the traffic study (attached as Appendix U to the DEIR) has been corrected by adding one eastbound through lane. See traffic study errata sheet contained in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” Furthermore, revisions to DEIR Figure 16-5.2 are also made as described in Chapter 5. These changes do not alter the conclusions of the DEIR.
- CALTRANS-31** Physical restrictions at the Arch Road/Single Point Interchange (Intersection 24) make it impractical to add one additional eastbound left-turn lane and one westbound through lane, which would be necessary for the intersection to operate at an acceptable LOS under 2035 General Plan No Project conditions. This explanation is presented in Table 16-32 on page 16-104 of the DEIR, as well as on page 94 of the traffic report and the footnote in Table XII in the traffic report (attached as Appendix U to the DEIR). No revisions to the DEIR are necessary.
- CALTRANS-32** The lane geometry of Intersections 12, 17, and 23 (2035 General Plan Plus Project) in Figure 49 of the traffic study (attached as Appendix U to the DEIR) do match the a.m. Synchro output; therefore, it appears the commentor incorrectly compared the mitigated lane geometry presented in Figure 49 with the unmitigated lane geometry presented in the worksheets. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-33** See note (1) under Table XIII in the traffic study (attached as Appendix U to the DEIR). The worksheets were intentionally excluded from Appendix M of the traffic study because existing lane geometry cannot be used to analyze volume forecast for Intersections 27 and 28 due to roadway network changes under the 2035 General Plan Plus Project conditions. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.
- CALTRANS-34** The Intersections 3 and 16 p.m. and p.m. LOS results (2035 General Plan Plus Project) do match Table XII of the traffic study (attached as Appendix U to the DEIR). It appears the commentor incorrectly compared the worksheet results for 2035 General Plan Plus Project Conditions to Table XII instead of Table XIII. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.

CALTRANS-35

The project applicant proposes to relocate SR 4 through the project site to realign with Mariposa Road at Stagecoach Road. SR 4 and Mariposa Road would each be designed to have eight-lane cross sections (i.e., four through lanes in both the eastbound and westbound directions). For the intersection to operate at an acceptable LOS, the following would be required: signalization, double left-turn lanes, and double right-turn lanes in the eastbound approach, and an exclusive left-turn lane and a right-turn lane in the westbound approach. In addition to the eight through lanes, the eastbound and westbound turning lanes at Intersection 10 would require a right-of-way that could accommodate 12 east-west lanes, as opposed to 14 lanes as indicated in the comment.

Currently, there are no physical restrictions in the immediate vicinity of the proposed Mariposa Road/Stagecoach Road/SR 4 intersection since it would be located on open, undeveloped land. Therefore, it would be feasible to construct a 12-lane east-west cross section at Mariposa Road/Stagecoach Road/SR 4 (Intersection 10). No revisions to the DEIR are necessary.

CALTRANS-36

Figure 47 of the traffic study (attached as Appendix U to the DEIR) shows the feasibility of widening the South Airport Road/Arch-Airport Road interchange (Intersection 26) to accommodate the additional lanes (a total of 14) necessary to operate the intersection at an acceptable LOS under future traffic conditions. As shown in Figure 47, there are buildings located on only the northwest quadrant of the intersection. The other three quadrants consist of open, undeveloped land. Therefore, it would be feasible to construct additional lanes at the intersection as shown in Figure 47 without affecting the existing buildings. Departure lanes at the intersection can be merged for optimum roadway cross-sections along Arch Airport Road and South Airport Way. No revisions to the DEIR are necessary.

CALTRANS-37

The HCM methodology contained in the Highway Capacity Software (HCS) assumes a per-lane capacity of approximately 2,250 vehicles/hour. Previous experience with Caltrans indicates that this overstates the freeway capacity for SR 99 in the vicinity of Stockton. In previous comments to the City of Stockton, Caltrans has recommended a lane capacity of 1,850 vehicles/hour. A vehicle/capacity analysis method was used instead of the HCS methodology to conservatively estimate the level of service based on Exhibit 23-2 of the HCM.

The vehicle/capacity analysis for the proposed project uses the 1,850-vehicles/hour/lane criteria. Therefore, no mainline SR 99 LOS worksheets were prepared since the vehicle/capacity ratio is simply the forecast volumes divided by 1,850 vehicles per lane. However, weaving analyses were conducted for SR 99 to supplement the mainline results. The weaving analysis worksheets are contained in Appendix M to the traffic study (attached as Appendix U to the DEIR). This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.

CALTRANS-38

Please see Master Response 1 contained in Chapter 3, "Master Responses," of this FEIR. No revisions to the DEIR are necessary.

CALTRANS-39

This comment is apparently intended to address Intersections 1 and 2 in the traffic study (attached as Appendix U to the DEIR). These "intersections" are actually segments of the SR 99/East Fremont interchange. The traffic study provides ramp merge/diverge analyses for Intersections 1 and 2 (i.e., SR 99 Southbound Ramps/East Fremont and SR 99 Northbound Ramps/East Fremont) for all eight traffic scenarios. The volumes for the "freeway" (i.e., Fremont Street) are "low" because it is an arterial street. Even though Fremont Street is not technically a freeway, the interchange is fully directional and these two locations could not be analyzed as conventional intersections. The "freeway input

volume” is correct in all scenarios. This comment is directed to the traffic study rather than the text of the DEIR. No revisions to the DEIR are necessary.

CALTRANS-40

The City believes that a ramp metering analysis is more properly conducted at the time of project-specific interchange design studies, rather than at the DEIR stage. Furthermore, the suggested analysis may be addressed in the near future in the operational analysis (PSRs) currently being conducted by Caltrans and Caltrans’ consultants for SR 4 and SR 99. This comment is directed to the traffic study (attached as Appendix U to the DEIR) rather than the text of the DEIR. No revisions to the DEIR are necessary.

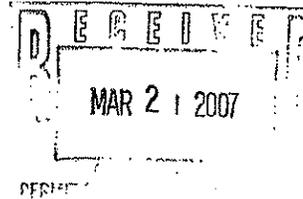
DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 942360001
(916) 653-5791



March 19, 2007

David Stagnaro, AICP
City of Stockton
345 North El Dorado Street
Stockton, California 95202



Mariposa Lakes Specific Plan
State Clearinghouse (SCH) Number: 2006022035

The project corresponding to the subject SCH identification number has come to our attention. The limited project description suggests your project may be an encroachment on the State Adopted Plan of Flood Control. You may refer to the California Code of Regulations, Title 23 and Designated Floodway maps at <http://recbd.ca.gov/>. Please be advised that your county office also has copies of the Board's designated floodways for your review. If indeed your project encroaches on an adopted food control plan, you will need to obtain an encroachment permit from the Reclamation Board prior to initiating any activities. The attached Fact Sheet explains the permitting process. Please note that the permitting process may take as much as 45 to 60 days to process. Also note that a condition of the permit requires the securing all of the appropriate additional permits before initiating work. This information is provided so that you may plan accordingly.

If after careful evaluation, it is your assessment that your project is not within the authority of the Reclamation Board, you may disregard this notice. For further information, please contact me at (916) 574-1249.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Huitt".

Christopher Huitt
Staff Environmental Scientist
Floodway Protection Section

cc: Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

Encroachment Permits Fact Sheet

Basis for Authority

State law (Water Code Sections 8534, 8608, 8609, and 8710 – 8723) tasks the Reclamation Board with enforcing appropriate standards for the construction, maintenance, and protection of adopted flood control plans. Regulations implementing these directives are found in California Code of Regulations (CCR) Title 23, Division 1.

Area of Reclamation Board Jurisdiction

The adopted plan of flood control under the jurisdiction and authority of the Reclamation Board includes the Sacramento and San Joaquin Rivers and their tributaries and distributaries and the designated floodways.

Streams regulated by the Reclamation Board can be found in Title 23 Section 112. Information on designated floodways can be found on the Reclamation Board's website at http://recbd.ca.gov/designated_floodway/ and CCR Title 23 Sections 101 - 107.

Regulatory Process

The Reclamation Board ensures the integrity of the flood control system through a permit process (Water Code Section 8710). A permit must be obtained prior to initiating any activity, including excavation and construction, removal or planting of landscaping within floodways, levees, and 10 feet landward of the landside levee toes. Additionally, activities located outside of the adopted plan of flood control but which may foreseeable interfere with the functioning or operation of the plan of flood control is also subject to a permit of the Reclamation Board.

Details regarding the permitting process and the regulations can be found on the Reclamation Board's website at <http://recbd.ca.gov/> under "Frequently Asked Questions" and "Regulations," respectively. The application form and the accompanying environmental questionnaire can be found on the Reclamation Board's website at <http://recbd.ca.gov/forms.cfm>.

Application Review Process

Applications when deemed complete will undergo technical and environmental review by Reclamation Board and/or Department of Water Resources staff.

Technical Review

A technical review is conducted of the application to ensure consistency with the regulatory standards designed to ensure the function and structural integrity of the adopted plan of flood control for the protection of public welfare and safety. Standards and permitted uses of designated floodways are found in CCR Title 23 Sections 107 and Article 8 (Sections 111 to 137). The permit contains 12 standard conditions and additional special conditions may be placed on the permit as the situation warrants. Special conditions, for example, may include mitigation for the hydraulic impacts of the project by reducing or eliminating the additional flood risk to third parties that may caused by the project.

Additional information may be requested in support of the technical review of

your application pursuant to CCR Title 23 Section 8(b)(4). This information may include but not limited to geotechnical exploration, soil testing, hydraulic or sediment transport studies, and other analyses may be required at any time prior to a determination on the application.

Environmental Review

A determination on an encroachment application is a discretionary action by the Reclamation Board and its staff and subject to the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq.). Additional environmental considerations are placed on the issuance of the encroachment permit by Water Code Section 8608 and the corresponding implementing regulations (California Code of Regulations – CCR Title 23 Sections 10 and 16).

In most cases, the Reclamation Board will be assuming the role of a "responsible agency" within the meaning of CEQA. In these situations, the application must include a certified CEQA document by the "lead agency" [CCR Title 23 Section 8(b)(2)]. We emphasize that such a document must include within its project description and environmental assessment of the activities for which are being considered under the permit.

Encroachment applications will also undergo a review by an interagency Environmental Review Committee (ERC) pursuant to CCR Title 23 Section 10. Review of your application will be facilitated by providing as much additional environmental information as pertinent and available to the applicant at the time of submission of the encroachment application.

These additional documentations may include the following documentation:

- California Department of Fish and Game Streambed Alteration Notification (<http://www.dfg.ca.gov/1600/>),
- Clean Water Act Section 404 applications, and Rivers and Harbors Section 10 application (US Army Corp of Engineers),
- Clean Water Act Section 401 Water Quality Certification, and
- corresponding determinations by the respective regulatory agencies to the aforementioned applications, including Biological Opinions, if available at the time of submission of your application.

The submission of this information, if pertinent to your application, will expedite review and prevent overlapping requirements. This information should be made available as a supplement to your application as it becomes available. Transmittal information should reference the application number provided by the Reclamation Board.

In some limited situations, such as for minor projects, there may be no other agency with approval authority over the project, other than the encroachment permit by Reclamation Board. In these limited instances, the Reclamation Board

may choose to serve as the "lead agency" within the meaning of CEQA and in most cases the projects are of such a nature that a categorical or statutory exemption will apply. The Reclamation Board cannot invest staff resources to prepare complex environmental documentation.

Additional information may be requested in support of the environmental review of your application pursuant to CCR Title 23 Section 8(b)(4). This information may include biological surveys or other environmental surveys and may be required at anytime prior to a determination on the application.

DWR-1

Thank you for your comment. Pacific Advanced Civil Engineers, a consultant to the project applicant, has determined that the proposed project does not represent an encroachment on the State Adopted Plan of Flood Control; on this basis, therefore, the City has determined that a State Designated Floodway Encroachment Permit is not required. No revisions to the DEIR are necessary.

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-8298



April 19, 2007

David Stagnaro
City of Stockton
345 N. El Dorado Street
Stockton, CA 95202

RECEIVED
APR 24

RE: Mariposa Lakes Specific Plan, SCH#2006022035

Dear Mr. Stagnaro:

As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the rail corridor in the City be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way.

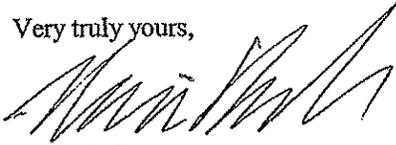
Safety factors to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way. Any project that includes a modification to an existing crossing or proposes a new crossing is legally required to obtain authority to construct from the Commission. If the project includes a proposed new crossing, the Commission will be a responsible party under CEQA and the impacts of the crossing must be discussed within the environmental documents.

Of specific concern is that vandal-resistant fencing along the entire BNSF rail corridor within the project limits be a requirement of approval for the project. In conjunction with the numerous grade-separated crossings proposed as part of the project, a continuous fence along the rail corridor would deter trespassing onto the tracks, which could be an attractive nuisance to the children in the nearby housing tracts, or as a short cut over the tracks for workers in the adjacent industrial tracts.

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the City.

If you have any questions in this matter, please call me at (415) 703-2795.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Kevin Boles', written in a cursive style.

Kevin Boles
Environmental Specialist
Rail Crossings Engineering Section
Consumer Protection and Safety Division

cc: John Stilley, BNSF Railroad

CPUC-1

The commentor states that the new grade crossings would require California Public Utilities Commission (CPUC) approval and should be designed with safety in the rail corridor in mind. The City will coordinate with CPUC and obtain authority to construct for modifications to or creation of new railroad crossings. As discussed on pages 3-47 and 3-48 of the DEIR, the proposed project would require construction of three new Burlington Northern Santa Fe (BNSF) railroad grade separations at the following locations: Mariposa Road/Austin Road intersection, Viceroy Avenue, and SR 4 realignment. The potential impacts associated with construction of these railroad grade separations are evaluated in the DEIR as follows: Impact 6-7, 6-14, 7-10, 7-20, 8-5, 8-10, 9-6, 9-12, 10-7, 10-14, 11-8, 11-16, 12-5, 12-11, 13-7, 13-14, 14-4, 14-8, 15-9, 15-18, 17-9, and 17-18. No revisions to the DEIR are necessary.

CPUC-2

The commentor states that vandal-resistant fencing may be required for the entire rail corridor to deter trespassing from adjacent residential areas. Although the City has determined that Impacts 10-1 and 10-8, "Safety of Project Residents and Workers Proximate to SR 4 and Burlington Northern Santa Fe (BNSF) Rail Line" would be less than significant because the appropriate City setbacks from the rail line would be enforced, the City agrees with the commentor's request that the project applicant install vandal-resistant fencing along the BNSF through the project site. A provision has been added to the MLSP on pages 11-6 and 11-8 that stipulates installation of vandal-resistant fencing along the BNSF rail corridor with the project limits. No revisions to the DEIR are necessary.



State Water Resources Control Board



Linda S. Adams
Secretary for
Environmental Protection

Division of Water Rights
1001 I Street, 14th Floor ♦ Sacramento, California 95814 ♦ 916.341.5300
P.O. Box 2000 ♦ Sacramento, California 95812-2000
Fax: 916.341.5400 ♦ www.waterrights.ca.gov

Arnold Schwarzenegger
Governor

MAR 28 2007

In Reply Refer
to:334:KDM:266.0

David Stagnare
City of Stockton
C/o Community Development Department
Planning Division
345 North El Dorado Street
Stockton, CA 95202

MAR 29 2007

MAR 29 2007

Dear Mr. Stagnare:

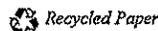
DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) FOR THE MARIPOSA LAKES
SPECIFIC PLAN, STATE CLEARINGHOUSE #2006022035

Division of Water Rights (Division) staff has reviewed the DEIR for the Mariposa Lakes Specific Plan. The project includes development of 3,810 acres for a population of 33,178 persons, including a mix of residential development, retail, office and public uses. The project includes a series of inter-connected lakes to handle winter storm runoff. The lake system includes 11 lakes and interconnecting canals totaling approximately 192 acres. This system has been divided into the Duck Creek, Branch Creek and North Little Johns Creek networks. All three creeks flow through the project site.

The Branch Creek lake network would receive and convey runoff from a small off-site watershed (see page 3-36). The other lake systems would also serve as primary flood control and storm flow conveyance facilities. An appropriative water right issued by the State Water Resources Control Board (State Water Board) is required prior to diversion from any of the surface streams into the lakes for (a) seasonal storage, (b) storage for more than 30 days, or (c) direct diversion for irrigation or other uses. Storage is water retention for 30 days or more. In determining storage, the Division considers the last water flowing into the lake as the first water flowing from the lake. The DEIR foresees purchase of surplus water from other entities for storage in the lakes and subsequent non-potable use. The entities selling the water must have adequate appropriative water rights issued by the State Water Board for the water sold for use by this project. The water rights should be identified in the document and sufficient information included to show that the City of Stockton and the California Water Service Company (the potable water suppliers for the project) have not fully committed their available supplies for existing customers. The DEIR includes blanket statements that these entities will be able to serve the new project, without disclosing their existing water supplies and commitments. Drought year supply is a particular concern.

The DEIR indicates that one source of irrigation water is the lakes. Division staff could not determine from the project description the quantity of water stored in the lakes. This should be clearly stated. The project water demand for the lakes is identified as an evaporation amount of 1,565 af. The water demand for initially filling the lakes should be stated and included with the total water demand. A source of supply for the initial fill should be identified. The project water demands indicate that there is a 3,781 af deficit. Adding the initial lake fill will increase the water deficit.

California Environmental Protection Agency



Does the developer intend to divert surface water to the lakes? If so, an appropriative water right is required. Duck Creek and Little Johns Creek are fully appropriated during the summer months. Page 11-35 of the DEIR indicates that surface water may not be available in Duck Creek at the necessary rate and duration to meet the annual demands of full project build out in any given year. Irrigation water will be obtained from Arbini recharge facility banked groundwater. During the years when surface water is not available, the lakes will still have a 1,565 af evaporation. The aesthetic and water quality issues of lower lake levels should be evaluated in the DEIR.

Page 11-35 states that it is uncertain whether Duck Creek and North Little Johns Creek have adequate conveyance capacity to convey 23 cubic feet per second of purchased water needed to provide non-potable water for this project. If the creeks cannot convey the water, how will the non-potable water for the project be obtained? What would the new water deficit be?

The water supply information included in the appendix states that the project has a water demand of 13,393 acre-feet per annum (afa) for both potable and non-potable uses, which exceeds the available water supply by 3,781 af. The information in the appendix does not separately evaluate water supply by water year type. Also, there is no information to show that there is an adequate summer water supply. The DEIR should show that there is sufficient water banked during winter months to provide the summer supply.

Page 11-6 states that water from the New Melones project of U.S. Bureau of Reclamation (Reclamation) may be available to serve the project, even though Reclamation has not historically provided the full contractual water supply to the City of Stockton. The City has sued Reclamation. It appears that only the water historically available should be considered in evaluating water supply for the project.

Page 11-8 states that water is available from the City of Stockton's Delta Water Supply Project (DWSP), even though the water delivery system has not yet been built. Per page 11-11, the city will obtain up to 126,000 afa of treated surface water from the DWSP. The State Water Board has issued Permit 21176 (Application 30531A) for this project, but total annual diversion is limited to 33,600 af. The City has not yet completed a CEQA document for the remainder of this project, 92,300 af of proposed diversion pursuant to Application 30531B. Consequently, the DEIR should be revised to reflect this information.

Page 3-76 states that a pump station will be built on Duck Creek to divert purchased water. Page 11-13 states that high flows from Duck Creek will be diverted to the recharge facility. In addition, a weir will be built on North Little Johns Creek to divert high flows for flood management purposes into the Arbini recharge facility. Page 17-16 states that non-potable water would be delivered by Stockton East Water District and would occur during flood periods, when New Hogan Reservoir spills.

Although management of flood flows does not require a water right when such flows are simply detained for later release in a controlled manner into the stream system (within a 30-day period), this project will not manage flood flows for later release to the stream system. The water will be permanently retained in a detention facility, thence the groundwater basin. Consequently, an appropriative water right is needed for storage of flood flows. The DEIR did

David Stagnare

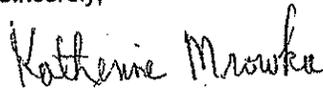
- 3 -

not evaluate impacts to salmon and other fish associated with diversion of high flows to the Arbini recharge facility. The DEIR, page 7-13, states that special status fish are not likely to live in the on-site portion of Duck Creek, Branch Creek or North Little Johns Creek because of a lack of suitable spawning and rearing habitat. This statement overlooks the potential presence of fish during migratory periods. Moreover, one element of the project is habitat restoration in Duck Creek and North Little Johns Creek. Once the habitat is restored, it is possible that fish will reside in this vicinity. Therefore, the pump station on Duck Creek and weir on North Little Johns Creek should be designed so that that the facilities do not impact fish.

The document lists flood flows at New Hogan Reservoir as a source of supply. The frequency when such flows are available to serve the project should be evaluated. The DEIR should note that Stockton East Water District has applied for appropriate water rights on the Calaveras River, but has not yet obtained a water right permit.

If you have any questions regarding these comments, I can be contacted at (916) 341-5363.

Sincerely,



Katherine Mrowka, Chief
Watershed Unit 3

SWRCB-1

The commentor expresses concern that that the proposed project may need an appropriative water right to divert stormwater from the on-site creeks. Water diverted from any of the on-site creeks (i.e., North Little Johns Creek, Duck Creek, or Branch Creek) for flood control does not require a permit from the State Water Resources Control Board (SWRCB) because it would be released within 30 days—it would not be stored. As described on pages 3-32 through 3-37 of the DEIR, stormwater flows from the on-site creeks would be conveyed into a series of artificially created lakes and interconnecting canals. Each lake would include various water quality treatment systems including constructed wetlands, lake circulation, biofilters, aeration, and wetland planters. Within 30 days, the water would be released from the lakes into the western portions of each of the creeks, where the water would continue to flow off the project site. The project applicant would purchase surplus surface water from either Stockton East Water District (SEWD) or Central San Joaquin Water Conservation District (CSJWCD) or both, for percolation into the ground to supply water for the recharge project. Thus, contrary to the commentor's assertion, this surplus surface water would not be stored in the artificially created lakes; rather, it would be deposited into the groundwater aquifer and later withdrawn for use when needed. Since the DEIR was circulated for public review and comment, SEWD, on behalf of itself and CSJWCD, has prepared a *Non-Potable Water Supply Assessment for the Proposed Mariposa Lake Development*, which is attached as new Appendix Y to this FEIR. Water from SEWD and/or CSJWCD, and water from the groundwater recharge project, would be used to supply the proposed project's nonpotable water needs for landscape irrigation and lake level maintenance. The purchased water would come from existing, surplus water that is already flowing down North Little Johns Creek and/or Duck Creek; therefore, there would be no channel modifications necessary for conveyance, nor would there be any new flooding or erosion hazards. No water for the recharge project would come from Branch Creek. Impacts associated with construction of diversion structures in Duck Creek and North Little Johns Creek are evaluated under separate impact headings ("Off-Site Improvements") in Chapters 4 through 17 of the DEIR. When this surface water is purchased for the proposed project, the water retailer (in this case SEWD and/or CSJWD) is the holder of the water right, not the project applicant. The project applicant would only be entitled to use the purchased water under contract with the water retailer. The water retailer receives its water under a contract with the California Reclamation Board, and that contract lists the water retailer's entire district as its "Place of Use." Because the creeks are used merely as a means of conveyance of existing water that is already flowing, no new water right would be created. Therefore, no new permit is needed from the SWRCB. The project applicant may elect, in the future, to pursue a separate appropriative water right from SWRCB for additional water above and beyond that described above. If this were to occur, such an application would be subject to a separate California Environmental Quality Act (CEQA) environmental review. No revisions to the DEIR are necessary.

SWRCB-2

The commentor expresses concern that the water purveyors selling water to the proposed project must actually have demonstrated rights to that water. See response to SWRCB-1, above.

SWRCB-3

The commentor expresses concern that the water purveyors selling water to the proposed project may not have supplies sufficient to serve the proposed project. Since the DEIR was circulated for public review and comment, SEWD, on behalf of itself and CSJWCD, has prepared a *Non-Potable Water Supply Assessment for the Proposed Mariposa Lake Development*, which is attached as new Appendix Y to this FEIR. Appendix Y details the suppliers' sources of water and commitments to existing customers. As discussed in the DEIR on pages 11-33 through 11-39, the recharge project would provide a 3-year reserve of banked groundwater to meet the proposed project's nonpotable demand in critically dry years. See Master Response 5 in Chapter 3, "Master Responses," of this FEIR.

SWRCB-4

The commentor asks how much water is needed to fill the lakes, where that water would come from, and whether that water would contribute to the proposed project's "operational deficit." The total amount of water that would be stored in the proposed lake network is approximately 1,541 acre-feet (af) at full project buildout. For development Phase 1, approximately 704 af would be required. The source of supply for initial fill of the Phase 1 lakes would be potable water from the City of Stockton water supplies. This water was included in the water supply assessment (WSA) prepared by the City (DEIR Appendix R). Water that is needed to fill the remaining lakes in future development phases 2-5 (approximately 837 af) would come from the recharge project. Because filling the lakes with water for the first time is a one-time-only occurrence, this water would not contribute to the project's operational deficit. See Master Response 5 in Chapter 3, "Master Responses," of this FEIR. No revisions to the DEIR are necessary.

SWRCB-5

The commentor asks whether water would be diverted from on-site creeks to fill the artificially created lakes, states that such a diversion would require a water right, and states that the aesthetic impacts to the lakes associated with water shortfalls, if any, should be evaluated. The initial source of water for the proposed lakes in development Phase 1 (approximately 704 af) would be purchased surface water from the City of Stockton (included in the City's WSA, DEIR Appendix R). Water to fill the remaining lakes in future development phases (approximately 837 af) would come from banked surface water that was deposited into the groundwater aquifer from the recharge project. The source of water for the recharge project is purchased surplus water from SEWD and/or CSJWCD. See response to comment SWRCB-1 above for a discussion of water rights associated with purchase of water to meet the project's nonpotable water demand. Water for continued maintenance of lake water levels would come from stormwater runoff, on-site precipitation, and from the recharge project. All water used in the lakes would be circulated, treated, and drained through the lake network into the appropriate downstream creek channel, either Duck, Branch, or North Little Johns Creek (see DEIR Figures 3-17 and 3-18).

The WSA prepared by SEWD (new Appendix Y attached to this FEIR) indicates that a supply of nonpotable water sufficient to meet the project's nonpotable needs is available from both Duck Creek and North Little Johns Creek. During a drought year, when the surface water supplies are reduced, the project would rely on the 3-year reserve of surplus surface water banked as part of the recharge project (discussed on pages 11-34 through 11-38 of the DEIR). See Master Response 5 in Chapter 3, "Master Responses," of this FEIR. Mitigation Measure 11-6b requires monitoring of recharge operations at the Arbini site. If, during an extended drought longer than 3 years, the surface area of the on-site lakes were reduced (as contemplated in DEIR Mitigation Measure 11-6b), the project applicant would plant the area around the edges of the lakes with drought-tolerant vegetation; thus, visual impacts would be less than significant, as stated on page 11-40 of

the DEIR. See also edits to Mitigation Measure 11-6b in FEIR Chapter 5, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.”

Having a smaller surface area in the proposed on-site lakes would have no impact on groundwater quality because the quality of water coming into the lakes would remain the same, and the same components of the lakes designed to maintain lake water quality would still be implemented (as stated in the project description on pages 3-66, 3-70, 3-75, 3-76 of the DEIR; in Impact 11-7 on page 11-42 of the DEIR; and in the Integrated Water Management Plan attached as Appendix P to the DEIR). Furthermore, Mitigation Measure 11-7a requires the project to operate in conformance with Central Valley RWQCB Order No. R5-2002-0181, National Pollutant Discharge Elimination System NO. CAS083470 Waste Discharge Requirements, and City of Stockton and County of San Joaquin Storm Water Discharges from Municipal Separate Storm Sewer System, San Joaquin County (City Stormwater Permit).

SWRCB-6

The commentor queries whether Duck Creek and North Little Johns Creek have sufficient conveyance capacity to carry the water proposed for on-site use. The source of nonpotable water for the recharge project would be surplus water that is already flowing through Duck Creek and/or North Little Johns Creek; therefore, additional capacity for channel conveyance is not needed. The last paragraph on page 11-35 of the DEIR, and Mitigation Measure 11-6, are hereby revised to reflect this information, as shown in Chapter 5 of this FEIR, “Corrections to the DEIR and Errata to DEIR Appendices.” Recharge water delivery itself is no longer a potentially significant impact; however, Impact 11-6 as a whole remains potentially significant before implementation of mitigation, and less than significant after implementation of mitigation, as stated on pages 11-39, 11-41, and 11-42 of the DEIR.

SWRCB-7

The commentor states that in an appendix to the DEIR, there is a statement that the water demand for the project is 13,393 acre-feet per year (afy), which is in excess of the stated supply for the proposed project. The City assumes that the commentor is referring to the information contained in the Integrated Water Management Plan, and the WSAs prepared by the City and the California Water Service Company (Cal Water) (DEIR Appendices P, R, and S, respectively). Since these appendices were developed, the project design and analysis has been refined further, and currently the projected water demand for the project, both potable and nonpotable, is 10,128 afy. (See DEIR pages 11-34 to 11-35, 17-11 to 17-13, and Master Response 5 in Chapter 3, “Master Responses,” as well as Section 5.3 of this FEIR.)

Sufficient water is available to meet this demand. Current and future potable water sources and availability by type of water year is contained in Table 6 on page 20 of the City’s WSA (DEIR Appendix R), and on pages 32 through 34 of the Cal Water WSA (DEIR Appendix S). The WSAs evaluate the total project potable water demand per annum. Those WSAs conclude that once the Delta Water Supply Project (DWSP) is constructed, there would be sufficient water to meet the project’s potable water needs (regardless of season). As discussed in DEIR Chapter 11, “Hydrology and Water Quality,” the recharge project would be operated to meet the project’s annual nonpotable water needs (regardless of season). The recharge project includes a 3-year supply of banked water to serve the project during dry years. Impacts associated with potential shortfalls of recharge water during an extended drought (longer than 3 years) are addressed in Mitigation Measure 11-6b (DEIR page 11-40). See Master Response 5 in Chapter 3, “Master Responses,” of this FEIR.

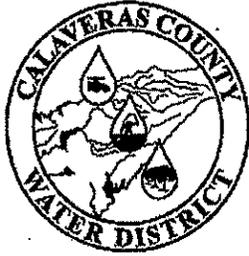
- SWRCB-8** The commentor questions the proposed project’s reliance on water from New Melones. See Master Response 2 contained in Chapter 3, “Master Responses,” of this FEIR.
- SWRCB-9** The commentor questions the reliance on water from the full DWSP, and questions assertions in the DEIR that such water is available now. The commentor misstates the text on page 11-8 of the DEIR. The DEIR does not indicate that water from the DWSP is already available; rather the DEIR states “Additional surface water supplies will be made available to the City of Stockton as a result of the City’s Delta Water Supply Project (DWSP) [emphasis added].” The text of page 11-11 of the DEIR indicates that up to 126,000 acre-feet per year (afy) of water will be supplied to the City of Stockton; this amount will be available once full buildout of the DWSP is complete (Phases I and II). Phase I of the DWSP will supply 33,600 afy of water. The proposed project relies only on Phase I of the DWSP (which has a certified EIR and a permit from SWRCB [Permit 21176]), not Phase II. See Master Response 3 contained in Chapter 3 of this FEIR, “Master Responses.” No revisions to the DEIR are necessary.
- SWRCB-10** The commentor suggests that the project proposes to divert storm waters for consumptive use on-site without an appropriate water right. The commentor is mistaken. The proposed project includes two separate components involving water from North Little Johns Creek: (1) a flood control component, and (2) diversion of purchased surplus water for groundwater recharge. As shown in DEIR Figures 11-4 and 11-7, the same constructed basin would be used for both purposes; however, they involve separate diversions of water. Phase 1 of the developed portions of the project site is located downstream from the Arbini recharge facility, along North Little Johns Creek. To protect future residents from flooding hazards, the project applicant must divert flood water from North Little Johns Creek, upstream of the proposed development areas. Those flood flows would be diverted into an artificially created flood control basin on the Arbini property, and would be released in a controlled manner over a 30-day period; therefore, an SWRCB permit for diversion of water is not required. The second component of the project involves purchase of existing surplus surface water from CSJWCD that is already flowing down North Little Johns Creek. See response to SWRCB-1 (above) for a discussion of why an SWRCB permit is not needed for diversion of this water. Finally, the commentor cites the DEIR at page 11-13 regarding possible diversion of water from Duck Creek during times of heavy runoff into a possible detention basin/groundwater recharge basin in the northwest portion of the project site. This detention basin may or may not be used for recharge; however, it would be used to temporarily attenuate flood flows from Duck Creek as necessary. As with flood flows from North Little Johns Creek, any flood flows on Duck Creek would be released within 30 days, therefore no permit would be required. No revisions to the DEIR are necessary.
- SWRCB-11** The commentor states that there may be impacts to special-status fish during migratory periods that were not evaluated in the DEIR. Impacts associated with special-status fish species are discussed on pages 7-12, 7-13, 7-31, and 7-32 of the DEIR. There is no suitable aquatic habitat in Duck Creek, North Little Johns Creek, Branch Creek, or associated tributaries upstream of the project site for salmon or any other special-status fish species. Therefore, these fish species would not be expected to migrate through the project site at any time. Additionally, the restoration concepts developed for Duck Creek and North Little Johns Creek would not benefit special-status fish species because the streams are either out of the range for these species or they lack the suitable habitat attributes (e.g., water temperatures, spawning habitat upstream [clean gravels with cold fast flowing water]) to provide necessary functions with or without implementation of the habitat restoration plan (see also Table 7-3, page 7-12 of the DEIR). The restoration plan

for North Little Johns Creek provided in Appendix J of the DEIR is conceptual in nature. Final details would be determined in consultation with the appropriate regulatory agencies during the project permitting stage. No changes to the DEIR are necessary.

SWRCB-12

The commentor questions the proposed project's reliance on water from the New Hogan Reservoir. The sources and availability of surface water for the recharge facility are evaluated in the *Non-Potable Water Supply Assessment for the Proposed Mariposa Lake Development*, which is attached as new Appendix Y to this FEIR. Changes to relevant portions of the text of DEIR Chapter 11, "Hydrology and Water Quality," and Chapter 17, "Utilities and Energy," are shown in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." These revisions change the significance conclusions of Impacts 17-3 and 17-12 (Increased Demand for Nonpotable Water Supply and Conveyance Facilities) from potentially significant and unavoidable to less than significant, with no required mitigation measures, because the data contained in the nonpotable WSA show that a secured supply of nonpotable water would be available to meet the needs of the proposed project. The significance conclusion of Impact 11-6 is unchanged.

SECTION C: LOCAL AGENCIES



**CALAVERAS
COUNTY
WATER
DISTRICT**

BUSINESS OFFICE

423 East St Charles Street
Post Office Box 846
San Andreas, California 95249
(209) 754-3543
Fax (209) 754-1069

VIA U.S. MAIL AND FAX (209) 937-8893

April 20, 2007

RECEIVED
CITY OF STOCKTON

APR 23 2007

PERMIT CENTER
PLANNING DIVISION

City of Stockton
c/o Community Development Department
Planning Division
345 N. El Dorado Street
Stockton, CA 95202

Re: Calaveras County Water District Comments on Draft Environmental Impact Report
Mariposa Lakes Specific Plan State Clearinghouse #2006022035.

To Whom It May Concern:

Calaveras County Water District ("CCWD") appreciates the opportunity to comment on the Draft Environmental Impact Report for the City of Stockton's Mariposa Lakes Specific Plan ("Draft EIR"). Similar to a letter from CCWD dated January 27, 2007 regarding the City of Stockton's General Plan EIR, this letter covers much of the same information as the water supply information referenced in both the General Plan EIR and the Mariposa Lakes Specific Plan Water Supply Assessment and EIR is nearly identical. Also, please add CCWD to the distribution list for any future documents related to significant growth in the City of Stockton area. This would include any water supply planning documents and all individual projects requiring a Water Supply Assessment.

The Mariposa Lakes Specific Plan Draft EIR, Appendix R, attaches a Water Supply Assessment ("WSA"),¹ with reference to the California Water Code, §§10910 *et seq.* The WSA is circulated with the Draft EIR pursuant to Water Code §10911. This provision also requires the City to determine whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses; if the City determines that water supplies will not be sufficient, the City must include that determination in its findings for the project.

¹ Exhibits to the WSA are identified in the table of contents for the WSA, but are not available in the on-line document reviewed by CCWD.

Availability of New Hogan Water Supplies

CCWD would like to take this opportunity to correct substantial inaccuracies contained in the WSA discussion of CCWD's water supplies and the availability thereof to Stockton East Water District ("SEWD"), and thence to City of Stockton municipal area users. Specifically, at p. 20 and Table 6, the WSA alludes to two types of CCWD-related water supplies:

- (1) water available to SEWD under contracts with the U.S. Bureau of Reclamation and Calaveras County Water District for water developed through the New Hogan project (identified in the WSA at a year 2035 quantity of 12,000 acre-feet); and
- (2) water available to SEWD under Calaveras County Water District "appropriative rights," called "unused CACWD rights" (identified in the WSA at p. 20, Table 6 at a year 2035 quantity of 10,000 acre-feet).

There are at least two major problems with this discussion: First, SEWD does not have access to any CCWD appropriative rights. At present, the only water supply agreement between SEWD and CCWD pertains to contractual entitlements to New Hogan supplies for which the appropriative water rights are presently held by the U. S. Bureau of Reclamation ("Reclamation"). Second, although it is true that CCWD is not currently using its full New Hogan entitlement, and that SEWD may use some of this water on a temporary, year-to-year basis, CCWD may require that water at any time, and will use its full New Hogan entitlement in the future. Accordingly, as described in more detail below, it is inappropriate for the City to rely on CCWD's New Hogan supplies for water supply planning purposes.

On August 25, 1970, Reclamation, SEWD and CCWD entered into a water supply contract that entitles CCWD and SEWD to the entire yield of New Hogan Reservoir (Contract No. 14-06-200-5057A) ("New Hogan Contract"). The New Hogan Contract is a repayment contract requiring SEWD and CCWD to pay for the cost of conservation storage. CCWD also pays for a proportionate share of annual operation and maintenance costs of the New Hogan Project. In return, CCWD and SEWD are allocated the entire yield of the New Hogan Project for the authorized purposes of use. Under the New Hogan Contract, Reclamation holds the appropriative water right permits issued by the State Water Resources Control Board.

Simultaneous with execution of the New Hogan Contract, CCWD and SEWD entered into a second, separate contract that governs payment for the New Hogan Project and allocation of New Hogan water between the two districts ("CCWD-SEWD Contract"). Among other things, the CCWD-SEWD Contract allocates 43.5% of New Hogan Project yield to CCWD and the remaining 56.5% to SEWD. As noted, the CCWD-SEWD Contract does provide that at such times that CCWD does not request its full 43.5% entitlement, SEWD may use CCWD water² but only until CCWD requires that water. Each year, CCWD notifies SEWD of how much water CCWD requires during that year and, in any given year, CCWD can require up to its full 43.5%. That amount must be made available to CCWD on request. In other words, if SEWD uses

² SEWD's right to use the water is limited by the specific terms of the contract between SEWD and CCWD.

CCWD water, SEWD must terminate this use upon CCWD's request for increased supplies, in the same year that CCWD requests the increased supplies. SEWD has no continuing right to this water, and therefore SEWD customers cannot rely on this water. CCWD intends to use its full 43.5% allocation in the future. Accordingly, the WSA should be revised to delete any reference to so-called "unused" CCWD New Hogan water for purposes of water supply planning for the City of Stockton municipal area.

Page-Specific Comments

WSA, Page 19 states that "[e]xisting firm surface water contracts held by SEWD include a Bureau of Reclamation (Reclamation) contract (New Hogan Reservoir) and a Calaveras County Water District (CACWD) contract on the Calaveras River based on appropriative water rights held by CACWD . . ." This statement is incorrect. The New Hogan Contract and the CCWD-SEWD Contract are relevant to the same supply of water, and both contracts are based on appropriative water rights held by Reclamation.³

WSA, Page 20, Table 6, just below the line item describing New Hogan water supplies there is another item entitled "CACWD Appropriative Water Rights."⁴ This second item purports to identify up to 10,000 afy from "unused CACWD rights" that will be permanently available to the City of Stockton at the City's build-out. This 10,000 afy does not exist. As noted above, if this line item is intended to refer to New Hogan water, it is inaccurate because CCWD will use all of its 43.5% entitlement in the future, and neither SEWD nor the City can rely on that water for long-term planning. If this item is intended to refer to any other CCWD water right, then it is simply in error: beyond the limited availability provided by the SEWD-CCWD contract, there is no other scenario under which SEWD has access to CCWD water supplies.

WSA, Page 20 states that ". . . as development continues in Calaveras County, less of the CACWD water will be available to SEWD and its customers. This contract currently yields 24 TAF and will ultimately be decreased to 10 TAF at build-out." Again, this 10,000 afy does not exist; the full amount of CCWD's entitlement can be requested by CCWD in any given year. . . . Moreover, CCWD will use its full entitlement in the future. There is no scenario under which the City can rely on unused CCWD entitlement for purposes of water supply planning.

WSA, Page 21, Figure 7 shows a "Calaveras River Water Right Transfer (10TAF)." Again, this 10,000 afy does not exist; the full amount of CCWD's entitlement can be requested by CCWD in any given year. Moreover, CCWD will use its full entitlement in the future. There is no scenario under which the City can rely on unused CCWD entitlement for purposes of water supply planning.

³ There is a complex history that informs interpretation of the New Hogan contracts, but which is not relevant here because the City cannot rely on "unused" CCWD supplies.

⁴ As indicated herein, at present the appropriative rights for New Hogan are held by the U.S. Bureau of Reclamation, and not CCWD or SEWD.

WSA, Page 54 refers to a "transfer" of CCWD's rights to New Hogan water. Again, it is inaccurate to characterize the interim, temporary, year-to-year availability of water to SEWD from CCWD's New Hogan entitlement as a "transfer." This water may not be available to SEWD in any given year, and will not be available in the long-term.

The New Hogan Project Is Not A CVP Facility.

WSA, Page 35 states that New Hogan supplies are subject to Central Valley Project ("CVP") deficiencies. However, the New Hogan contract is not a CVP contract and is not subject to CVP deficiencies.

Conclusion

As previously offered, I would be happy to make available members of my staff to work with representatives of the City of Stockton to assist with future water supply planning as it relates to CCWD water supplies. I look forward to receiving notices of document availability and public hearings on these topics in the future. In the meantime, please also feel free to contact me on a more informal basis to discuss any questions or concerns.

Sincerely,


David Andre, General Manager
Calaveras County Water District

Attachment

cc: Larry Diamond, CCWD
Ed Pattison, CCWD
Kevin Kauffman, SEWD

CCWD-1

The commentor states that the City's WSA (DEIR Appendix R) incorrectly describes SEWD's rights to water supplies held by the U.S. Bureau of Reclamation (Reclamation) and stored at New Hogan Reservoir, and identifies certain inaccuracies in the WSA. In response, the City has revised Section 2.4.2 of the WSA ("SEWD Surface Water Contract Entitlements") to correct the inaccuracies. In sum, the City agrees that certain statements in the WSA were inaccurate and has corrected those statements, but the City disagrees that SEWD is not entitled to rely on the unused portion of Calaveras County Water District's (CCWD's) New Hogan water supply entitlements when determining the volume of supplies available to serve the MLSP project and the City, as described in the WSA and DEIR and as amended by this FEIR. Please refer to Section 5.4 of Chapter 5 of this FEIR. These changes do not alter the conclusions of the DEIR.

**THE CENTRAL SAN JOAQUIN WATER
CONSERVATION DISTRICT**

"67,000 acres of diversified family farms in San Joaquin County, California"
311 E. Main St., Ste. 202, Stockton, California 95202
(209) 466-7952 • FAX 466-7953

DIRECTORS
GRANT THOMPSON
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COUNSEL
REID W. ROBERTS

April 17, 2007

David Stagnaro, AICP
Senior Planner
Stockton Community Development Department, Planning Division
345 North El Dorado Street .
Stockton CA 95202

RECEIVED
APR 23
CITY OF STOCKTON

RE: Mariposa Lakes DEIR

Dear Mr. Stagnaro:

The Central San Joaquin Water Conservation District submits the following comments regarding the Draft Environmental Impact Report prepared for the above referred project.

1. As set forth in the Draft report, the project area location is an area of ground water overdraft. Water supply issues, in particular water extracted from the area ground water aquifer must be closely examined and water extraction rates must be accurately quantified. The effect upon the adjacent Groundwater aquifer must be adequately addressed in order to insure and guarantee that no negative effect upon the Groundwater table will occur.
2. The Draft report describes a recharge project to be located east of the development boundary. This recharge site and the recharge project must be fully investigated to address the following concerns:
 - a. **Water Supply.** The draft report refers to various sources of surface water for the recharge project. These sources must be specifically described and quantified prior to project approval. The water source should be fully secured prior to approval.
 - b. **Water rate recharge.** The draft report sets forth rates of recharge and estimated ground water banking adjacent to the project area. The report should set forth specified quantities of water which will be

banked under the recharge plan and which will be available for extraction. The report should consider the possible migration of recharged water away from the recharge site and the overall effectiveness of the planned recharge on the ground water aquifer, underlying the project area and those areas to the south and east.

- c. **Safe yield.** Water banked at the recharge facility should not be removed without a specified determination of safe yield. A base case of safe yield should be established to set an overdraft standard which shall not be exceeded. The extraction rate should guarantee the safe yield standard and should not be merely a two to one ratio as set forth in the report.
- d. **Staged Development.** The project description calls for a staged development. Due to the concerns regarding the overall effectiveness of the recharge project, mitigation measures should be adjusted as development occurs. In the event that the recharge is not effective, then development should be controlled to insure no negative impact upon the ground water aquifer.
- e. **Drought.** Special consideration should be addressed for drought conditions. In the event of drought, no extraction should be made that subjects the ground water aquifer to overdraft below a predetermined standard. At such times, groundwater should not be extracted for the purpose of supplying water to the lakes or other non-potable purposes.
- f. **Participation of the District.** Any recharge facility should be planned, designed, operated, and maintained with the involvement and participation of the Central San Joaquin Water Conservation District. No recharge facility should be constructed without the consent and approval of the District.
- g. **Monitoring of the recharge project.** Appropriate monitoring of water level conditions should be maintained to assure that the recharge project is in fact recharging the specific area and is making water available for planned extraction.

3. The draft report sets forth plans to utilize Duck Creek and Little John's Creek as surface water delivery channels. Both channels are currently utilized by Central San Joaquin for water delivery from April through October. In addition, both streambeds are utilized as flood control channels. The report should address the effect upon District facilities, in both Duck Creek and Little John's Creek, when water is delivered to the project site. Questions of erosion, operations, and maintenance should be addressed. The report should also address additional improvements to both streambeds for conveyance of project water.
4. In the event that the project is permitted and goes forward, the area will be annexed to the City of Stockton. Such resulting annexation will create financial and operational issues with Central San Joaquin. Such issues must be adequately addressed and resolved before project approval.
5. The Project is planned in an area that is almost exclusively developed for agriculture. The report should address the effect of this densely populated urban development upon the surrounding agricultural area, to insure and guarantee that no adverse effect shall occur.



Reid W. Roberts, Secretary
C.S.J.W.C.D.

- CSJWCD-1** The commentor states generally the importance of careful evaluation of the proposed project’s potential impacts to groundwater. As described on DEIR pages 11-34 through 11-39, 2 acre-feet of purchased surface water would be applied to the ground for every 1 acre-foot of water withdrawn. Therefore, the project applicant would only be withdrawing water that they have purchased and placed into the ground—they would not be withdrawing any existing groundwater. As discussed on DEIR pages 11-39 through 11-41, Mitigation Measures 11-6a, b, and c would ensure that the groundwater recharge project does not have an adverse impact on the existing groundwater aquifer. No revisions to the DEIR are necessary.
- CSJWCD-2** The commentor requests more particular information on the water supply that would be used to serve the recharge project. See Master Response 5 in Chapter 3, “Master Responses,” of this FEIR.
- CSJWCD-3** The commentor requests more particular information on the rate of recharge as well as the quantities of banked water that would be available for extraction. The commentor also requests consideration of the migration of banked water from the project site. See Master Response 5 in Chapter 3, “Master Responses,” of this FEIR. The migration of banked water away from the project site is considered in DEIR Appendices Q and BB. To account for possible migration, 2 acre-feet of water would be applied to the ground surface for every 1 acre-foot of water that is withdrawn.
- CSJWCD-4** The commentor asks for a determination of safe yield before allowing removal of banked water. Safe yield is defined as “the amount of naturally occurring groundwater that can be withdrawn from an aquifer on a sustained basis, legally and economically, without impairing the native groundwater quality or creating an undesirable effect, such as environmental damage” [emphasis added] (Fetter 1988); *City of Los Angeles v. City of San Fernando* (1975) 14 Cal.3d 199, 278; *Central and West Basin Water Replenishment Dist. v. Southern Cal. Water Co.* (2003) 109 Cal. App. 891, 899). Therefore, the safe yield factor established for groundwater pumping in the Stockton area does not apply to the proposed groundwater recharge project, which would consist of purchased surface water that is applied to the ground surface and then allowed to filter into the groundwater aquifer. As described on DEIR pages 11-34 through 11-39, 2 acre-feet of purchased surface water would be applied to the ground for every 1 acre-foot of water that is withdrawn. The recharge project would also include enough applied water to allow for an estimated 5% loss of recharged water that may move away from the site as it filters downward through the aquifer. Thus, this extra 5% of applied recharged water would contribute to the regional aquifer. Therefore, the recharge project would only withdraw water that has been purchased and placed into the ground—no existing groundwater would be withdrawn. As discussed on DEIR pages 11-39 through 11-41, Mitigation Measures 11-6a, b, and c would ensure that the groundwater recharge project does not have an adverse impact on the existing groundwater aquifer. Mitigation Measure 11-6d requires that a suitable entity with experience in groundwater recharge operations must be established to operate and maintain the recharge project. No revisions to the DEIR are necessary.

CSJWCD-5

The commentor requests that mitigation measures be adjusted as development occurs. As stated on pages 11-41 and 11-42 of the DEIR, implementation of Mitigation Measures 11-6a, 11-6b, 11-6c, and 11-6d would reduce potentially significant direct impacts related to groundwater recharge to a less-than-significant level, and implementation of Mitigation Measures 7-10a, 7-10b, 7-10c, 8-5a, 8-5b, 11-1a, 11-1b, 11-4a, 11-4b, and 11-8 would reduce any potentially significant indirect impact(s) related to groundwater recharge to a less-than-significant level. However, the City agrees that the addition of a new mitigation measure requiring that development phases be controlled in relationship to the effectiveness of groundwater recharge, would also help to reduce potentially significant direct and indirect impacts related to groundwater recharge. Therefore, a new Mitigation Measure 11-6e is hereby added, and edits to the “Implementation” and “Significance after Mitigation” of the Mitigation Measures for Impact 11-6 are also made as described in Chapter 5, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” New Mitigation Measure 11-6e reads as follows:

If the results of the groundwater monitoring plan required in Mitigation Measure 11-6a show that recharge operations are not functioning at the level necessary to serve proposed development, the City shall not issue building permits for any additional phases of project development until the applicant(s) has demonstrated to the satisfaction of the City that appropriate corrective actions (as contemplated in Mitigation Measure 11-6b) have been implemented.

These changes do not alter the conclusions of the DEIR, nor does the inclusion of Mitigation Measure 11-6e present any new significant environmental effects.

CSJWCD-6

The commentor suggests that groundwater extraction during drought conditions should not subject the aquifer to overdraft below a predetermined standard. As described on DEIR pages 11-34 through 11-39, 2 acre-feet of purchased surface water would be applied to the ground for every 1 acre-foot of water withdrawn. The recharge project would also include enough applied water to allow for an estimated 5% loss of recharged water that may move away from the site as it filters downward through the aquifer. Therefore, regardless of whether the time of withdrawal occurs during a wet year or a drought year, the project applicant would only be withdrawing water that they have purchased and placed into the ground—they would not be withdrawing any existing groundwater from the aquifer. Furthermore, the project applicant would be banking an extra supply of water that would be used to supply the project’s nonpotable water needs in times of an extended drought. As stated on DEIR pages 11-38 and 11-39, the project applicant would bank a 3-year reserve of water. In the event of a drought that lasts longer than 3 years (1) water conservation measures that are consistent with those described in the City of Stockton 1990 Urban Water Management Plan would be implemented (see Mitigation Measure 11-6a) and (2) the project applicant could also take any of the additional three actions described in Mitigation Measure 11-6b. Those actions include the purchase of additional land to expand the recharge facility, purchasing additional surface water supplies, and/or reducing the project’s landscape irrigation and lake level maintenance needs. The secondary impacts associated with those three actions are evaluated in the DEIR as part of Mitigation Measure 11-6b. See also edits to Mitigation Measure 11-6b in FEIR Chapter 5, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.”

CSJWCD-7

The commentor suggests that the recharge program should be coordinated with CSJWCD. Thank you for your comment. The proposed recharge facility would be

planned and operated in conjunction with CSJWCD. See also DEIR Mitigation Measure 11-6d, which requires that a suitable entity with groundwater recharge experience be established to operate and maintain the recharge program. No revisions to the DEIR are necessary.

CSJWCD-8

The commentor suggests that an appropriate groundwater monitoring should program be implemented. Mitigation Measure 11-6 requires the project applicant to prepare a groundwater monitoring plan covering all project phases, which would be used to direct, assess, and report routine observations regarding groundwater conditions at the Mariposa Lakes development and the Arbini recharge site. This mitigation measure also includes provisions for corrective actions should the groundwater monitoring results indicate that recharge is not functioning as required for project development. No revisions to the DEIR are necessary.

CSJWCD-9

The commentor questions the availability of on-site creeks to convey water to the project site, especially in the summer months, because they are currently utilized during the summer by CSJWCD. Because the project applicant would use existing, surplus water that is already flowing down Duck Creek and North Little Johns Creek, no stream channel improvements for conveyance capacity would be needed, nor would any new flooding or erosion hazards occur. Impacts from off-site improvements relating to installation of a diversion structure in Duck Creek and North Little Johns Creek are evaluated under separate impact headings (“Off-Site Improvements”) in Chapters 4 through 17 of the DEIR, and mitigation measures have been included where appropriate. Furthermore, Mitigation Measure 11-6c requires the project applicant to prepare a nonpotable off-site water source feasibility assessment covering all project phases, which would be submitted to the City for review. This assessment must evaluate the availability and quantity of off-site surface water supplies, delivery mechanisms from the source to the SPA, and provide a cost-benefit analysis for each identified off-site source. No revisions to the DEIR are necessary.

CSJWCD-10

The commentor indicates that, should annexation occur, the City should address the financial implications to the CSJWCD. Contracts for the supply of surface water by CSJWCD and SEWD to meet the project’s nonpotable water needs, and a contract for operation of the Arbini recharge facility, along with any other relevant issues with CSJWCD, would be executed prior to the commencement of any construction in connection with the proposed project, and prior to any detachment of the SPA from CSJWCD and annexation into the SEWD Service Area. No revisions to the DEIR are necessary.

CSJWCD-11

The commentor expresses generalized concerns about placing an urbanized area next to agricultural areas. The proposed project’s potential impacts on agricultural resources are addressed in the following locations in the DEIR:

- ▶ “Agricultural Resources,” pages 5-10 through 5-16;
- ▶ “Cumulative Impacts,” pages 18-7 and 18-8;
- ▶ “Growth-Inducing Impacts,” pages 20-4 and 20-5;
- ▶ “Irreversible Environmental Changes,” page 21-1; and
- ▶ “Significant and Unavoidable Impacts,” pages 22-1 through 22-3.

No revisions to the DEIR are necessary.

Montezuma Fire District

In San Joaquin County
Station 18-1, 2405 S. "B" St., Stockton, CA 95206
Station 18-2, Stockton Metro Airport



Administration
Business Phone:
(209) 464-5234
Fax (209) 466-2624

Board of Directors: Linda A. Todd
Chair Person

Sue Heaton
Director

Jeff Hachman
Director

Edward Martel
*Fire Chief
& Clerk to the Board*

To: City of Stockton
c/o Community Development Dept. Director M. Niblock
345 N. El Dorado Street
Stockton, Ca. 95202

March 23rd 2007

MAR 26 2007

From: Fire District Administration

Re: Public review of the draft environment impact report for the mariposa Lakes specific plan project (DEIR 11-03)

The Montezuma Fire Protection District is in receipt of your Draft Environmental Impact Report (EIR) for the Mariposa Lakes Specific Plan Project. Although the document relates to and addresses mostly environmental issues your document briefly discus Fire Protection Services 15.1.1, with very little if any about the current service the Montezuma Fire District provides. Again the district would like to inform you of (3) three very important public safety issues, which are;

- 1.) Current Fire Protection Service.
- 2.) Current Fire Prevention Service.
- 3.) Fiscal impact to the District.

1.) Current Fire Protection Service:

The Montezuma Fire currently serves a portion of the project site listed above. The portion protected by the district is the most populated. (See attached sheets for boundary's)

The district is currently providing fire suppression, rescue, fire training, aircraft fire fighting, hazardous material response and emergency medical service to all areas with in the fire district to include a portion of the above listed area.

The Montezuma Fire District currently serves a 9.6 square mile area and staffs two (2) Fire Stations at all times. The Fire district also has an Automatic Aid agreement with the French Camp Fire District to responds to all structure fires automatically.

The nearest fire station is Sta.# 181 located @ 2405 S. "B" Street. Response time to the project area by district personnel is approximently less than two (2) minutes. (approx. 1 5/10 of a mile)

2.) Current Fire Prevention Service:

The Montezuma Fire District also provides Fire Prevention service to the area mentioned above. Through out the area there are mix businesses to be inspected on an annually bases and meet California Fire Code requirements. All other parcels with in the area are required to be inspected per the San Joaquin County Weed Abatement program. Any Plan Checking requirements for new constructions are contracted out by the district to San Joaquin County Fire Prevention Bureau.

3.) Fiscal impact to the district:

Although the fire district does not have an exact amount of loss of revenue, it is projected to be a substantial amount that would impact the district greatly. (lost of personnel staffing would occur) If the ENTIRE area would be detach from the district the following lost of revenue would occur.

- Which are;
- A.) State Property Tax
 - B.) Montezuma Fire District Tax Override Assessment
 - C.) Fire Prevention Bureau -- Fire Permit Fee's

Conclusion:

Attached you will find several copies of SJC Assessor Parcel Map pages, the district will be forwarding such pages and a memorandum to the SJC Auditor-Controller office to seek the total amount lost in State Property Tax.(this task may take up to 120 days)

Conclusion Continues:

Also, the district it self will conduct a study on lost of revenues per the Montezuma Fire District Override Tax Assessment and Fire Permit Fee's which the district will forward to you with in the next 30-45 days.

The district did enter in an agreement with the City of Stockton and San Joaquin County were the district receives current state property tax sharing were Annexation occurs. This agreement is valid from 2005 thru 2010 only. If annexation was to occur today the district would receive a maximum "tax revenue" from 2008- 2010. Approximently (2) two years of wing off tax. However the district Override Assessment and Fire Permit Fees would end immediately upon annexation.

In ending, the district has numerous plans it would like to proposed to the City of Stockton regarding this proposed project and will request meetings with you, your staff and Chief Hittle from the city's fire department.

Thank you, in advance for your cooperation.

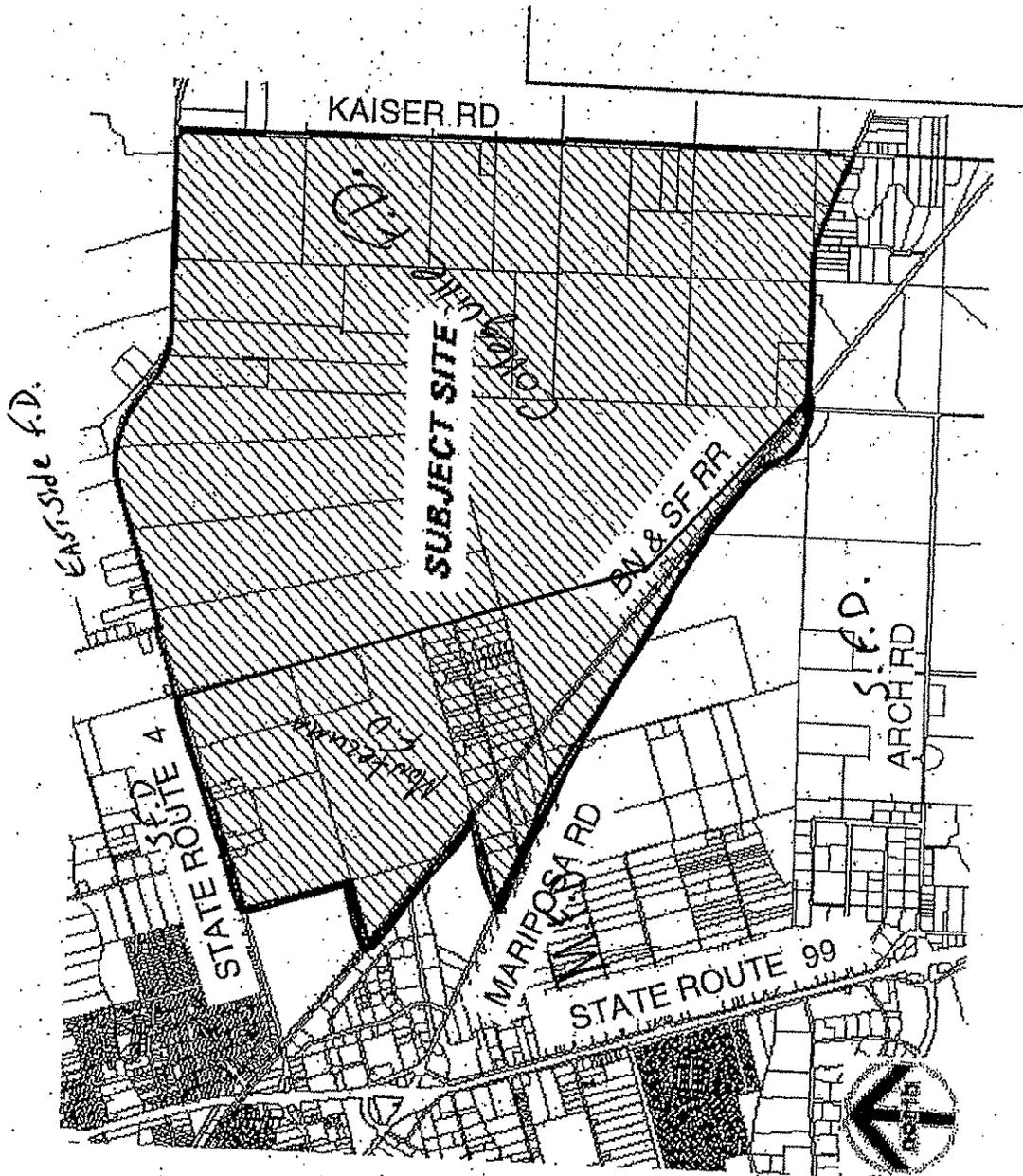
Respectfully,



Edward O. Martel – Fire Chief

Moe

C; MFD Files
MFD Board of Directors
LAFCO – J. Glaser, Interim Executive Director
All San Joaquin Board of Supervisors
Mayor Chavez, City of Stockton



179-22

THIS MAP IS FOR
ASSESSMENT USE ONLY

SEC. 69 & POR. SECS. 59,
60, 70, 80, WEBER GRANT

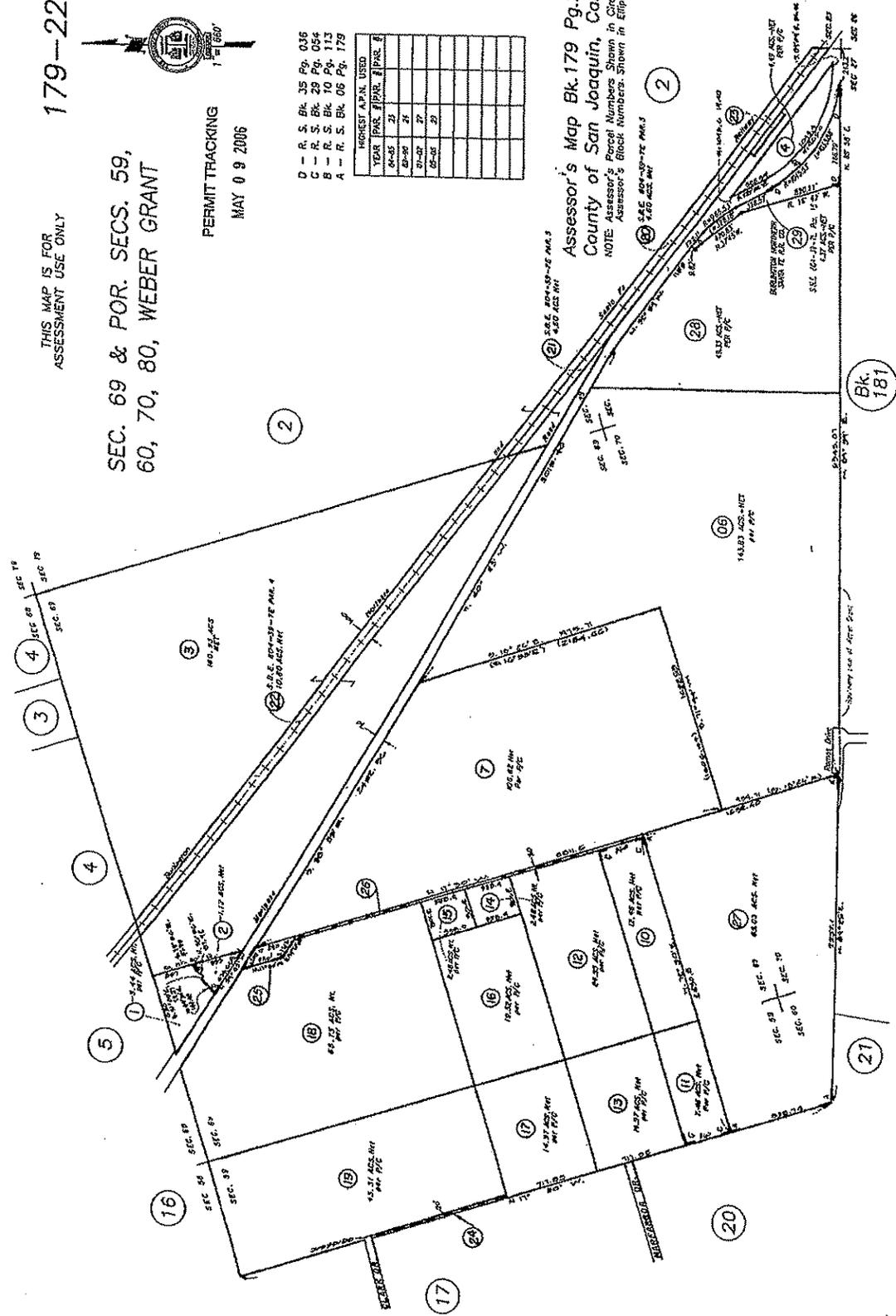


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D - R. S. Bk. 35 Pg. 036
C - R. S. Bk. 29 Pg. 054
B - R. S. Bk. 10 Pg. 113
A - R. S. Bk. 06 Pg. 179

YEAR	PERM. #	PARCEL #	PERM. #
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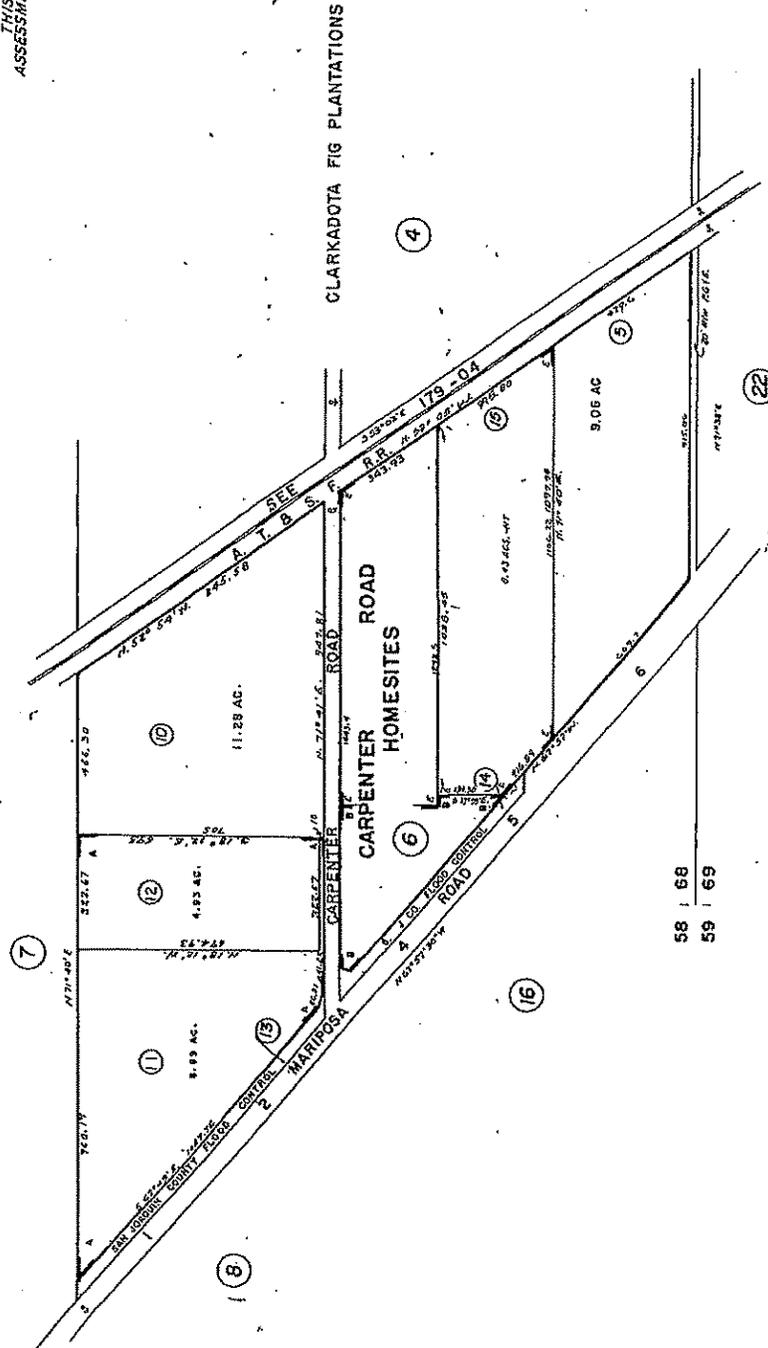
Assessor's Map Bk. 179 Pg. 22
County of San Joaquin, Calif.
NOTE: Assessor's Parcel Numbers Shown in Circles.
Assessor's Block Numbers Shown in Ellipses.



THIS MAP FOR
ASSESSMENT USE ONLY

179-05

PERMIT TRACKING
AUG 18 1993



CLARKADOTA FIG PLANTATIONS

SCALE 1"=300'
SAN JOAQUIN COUNTY
ASSESSOR'S MAPS

C-R.S. Bk 37 P. 137
B-P.M. Bk. 6 P. 95
A-P.M. Bk. 5 P. 36

MONTICELLI FIRE DISTRICT

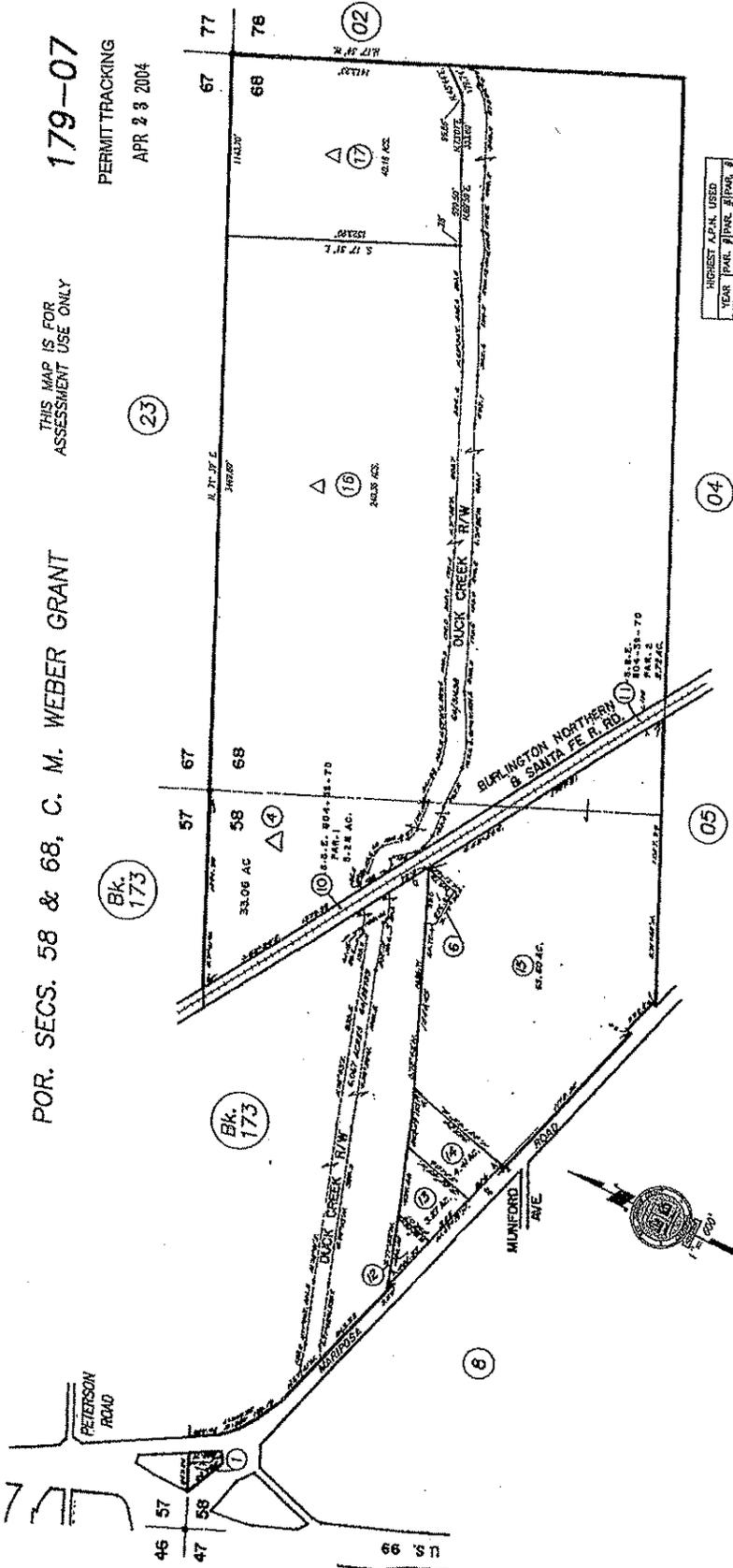
POR. SECS. 58 & 68, C. M. WEBER GRANT

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179-07

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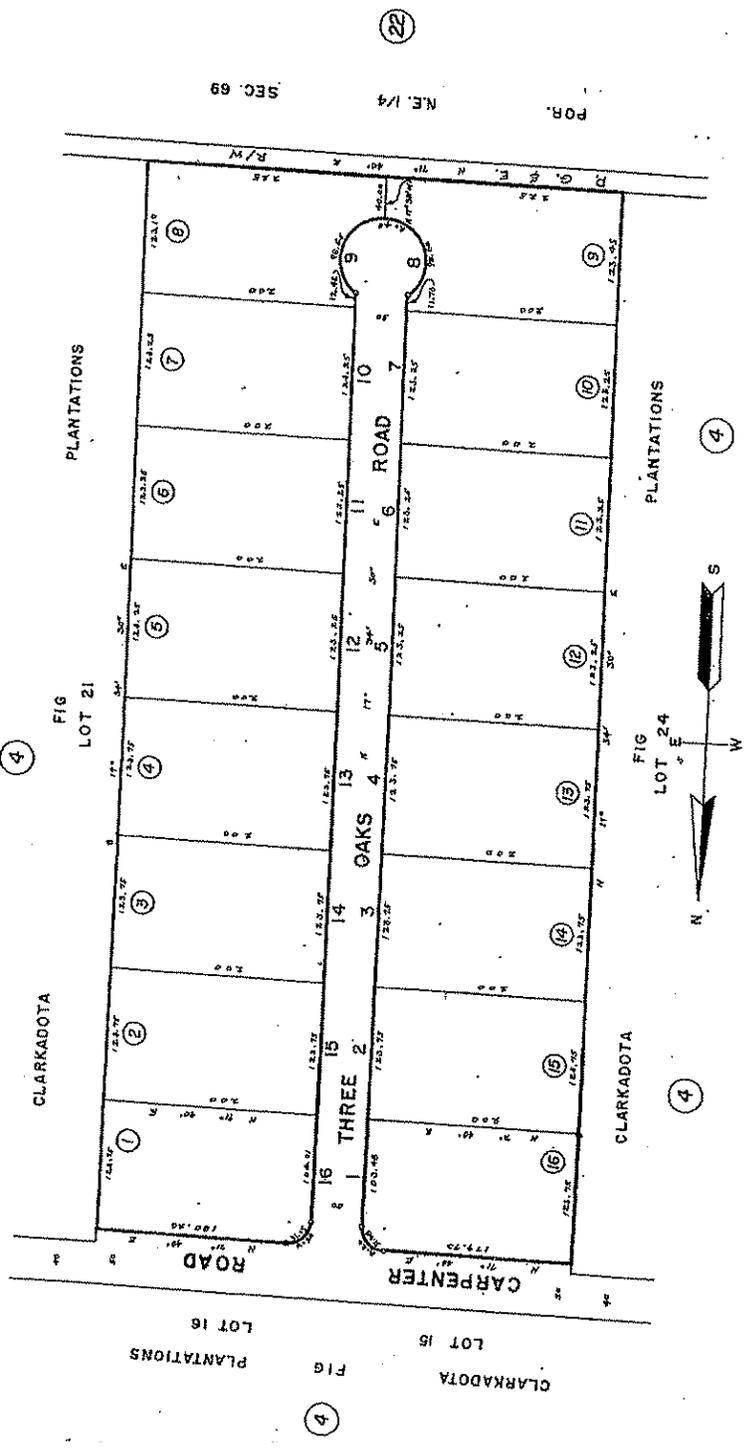
△ - WILLIAMSON ACT PARCELS

NOTE: Assessor's Parcel Numbers Shown in Circles
Assessor's Block Numbers Shown in Ellipses

A - P.M. Bk. 17 Pg. 123

Assessor's Map Bk. 179 Pg. 07
County of San Joaquin, Calif.

179-03



THREE OAKS
 SCALE 1"=100'
 SAN JOAQUIN COUNTY
 ASSESSORS MAPS

Montezuma Fire District

In San Joaquin County
Station 18-1, 2405 S. "B" St., Stockton, CA 95206
Station 18-2, Stockton Metro Airport



Administration
Business Phone:
(209) 464-5234
Fax (209) 466-2624

Board of
Directors:

Linda A. Todd
Chair Person

Sue Heaton
Director

Jeff Hachman
Director

Edward Martel
Fire Chief
& Clerk to the Board

Memorandum

To: SJC Auditor-Controller – A. Van Houten

3/23/07

From: Chief Martel

Re; Proposed City of Stockton Annexation Mariposa Lakes Project.

Dear Mr. Van Houten

The district is requesting if you can inform the district approximat revenue the district is currently receiving for state property tax. Attached you will find copies of proposed parcel's that would be effected.

Thank you,

Edward Martel – Chief

C; MFD Files
City of Stockton Comm. Develop. Dir. M. Niblock

Letter
MONTEZUMA
Response

Montezuma Fire District
Edward Martel, Fire Chief
March 26, 2007

MONTEZUMA-1

Thank you for your comment that provides background information about current fire protection and prevention services within the Montezuma Fire District. Impact 15-2 on pages 15-15 and 15-16 of the DEIR addresses the proposed project's demand for fire protection facilities, systems, equipment, and services. Fiscal issues related to fire protection services are not a CEQA issue, and will be addressed in the project applicant's Public Facilities Financing Plan. No revisions to the DEIR are necessary.



**NORTHEASTERN SAN JOAQUIN COUNTY
GROUNDWATER BANKING AUTHORITY**

1810 EAST HAZELTON AVENUE
STOCKTON, CALIFORNIA 95205
(209) 468-3531
(209) 468-2999/FAX

GBA MEMBERS

- CALIFORNIA WATER SERVICE COMPANY
- CENTRAL DELTA WATER AGENCY
- CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT
- CITY OF LODI
- CITY OF STOCKTON
- NORTH SAN JOAQUIN WATER CONSERVATION DISTRICT
- STOCKTON EAST WATER DISTRICT
- SAN JOAQUIN COUNTY
- SOUTH DELTA WATER AGENCY
- WOODBRIDGE IRRIGATION DISTRICT
- SAN JOAQUIN FARM BUREAU FEDERATION - ASSOCIATE MEMBER

STEVEN GUTIERREZ
CHAIRMAN

TOM FLINN
SECRETARY

Mr. Michael M. Niblock, Director
Mr. David Stagnaro, Senior Planner
City of Stockton
Community Development Department
345 North El Dorado Street
Stockton, California 95202

SUBJECT: COMMENTS ON DEIR 11-03 – MARIPOSA LAKES SPECIFIC PLAN PROJECT

Dear Director Niblock and Mr. Stagnaro:

The Northeastern San Joaquin County Groundwater Banking Authority (Authority) was established in 2001 to collectively develop locally supported projects to strengthen water supply reliability in Eastern San Joaquin County. Formed as a joint powers authority, Authority members agree to work cooperatively and to speak with one voice in their efforts to achieve reliable and affordable water supplies for the region. Since the Authority's formation in 2001, members have taken steps to preserve the valuable groundwater resources underlying our region.

In 2004, the Authority adopted a Groundwater Management Plan (Plan) for the Eastern San Joaquin Groundwater Basin (Basin) (Water Code Section 10750 et. seq.). The purpose of the Plan was to review, enhance, assess, and coordinate existing groundwater management policies and programs in Eastern San Joaquin County and to develop new policies and programs to ensure the long-term sustainability of groundwater resources in Eastern San Joaquin County. To better define the supporting values included with this Plan's purpose, the Authority has listed the following mission values centered on the development of the Plan as outlined in Table 1.

Be implemented in an equitable manner	Maintain or enhance the local economy	Protect groundwater and surface water quality
Be affordable	Minimize adverse impacts to entities within the County	Provide more reliable water supplies
Exhibit multiple benefits to local land owners and other participating agencies	Maintain overlying landowner and Local Agency control of the Groundwater Basin	Restore and maintain groundwater resources
Minimize adverse impacts to the environment	Protect the rights of overlying landowners	Increase amount of water put to beneficial use within San Joaquin County

In order to meet the purpose of the Plan and ensure the long-term sustainability of the Basin, the Authority created the following Plan objectives:

1. Maintain long-term sustainability of the Basin through the development of management objectives, practices and conjunctive use projects to benefit the social, economic and environmental viability of Eastern San Joaquin County.
2. Prevent further saline intrusion and degradation of groundwater quality throughout the Basin.
3. Increase understanding of Basin dynamics through the development of a sound research program to monitor, evaluate, and predict Basin conditions.
4. Maintain local control of the groundwater Basin through the responsible management of groundwater resources by overlying cities, counties, water districts, agencies, and landowners.
5. Formulate rational and attainable Basin management objectives to comply with Senate Bill 1938 and retain State funding eligibility.
6. Formulate voluntary policies, practices and incentive programs to meet established Basin management objectives.
7. Formulate appropriate financing strategies for the implementation of the Plan.

San Joaquin County overlies the Eastern San Joaquin, Cosumnes, and Tracy Sub-basins of the greater San Joaquin Valley Groundwater Basin. For the purposes of the Plan, the Eastern San Joaquin County Groundwater Management Area (GMA) is defined as the portion of San Joaquin County overlying the Eastern San Joaquin and Cosumnes Sub-Basins. Within the GMA, the member agencies of the Authority will implement the Groundwater Management Plan within their respective boundaries. To ensure that every parcel in the GMA is represented, all unorganized areas will be included in the San Joaquin County Flood Control and Water Conservation District. Figure 1 depicts that portion of San Joaquin County within the boundaries of the GMA. The Authority has adopted the following Basin Management Objectives for the GMA.

Management Objective No. 1: Maintain or enhance groundwater elevations to meet the long-term needs of groundwater users within the GMA.

Management Objective No. 2: Maintain or enhance groundwater quality underlying the Basin to meet the long-term needs of groundwater users within the Groundwater Management Area.

Management Objective No. 3: Minimize impacts to surface water quality and flow due to continued Eastern San Joaquin Groundwater Basin overdraft and planned conjunctive use.

Management Objective No. 4: Prevent inelastic land subsidence in Eastern San Joaquin County due to continued groundwater overdraft.

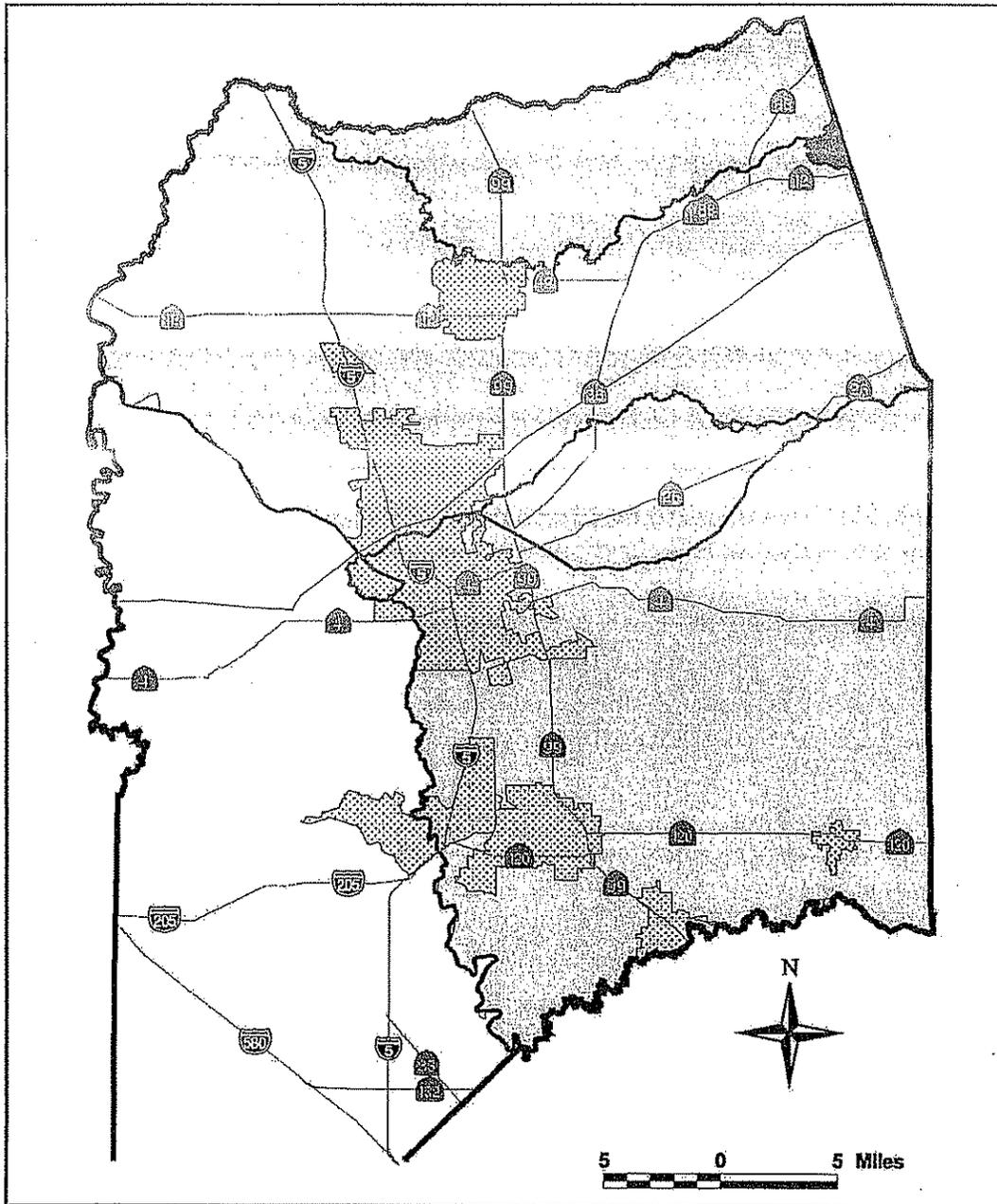


Figure 1
Groundwater Management Area

Mr. Michael Niblock, Director
Mr. David Stagnaro, Senior Planner
COMMENTS ON DEIR 11-03
MARIPOSA LAKES SPECIFIC PLAN PROJECT

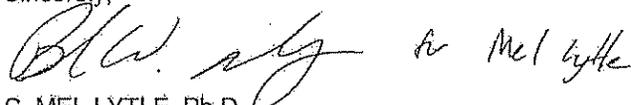
-4-

On April 11, 2007, the Authority Coordinating Committee discussed the Draft Environmental Impact Report from the Mariposa Lakes Specific Plan. The document has provided information on the proposed development of several lake features and an off-site groundwater recharge/banking facility. At that meeting, several discussions and recommendations occurred regarding the Project which are summarized as follows:

- The development and operation of groundwater recharge/banking facilities be consistent with established Basin Management Objectives. Project extraction operations should not cause groundwater levels to decline in adjacent properties during persistent drought conditions.
- To the greatest extent possible the lake features of the proposed development be constructed in a way to allow for groundwater recharge. This can be achieved by modifying how and at what elevation lake lining materials are installed.
- The proposed off-site groundwater recharge/banking facility should be supplied with surface water made available from either local streams, the Stanislaus, Calaveras and/or Mokelumne Rivers.

If you have questions or would like to discuss these comments, please contact me at 468-3089.

Sincerely,



C. MEL LYTLE, Ph.D.
Water Resource Coordinator
Northeastern San Joaquin County Groundwater Banking Authority

CML:THM:rc
WR-7D067-RC1

- c: Bob Granberg, Deputy Director, City of Stockton Water Resources Planning
Mark Madison, Director, City of Stockton MUD
T. R. Finn, Authority Secretary/Director of Public Works
Thomas M. Gau, Chief Deputy Director

NSJCGBA-1

The Northeastern San Joaquin County Groundwater Banking Authority (NSJCGBA) recommends that the recharge program be developed consistent with the NSJCGBA's established Basin Management Objectives, and that extraction operations not cause groundwater levels to decline in adjacent properties. The development and operation of groundwater recharge/banking facilities would be consistent with established Basin Management Objectives. For every 1 acre-foot of water that would be withdrawn from the recharge project, 2 acre-feet of water would be applied to the ground surface; therefore, project extraction operations would not cause groundwater levels to decline in adjacent properties under any conditions (drought years or wet years) because the project applicant would only be withdrawing surface water that they have already purchased and placed into the ground. (See generally Master Response 5 in Chapter 3, "Master Responses," of this FEIR.) No revisions to the DEIR are necessary.

NSJCGBA-2

The commentor requests that the lake features of the proposed project be constructed in such a way as to allow for groundwater recharge. Various lake design alternatives were considered during the planning phase of this project. Lined lakes, unlined lakes, and a hybrid line/unlined condition were all considered in initial planning, and for various reasons a lined lake network was selected. The key reasons for selecting a lined lake network are discussed below.

- ▶ **Ground saturation.** Constantly saturated soils that occur adjacent to unlined lakes are not desirable in residential developments. Most of the proposed lakes would be bordered by homes, many located close to the lake edges. If the lakes are not lined, much of the ground surrounding the lakes would remain saturated, leading to questions of foundation stability and the potential for mold problems in homes. Lake lining would alleviate these problems.
- ▶ **Maintenance as groundwater recharge basins.** The infiltration rate within a lake would decrease substantially over time unless regular maintenance is performed on the lake bottom. Like all quiescent water bodies, artificially created lakes gradually accumulate layers of fine-grained sediments on the lake bottom that would not substantially fill the lake, but would substantially decrease the rate at which water infiltrates into the ground. Eventually, an unlined or partially lined lake would need to be drained, dried, and treated (the soil disced or scraped) to reestablish adequate pore spaces in the surface layer to promote adequate infiltration. This draining/drying/treatment process would be costly, time-consuming, unaesthetic, and noisy for adjacent and nearby property owners. This process would require a substantial amount of time (months) and would require frequent repetition to maintain adequate infiltration rates in the lakes. Given the large size of the proposed project, the phased development over a period of 25 years, and the substantial number of proposed lakes (11), this process would be infeasible.
- ▶ **Low infiltration Rates.** The total volume of water recharged into underlying aquifers from the unlined portions of the lake network would be small. The City believes that the small amount of total infiltrated water would not justify the periodic

draining/drying/ treating process of the lakes that would be necessary. Furthermore, infiltration rates would diminish quickly after construction.

- ▶ **Operating water surface fluctuations.** One of the goals of the lake network design is to maintain operating water surfaces that have limited regular fluctuations. Evaporation and irrigation withdrawals from the lake can be estimated and planned for before the lakes are built. It would be substantially more difficult to maintain operating water levels with the added complexity of unknown infiltration rates.
- ▶ **Groundwater recharge plans are in place.** The proposed project includes plans to use the adjacent Arbini Ranch property as a groundwater recharge and water storage facility (evaluated in detail on pages 11-34 through 11-39, and pages 11-59 through 11-63 of the DEIR). This facility would be dedicated to water resources management, and thus would be maintained in a condition that promotes high rates of groundwater recharge, therefore supporting a more controlled and reliable groundwater recharge program.

For the reasons listed above, the City believes it would be infeasible to construct unlined lakes. The project description contained in DEIR Chapter 3, “Project Description,” is hereby revised to reflect this conclusion, as described in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” This change does not alter the conclusions contained in the DEIR.

NSJCGBA-3

The commentor suggests that the recharge program be supplied with surface water from local streams, the Stanislaus, Calaveras, and/or Mokelumne Rivers. The proposed off-site groundwater recharge facility would be supplied with surface water as suggested by the commentor. See the Nonpotable Water Supply Assessment prepared by SEWD, on behalf of itself and CSJWCD (attached as new Appendix Y to this FEIR), and Master Response 5 in Chapter 3, “Master Responses,” of this FEIR.



San Joaquin County
Environmental Health Department
600 East Main Street
Stockton, California 95202-3029

Website: www.sjgov.org/ehd
Phone: (209) 468-3420
Fax: (209) 464-0138

DIRECTOR

Donna Heran, REHS

ASSISTANT DIRECTOR

Laurie Cotulla, REHS

PROGRAM COORDINATORS

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Margaret Lagorio, REHS

Robert McClellon, REHS

Jeff Carruesco, REHS, RDI

Kasey Foley, REHS

May 15, 2007

David Stagnaro, AICP, Senior Planner
City of Stockton Community Development Department
Planning Division
345 North El Dorado Street
Stockton, California 95202

**RE: PUBLIC REVIEW OF THE DRAFT ENVIRONMENTAL IMPACT
REPORT FOR THE MARIPOSA LAKES SPECIFIC PLAN PROJECT
(EIR 8-03)**

The San Joaquin County Environmental Health Department (EHD) requests the following comment be added to the above project for consideration.

- 1) Section 10-4 (d) existing onsite sewage disposal systems to be abandoned shall be destroyed under permit and inspection by the Environmental Health Department (EHD).
- 2) Section 10-4(h) existing wells to be abandoned shall be destroyed under permit and inspection by the Environmental Health Department (EHD).

Should you have any questions, please call Rod Estrada, Lead Senior R.E.H.S. of my staff at (209) 468-0331.

Donna Heran, R.E.H.S., Director

Mike Huggins, Program Coordinator, R.E.H.S., R.D.I.
Environmental Health Department

MH: tl

SJCDEH-1

Thank you for your comment. Any on-site sewage disposal systems to be abandoned would be properly removed and destroyed in accordance with applicable local, state, and federal regulations as required by Mitigation Measure 10-4(d) on page 10-17 of the DEIR. No revisions to the DEIR are necessary.

SJCDEH-2

Thank you for your comment. Existing on-site wells to be abandoned would be closed in accordance with SJCDEH guidelines, as required by Mitigation Measure 10-4(h) on page 10-17 of the DEIR. No revisions to the DEIR are necessary.



THOMAS R. FLINN
DIRECTOR

THOMAS M. GAU
CHIEF DEPUTY DIRECTOR

MANUEL SOLORIO
DEPUTY DIRECTOR

STEVEN WINKLER
DEPUTY DIRECTOR

ROGER JANES
BUSINESS ADMINISTRATOR



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STOCKTON, CALIFORNIA 95201
(209) 468-3000 FAX (209) 468-2999
www.sjgov.org/pubworks

April 23, 2007

Mr. David Stagnaro
City of Stockton
345 North El Dorado Street
Stockton, California 95202

SUBJECT: DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE MARIPOSA LAKES SPECIFIC PLAN PROJECT

Dear Mr. Stagnaro:

The San Joaquin County Department of Public Works has reviewed the above mentioned document and has the following comments:

1. Duck Creek is a Project Channel maintained by San Joaquin County Channel Maintenance; the function, use, and maintenance shall not be changed by this project. Any changes to or work done in the channel, banks, or levees will require a Reclamation Board Permit.
2. Branch Creek is part Project and Non-Project Channel and is maintained by San Joaquin County Channel Maintenance; the function, use, and maintenance shall not be changed by this project. Any changes to or work done in the channel, banks, or levees will require a Reclamation Board Permit in project areas, or a San Joaquin County Water Course Encroachment Permit will be required in non-project areas.
3. North Littlejohn's Creek is designated a Project Channel by the Army Corps of Engineers and the State of California, Reclamation Board; the function, use, and maintenance shall not be changed by this project. Any changes to or work done in the channel, banks, or levees will require a Reclamation Board Permit.
 - a. Right-of-Way shall conform to the Specific Plan of Right-of-Way Map for Littlejohn's Creek as described in the Ensign-Buckley report dated May 1993, or as required for maintenance and necessary construction at the time of subdivision. Ownership shall be conveyed prior to any final map approval for this project. All Right-of-Ways shall be granted in fee to San Joaquin County Flood Control and Water Conservation District
 - i. The Right-of-Way property lines shall be designated as Restricted or Non-Access property on the final recorded maps.
 - b. No vegetation shall be planted, bicycle/pedestrian paths built, or any other alteration shall be allowed on the Right-of-Way without a permit to do so from the State Reclamation Board on project channels, or a permit from San Joaquin County Flood Maintenance on non-project channels.

- c. Fencing: any instances of a rear or side yard butting up to the Right-of-Way as described in (a) shall have a Masonry wall, seven feet tall from finished grade, erected along the property line with no legal or implied access to the Right-of-Way.
 - d. Bridges built over Duck Creek, Branch Creek, or North Littlejohn's Creek shall have a minimum of 14-foot wide by 14-foot high vehicle access clearance under the bridge on both banks, immediately adjacent to the abutments on the bank.
 - e. All bridges shall have vehicle access across each end for maintenance vehicles in line with the access road along any channel. This access will cross in line with the access road along any channel. This access will cross through any median. Any curb along the access shall not exceed 1.5 inches in height. Minimum width for these access points is 20 feet.
 - f. Per San Joaquin County Standards, gates shall be installed at right angles to the access roads a minimum of 50 feet from the most outwardly point of the bridge structure.
 - g. Access roads shall be paved a minimum of 14-foot wide with two feet of three-quarter inch aggregate base shoulders.
4. Areas along the eastern side of the ATSF (Burlington Northern) Railroad are in a Federal Emergency Management Agency 100-year flood zone, AO depth 1, located on panels 060299-0470 C, dated April 2, 2002 and 060299-0465 C, dated April 2, 2002.
5. Large areas of the site are within the effective Federal Emergency Management Agency Flood Plain shown on Figure 2 of the Ensign-Buckley report, dated May 1993.
6. San Joaquin County shall have approval authority for any work on the existing creeks and channels that are maintained by the San Joaquin County Flood Control and Water Conservation District.
7. The impact of hydro-modification shall be part of the stormwater study/engineering.
8. There is a limited capacity in Duck Creek and other waterways in this area. Detention/retention facilities shall be constructed to mitigate increased flows and volume of stormwater run-off.
9. The Specific Plan proposes to surround existing residential land uses on Carpenter Road and south of Farmington Road with industrial uses creating significant impacts to existing residents. The close proximity of industry will subject residences to noise, fumes, hazardous materials, and other undesirable concerns at all hours of the day or night. Specific mitigation measures need to be developed to address these issues, including providing adequate buffers, limiting hours of operation, and placing restrictions on types of materials stored. Reconsideration should be made for reducing impacts to these existing residential areas by surrounding the areas with residential uses, parks, and open space.
10. Gillis Road is currently a small, two-lane rural road with a few country residences. Sight distance is restricted at the Main Street intersection due to the grade change at the Stockton Diverging Canal. The Specific Plan proposes to widen the road to four lanes to address traffic impacts. Per the County's General Plan, Gillis Road is to remain a rural two-lane road. Therefore, the County requests that the applicant revise the document to realign Austin Road, within the project area, to intersect Farmington Road west of Gillis Road at an acceptable intersection, spacing and redistributing the project's traffic accordingly.

11. The references to a disposal facility indicate Foothill Landfill is the dominant landfill for use. Establishing the plan on the life of Forward Landfill should be used.
12. TJKM's analysis of dwelling units totals 10,819 -- not 10,814 -- and the Project Descriptions total each breakdown of low/medium/high density to 10,512 units, but the report states there are 10,566 units. Please clarify which is correct and reflect changes accordingly where necessary.
13. How were truck percentages incorporated into the traffic analysis? Were the percentages segregated into the different classes of commercial vehicles, i.e., California Legal vs. Surface Transportation Assistance Act? Certain roadways and intersections should be evaluated utilizing each respective design vehicle for appropriate mitigation. If certain roadways generate Service Transportation Assistance Act trucks, a route should be identified, analyzed as such, and designed accordingly.
14. Page 16-5 (Section 16.1.2 Existing traffic Operations): It is unclear if new counts were taken to inventory existing conditions, or if "existing" count data was used. If "existing", how old was the data? Traffic data older than three years should not be used and new data should be collected.
15. Page 16-25 (Section 16.3.1 Anticipated Regional and Project Related Transportation Improvements): With regard to State Highway Route 4, a statement is made "The portion east of the overpass would be constructed with funds from the project applicant(s)." However, no mention is given as to how the portion west of the Burlington Northern Santa Fe railroad overpass (which is said to be constructed with the State Highway Route 99 (SR99)/Mariposa Road Interchange Improvements) will be funded. Please revise and/or add further explanation regarding the implementation of the needed improvements.
16. Page 16-26: The document states that the project applicants will pay their fair share toward an improved interchange at SR99/Mariposa Road through the payment of Regional and City Traffic Impact Fees. Should additional funds fail to materialize, the proposed project should be prepared to fully construct the interchange to mitigate the project's impacts. This should be required of the applicant, either in the conditions of approval, or in the development agreement.
17. Page 16-26: The document states that Caltrans is in the process of preparing a Project Study Report for the SR99 mainline widening to six lanes. Please correct to indicate that Caltrans is in the Project Approval and Environmental Document phase. Additionally, while the document notes it will participate toward an improved interchange at SR99/Mariposa Road, it does not address how the project traffic would work with the three current alternatives being studied by Caltrans. Please address.
18. Trigger point monitoring for mitigation that includes and/or affects unincorporated County facilities should be coordinated well in advance with San Joaquin County Department of Public Works to avoid undue complication and delay associated with the implementation of said improvements.
19. Proposed improvements required for the East Charter Way/East Main Street Intersection have the potential to conflict with the signal at Anteros. The need for reconfiguration of this intersection needs to be addressed in the document.
20. The Arch Road/Austin Road Intersection is currently being redesigned by San Joaquin County for Signalization. The City of Stockton (City)/project applicant should coordinate the need for improvements/additional lanes at this intersection so they can be included in the current effort. The project should be conditioned by the City to construct improvements needed or contribute its fair share.

21. Page 16-4: Gillis Road is identified in Table 16-14 as needing to be widened to four lanes in both General Plan plus Project conditions. However, it is unclear what happens to the traffic volumes once they distribute onto Main Street, which is only two lanes. Please address and identify improvements to the Main Street corridor. The project should be conditioned by the City to constructed improvements needed or contribute its fair share.
22. Page 16-62: Reference to Table 16-17 is incorrect. Appears it should be "Table 16-18".
23. For the Approved Projects scenarios, the following background City projects should also be included: Empire Ranch, Oakmoore Gateway, and Origene Ranch. Please update the scenarios as necessary and identify all changes.
24. Page 16-98: Under the heading "Trip Generation", a "new north-south major arterial" is referred to. This seems to indicate the future Austin Road Expressway. If so, please be more specific to avoid confusion, and give more detail as to the type of facility (i.e. number of lanes, etc.).
25. Also on page 16-98: a statement is made regarding the lack of feasible mitigation for the SR99/French Camp Road Interchange, which is operating at unacceptable LOS in the 2035 General Plan scenario. Why is the traffic impact significant and unavoidable at this location? The project document needs to address the project's impacts to this location and identify adequate mitigation.
26. Page 16-107 (Mitigation Measures): Why would impacts remain significant and unavoidable? Please explain for this and all "significant and unavoidable" impacts.
27. It is stated on page 16-16 that Caltrans' own Transportation Concept Report and the identified Ultimate Transportation Corridor for SR99 is eight lanes in the project study area. The fact that the City General Plan is identifying 10 lanes on SR99 seems unrealistic. Have the Cumulative and Cumulative Plus Project impacts been studied with State Highway Route 99 as an eight-lane facility or as a 10-lane facility per the City of Stockton's General Plan? Please identify the implications to parallel routes and note whether the interchanges needed to facilitate cumulative plus project traffic will be built to a 10-lane width, or merely eight lanes as Caltrans has identified? These are very significant and costly issues that should be addressed prior to project approval.

Thank you for the opportunity to comment, should you have any questions, please contact me at 468-8494 or by e-mail avallejo@sipgov.org.

Sincerely,



ANDREA VALLEJO
Associate Planner

AV:mk
TP-7D065-M1

c: Michael R. Callahan, Senior Civil Engineer
Roger Churchwell, Senior Civil Engineer
Peter D. Martin, Senior Civil Engineer
Thomas K. Okamoto, Senior Civil Engineer
Desi Reno, Integrated Waste Manager

Michael C. Selling, Senior Civil Engineer
Adam Brucker, Senior Transportation Planner
Charles F. Kelley, Senior Civil Engineer
Dodge Vidad, Associate Civil Engineer

- SJCPW-1** Thank you for your comment indicating that changes or work in Duck Creek require a permit from the California Reclamation Board. No revisions to the DEIR are necessary.
- SJCPW-2** Thank you for your comment indicating the changes or work in Branch Creek require a permit from the California Reclamation Board in project areas, or a San Joaquin County Water Course Encroachment Permit in nonproject areas. No revisions to the DEIR are necessary.
- SJCPW-3** Thank you for your comment indicating the changes or work in North Little Johns Creek require a permit from the California Reclamation Board and the U.S. Army Corps of Engineers (USACE) in project areas. No revisions to the DEIR are necessary.
- SJCPW-4** Thank for your comment indicating that areas of the project are within a Federal Emergency Management Agency flood zone. Background information and potential project impacts and associated mitigation measures related to flooding hazards are discussed on pages 11-6 through 11-7, in Figure 11-3, and on pages 11-29 through 11-32 of the DEIR. No revisions to the DEIR are necessary.
- SJCPW-5** Thank you for your comment indicating that San Joaquin County has approval authority for work on the existing creeks and channels maintained by the San Joaquin County Flood Control and Water Conservation District. No revisions to the DEIR are necessary.
- SJCPW-6** The commentor requests that the stormwater/engineering studies consider the impact of hydro-modification. Hydro-modification studies are intended to ensure that postdevelopment flow rates are not larger than predevelopment flow rates caused by the conversion of land use to a more urbanized state. The *Mariposa Lakes Master Drainage Plan-Part B, Numerical Modeling of Stormwater Facilities* (PACE 2006), attached as Appendix O to the DEIR, addresses this requirement. Peak flow rates from the 100-year design storm are all shown to be smaller in the proposed development condition because of various storm water facilities incorporated into the project land use plan, including the detention of storm water by detention basins, artificially created lake surcharge volumes, and the Arbini Flood Control Basin. The issue of post development vs. predevelopment discharge rates is evaluated in Impact 11-4 (pages 11-29 through 11-31) and is specifically addressed by Mitigation Measures 11-4a and 11-4b (pages 11-31 and 11-32) of the DEIR. No revisions to the DEIR are necessary.
- SJCPW-7** As suggested by the commentor, proposed detention/retention facilities would be constructed to mitigate increased flows and volume of storm water runoff. See Impact 11-4 discussed on pages 11-29 through 11-32, and Impact 11-12 discussed on pages 11-53 through 11-59 of the DEIR. No revisions to the DEIR are necessary.
- SJCPW-8** The commentor expresses concern regarding potential land use conflicts between existing residential uses and proposed industrial uses. Pages 13-8 and 13-9 of the DEIR identify the existing Carpenter Road and Farmington Road residential areas as noise-sensitive land uses, and a noise survey was conducted at these locations (see pages 13-12 and 13-13 of the DEIR). Project-related noise impacts, including impacts to the existing

Carpenter Road and Farmington Road residential areas, and associated mitigation measures, are contained in the DEIR on pages 13-26 through 13-50.

Project-related impacts to the existing Carpenter Road and Farmington Road residential areas related to air quality, including toxic air contaminants and odors, and associated mitigation measures, are contained in the DEIR on pages 6-29 through 6-52.

Project-related hazards that could affect the existing Carpenter Road and Farmington Road residential areas are evaluated in Impacts 10-2 and 10-5 on pages 10-13 and 10-17 of the DEIR, respectively.

As discussed on page 6-18 of the DEIR, the California Spray Dry facility is located within one-quarter mile of the proposed project site, immediately southwest of the project site, between the BNSF railroad tracks and Mariposa Road. California Spray Dry processes meat and blood from rendering plants to produce animal and pet feed products. The process can release odors from various equipment and processes. The San Joaquin Valley Air Pollution Control District (SJVAPCD) received a significant number of odor complaints regarding this facility between 2001 and 2003. As discussed on page 6-26 of the DEIR, one of the two most common situations that increases the potential for odor problems occurs when new sensitive receptors are developed near existing sources of odor. In this situation, the potential conflict is considered significant if the project site is at least as close as any other site that has already experienced significant odor problems related to the odor source. Therefore, if new residential housing were placed in the Carpenter Road area, it is likely that significant air quality impacts related to odors would occur. Furthermore, the City requested that the project applicant design a land use plan that would be consistent with the zoning and land use designations in the 2035 City General Plan document. Placement of residential housing around the existing Carpenter Road residences would result in a conflict with the zoning designation in the 2035 City General Plan. In addition, the project applicant has designed a land use plan that reduces, to the maximum extent possible, hazards related to public safety. Placement of residential housing in the area around Carpenter Road would locate more people in proximity to the BNSF rail lines. In general, industrial land uses are considered the best use of land near rail lines. Finally, feedback received from Carpenter Road residents during public workshops held during the project planning stages indicated that the existing residents were opposed to the placement of new residential housing around their properties. Therefore, the City believes that the land uses proposed in the MLSP are appropriate. No revisions to the DEIR are necessary.

SJCPW-9

The commentor suggests that because Gillis Road is identified by the County as only a two-lane road, rather than widening it under the proposed project, Austin Road should be realigned to intersect Farmington Road to accommodate project-related traffic. The proposed project would entail phased development over approximately 25 years on a large land area. The use of Gillis Road as an extension of Austin Road is intended to be the interpretation of the 2035 City General Plan, which includes a new high-capacity north-south roadway in the general area, but at an unspecified location. The purpose of that new roadway is to serve local development to the east of SR 99 and to provide for through-traffic capacity to relieve traffic on SR 99 itself. The exact location of the north-south roadway is outside the scope of this project, and would be determined in the future through the development of plan lines for the selected alignment. Even if the location of the roadway is shifted slightly (approximately one-quarter mile in either direction), the traffic assignment to it and other gateway roadways is not expected to change

appreciably. Therefore, an adjustment of the traffic study is not needed. No revisions to the DEIR are necessary.

SJCPW-10

The commentor states that the DEIR should rely on the Forward Landfill rather than the Foothill Landfill. Chapter 15, “Public Services,” of the DEIR is hereby revised to reflect use of the Forward Landfill rather than the Foothill Landfill as described in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” This change does not alter the conclusions of the DEIR.

SJCPW-11

The commentor requests clarification on the total amount of dwelling units. The second paragraph on page 16-1 of the DEIR explains that TJKM’s analysis was based on an earlier, more intensively developed version of the MLSP. The traffic analysis represents a worst-case scenario that fully addresses potential environmental impacts by conservatively addressing a higher amount of residential development than is currently proposed. No revisions to the DEIR are necessary.

SJCPW-12

The commentor requests clarification on incorporation of truck percentages into the traffic analysis. The impact of heavy vehicles (i.e., trucks) on both roadway and intersection levels of service can be estimated by applying a heavy vehicle adjustment factor (one of many friction factors) to traffic volumes entering an intersection or using a roadway. Friction factors affect saturation flow rates. In the calculations of levels of service, the traffic study (attached as Appendix U of the DEIR) for the proposed project applied conservative truck factors based on extensive traffic counts in the area (taken for TJKM by Baymetrics in June 2006—see Appendix D of the traffic report). The traffic study LOS calculations also relied on an analysis of truck percentages from industrial parks and residential subdivisions developed by TJKM based on published traffic generation studies conducted by Caltrans District 4.

New developments need to consider the impacts of trucks on the street network in at least three ways: (1) in the analysis of capacity and level of service to allow for the proper number of lanes, (2) in the analysis of roadway geometrics to allow for proper space for turns, and (3) in the analysis of roadway thickness to ensure adequate structural strength of the roadway itself. At the EIR stage, only the first factor is considered (as described above); the geometric and structural concerns are addressed at later stages of the project application process. Therefore, an adjustment of the Mariposa Lakes traffic study is not needed. No revisions to the DEIR are necessary.

SJCPW-13

The commentor requests clarification regarding traffic counts. Existing a.m. and p.m. peak hour turning movement volumes were conducted at 31 existing intersections in the vicinity of the proposed project between the years 2003 and 2006. Of the 31 study intersection counts, 10 were conducted in 2003, 16 were conducted in 2005, and 5 were conducted in 2006. Since some of the study area is not experiencing significant growth, the City believes that use of the older counts is appropriate. Additionally, the “existing” counts are only used for analysis of existing conditions; all subsequent scenarios used model-generated forecasts. No revisions to the DEIR are necessary.

SJCPW-14

The commentor requests clarification regarding improvements to SR 4 west of the BNSF railroad overpass. The project applicant is preparing and processing a PSR, through Caltrans and sponsored by the City of Stockton, for the SR 4 realignment. Simultaneously, Caltrans is preparing the Project Approval and Environmental Document (PA&ED) for the South Stockton SR 99 widening. The Caltrans project is analyzing three alternatives. All three alternatives contain a major improvement to the Mariposa Road/SR 99 interchange, the elimination of the Farmington Road/SR 99 interchange, and a

realignment of SR 4. The PSR process will determine the baseline cost estimate for the proposed SR 4 realignment and the traffic analysis will provide the basis to determine fair share costs of the project. Preliminary estimates indicate the cost of the western portion of the project applicant-proposed SR 4 realignment is about equal to the Caltrans cost to realign SR 4 for Alternative 1 of the South Stockton SR 99 widening project. Should Alternative 1 be selected and the PSR approved, the Caltrans realignment would not be necessary and those funds would be available to construct the western segment of the project applicant-proposed SR 4 realignment. Should Caltrans select a different alternative, the project applicant-proposed SR 4 realignment would not be necessary and the proposed realignment would likely be converted to a local road with a smaller scope and cost. The process that is currently underway will develop the funding and implementation plan for this roadway improvement. No revisions to the DEIR are necessary.

SJCPW-15

The commentor suggests that the project applicant should be required to construct or otherwise mitigate impacts related to the interchange at Mariposa Road/SR 99. An improved Mariposa Road/SR 99 interchange is a part of all Caltrans alternatives for the South Stockton SR 99 widening project. This project is fully funded through state, federal, and local funds that include the State Transportation Improvement Program, SJCOG Measure K renewal, City of Stockton funds, and the recent state infrastructure bond measure. Improvements beyond the scope of the current Caltrans project are minor and would be the subject of the project applicant's development agreement. No revisions to the DEIR are necessary.

SJCPW-16

The commentor requests clarification of Caltrans's evaluation of the SR 99 widening project and consideration of the proposed project in concert with Caltrans's alternatives. The commentor is correct that the Caltrans South Stockton SR 99 widening project is in the PA&ED phase. The reference to the PSR is hereby revised as described in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." This change does not alter the conclusions of the DEIR.

TJKM, the author of the Mariposa Lakes DEIR traffic study, recently submitted a traffic forecast report for the SR 4 PSR. The report supplements ongoing studies by Caltrans for the SR 99 widening project in the City of Stockton, which already has an approved PSR. TJKM's traffic forecast report for the SR 4 PSR included the traffic impacts of the Mariposa Lakes project in the City of Stockton. Chapter 16 of the DEIR, "Transportation and Circulation," analyses Alternate 1 (Mariposa Interchange) of the Caltrans PA&ED. The Mariposa Lake street network adapts to all three Caltrans project alternatives. The other two alternative Caltrans alignments are analyzed with the full effects of the Mariposa Lakes project-related traffic included in the PA&ED. No revisions to the DEIR are necessary.

SJCPW-17

The commentor requests coordination with SJCDPW in advance of facility improvements. Thank you for your comment. The City will continue to coordinate with the County Department of Public Works regarding improvements to County facilities. No revisions to the DEIR are necessary.

SJCPW-18

The commentor requests that the DEIR address the need for reconfiguration of the East Charter Way/East Main Street intersection. As shown in Figure 38 of the traffic study (attached as Appendix U to the DEIR), it is possible to install traffic signals at the intersection of East Charter Way/East Main Street so they would operate with the signals located at South Anteros Avenue/East Main Street as a "clustered" signal system with only one traffic signal controller. The recommended "ring and barrier" signal phasing

would ensure no conflicts in traffic movements. As designed, northbound traffic from East Charter Way would proceed through the intersection exclusively on Phase 3 with red light indication for East Main Street through traffic. East Main Street traffic uses Phases 2 and 6 for the eastbound and westbound through movements, respectively. Eastbound and westbound left-turn traffic would proceed concurrently with red indication for all other movements. No revisions to the DEIR are necessary.

SJCPW-19

The commentor requests coordination with SJCDPW in advance of facility improvements, and suggests that the project applicant should construct the needed improvements or contribute its fair share. The project applicant would meet and work with San Joaquin County to implement the approved City of Stockton Arch Road Geometric Plan Line and the project-related traffic mitigation measures into the County signalization project to the extent possible.

The City notes that the County project referenced by the commentor is a near-term project necessary to correct existing safety deficiencies. The City Geometric Plan Line was approved in 1999, before Arch Road was extended into the BNSF multimodal terminal. It provides the City's long term blueprint for Arch Road, which is still a County road at this location. The proposed project triggers the need for four lanes on Arch Road when 3,000 MLSP dwelling units are constructed. Full implementation of the 2035 City General Plan would require construction of six lanes on Austin Road north of Arch Road and four lanes south of Arch Road. The future roadway needs would require right-of-way acquisition that is not necessary for the current County project. Nevertheless, the project applicant has agreed to pay its fair share of the current Arch Road/Austin Road interchange signalization improvements, which will be set forth in the project applicant's development agreement. No revisions to the DEIR are necessary.

SJCPW-20

The commentor states that DEIR Table 16-14 requires Gillis Road to be widened to four lanes, and expresses concerns with project-related traffic impacts on Main Street. Table 16-14 (on page 16-54 of the DEIR) identifies the need to widen Gillis Road between Farmington Road and Main Street under both the 1990 General Plan Plus Project and the 2035 General Plan Plus Project scenarios. Since Gillis Road extends north of Main Street, Main Street is not heavily used in any of the traffic scenarios. Therefore, no additional lanes need to be constructed on Main Street. No revisions to the DEIR are necessary.

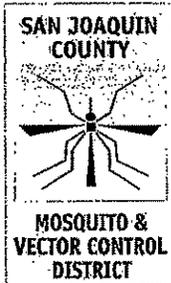
SJCPW-21

The commentor requests a correction in the DEIR text. Thank you for your comment. The reference to Table 16-17 in Mitigation Measure 16-3 is hereby revised as described in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." This change does not alter the conclusions of the DEIR.

SJCPW-22

The commentor suggests that three additional projects should be considered in the proposed project traffic scenarios. The EPAP traffic model used for the proposed project included only those projects that were classified as "approved" at the time of the model runs, in mid-2006. The Empire Ranch, Oakmoore Gateway, and Origone Ranch projects were not approved projects at the time the traffic modeling was performed, nor have they been approved as of the date of these responses to comments. However, under the 2035 City General Plan buildout scenarios, future buildout of the entire general plan area (up to the year 2035) was analyzed. This scenario would therefore include full buildout with urban land uses of the areas proposed for inclusion in the Empire Ranch, Oakmoore Gateway, and Origone Ranch projects. Therefore, no supplemental traffic analysis is required, and no revisions to the DEIR are necessary.

- SJCPW-23** The commentor requests additional details regarding the “new north-south major arterial” in the traffic section of the DEIR. The “new north-south roadway” referred to on page 16-98 of the DEIR is the Austin Road Expressway. This roadway and its general alignment are included in the 2035 City General Plan prepared by the City of Stockton. The function of the roadway is to serve local development east of SR 99 and to provide relief to SR 99 for trips that do not require the use of the freeway. The traffic study prepared for the proposed project identified the need for the Austin Road Expressway to be constructed as a four-lane divided roadway for most of its length. No revisions to the DEIR are necessary.
- SJCPW-24** The commentor requests that the DEIR include an explanation of the significance conclusion for the SR 99/French Camp Road interchange. Paragraphs six and seven on page 16-98 of the DEIR contain statements explaining that the traffic impact is significant and unavoidable at the SR 99/French Camp Road interchange because the interchange cannot be widened because of physical restrictions. See also Table 16-31 on pages 16-101 and 16-102 of the DEIR. Please note that the text on page 16-98 describes 2035 General Plan No Project conditions; therefore, the project applicant is not required to participate in these roadway improvements. No revisions to the DEIR are necessary.
- SJCPW-25** The commentor requests that the DEIR include an explanation of the significance conclusion for all significant and unavoidable impacts, and for Impact 16-22 in particular. The reason why Impact 16-22 (on page 16-107) of the DEIR would be significant and unavoidable is explained on pages 16-114 and 16-115 under the heading “Significance after Mitigation” (improvements are not available for all intersections that would operate at an unacceptable level). Every analysis chapter of DEIR (chapters 4 through 18) contains an explanation why all significant and unavoidable impacts are identified as such. These explanations are found after each mitigation measure under the heading “Significance after Mitigation,” are summarized at the end of each chapter under the heading “Residual Significant Impacts,” and are summarized again in Chapter 22 “Significant and Unavoidable Impacts.” No revisions to the DEIR are necessary.
- SJCPW-26** The commentor expresses concerns regarding the feasibility of widening SR 99 to 8 or 10 lanes. See Master Response 1 in Chapter 3, “Master Responses,” of this FEIR. No revisions to the DEIR are necessary.



JOHN R. STROH
MANAGER

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LEGAL ADVISOR

APR 23 2007

April 19, 2007

City of Stockton
Community Development Department, Planning Division
Attn: David Stagnaro, AICP, Senior Planner
345 North El Dorado Street
Stockton, CA 95202

Re: Public Review of the Draft Environmental Impact Report for the Mariposa
Lakes Specific Plan Project (DEIR11-03)

Dear David Stagnaro,

San Joaquin County Mosquito and Vector Control District has reviewed the
Draft Environmental Impact Report for the Mariposa Lakes Specific Plan
Project (DEIR11-03) and provides the following comments:

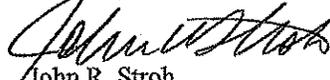
1. This project includes proposed man-made lakes and stormwater treatment devices. Storm water treatment devices and man-made lakes provide aquatic habitats suitable for mosquitoes and other vector species as an unintended consequence of their implementation. It is requested that the project's proponents implement mosquito prevention measures in the design, construction, and management of the storm water treatment devices, man-made lakes and related structures. Enclosed for your consideration are suggested mosquito prevention best management practices published by the University of California Mosquito Research Program.
2. The MLSP proposes restoration and recreational development of several existing creek channels (i.e., Duck Creek, North Little Johns Creek, etc.). While it is stated on page 3-36 that any improved creek channels would incorporate design features that would reduce the incidence of mosquitoes and other nuisance vectors, the proposed stream restoration schematic on page 3-39 incorporates design criteria that is conducive to mosquito development and limits accessibility of the site(s) to vector control technicians to perform surveillance and control activities. Project proponents should carefully examine the design, development, and management of any stream restoration as it relates to mosquito development and control.

7759 SOUTH AIRPORT WAY, STOCKTON, CALIFORNIA 95206-3918
(209) 982-4675 • FAX (209) 982-0120

3. The MLSP proposes development and operation of a ground water recharge facility (Arbini). The size and scope of this component of the project has the potential to produce sizeable mosquito populations, thus requiring extensive and on-going mosquito surveillance and control operations at this site. The District has worked with several ground water recharge projects in San Joaquin County, and all of the projects resulted in extensive mosquito development that required large-scale applications of pesticides, and ultimately dewatering of the sites to prevent further vector problems. A mosquito prevention plan should be developed and adopted by all parties specifically for the Arbini Recharge Facility prior to any waters being discharged to this site.

Do not hesitate to contact me if you have any questions or need additional information on this matter.

Sincerely,



John R. Stroh
Manager

- SJCMVCD-1** The proposed project includes, and the project applicant would implement, mosquito prevention measures in the design, construction, and management of the stormwater treatment devices, artificially created lakes, and related structures. Mosquito/vector controls and lake maintenance are described in the DEIR on pages 3-35 through 3-37 of Chapter 3, "Project Description," and on pages 10-17 and 10-18 of Chapter 10, "Health and Safety." These controls are also described on page 9 of Appendix N, "Master Drainage Plan Part A." No revisions to the DEIR are necessary.
- SJCMVCD-2** As stated on page 3-36 of the DEIR, improved creek channels would incorporate design features that would reduce the incidence of mosquitoes and other vectors. The primary goal of the stream restoration plan at the conceptual level, which is attached as Appendix J to the DEIR, is to return the currently degraded habitat to more natural conditions. The final restoration plan would contain exact details of the stream channels and restoration activities, including activities such as channel maintenance and vector control. Potential impacts related to mosquito and vector control are evaluated in the DEIR in Impact 10-5 (pages 10-17 and 10-18) and Impact 10-12 (page 10-20). No revisions to the DEIR are necessary.
- SJCMVCD-3** As part of the Operational Level Integrated Water Management Plan, required by Mitigation Measure 11-6a of the DEIR, the project applicant would implement a mosquito/vector control plan for the Arbini recharge facility. Project-related health impacts related to mosquito and vector control are evaluated in the DEIR in Impact 10-5 (pages 10-17 and 10-18) and Impact 10-12 (page 10-20). No revisions to the DEIR are necessary.

David Stagnaro - San Joaquin RTD Comments on Mariposa Lakes DEIR

From: "Nate Knodt" <nknodt@sanjoaquinrtd.com>
To: <david.stagnaro@ci.stockton.ca.us>
Date: 4/23/2007 5:09 PM
Subject: San Joaquin RTD Comments on Mariposa Lakes DEIR
CC: "Donna Kelsay" <dkelsay@sanjoaquinrtd.com>, "Kari Wilson" <kwilson@sanjoaquinrtd.com>

April 23, 2007

Mr. David Stagnaro, AICP, Senior Planner
Lead Agency
City of Stockton
C/o Community Development Dept.
Plannin Division
345 North El Dorado Street
Stockton, CA 95202

Dear Mr. Stagnaro:

The San Joaquin Regional Transit District (RTD) appreciates the opportunity to review and comment on the Mariposa Lakes Project, RTD Reference 052039004-031907-042307-041904-107.

In reviewing the Draft Environmental Impact Report (DEIR), we have the following comments to make regarding the projects impacts listed;

- Impact of Increased Demand for Transit Service
 - The DEIR states that "Increased demand for transit service is considered **potentially significant.**" RTD believes the impact should be considered **significant** as RTD currently operates no bus routes south of Farmington Road, east of State Highway Route 99 and RTD currently has no identified funding source to implement fixed route service to the proposed Mariposa Lakes SPA"
- Impact of Traffic Impacts on Streets in the Vicinity of School Development
 - The DEIR considers this impact **potentially significant.**" Under an agreement by which SUSD can purchase discounted RTD student passes for SUSD to ride RTD buses to/from school, RTD is now the primary provider of bus transportation for students attending SUSD high schools. New residential development that calls for the creation of new high schools within the SUSD territory may necessitate the establishment of RTD transit connections to the new high schools IF funding sources for this additional service are identified. Therefore, RTD believes this impact should be considered **significant.**
- Impact of San Joaquin Delta College Campus
 - RTD currently transports significant portions of San Joaquin Delta College's

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Stockton campus population. RTD's ability to provide connecting transit services would be significantly impacted by the establishment of a satellite campus, similar to the impact generated by the establishment of new SUSD high schools. New, connecting transit service to a satellite campus would be dependent upon the identification of funding sources that would enable RTD to provide the service.

- Impact of Amtrak Rail/Multimodal Station
 - RTD currently operates two Stockton SMA Metropolitan Area routes that provide connecting service, all day, Monday through Sunday, to the Amtrak Station located on San Joaquin Street, and RTD currently operates extensive daily fixed route service, via several routes, to the ACE Station located near the Downtown Transit Center. As with the impact of new school campuses on RTD's ability to provide connecting transit services, the establishment of a new Amtrak Rail/Multimodal Station will be significant, and RTD's ability to provide connecting transit service would be dependent upon the identification of funding sources that would enable RTD to provide the service.

Thank you for the opportunity to respond to this proposal. Please contact Nate Knodt, Planning Manager, at 209-948-5566, ext. 652, if you have any questions or require additional information.

Sincerely,

Nate Knodt
Planning Manager

Cc: Donna Kelsay, General Manager/CEO

Karl E. "Nate" Knodt
Manager Service Development
SAN JOAQUIN

RTD

e-mail: nknodt@sanjoaquinRTD.com

(209)948-5566 Ext. 652

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SJRTD-1

The commentor expresses a concern that certain potentially significant impacts should actually be identified as significant impacts. As explained on DEIR page 1-16, all potentially significant impacts are treated as if they are significant impacts in the EIR. Moreover, Pages 16-65 and 16-76 of the DEIR, “Significance after Mitigation,” already state that Impacts 16-6 and 16-13 are significant and unavoidable, which addresses the agency’s concerns about the absence of funding. Mitigation Measures 16-6b and 16-13b require the project applicant(s) to coordinate with the San Joaquin Regional Transit District (SJRTD) regarding route locations and transit facilities. In addition, the text of Impact 16-6, “EPAP plus Phase I Project Conditions—Increased Demand for Transit Service,” and Impact 16-13, “EPAP plus Full Project Buildout Conditions—Increased Demand for Transit Service,” are hereby revised as described in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices,” to reflect SJRTD’s concerns regarding identification of funding sources. These changes do not alter the conclusions of the DEIR.

SJRTD-2

The commentor expresses a concern that certain potentially significant impacts should actually be identified as significant impacts. As explained on DEIR page 1-16, all potentially significant impacts are treated as if they are significant impacts in the EIR. Moreover, Page 16-77 of the DEIR, “Significance after Mitigation,” already states that Impact 16-14 is significant and unavoidable, which addresses the agency’s concerns about the absence of funding. In addition, the text of Impact 16-14, “EPAP plus Full Project Buildout Conditions—Traffic Impact on Streets in the Vicinity of School Development,” is hereby revised as described in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices,” to include a discussion of the Stockton Unified School District policy of negotiating for discounted student transit passes. This change does not alter the conclusions of the DEIR.

SJRTD-3

Pages 16-65 and 16-76 of the DEIR, “Significance after Mitigation,” already state that Impacts 16-6 and 16-13 are significant and unavoidable, which addresses the agency’s concerns about the absence of funding. Furthermore, Impact 6-6, “EPAP plus Phase I Project Conditions—Increased Demand for Transit Service,” and Impact 16-13, “EPAP plus Full Project Buildout Conditions—Increased Demand for Transit Service,” already address the need for additional transit services. However, the text of Impact 16-13 is hereby revised as described in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices,” to include a reference to new service to the proposed on-site San Joaquin Delta College satellite campus. This change does not alter the conclusions of the DEIR.

SJRTD-4

Thank you for your comment. The City believes that the commentor’s concerns regarding funding for SJRTD bus service to and from the proposed on-site Amtrak multimodal facility have been addressed by the responses to SJRTD-1 and SJRTD-3 above. No further changes to the DEIR are necessary.



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

April 25, 2007

David Stagnaro
City of Stockton
Community Development
Planning Division
345 N. El Dorado St.
Stockton, CA 95202

Project: Mariposa Lakes Specific Plan (MLSP); SCH# 2006022035; City of Stockton File Numbers: SP4-03, A-03-10, GPA 12-03, Z-17-03, DA7-05

Subject: CEQA comments regarding the Draft Environmental Impact Report (DEIR) for the development of 3,810 acres for residential, institutional, commercial, business, industrial, and public land uses

District Reference No: 200700430

Dear Mr. Stagnaro:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above and offers the following comments:

Findings of Significance

Upon review of the project, the District concurs with the findings in the Air Quality section of the DEIR that:

- Short-term construction-related ROG and NOx emissions will be greater than the District's Thresholds of Significance of 10 tons per year. The implementation of mitigation measures identified in the DEIR will not be sufficient to reduce these emissions to a level of insignificance.
- Short-term construction-related PM10 emissions can be mitigated to a level of insignificance through compliance with District Regulation VIII (Fugitive PM10 Prohibitions) requirements.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061
www.valleyair.org

Southern Region
2700 M Street, Suite 276
Bakersfield, CA 93301-2373
Tel: (805) 326-6900 FAX: (805) 326-6985

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- Short-term construction-related NOx emissions from off-site improvements will be greater than the District's Thresholds of Significance of 10 tons per year. The implementation of mitigation measures identified in the DEIR will not be sufficient to reduce these emissions to a level of insignificance.
- Long-term operation-related regional ROG and NOx emissions will be greater than the District's Thresholds of Significance of 10 tons per year. The implementation of mitigation measures identified in the DEIR will not be sufficient to reduce these emissions to a level of insignificance.
- Long-term operation-related local mobile source emission of CO will have a less than significant impact on air quality.
- Exposure of sensitive receptors to toxic air contaminants potentially has a significant impact on human health. As indicated in the DEIR, industrial and commercial developments are unknown at this time, and project-specific impacts are cannot be accurately evaluated. The District expects future stationary source emissions to have a less than significant impact on human health. However, non-stationary equipment, including on- and off-site project-related mobile sources, may generate significant health risks. As future developments are identified, additional environmental review will be required.

Mitigation Measures

The District commends the applicant for implementing the emission reducing measures identified in Table 2-2, Summary of Project Impacts and Mitigation Measures. Implementing these measures, however, will not mitigate all air impacts to a less-than-significant level. Although current technology may limit the amount of on-site reductions possible, off-site reductions are available. The project applicant may enter into voluntary Air Quality Mitigation Agreements (Mitigation Agreement) with the District. These agreements require the District and the applicant to quantify operational emissions, and identify on-site mitigation to reduce the proposed project's impact on air quality. The applicant commits to providing funding on a per-ton of emissions basis to the District to purchase emission reductions through its grant and incentive programs to mitigate the net emissions. The District commits to reduce the emissions and to manage and monitor the emission reduction projects over time. District staff is available to meet with project proponents to discuss Mitigation Agreements for specific projects. For more information, or questions concerning this topic, please call Mr. Arnaud Marjollet, Permit Services Manager, at (559) 230-6000.

District staff is available to meet with you and/or the applicant to further discuss the regulatory requirements that are associated with this project. If you have any questions or require further information, please call Jessica Willis at (559) 230-5818 and provide the reference number at the top of this letter.

Sincerely,

David Warner
Director of Permits Services



for Daniel T. Barber, Ph. D.
Supervising Air Quality Specialist

DW:jw

cc: File

**Letter
SJVAPCD
Response**

San Joaquin Valley Air Pollution Control District
Daniel Barber, Air Quality Specialist
April 25, 2007

SJVAPCD-1

Thank you for your comment, which concurs with the significance conclusions contained in the DEIR. No revisions to the DEIR are necessary.

SJVAPCD-2

The commentor concurs with the significance conclusions in the DEIR: even after implementation of mitigation measures, all project-related air quality impacts cannot be feasibly reduced to a less-than-significant level. As suggested by the commentor, the project applicant would be interested in meeting with the SJVAPCD to discuss voluntary Air Quality Mitigation Agreements. However, even if additional voluntary air mitigation agreements were reached, such agreements would not reduce the air quality impacts to a less-than-significant level. No revisions to the DEIR are necessary.



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Loralee McGaughey
Division 6

Thomas McGurk
Division 7

Kevin M. Kauffman
General Manager

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AGM - Operations

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6767 East Main Street
Stockton, CA 95215

Post Office Box 5157
Stockton, CA 95205

April 20, 2007

Mr. Michael M. Niblock, Director
Mr. David Stagnaro, Senior Planner
City of Stockton Community Development Department
345 North El Dorado Street
Stockton, California 95202

APR 24 2007

Re: Comments on DEIR 11-03 – Mariposa Lakes Specific Plan Project

Gentleman:

We have received a document informing the district of the Public Review of the Draft Environmental Impact Report for the above referenced project dated March 8, 2007, and the incorporated Water Supply Assessment (WSA), dated October 2, 2006.

Stockton East Water District ("SEWD") provides the attached comments on the WSA completed by the City of Stockton MUD. The purpose of our comments is to correct technical inaccuracies or omissions contained in the document. We hope that these technical corrections and additions will be used in the future to make similar WSA's more accurate.

SEWD provides the following comments on the DEIR 11-03:

1. SEWD is currently completing a WSA for this Project's non-potable water supply. This WSA is intended to complement the WSA's completed by the City of Stockton and California Water Service Company. The district supports the City of Stockton's position that requires the Project to secure a surface water supply for its non-potable demands.
2. SEWD intends to seek agreement to specific groundwater management objectives for the Project's proposed groundwater bank. The water quantity and quality parameters defined by these objectives will assure the sustainability of the non-potable supply identified in our nearly complete WSA, as well as provide assurance to our other SEWD customers that they will only benefit from such a bank.
3. SEWD requests that 'lined' portion of all of the to be constructed Project lakes be discontinued at an elevation approximately 2.5 to 3.0-feet below the intended summertime fill level elevation. Our intention is to encourage groundwater recharge, by allowing the upper portion of the lakes' shoreline to percolate surface water for benefit the groundwater basin. In average to wet hydrologic years, it is believed that the lakes can be kept filled with an appropriately designed non-potable water supply system; i.e., be able to compensate for this recharged water with available surface water. In addition to benefiting the groundwater basin in average to wet years, these lakes will be kept low (no recharge) in dry years and during drought periods, sending the message to all residents and visitors that 'we live in a desert, and we need to protect and conserve our water resources.'

Thank you for your consideration of these and the attached comments.

Very truly yours,


MELVIN J. PANIZZA
President

cc: Mark Madison, Director, COS MUD

Stockton East Water District (district) Comments on the Public Review Draft Environmental Impact Report (DEIR 11-03), Mariposa Lakes Specific Plan Project

April 20, 2007

The district's comments are in general limited to the section of the above entitled document related to the City of Stockton's Water Supply Assessment (WSA), dated October 2, 2006. Any changes to the WSA resulting from these comments should be incorporated into the appropriate sections of the above-entitled document. The comments listed below are in the order in which they appear in the WSA:

1. Non-Potable Water Supply (page 5). The last paragraph requires the Project proponents to demonstrate the availability of their non-potable water supply and any impact on water supplies to the district that may be needed for the COSMA through the district drinking water treatment plant. *The district is currently completing a WSA for this Project's non-potable water supply intended to complement those produced by the City of Stockton and the California Water Service Company.*

2. Identify Responsible Public Water System [Section 10910(b)]. *The district requests that the Stockton East Water District (SEWD) be added to this section as a responsible public water system. A "Public water system" pursuant to Water Code § 10912 (c)(3) is defined as a public agency that treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.*

3. Identify Existing Water Supplies for the Project [Section 10910(d)]:

a. Page 37, Figure 13. *The district does not agree with the author's suggestion that the OID-SSJID water transfer agreement will be reduced after 2009. With cooperation between the City and the district, there is no reason why the full contract amount of 30,000 AFA well after 2009.*

b. Page 50, 4th paragraph. *The district feels that the water transferred from OID and SSJID should be guarded as if it were our own. Suggesting that this water transfer agreement would not be renewed after 2025 is premature at best.*

SEWD CONCLUSION. The district is comfortable that the drinking water demands of the COSMA can be served from a conjunctively managed surface and groundwater supply. The district is gratified to see that the City of Stockton has considered the long-term effects of its actions on the critically overdrafted groundwater Basin, noting the existing and planned surface water supplies for the drinking water demand (district WTP, Farmington Groundwater Recharge Program, and the DWSP (WID and Delta surface water)). Assuring our Basin's water quality and groundwater levels are adequate to meet drinking water demands during dry years and drought periods should continue to be the primary goal of the water suppliers of COSMA.

End of SEWD Comments
April 20, 2007

- SEWD-1** Thank you for your comment supporting the City’s policy requiring the proposed project to secure a surface water supply for nonpotable needs. Please see the Nonpotable WSA prepared by SEWD on behalf of itself and CSJWCD (attached as new Appendix Y to this FEIR). Revisions to Impact 17-3 and 17-12 (Increased Demand for Nonpotable Water Supply and Conveyance Facilities) are also contained in Chapter 5 of this FEIR “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” These revisions change the significance conclusions of Impact 17-3 and 17-12 from potentially significant and unavoidable to less than significant, and no mitigation measures are required.
- SEWD-2** Thank you for your comment indicating your intention to seek agreement to specific groundwater management objectives for the proposed Arbini recharge project to assure the sustainability of the nonpotable water supply and to provide assurance of the benefit of the proposed recharge project. The City concurs. Mitigation Measure 11-6 in the DEIR requires that specific groundwater management objectives be developed. No revisions to the DEIR are necessary.
- SEWD-3** Please see the response to comment NSJCGBA-2, above. No revisions to the DEIR are necessary.
- SEWD-4** These comments pertain to the City’s WSA (DEIR Appendix R) rather than to the text of the DEIR itself. In response to these comments, the City has revised some of the text contained in its WSA as follows: population projections in Figure 3 have been corrected, and new text has been provided for Section 2.4.2 “SEWD Surface Water Contract Entitlements.” Accordingly, the text of Appendix R is hereby revised as described in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” These changes do not alter the conclusions of the DEIR.

SECTION D: INDIVIDUALS AND ORGANIZATIONS



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LINDEN, CA 95236
(209) 941-4500

Plant Address
7367 E. Mariposa Rd.
Stockton, CA 95205
FAX (209) 941-0118

March 14, 2007

David Stagnero
City of Stockton
Planning Dept.
425 N. El Dorado St.
Stockton, Calif. 95202

Re: Mariposa Lakes Project

Dear Mr. Stagnero:

I have obtained a copy of the EIR, and hope to respond in a timely manner.

Figure 3-23 proposes a Railroad Grade Separation. This separation looks to impact me significantly.

As the proposal is quite vague as to how the grade separation is to be constructed and how this will impact me specifically I cannot commit, as I would only be speculating.

Maybe the specifics are in the EIR and I am remiss in finding them as this is a large document. If they are can you direct me to the pertinent information in the document? If not where can I get the necessary information so that my concerns can be part of this process?

I also have many other concerns including but not limited to:

Access to my property, both by car and truck
Noise
Use of chemicals required to meet protocols for international shipments of local produce.

In the past your reply to my concerns have not been as timely as I would have hoped. As my window for comment is limited I am looking for your prompt reply on this matter.

Yours Truly,

A handwritten signature in black ink, appearing to read "Craig Podesta", with a long horizontal line extending to the right.

Craig Podesta

cc: Jim Giottonini
Public Works

These responses pertain to Mr. Podesta's property no. 6 as shown in Figure 4-1.

DANAMARK-A-1 The commentor expresses concern about the details of the proposed railroad grade separations. The separations are discussed in the DEIR at pages 3-47 through 3-50, 16-9, 16-26 through 16-27, 16-42, 16-65 through 16-66, 16-77. Only one grade separation is proposed as part of Phase 1 of the proposed project.

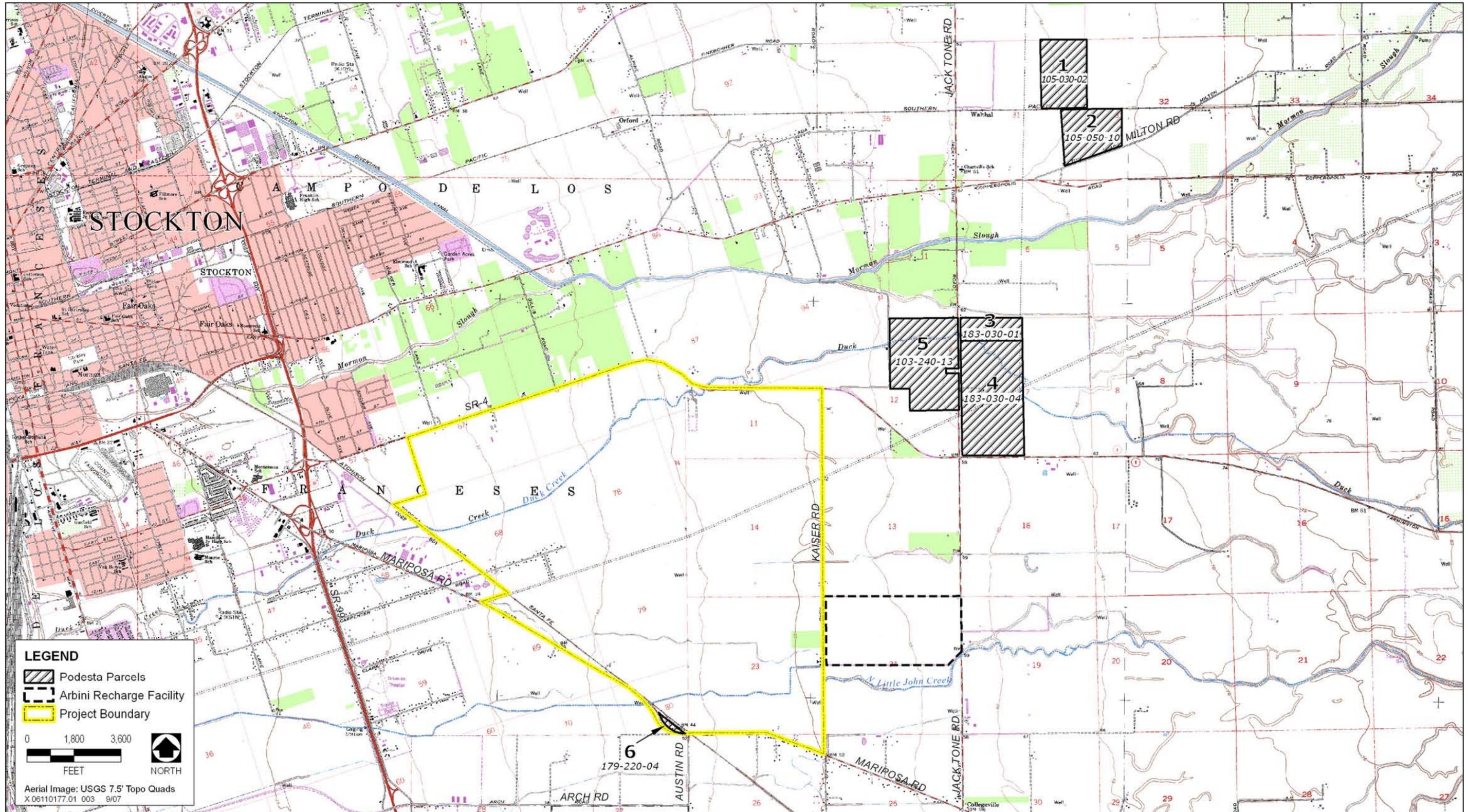
The commentor expresses particular concern about how the proposed railroad grade separations would affect the Danamark business. After this comment was submitted, the project applicant initiated and participated in four face-to-face meetings with Mr. Podesta (on March 20, March 26, April 13, and April 24, 2007) to discuss his concerns and explain various aspects of the proposed project, including his concerns regarding access to his property resulting from the proposed railroad grade separations. The necessary railroad grade separations would have minimal impact to the Danamark plant or access to Mr. Podesta's property. The proposed Austin Road grade separation would pass over the northeast corner of Mr. Podesta's property, necessitating a construction easement or the purchase of a small portion of the parcel. Access to Mr. Podesta's processing plant would be unaffected, and therefore no impacts would result from obtaining a construction easement. No revisions to the DEIR are necessary.

DANAMARK-A-2 This comment expresses general concern about how the proposed project would affect access to the Danamark facility. Automobile and truck access requirements to the Danamark facility have been discussed in the four meetings with Mr. Podesta listed in response to DANAMARK-A-1 above. Implementation of the proposed project would not impair Mr. Podesta's access. No revisions to the DEIR are necessary.

DANAMARK-A-3 The commentor expresses concern about potential land use conflicts, in particular noise, between the Danamark facility and proposed project land uses near that facility. After this comment was submitted, an EDAW acoustic specialist conducted noise measurements of Danamark operations on June 20, 2007. The results of these measurements indicate that noise generated by the Danamark processing facility has the potential to exceed applicable stationary nighttime noise standards at the proposed residences in neighborhood N-3, which would be located approximately 600 feet to the east. The text of Impact 13-5 in DEIR Chapter 13, "Noise," is hereby revised to reflect this information and the results of the noise measurements, along with appropriate mitigation, as described in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." Impact 13-5, regarding land use compatibility of sensitive receptors with noise levels from stationary and area sources, has already been determined to be potentially significant. The addition of noise generated by the Danamark processing facility contributes to the existing significance conclusion. To reduce the noise levels generated by the Danamark facility to levels that are within the City's noise standards, a sound wall must be constructed. This sound wall is already required as mitigation for Impact 13-4. Therefore, these revisions do not change the conclusions of the DEIR, and implementation of the mitigation necessary to reduce this potential impact to a less-than-significant level would not introduce new significant impacts.

DANAMARK-A-4

The commentor expresses concern about potential land use conflicts, in particular use of certain chemicals, between the Danamark facility and proposed land uses near that facility. After this comment was submitted, a Health Risk Assessment (HRA) was performed by ENSR (2007) and EDAW (2007) to evaluate potential impacts related to emissions from the Danamark processing facility (new Appendix Z). The risk analysis modeling yielded predictions for the Point of Maximum Impact (PMI) at a hypothetical sensitive receptor location; in this case, the nearest proposed project land use (the Village Center/Commercial area N-20 shown in DEIR Figure 3-8), which would be approximately 300 feet from the Danamark fumigation chamber. At the PMI, the chronic and acute noncancer impacts (HI) are estimated to be 0.205 and 0.186, respectively. Because these values do not exceed SJVAPCD's applicable thresholds for chronic and acute noncarcinogenic health effects (i.e., an HI of 1.0), development of the land uses proposed by the MLSP is not expected to expose new residents to acute or chronic health risks. Therefore, air quality emissions from the Danamark facility would not result in any new significant impacts, and thus no mitigation measures are required. Impact 6-5 (exposure of sensitive receptors to toxic air contaminants) is hereby revised as described in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices" to include the results of the HRA. These revisions do not change the conclusions of the DEIR.



Source: San Joaquin County 2007, EDAW 2007

Properties Owned by Mr. Podesta

Figure 4-1

DANAMARK

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Stockton, CA 95205
FAX (209) 941-0118

March 15, 2007

David Stagnero
City of Stockton
Planning Dept.
425 N. El Dorado St.
Stockton, Calif. 95202

RECEIVED

MAR 15 2007

CITY OF STOCKTON
PERMIT CENTER/PLANNING DIVISION

Re: Mariposa Lakes Project

Dear Mr. Stagnero:

I gotta tell you I am just bewildered over your explanation to me yesterday, regarding the EIR.

The EIR on the cover page states "Mariposa Lakes SPECIFIC Plan" capitalization for emphasis.

Your explanation that the construction design of the Mariposa Railroad grade separation is only a concept, is unknown and not specific at this time, and how it will negatively impact me is bewildering.

Just how am I to comment on a concept. I don't know how it will impact me, so how will my concerns be know or addressed? Maybe I am wrong but this just doesn't make sense to me.

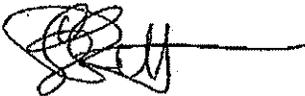
I have to know, this is very important to me and my business. This is a multimillion dollar business that just can not pick up and move. It would take years to duplicate this facility as you well know being in Planning.

I have a responsibility not just to Danamark but also to the trees that grow the product, employees and customers that rely on this business.

I can't let this go. Mariposa Lakes Specific Plan is incomplete it is by no means Specific and work needs to be completed. The EIR needs to be Specific and the comment period should not be closed until local issues are specifically addressed, so that they can be adequately commented on.

Keeping this in mind, what procedure if any, can I implement
to achieve completion of this EIR.

Yours Truly,

A handwritten signature in black ink, appearing to be 'CP', with a long horizontal line extending to the right.

Craig Podesta

cc. Jim Giottonini
Public Works

DANAMARK-B-1

The commentor expresses concerns about the level of specificity in the “specific plan.” In particular, the commentor requests more details about how the proposed project would affect the Danamark facility. The project applicant has initiated and participated in four face-to-face meetings with Mr. Podesta (March 20, March 26, April 13, and April 24, 2007) to discuss his concerns and explain various aspects of the proposed project. Comment noted. The City is mindful of the concerns expressed.

It is important to keep in mind that a “specific plan” is a legislative development plan prepared in accordance with California planning statutes found in Government Code Section 65450 et seq. The goal of a specific plan is to establish a development framework for land use, resource protection, circulation, public utilities and services, and implementation and design. The proposed MLSP project includes adoption of the specific plan itself and implementation of the associated development proposal.

Sections 15161 and 15168 of the State CEQA Guidelines provide that an EIR may consider impacts at either a “project” level or a “program” level, or both. As discussed on page 1-6 of the DEIR, the MLSP DEIR contains both levels of analysis. At the project level, the details have been designed and the project applicant is ready to move forward with construction following project approval. At the program level, while the broad concepts of future phases of the specific plan are known, the details (i.e., lotting plans) are not known at this time. At a program level, the EIR need only consider the broad environmental effects of the overall specific plan, which is composed of a series of actions that can be characterized as one large project. Based on the program level of analysis, the EIR identifies performance standards (e.g., setbacks, measures to protect biological and visual resources) and mitigation measures that would apply to all subsequent, future project phases under the specific plan (as conditions of approval) at the MLSP project site. These performance standards would be incorporated into the MLSP or the mitigation monitoring and reporting plan to avoid or reduce impacts to the degree feasible. To move forward with Phases 2–5, the project applicant(s) would submit a tentative subdivision map/improvement plan for each phase. At that time, the City would examine these subsequent activities in light of the program level of analysis in this EIR, to determine whether an additional environmental document must be prepared. Additionally, as conditions of approval, the City would require compliance with the MLSP performance standards and mitigation measures set forth in this EIR and incorporated into the MLSP and/or mitigation monitoring and reporting plan for each tentative subdivision map/improvement plan.

As discussed on pages 3-47 through 3-51 of the DEIR, there are three proposed railroad grade separations. The Austin Road grade separation is included in Phase 1 of the proposed project, a figure showing the proposed design is included on page 3-49 of the DEIR, and impacts associated with construction of this facility are evaluated at a project level in Chapters 4 through 17 of the DEIR. The Austin Road grade separation would pass over the northeast corner of Mr. Podesta’s property, necessitating a construction easement or the purchase of a small portion of the parcel. Access to Mr. Podesta’s processing plant would be unaffected. The other two railroad grade separations are

proposed for future phases of development, have not yet been designed, and therefore are evaluated at a program level in Chapters 4 through 17.

No revisions to the DEIR are necessary.



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RECEIVED
CITY OF STOCKTON

April 22, 2007

APR 23 2007

Lead Agency
City of Stockton
c/o Community Development Dept
Planning Division
345 N. El Dorado St.
Stockton, Ca. 95202

PERMIT CENTER
PLANNING DIVISION

Re: Mariposa Lakes Project
Public Comments Draft EIR

Dear Sirs:

I own and operate two properties that will be significantly impacted by the proponent and this project if approved, as presented.

Mr. Kamilos his team and I have met and many of the concerns I have, have been addressed, although not completely remedied. I write this in response to the DEIR and also so that my concerns regarding this project are addressed and on the record. I preserve any and all rights with respect to the impacts that this project might impose on me, my ability to conduct business, and my property.

I will deal with each property separately.

The first property is a walnut farm located to the east of this project, ½ mile. It is approximately 500 acres and includes both sides of Duck Creek for approximately 1 mile. It includes the property that the proponent has proposed to site the alternate pumping station and pipeline to fulfill the requirements for a proposed recharge system for a 170 acre multiple lake scheme.

My concerns are:

Necessary or increased setbacks in regard from the center line of Duck Creek. Required both physically and in regards to conducting farming practices. This is in response to DEIR and the possible impact of the quality of the water used for the recharge system. The DEIR does not offer any analysis or possible mitigation that might become necessary.

Any requirements with regard to run off from my property into Duck Creek. Again with regard to any potential water quality mandates.

Impairment of any kind with respect to my water rights and water that flows down Duck Creek. As the DEIR comments at 11-6c an undetermined amount of water is necessary to be moved, possibly in a short time, will this impair any water flow that I would be entitled to? The DEIR does not address this.

DEIR at 11-35 envisions construction of a pumping station to divert 23 cfs, or approximately 10,000 gpm. A study should be made as to the effect of the movement of this water on Duck Creek. The creek is designed for flood control and the proponent envisions the necessity of the creek on wet years for the movement of water. Can the conveyance system (creek) be used for both purposes simultaneously or will they be in conflict resulting in failure for the original purpose of flood control? The DEIR does not address this.

The proponent envisions purchase of water from SEWD and SCJWCD, and the conveyance of the water down Duck Creek. An opinion has been written by their counsel. Is there a valid easement for Duck Creek secure, for the conveyance of water for the benefit of a private party? The DEIR does not address this.

DEIR 11-6, states as a possible mitigation for the failure of the re-charge system the expansion of the Arbin property. I believe that this proposal encompasses the entire property. Expansion of this property is impossible.

Although the DEIR identifies the property in grids and its soil permeability, it does not address what areas are specifically going to be utilized for the success of this project. The DEIR does not explain thoroughly net acres needed for this scheme to work, taking into account seasonality. The DEIR must more fully explain this scheme, taking into account real world data.

As the Arbin property is so closely linked to this project should it be included in the annexation? As this is a City of Stockton project, should the county have jurisdiction over this project and its mandates? Is it necessary or prudent to re-zone the property?

Another concern is the disruption of my farm practices in regard to the proposed pumping station and pipeline before, during, and after construction. Possible necessary mitigation measures are not addressed.

Taking of any of my land for the proposed pumping station and pipeline, will be accomplished how? Is condemnation necessary, proposed, or envisioned by any entity? The DEIR fails to take this into account.

As proposed in the DEIR, any Duck Creek stream restoration on the proponents property, could potentially impact my property because of diminished or increase of flows. Again creating a potential for the failure of Duck Creek as designed for flood control. The DEIR does not address possible necessary mitigation.

The taking of my property or the restrictions placed when and if as stated in DEIR that possible "Construction of a berm or engineered levee: channel widening: or channel maintenance." How will this taking happen? How will determined mandates be enforced? The DEIR does not address necessary mitigation, or how this possible taking will be accomplished.

Mandates of stream restoration on my property, in regards to both a taking and a cost.

As stated in the DEIR, how will the possible overdraft caused by the additional pumps and or pumping for both potable and non-potable water be mitigated? If not mitigated and the aquifer does diminish, or lowers, how will my additional pumping costs be mitigated? The DEIR fails to state possible impacts or mitigation measures, other than to state the obvious, "potential serious negative impact".

If the proposed DWSP project is not completed or construction is delayed, as is quite probable and as the Draft EIR depends on this faculty for water, can this project be permitted and started before securing this water that has been identified for the success of this project? Will future phases be delayed waiting for said water supplies? If not where will necessary water be obtained? Will restrictions be proposed until the necessary water obtained? Can the project be permitted on the hope of obtaining said supplies? The DEIR does not address these possible scenarios.

Will the existing 24 Ag Pumps be capped or utilized for this project? I don't believe this is addressed in the DEIR.

As water is at a premium, here and throughout the area, if water is not able to be bought from the local agencies, and as this is a living project, in what time period and what exactly will trigger the proponent to abandon his proposal for a lake system on the project, as the DEIR states in many chapters, as is one option?

If water is not able to be bought for the Lakes system and a recharge system not enabled, is pumping from the underground aquifer an option? Either to fullfill the entire project or to add to the project? Can the proponent borrow from the bank, before it has banked the water?

With regard to the second property I own and operate 7367 E. Mariposa Road and is adjacent to the proponent's property.

Originally my property was scheduled to be included into this project. The planning has changed and my property is now excluded from the proposed annexation. This brings to my attention that all proposals, illustrations, and figures in the future should so state. Please see attached letter.

The walnuts that are grown on my farm are brought to my facility. I also process other walnuts and almonds from the surrounding area. Here they are cracked, sorted, boxed and shipped throughout the world. This is done mostly in a 6 month seasonal period. Almost all of the product is received in a 3 month period. Processing at times is 24/7.

With respect to my on going business. I generate car traffic from both employees and guests. Truck traffic with incoming product, outgoing product, and necessary movement of supplies. Noise from the operation. An amount of dust and run-off. Use and discharge of Methly-Bromide and Phoxtoxin. The DEIR does not take any of this into account or any possible necessary mitigation measures.

I wish to preserve my rights with regards to this and anything else necessary to conduct my business in a lawful manner. Not to be infringed upon, or any costs to be increased because of the approval of the proponent's project.

The worldwide shipment of nuts necessitates the use of the chemicals, Methly-Bromide and/or Phoxtoxin, to meet export protocols. These products are lawfully used and discharged from this facility. A school sited within 1000' of this facility would jeopardize this operation. The proponent has assured me that is not planned. Although RR setbacks would logically move a school farther than 1000' from my facility. The DEIR does not address this possible mitigation. Please see attached letter, with regard to proximity of school.

The discharge of these products must be 10' above the tallest structure within 200'. The proponent's proposed overpass would be within 200' of my discharge and necessitate re-design and construction of the discharge device. How will this cost be mitigated?

The proposed 24" water main in Figure 3-31 of the DEIR seems to impact my property. Is the water main to be on my property or the Rail Road's? If it is to be on my property how is an easement to be granted? How is the project to be constructed as a large commercial building edges my property line? The DEIR does not address this.

The DEIR envisions 220 pumping days possibly necessary for this proposed system to be in balance. This year would have yielded approximately 0 days. The project also envisions up to 23 cfs to be diverted. This is about 50 acre feet per day sent to the recharge property. In all candor this is a tremendous amount of water with the bulk of it to be absorbed in the winter.

My first concern is the ability of the property to cope with this amount of water, especially in the winter. My second concern is as the aquifer fills or domes, the ability of the project to continue as envisioned. It has been explained to me that the underground area of a property does eventually fill up, or domes. As this limit is reached it is unknown as to the ability of the property to absorb or "bank" any more water. The DEIR fails to address or mitigate this impact.

To put this into perspective, I have not been able to find a project to compare this to locally, especially in scope, other than a small project with CSJWCD and a 60 acre project with SEWD. The DEIR with all the analysis and figures is like taking the physics of a firecracker and now applying them to an atomic bomb blast.

I do not believe the DEIR takes all its calculations in its entirety seriously, as it quantifies and states numerous times, "there are significant and unavoidable potentially significant impacts" if one of many factors unknown at this time do not occur as envisioned. As each one is dependent on the other for success the likelihood of this project being successful is highly suspect.

Although the proponent has made a novel attempt to construct and supply a 170 acre lake system, the use of this precious water, is ill-spent. Water is in the news every day, the need for it and the limited supply. Urban, ag and the environment all need water to live, and are all in conflict, trying to secure an adequate supply. As the urban population increases as envisioned in California, the need for this water is even more precious to preserve. If this project were to proceed as proposed, I believe future planners will seriously question why this water was dedicated for this use, I question it now.

As the amount of water is finite, this water dedicated for a lake system, will constrict uses far more necessary for the growth that we all know is occurring in California, now and in the future, and the conflicts as described above.

With regard to the proposed demolition, re-alignment and construction of the new Mariposa-Austin Road overpass. The proponent has a new tentative map showing the placement of a new 4 lane overpass interchange. This has the potential to seriously impact my ability to operate. The DEIR does not address this.

This property is long and narrow, at approximately 1,600' long and 400' wide at the widest, tapering down to 0' at each end. As the property supports 3 different buildings the taking of any area that decreases the width or infringes on the present use as designed, is a significant negative impact.

To function the property has been constructed to use 3 entrances. It has been explained to the proponent that all 3 entrances are necessary for business to be conducted.

The narrowing even further, or the impairment of the use of any width of the property caused by retaining walls, a necessary drainage scheme, or any other feature to enable the new structure, would be a significant negative impact.

The proposed overpass should be designed for easy ingress and egress for trucks traveling both in an Easterly and Westerly direction, to my property.

Is any condemnation necessary for the construction of this project by any entity, now or in the future? The DEIR does not identify the potential for condemnation, its mitigation or how any condemnation might be accomplished.

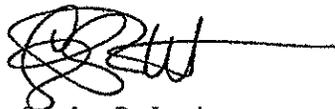
Finally, I have had the pleasure to read the 3" DEIR for the Mariposa Lakes Project, for the purpose of submitting public comments. After reading the DEIR I have been directed to read appendices to answer questions I might have. These I have not commented on as I was not aware of them and thought the DEIR was the entire document, that required public comments.

I do note that PACE located in the Los Angeles area seems to be the firm that the proponent relies upon for the re-charge scheme. I am sure that they are an expert in their field of supplying reliable figures and charts for the successful proposal of this scheme.

I submit however, that local people and officials with an intimate knowledge of the area gained by experience, would be a more reliable resource with first hand knowledge, and should be consulted for design so that this project might succeed. They should also be consulted for any possible negative impacts on the project and the surrounding area. This was not done in the DEIR.

Respectfully Submitted

By,

A handwritten signature in black ink, appearing to be 'CP', with a horizontal line extending to the right.

Craig Podesta

These responses pertain to Mr. Podesta's property nos. 1–6 as shown in Figure 4-1.

- DANAMARK-C-1** The commentor questions the need for greater setbacks from Duck Creek to protect water quality for the recharge system. No setbacks are necessary because the Duck Creek improvements would occur within the County right-of-way along Duck Creek. Water quality of the proposed recharge system is unrelated to and would have no effect on Mr. Podesta's property, which is upstream of the proposed project site. No revisions to the DEIR are necessary.
- DANAMARK-C-2** The commentor suggests that water quality runoff from Mr. Podesta's property may affect the water quality of Duck Creek in relationship to the proposed project. There are no requirements pertaining to runoff from Mr. Podesta's property into Duck Creek that would be generated by the proposed project. Runoff from Mr. Podesta's property is governed by any permits that may have been issued to him by the City, the SWRCB, or the SJVAPCD, and are unrelated to the proposed project. The water obtained from Duck Creek for the proposed project would be used for groundwater recharge, and therefore would be nonpotable water rather than potable water. No revisions to the DEIR are necessary.
- DANAMARK-C-3** The commentor suggests concern that the project may affect Mr. Podesta's water rights to Duck Creek. Mr. Podesta's water rights, whether appropriative or riparian, by law, would not and cannot be affected by water delivered downstream to the proposed project. As described on pages 11-35 and 17-16 of the DEIR, and in the Nonpotable Water Supply Assessment prepared by SEWD (attached as new Appendix Y to this FEIR), the project applicant would purchase surplus (unappropriated) surface water that is already flowing down either Duck Creek or North Little Johns Creek, or both. Because this water is surplus, the project applicant's purchase of water would have no effect on Mr. Podesta's water supplies. No revisions to the DEIR are necessary.
- DANAMARK-C-4** The commentor expresses a concern that use of Duck Creek to deliver water to the project site may affect the creek or the current uses of the creek for water delivery and flood control. Duck Creek is a natural feature of the landscape that is being used by SEWD, under a permit from the Reclamation, for delivery of water supplies to its customers. As described on pages 11-35 and 17-16 of the DEIR, the project applicant would purchase surplus (currently unused) surface water that is already flowing down either Duck Creek or North Little Johns Creek, or both. Therefore, there would be no effect on flood control. See Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices" for changes to the text of Impact 11-6 regarding certainty of supply of nonpotable water and delivery of nonpotable recharge water down North Little Johns Creek and/or Duck Creek. Recharge water delivery itself is no longer a potentially significant impact; however, Impact 11-6 as a whole remains potentially significant before implementation of mitigation, and less than significant after implementation of mitigation, as stated on pages 11-39, 11-41, and 11-42 of the DEIR. No further revisions to the DEIR are necessary.

- DANAMARK-C-5** The commentor asks under what authority would water be conveyed through Duck Creek. California Water Code Section 7075 authorizes the conveyance of purchased water through a natural stream such as Duck Creek. No easement is necessary for water conveyance. No revisions to the DEIR are necessary.
- DANAMARK-C-6** The commentor asks whether expansion of recharge activities, as proposed at DEIR page 11-6, is feasible. As discussed on page 11-34 of the DEIR, the recharge facility would bank enough additional water to serve the project during a 3-year drought. Mitigation Measure 11-6b addresses the situation of an extended drought that lasts longer than 3 years. In that event, one of the potential options would be to expand the Arbini recharge facility by purchasing adjacent land or by expanding the recharge capacity and/or storage volume on the existing Arbini property. No revisions to the DEIR are necessary.
- DANAMARK-C-7** The commentor asks for more data and analysis verifying the suitability of the Arbini property for groundwater recharge. The information requested by the commentor is discussed in the DEIR on pages 11-36 through 11-38; on pages 11-58 through 11-61; in DEIR Appendix Q (*Groundwater Recharge Feasibility Assessment*); and in new DEIR Appendix BB (*Supplemental Geotechnical Investigation, Groundwater Recharge Feasibility Assessment*) attached to this FEIR. No revisions to the DEIR are necessary.
- DANAMARK-C-8** The commentor suggests that the Arbini property should be annexed given its role in the proposed project. The owners of the Arbini property have had multiple opportunities to initiate or participate in proceedings that could lead to the annexation of their property to the City, including public meetings and hearings on the MLSP project and the City's 2035 City General Plan. They have consistently declined to take any action to annex their property to the City. The City does not intend to require any property owners to annex their property to the City involuntarily. While the Arbini property would remain within the County, the operation of the groundwater recharge facility would be vested with the appropriate water agency, probably the CSJWCD. No rezoning of the property by the City or County would be required. No revisions to the DEIR are necessary.
- DANAMARK-C-9** The commentor asks whether farming on Mr. Podesta's property would be disrupted during project construction and operations, particularly for the pumping station and pipeline. Construction of the proposed pump station at either location along Duck Creek (see DEIR Figure 11-4) would occur within a County right-of-way, and therefore would have no impact on Mr. Podesta's farming operations. Construction of the preferred pipeline route, along Kaiser Road, would have no impact on Mr. Podesta's property, since his property is upstream from that pipeline route. If the alternative diversion pipeline route were chosen, along Jack Tone Road, construction would occur within the designated road right-of-way, and the project applicant would coordinate with Mr. Podesta to minimize any minor temporary and short-term disturbance to his farming operations during the construction process. No revisions to the DEIR are necessary.
- DANAMARK-C-10** The commentor suggests that Mr. Podesta's land would need to be acquired as part of the proposed project, and questions how that would be accomplished. None of Mr. Podesta's land would need to be acquired, by any process, for either the Duck Creek pump station or the conveyance pipeline. See response to DANAMARK-C-9 above. If the alternative diversion pipeline route were chosen, along Jack Tone Road, construction would occur within the designated road right-of-way, and the project applicant would coordinate with Mr. Podesta to minimize any minor short-term disturbance to his farming operations during the construction process. No revisions to the DEIR are necessary.

- DANAMARK-C-11** The commentor asks whether the restoration proposed for Duck Creek would affect his operations on his property. The proposed restoration of Duck Creek would occur only within the SPA, which is downstream of Mr. Podesta's property, and would occur in consultation with the appropriate local, state, and federal regulatory agencies. Creek restoration would be designed to attenuate flood flows (see DEIR Appendices N and O). As part of the Conditional Letter of Map Revision (see DEIR Impacts 11-4 and 11-12) application that would be submitted to the Federal Emergency Management Agency, a detailed hydraulic model of the Duck Creek channel would be completed. This model would study the effects of restoration work conducted in and around the channel on the total flood conveyance capacity of Duck Creek through the SPA, including both upstream and downstream reaches of the project, to assure there would be no significant changes that would adversely affect the commentor's property. See also DEIR Mitigation Measures 7-7 and 7-17 regarding consultation and permits for modification of jurisdictional waters of the United States. Therefore, there would be no effect on upstream landowners such as Mr. Podesta. No revisions to the DEIR are necessary.
- DANAMARK-C-12** The commentor asks whether stream restoration would occur within the stretch of Duck Creek located within his property, how much that would cost, and how the property would be acquired. The proposed restoration of Duck Creek would occur only within the SPA; therefore, none of Mr. Podesta's land would be acquired and there would be no cost to Mr. Podesta. No revisions to the DEIR are necessary.
- DANAMARK-C-13** This comment suggest that project implementation could result in groundwater overdraft and asks how that potential impact would be mitigated. Contrary to the commentor's assertion, the DEIR does not conclude there is a "potential serious negative impact" to the groundwater aquifer from the proposed recharge project. As stated on page 11-42 of the DEIR, the implementation of Mitigation Measures 11-6a through 11-6d, and new Mitigation Measure 11-6e contained in Chapter 5 of this FEIR, would reduce potential impacts related to groundwater recharge from the proposed recharge project to a less-than-significant level. See also Master Response 5 in Chapter 3, "Master Responses," of this FEIR. The potable WSAs prepared for the proposed project (DEIR Appendices R and S) state that water would be available to serve the proposed project at full buildout once the Delta Water Supply Project is constructed. See Master Response 3 in Chapter 3, "Master Responses," of this FEIR. Water would be available to serve Phase 1 of the proposed project with the City's existing supplies. See response to SIERRA-28 and see revisions to Impact 17-10 in Chapter 5, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices," of this FEIR. The City does not believe that adverse impacts to groundwater would occur because it supplies water to its customers from both surface water and groundwater supplies under a conjunctive use approach. For a detailed explanation of this issue, see Master Response 4 in Chapter 3, "Master Responses," of this FEIR
- DANAMARK-C-14** The commentor asks what effect any delays in the construction and operation of the DWSP would have on the proposed project. See Master Response 3 in Chapter 3, "Master Responses," of this FEIR. See also Impact 17-1 and Mitigation Measure 17-1 in Chapter 17 "Utilities and Energy," of the DEIR as well as text changes to the same as shown in "Corrections and Revisions to the DEIR and Errata to DEIR Appendices" in Chapter 5 of this FEIR. Water would be available to serve Phase 1 of the proposed project with the City's existing supplies. See response to SIERRA-28 and see revisions to Impact 17-10 in Chapter 5, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices," of this FEIR.

- DANAMARK-C-15** The commentor asks about the fate of the 24 existing wells on-site that are used by agricultural operations. Pages 10-6 and 11-13 of the DEIR discuss existing agricultural wells within the SPA. Page 10-6 also states, “Wells, pumps, and septic systems would need to be removed in conjunction with development of the SPA.” Mitigation Measure 10-4(h) (DEIR page 10-17) requires that all existing wells be closed in conformance with San Joaquin County Department of Environmental Health guidelines. No revisions to the DEIR are necessary.
- DANAMARK-C-16** The commentor asks at what point the proposed on-site lake system would be abandoned if water becomes unavailable for purchase for the groundwater recharge system. The only location in the DEIR where elimination of the proposed lake system was contemplated was in Mitigation Measure 17-3 on page 17-17 of the DEIR. However, because of the information contained in new Appendix Y (Nonpotable Water Supply Assessment), the text of Impact 17-3 has been revised, Mitigation Measure 17-3 has been eliminated, no other mitigation measures are required, and the significance conclusion has changed from potentially significant and unavoidable to less than significant, as shown in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” See Master Response 5 in Chapter 3, “Master Responses,” of this FEIR. DEIR Mitigation Measure 11-6b addresses the situation of an extended drought (longer than 3 years).
- DANAMARK-C-17** The commentor asks whether groundwater pumping could serve as a backup if the recharge system proves infeasible in the short or long term. As discussed in the *Non-Potable Water Supply Assessment for the Proposed Mariposa Lakes Development*, attached as new Appendix Y, there is a secured source of nonpotable water for the proposed lake system. The Arbini recharge system is an integral component of the proposed project and would be enabled as part of the project. See Master Response 5 in Chapter 3, “Master Responses,” of this FEIR. The City requires the recharge project to operate by applying 2 acre-feet of purchased surplus surface water to the ground surface for recharge for every 1 acre-foot of water of banked groundwater that is withdrawn. Records would be kept by the entity operating the recharge project regarding how much water is applied and how much water is withdrawn. Banked recharge water cannot be withdrawn in a ratio greater than the 2:1 application rate. Therefore, pumping of native (already existing) groundwater for use in the project’s nonpotable water system would not be permitted. The project applicant must apply purchased surface water to the recharge facility before recharge water can be used. No revisions to the DEIR are necessary.
- DANAMARK-C-18** The commentor requests that all future documents related to the proposed expressly state that Mr. Podesta’s property would not be annexed as part of the project. The comment is noted and DEIR Figures 3-10 and 3-11 have been revised to reflect this as shown in FEIR Chapter 5, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.”
- DANAMARK-C-19** The commentor questions whether there could be land use conflicts between the commentor’s business operations (Danamark processing facility) and the proposed project, including conflicts related to traffic, noise, dust, and use of chemicals. Both on- and off-site drainage and hydrologic impacts from the project site and vicinity have been studied by Pacific Advanced Civil Engineering (PACE) and are included in the DEIR as Appendices L, N, and O. The project’s stormwater drainage system takes into account the drainage factors from surrounding properties and is designed to limit discharge rates after development of the project to levels that are equal or less than existing preproject development rates. Impacts related to hydrology are addressed in Chapter 11, “Hydrology

and Water Quality,” of the DEIR. Traffic on the roadways surrounding the project site was studied by TJKM, and is included as Appendix U to the DEIR. Impacts related to traffic are addressed in Chapter 16, “Traffic and Transportation,” of the DEIR.

Impacts from noise generated by the Danamark facility are addressed in response to DANAMARK-A-3 above. Revisions to the DEIR text regarding noise from the Danamark facility are included in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.”

Impacts from methyl bromide emissions generated by the Danamark facility are addressed in response to DANAMARK-A-4 above. Revisions to the DEIR text regarding air quality from the Danamark facility are included in Chapter 5 of this FEIR “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.”

With respect to dust, the Danamark facility is required by law to comply with all applicable SJVAPCD rules and regulations, and therefore should have no impact on the proposed project.

- DANAMARK-C-20** The commentor questions whether it would be appropriate to site project-related schools near the Danamark facility, given its use of certain chemicals. The closest school to the Danamark facility would be an elementary school (N-28), shown on DEIR Figure 3-8, “Mariposa Lakes Land Use Plan.” This school would be constructed approximately 2,000 feet from the Danamark facility. The results of a Health Risk Assessment (new Appendix Z) have demonstrated that even as close as 300 feet, no adverse health impacts would occur (see response to DANAMARK-A-4 above). Furthermore, as stated in Chapter 12, “Land Use” of the DEIR, the California Department of Education (CDE) School Facilities Planning Division has prepared a Guide to School Site Analysis and Development (CDE 2000) that provides criteria for locating appropriate school sites in California. In addition to these site requirements, a number of health and safety requirements for school site selection are also governed by state regulations. The California Education Code contains various provisions governing the siting of new public schools (e.g., Education Code Sections 17211, 17212, and 17212.5). An evaluation of CDE siting criteria in relationship to the schools proposed as part of development Phase 1 is contained in DEIR Impact 12-7. No revisions to the DEIR are necessary.
- DANAMARK-C-21** The commentor notes that Mr. Podesta’s discharge stack must be 10 feet above the tallest structure within 200 feet, and that the proposed overpass would infringe on that setback. He asks who would be responsible for the cost of relocation. Although the City notes that direct financial issues associated with the project are not a CEQA issue, the following response is provided: the project applicant would be responsible for paying the cost of relocating Mr. Podesta’s discharge stack. No revisions to the DEIR are necessary.
- DANAMARK-C-22** The commentor asks whether the proposed 24-inch water main would affect Mr. Podesta’s property. The proposed 24-inch water main would be located within the right-of-way of Mariposa Road, and therefore would have no impact on Mr. Podesta’s property. See revised Figure 3-35 attached to Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” This change does not alter the conclusions of the DEIR.
- DANAMARK-C-23** The commentor asks whether the Arbin site would be capable of accommodating the amount of water proposed for application, particularly in the winter. The commentor also asks whether the actual storage capacity of the aquifer is sufficient to meet the project’s demands. The *Groundwater Recharge Feasibility Assessment*, attached as Appendix Q to

the DEIR, evaluates the volumes of water that can be recharged and the storage capacity of the aquifer. The *Supplemental Geotechnical Investigation, Groundwater Feasibility Assessment* recently completed by Kleinfelder (2007), attached as new Appendix BB to this FEIR, contains additional details regarding the operating capacity of the proposed Arbini recharge facility. The Operational Level Integrated Water Management Plan, required in Mitigation Measure 11-6a of the DEIR, would contain additional details regarding operation of the Arbini recharge facility. In addition, a nonpotable off-site water source feasibility assessment, required in Mitigation Measure 11-6c of the DEIR, would contain final water availability calculations and a final water delivery schedule to the Arbini recharge site.

Recharged groundwater creates what is referred to as a “mound” beneath the recharge site, but the mound is not a result of water “piling up” beneath the site. Instead, the water moves downward, like water through sand in a bucket of infinite diameter. The aquifer itself exists in the form of saturated sand or coarse material in the lower portion of the bucket. Above this, the sand is normally dry; but with artificial recharge, the pore spaces between the dry sand grains become filled with water. This area where pore spaces in sand above the aquifer are filled with water is referred to figuratively as a “mound,” although it is actually a zone of saturated sand that would otherwise be dry. The mound of applied water spreads outward and downward as it moves through the water table.

Groundwater constantly moves through the aquifer. When groundwater encounters any sort of barrier, it simply flows around the barrier and continues moving. Thus, it is impossible to fill the aquifer as the commentor suggests. No revisions to the DEIR are necessary.

DANAMARK-C-24 The commentor questions the “success” of the proposed project and suggests that the DEIR does not appropriately consider the proposed project’s significant impacts. Because the commentor does not state exactly which impacts he is concerned about, it is not possible to respond with any degree of specificity to the commentor’s concerns other than to state that the DEIR was prepared by qualified environmental professionals with assistance from firms that are specialists in their trade (e.g., traffic engineering, hydrology, environmental planning, and utilities engineering), as identified in DEIR Chapter 24. The City believes that the DEIR appropriately identifies and analyzes project-related impacts, and (where necessary) provides mitigation for significant impacts. The City will consider the commentor’s concerns as part of its decision on whether or not to approve the project. No revisions to the DEIR are necessary.

DANAMARK-C-25 The commentor suggests that use of water for the project’s lake system would be ill spent. As an initial matter, we note that these sorts of policy questions are not truly CEQA issues but are essential questions for the City’s decisionmakers. The commentor’s concerns are noted and will be forwarded to the City’s decisionmakers as part of the FEIR. Moreover, as discussed on pages 3-66 through 3-76, 11-33 through 11-39, and 11-59 through 11-62 of the DEIR, water for the lake system would not be potable. The lake water would come from on-site stormwater runoff, on-site precipitation, and from purchased surplus surface water recharged into the Arbini facility. Therefore, the use of nonpotable water in the proposed lake system is not “ill spent,” and in fact, the City believes that application of water into the proposed recharge facility provides a benefit to the regional groundwater aquifer as a whole. No revisions to the DEIR are necessary.

DANAMARK-C-26 The commentor asks whether the new overpass would affect use of, including ingress or egress, the commentor’s property. Since this comment letter was received, the project applicant initiated and participated in four face-to-face meetings with Mr. Podesta (on

March 20, March 26, April 13, and April 24, 2007) to discuss his concerns and explain various aspects of the proposed project, including his concerns regarding access to his property resulting from the proposed railroad grade separations and the Mariposa-Austin Road overpass. Access to Mr. Podesta's property would be maintained as discussed in responses to the comments contained in DANAMARK-A, above. No revisions to the DEIR are necessary.

DANAMARK-C-27 The commentor states that he was unaware of the DEIR appendices and therefore did not review them. The appendices are part of the DEIR and support the DEIR analysis. Every chapter of the DEIR that refers to appendices contains the exact appendix title and number. All appendices are provided on CDs inserted inside the back cover of the DEIR. A list of all the appendices is contained on page iv of the DEIR, "Table of Contents," with a notation indicating that appendices are available on CDs attached to the back of the DEIR. Furthermore, as stated on page 1-12 of the DEIR, a hard copy of all appendices is available for public review at the City of Stockton Community Development Department, 345 North El Dorado Street, Stockton, California. No revisions to the DEIR are necessary.

DANAMARK-C-28 The commentor asks whether PACE has sufficient expertise, especially knowledge of the local hydrology, to design the proposed recharge project. Although the City notes that this comment does not refer to a CEQA issue, the following response is provided. PACE has regional offices in Stockton and Fountain Valley, California and Phoenix, Arizona. PACE specializes in solving civil engineering problems related to water resources. PACE is currently working on numerous projects in both Stockton and San Joaquin County, and the City believes they are well qualified to work on the MLSP project. Local citizens and officials with an intimate knowledge of the project area were consulted on the proposed project. In addition to the list of DEIR preparers on pages 24-1 and 24-2, see also DEIR pages 23-12 through 23-15 in the section titled "Personal Communications." No revisions to the DEIR are necessary.

20, April, 2007

To: City of Stockton (CAS, CASMA)
 Dept. of Planning Div.
 345 No. El Dorado St.
 Stockton, CA 95202

RECEIVED
 CITY OF STOCKTON

APR 23 2007

PERMIT CENTER
 PLANNING DIVISION

Attn: David Stagnard, Mike Niblock, Mark Madison,
 Mayor Ed. Chevey and City Council.

Re: Public Review of the Draft Environmental Impact
 Report (DEIR) for Mariposa Lakes Specific
 Plan (SP4-03) State Clearinghouse # 2006022035.

From: The following questions, statements, comments and
 remarks are from the Morada Community as
 represented by the Morada Area Association (M.A.A.)
 through the Morada Municipal Advisory Council
 (M.M.A.C.). Morada is a small rural
 residential farming community as defined by
 county maps as bounded by SR Hwy 99 on west,
 Alpine Rd. on east, Calaveras River on south,
 and Bear Creek on north.

The Morada Community's concerns regarding
 the massive Mariposa Lakes Subdivision project
 are the cumulative impacts of this project on
 our entire county. Our issues are the usual
 roads and streets, water and air quality, sewer and
 water infrastructure and supply, the loss of

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prime farmland, loss of habitat and open space, schools, etc. but our main focus and concern in this DEIR is water, groundwater and surface water, and the lack of it.

Since we all sit on the same aquifer, the Eastern San Joaquin Groundwater Basin, which is one basin, ie, water source for agricultural areas and urban areas alike, and the basin is deemed to be in a "critical overdraft condition" by the State Dept. of Water Resources to the tune of between 160,000 to 200,000 acft/yr., and since according to the Eastern San Joaquin Groundwater Management Plan, "current and historical groundwater pumping rates exceed the "sustainable yield" of the underlying groundwater basin on an average annual basis", the following questions arise: 1) how can the COS, SEWD and Cal-Water and project developers justify the "reasonable and beneficial" use of more groundwater pumping ... reasonable and beneficial to whom? 2) Is it legal for appropriators of groundwater like Cal-Water and COS to rely on this source of water unless there is a surplus or excess of water in the groundwater basin? 3) If you do, are you jeopardizing the rights of overlying property owners and individual groundwater pumpers extracting water legally from beneath their own property? 4) How about the significant growth in other cities like Lodi, Ripon, Lathrop and Manteca who

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rely heavily on groundwater use ... what will the cumulative and direct impacts of Mariposa Lakes be on them and all of us? 5.) Your groundwater recharge proposal feasibility assessment overestimates some numbers and understates others. and the COS recognizes your Arbini recharge site as a "none to slight" recharge area, this being said, if you consider both natural evaporation and very low recharge numbers at Arbini Ranch, will any significant recharge actually occur?

6.) Can you consider the groundwater basin a firm source of supply to the CASMA appropriators while it is in a critical overdraft condition... can the basin in a state of deficiency to this degree be called sustainable? 7.) Mariposa Lakes is dependent to some degree on the COS DWSP; what if the DWSP is denied a partial funding grant, what will the economic impacts be to Mariposa Lakes Project, and the COS and taxpayers? What if the tentative DWSP does not come to fruition due to political, funding or environmental reasons, how would such a failure impact the build out of Mariposa Lakes?

8.) With the results of the latest USGS study warning us of saline intrusion threat from the west under our S.G. Delta moving easterly rapidly at a rate of 143 ft. per year that already claimed the wells at Oak Grove Regional Park requiring city services

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(COS water grid hook-up) to the park, and the Cal-Water wells abandoned in Stockton due to arsenic contamination and requiring additional groundwater to "blend" and dilute this contamination down to acceptable USEPA drinking standards ("the solution to pollution is dilution"), aren't you gambling with our public trust? With our groundwater basin critically overdrawn and seriously threatened by saline intrusion and other contaminants along with diminishing surface water supplies, aren't you overtaking and harming our common and out-of-balance water resources?

9.) How are you going to mitigate the loss of thousands of acres of prime farmland and open space that does act as natural recharge land and also mitigate the compounded damage to our common groundwater basin?

10.) Isn't it true the COS has already built-out past its true ability to serve and is now expanding its footprint in order to take groundwater under that footprint by creating "pumping fields" over these annexed areas to act as legal appropriators and pump that groundwater into the COS water grid to serve the big pending development projects like Dupes' Sanctuary, Sparrow's Gateway Project and the Empire Ranch/Village I? ^{11.)} Many think the COS water policy is one of "picking the easy fruit first",

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essentially "mining" the aquifer, and if continued we face the very real potential of our aquifer failing as happened to the City of Clovis in Fresno County, so is the striking of new deep high volume municipal wells and the creating of well pumping fields which will only continue to overpump and overdraft our aquifer, a good fiscal and political decision? 12.) Won't Mariposa Lakes (as well as other such large projects) dependent on groundwater pumping, simply further deplete our already overdrawn basin and cause increased pumping costs for all existing residential, commercial, agricultural and industrial users due to increased hydraulic lift as well as decreased yields due to decreased aquifer static water levels and a greater tendency for the eastward movement of saline water due to a steeper hydraulic gradient? We are told by our water consultants that these projects are a very real threat to groundwater supply and quality and that our concerns for the future of the basin and our (Morada's) ability to continued right of use as overlying property owners is warranted and should be defended.

We are grateful for this opportunity to be heard and hope and pray we are. Simply there really is no mitigation for the very severe

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cumulative negative impacts on our groundwater basin if these large projects continue to be built without adequate water supply. Aside from hard and reasonable decisions to preserve, protect and restore our groundwater basin for now and the future (Public Trust) and also the protection of our prime farmland from being developed over for the mere sake of the "bottom line" is foolish and threatens the future of our country's agricultural centered economy as well as the livability of a place left to our kids with little or no water resource. We should be evaluating and analyzing our motives and intentions as well as our environmental documents to see if they are in line with the God-given obligation and very best possible moral/ethical stewardship of our God-given resources that we are commanded to demonstrate.

Thank you again for this opportunity to input.

William Tom Amber Fields
6406 Mulberry Ln.

Morada, CA 95212-9417

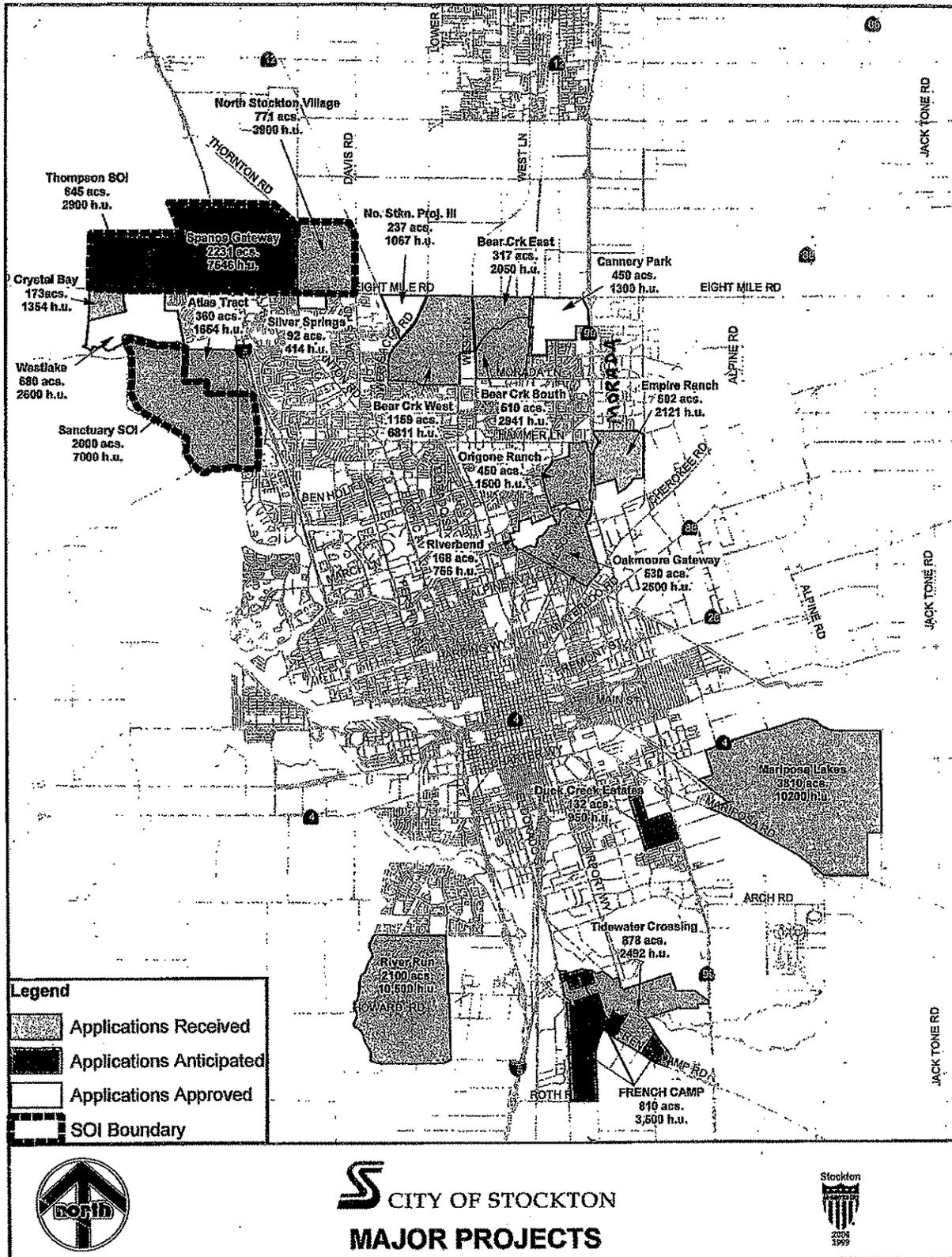
33 year resident Morada

63 year resident Stockton

member M.A.A.

member M.M.A.C.

attached: CAS map of
Major Projects
c/c M.A.A. M.M.A.C.



S:\CD\ARMAP\EXT\BIB75\dev\projects\with ac\h\mxd

attachment 20 April 2007

- MORADA-1** The commentor introduces the subject matter of the letter, and more detailed comments are provided in the bulk of the letter. The responses to those detailed comments are provided below. The introductory comment also express concern about the cumulative impacts of the proposed project. The cumulative impacts of the proposed project are discussed in Chapter 18 of the DEIR, which contains a detailed evaluation of cumulative impacts within each of the 14 issue areas (i.e., transportation, air quality, utilities and energy, agricultural resources, biological resources, etc.). No revisions to the DEIR are necessary.
- MORADA-2** The commentor expresses concerns over groundwater pumping proposed by the City of Stockton Metropolitan Area (COSMA), SEWD, Cal Water, and the project applicant. As explained in Chapter 17 of the DEIR, for potable water uses, the proposed project would rely primarily on surface water but also on groundwater as a conjunctive use. As explained in Chapter 11 of the DEIR, for nonpotable water uses, the proposed project would rely on “banked” surplus surface water rather than naturally occurring groundwater. Even assuming that the potable water demand of the proposed project were to come exclusively from groundwater, the proposed project would use less water than the existing uses on site. As explained on page 11-13 of the DEIR, the existing agricultural uses on site constitute about 11,000 afy of water, of which about 400–600 afy comes from surface water supplied by CSJWCD. The remainder, about 10,500 afy, is supplied by groundwater pumped from on-site wells. As explained on page 17-11 of the DEIR, the total water demand for the entire proposed project is anticipated to be 10,128 afy, of which only 7,535 afy would be potable. Thus, even under the worst case scenario, in which all potable water is derived from groundwater, the proposed project would result in a net reduction in the use of groundwater. See also Master Response 4 in Chapter 3 of this FEIR, “Master Responses,” as well as Section 5.3 of this FEIR. See also response to CSJWCD-4.
- MORADA-3** As a matter of law, the extraction of groundwater from a basin such as Eastern San Joaquin County is not restricted unless the groundwater basin has been adjudicated, which is not the case for the Eastern San Joaquin County basin or any sub-basin in the Central Valley (see additional detail contained in response to YEATES-27, below). California water law protects overlying users from extractions by appropriators (that is, those who pump groundwater for nonoverlying uses) (*San Bernardino v. Riverside* [1921] 186 Cal.7, 15). It is a well-established principle in California case law that overlying users’ right to use groundwater is superior to those that extract groundwater for use elsewhere, but where no injury to overlying users will occur, groundwater may be appropriated (*Cohen v. La Canada Land & Water Co.* [1907] 151 Cal. 680). See Master Response 4 in Chapter 3 of this FEIR, “Master Responses.”
- MORADA-4** An analysis of water use by other Eastern San Joaquin County cities (i.e., Ripon, Lathrop, Manteca, and Lodi) was not included in the DEIR because it was determined that the DEIR and supporting materials contain sufficient information and analyses to adequately analyze the project’s potential groundwater impacts, and it was not included in the WSAs because such information is not required under Section 10910 of the Water Code.

It should also be noted that the city of Ripon, which is relatively small, is located within the South San Joaquin Irrigation District (SSJID) and is adjacent to the Modesto Irrigation District. Because of many years of flood irrigation that has occurred around it by the two large irrigation districts, it has an ample water supply from groundwater that has been recharged through percolation of irrigation water. The Cities of Lathrop and Manteca are currently converting their water supply systems to receive treated surface water from the completed South SSJID Treatment Plant and the SSJID conveyance facility, which extends from the Woodward Reservoir to the city of Tracy using SSJID water from the Stanislaus River. This will provide a replacement for water now pumped from the underground aquifer and will also provide for growth in Lathrop and Manteca. Furthermore, the City of Lodi has contracted for a supply of surface water from the Mokelumne River from the Woodbridge Irrigation District, which has rights to surface water supplies that exceed its current and anticipated demands. The Lodi City Council has directed its staff to begin work on a water treatment plant to serve the City of Lodi. This additional use of surface water will further reduce the demand on the groundwater basin. Rather than anticipating a decrease in groundwater basin levels because of increased groundwater use by other Eastern San Joaquin County cities, the reverse is true. In the case of the southern cities, water is available and the facilities have been constructed. In the case of Lodi, there is a firm water supply contract with Woodbridge Irrigation District. (Prima, pers. comm., 2007.)

Cumulative impacts of the proposed project are evaluated in detail on pages 18-1 through 18-24 of the DEIR. The discussion of cumulative impacts is organized by issue area, and it includes a summary of the projected environmental impacts of the related projects, a summary of the project's cumulative contribution to impacts that may be caused by the related projects (if any), and inclusion of mitigation measures that could reduce or avoid the proposed project's contribution to any cumulative impacts. No revisions to the DEIR are necessary.

MORADA-5

The City disagrees with the commentor's assertion that "your groundwater recharge proposal feasibility assessment overestimates some numbers and understates others...." The *Groundwater Recharge Feasibility Assessment* (DEIR Appendix Q) prepared by Kleinfelder uses the most current information available about the project site and the regional groundwater aquifer, and incorporates widely used and accepted hydrologic modeling techniques to determine the feasibility of the proposed recharge project. Because the commentor did not provide any specifics about the numbers they disagree with, it is not possible to provide a detailed response. The commentor points out that the Arbini recharge site is located within a larger geographic area that has been generally classified as having "none to slight" recharge. However, the data contained in Appendix Q show that the Arbini property would be suitable for the amount of recharge necessary to meet project needs. The groundwater recharge facilities would be constructed and operated on the Arbini property, and not on the project site itself. Since the DEIR was circulated for public review and comment, Kleinfelder (2007) has completed a *Supplemental Geotechnical Investigation, Groundwater Recharge Feasibility Assessment*, which provides additional detail regarding the capacity of the Arbini property and further supports the ability of the proposed recharge facility to meet project needs. This report is attached as new Appendix BB to this FEIR. No revisions to the DEIR are necessary.

MORADA-6

Neither the COSMA appropriators nor the proposed project would rely primarily on groundwater to meet their demands. As explained in DEIR Chapter 11, "Hydrology and Water Quality," and in Master Response 5 in this FEIR, for its nonpotable demand, the

proposed project would rely only on “banked” groundwater rather than naturally occurring groundwater. The COSMA appropriators would rely on groundwater on a conjunctive use basis and have established goals for safe-yield withdrawals based on a thoroughly planned and evaluated conjunctive use program. See Master Response 4 in Chapter 3, “Master Responses,” of this FEIR, as well as Section 5.3 (summarizing water supply analyses provided for the proposed project) of this FEIR. See also response to CSJWCD-4 as well as Appendices R and S of the DEIR and Appendix Y of the FEIR (Water Supply Assessments).

MORADA-7

The commentor suggests that the DWSP should be considered a “tentative” water source. Phase I of the DWSP is considered a firm, reliable source of water to serve the proposed project. See Master Response 3 in Chapter 3, “Master Responses,” of this FEIR, as well as Sections 5.2 (discussing changes to Impact 17-10 of the DEIR) and 5.3 (summarizing water supply analyses provided for the proposed project) of this FEIR. The DWSP is not needed to serve Phase 1 of the proposed project (it is needed to serve development Phases 2-5). See Section 5.2 (discussing changes to Impact 17-10 of the DEIR) of this FEIR as well as response to SIERRA-28.

MORADA-8

The commentor does not specify which U.S. Geological Survey study they are referring to, and therefore it is not possible to respond to that portion of the comment. However, the City is aware of the threat of saline intrusion. The City has conducted and reviewed exhaustive groundwater studies in recent years to determine the health and sustainable capacity of the City’s groundwater basin. See page 9 of the City’s WSA (DEIR Appendix R). Based on these studies, the City has taken various steps to manage its groundwater use to reduce the historical overdraft of the groundwater basin, eliminate or minimize the risk of saline intrusion, and achieve long-term sustainability regarding its groundwater usage. As explained at pages 22 through 27 of Appendix R, these steps include establishing and maintaining a conjunctive use program to guide the City’s water service practices and the establishment of maximum safe groundwater yields on a yearly and long-term average basis. Page 22 of the City’s WSA states:

Conjunctive use implies that groundwater will be preserved as the last source of supply that is used if surface water supplies are insufficient to meet demands. Careful planning and study has and will continue to take place to insure that groundwater extraction yields, on average, do not pose any risk of salinity intrusion or undue risk to private domestic or agricultural wells in the City of Stockton area. In wet years, when surface water is more plentiful, the groundwater basin is allowed to recover through in-lieu recharge (i.e., allowing natural recharge to occur from streams and rivers by pumping at lower extraction amounts), and in the dry years, groundwater is extracted at higher amounts to meet the shortfall of surface water supplies in meeting M&I [municipal and industrial] demands.

Page 26 of the City’s WSA (Figure 9) shows the location of the saline front based on information from the California Department of Water Resources. The initiation of conjunctive use practices by the City and the other water providers serving the City has resulted in the on-going recovery and stabilization of the groundwater basin in recent years, such that groundwater levels have increased and the basin is operating within a manageable range. (Appendix R at page 23.) The groundwater extraction yields established by the City are designed to ensure that the City’s long-term use of groundwater is protective of the City’s groundwater resources. (Appendix R at page 25.)

See also Master Response 4 in Chapter 3, “Master Responses,” of this FEIR, and the responses to MORADA-2 and MORADA-9 as well as YEATES-27. No revisions to the DEIR are necessary.

MORADA-9

Chapter 5 of the DEIR discusses impacts to agricultural resources, and mitigation to address those resources, as a general matter. Chapter 11 of the DEIR discusses the loss of recharge capacity on site. (See also Chapter 5 of this FEIR, revising pages 11-34 and 11-35 of the DEIR.) The proposed project site consists of over 3,800 acres of irrigated, agricultural land. Approximately 11,000 afy of water, pumped from the groundwater aquifer, has historically been used to irrigate the project site. This translates to a use factor of approximately 3.0 acre-feet/acre/year (af/ac/yr), annually. The City’s stated goal for safe-yield withdrawals from the groundwater aquifer is 0.60 to 0.75 af/ac/yr (DEIR Appendix R). Therefore, existing agricultural groundwater use at the project site is approximately four to five times more than the City’s safe-yield factor. Construction of impervious surfaces on the project site would reduce the amount of surface water and runoff that currently recharges the groundwater aquifer by approximately 2,180 afy. However, because the approximately 11,000 afy of historical groundwater pumping would cease when the project is constructed, the project would result in a net benefit to the groundwater aquifer of approximately 9,000 afy. (DEIR at pages 11-33 and 11-39.) Furthermore, the proposed project includes a groundwater recharge component that would place purchased surplus surface water into the groundwater aquifer to form a “bank” of water that can be withdrawn for project use as needed. Because 2 af of water would be applied for every 1 af of water withdrawn, the recharge project would also provide a benefit to the groundwater aquifer. (DEIR at page 11-38.) No revisions to the DEIR are necessary.

MORADA-10

The commentor charges that the City has already built out beyond its capacity to serve, and is expanding its service area to obtain “pumping fields.” The City disagrees with the commentor’s assertion and believes that this comment is not directed toward the proposed project, but is instead directed toward broader policies that COSMA is pursuing throughout its service area. The application of those policies, as a whole, is not the subject of this EIR. Regarding groundwater use specific to the proposed project, see Master Response 4 in Chapter 3, “Master Responses,” of this FEIR, as well as Section 5.3 (summarizing water supply analyses provided for the proposed project) of this FEIR. No revisions to the DEIR are necessary.

MORADA-11

The commentor asserts that the City is mining the aquifer beyond its existing capacity. The City disagrees with the commentor’s assertion and believes that this comment is not directed toward the proposed project, but is instead directed toward broader policies that the COSMA is pursuing throughout its service area. The application of those policies, as a whole, is not the subject of this EIR. Regarding groundwater use specific to the proposed project, see Master Response 4 in Chapter 3, “Master Responses,” of this FEIR, as well as Section 5.3 (which summarizes the water supply assessments prepared for the proposed project) of this FEIR. No revisions to the DEIR are necessary.

MORADA-12

The commentor asserts that the proposed project would exacerbate the existing groundwater overdraft situation. See Master Response 4 in Chapter 3, “Master Responses,” of this FEIR, as well as Section 5.3 (summarizing water supply analyses provided for the proposed project) of this FEIR. See also the response to MORADA-2, MORADA-3, and MORADA-6, above. No revisions to the DEIR are necessary.

RECEIVED
CITY OF STOCKTON

APR 23 2007

April 23, 2007

Dear David,

PERMIT CENTER
PLANNING DIVISION

In reviewing the Mariposa Lakes Draft EIR and Specific Plan there is inadequate mention of the effect that closing the Downtown Stockton Amtrak station located on San Joaquin Street will have on downtown transportation systems and Amtrak passengers currently served downtown.

Downtown Stockton is home to all major transit providers. These include the San Joaquin Regional Transit District, which offers bus transportation in and between Stockton and surrounding cities from the Downtown Transit Center, the Greyhound Station operating long distance bus service to cities throughout California and between California and other states, the Cabral ACE Station taking passengers from Stockton to San Jose and the Amtrak Station connecting Stockton by train to the Bay Area and BART at the Richmond station and by bus to Sacramento.

The Mariposa Lakes project proposes the creation of the Austin Road Town Center featuring a multimodal station housing Amtrak serviced with shuttle buses from a downtown parking lot located at the current downtown Stockton Amtrak station to the new facility. This proposal separates a key transportation component, rail from downtown to the Bay Area, giving the residents of one new community special consideration to the detriment of Stockton as a whole and downtown in particular.

At present, downtown Stockton is a convenient hub of transportation giving passengers access to all major forms of transit within a close proximity. The

header of the SJRTD #54 bus even features Amtrak as its destination. If the downtown Amtrak station is closed and only used as a park and ride stop, passengers will no longer have the convenience of rail transportation located downtown. What will happen to the landmark rail station no longer in use? This action will cause passengers and downtown to suffer.

Fragmenting transportation downtown is unwise. Increased downtown housing is anticipated. A benefit of living downtown is close proximity to rail, not park and ride facilities adding time and uncertainty about connections to rail transport miles away. If necessary, a better alternative would be for Mariposa Lakes to build a new Amtrak station and retain the downtown Amtrak station. This alternative would remove the need for park and ride and shuttle services while allowing downtown to continue to offer the full range of transportation amenities.

As a Stockton resident and transit user relying on all downtown transportation options for my travel needs I urge the Mariposa Lakes project to fully consider the effects of the current proposal on downtown Stockton, the heart of the city, and all the passengers it serves.

Sincerely,



Joy Neas

NEAS-1

This comment notes that the MLSP DEIR does not contain an analysis of the effects on downtown transportation systems and downtown Amtrak passengers from closure of the existing Stockton Amtrak station. The City understands the commentator's concern, but notes, however, that the construction of a multimodal transit station in the proposed SPA would not necessarily result in the closure of the downtown Amtrak station. Whether or not the existing Amtrak station would continue to operate is a decision that would be made by Caltrans, and is not a decision that would be presented to the City of Stockton in connection with its consideration of the MLSP project. The text in DEIR Chapter 3, "Project Description," is hereby revised to reflect this fact, as shown in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices," especially corrections to DEIR pages 3-58 and 3-60. This change does not alter the conclusions of the DEIR.



Land Services, 4040 West Lane, Stockton, CA 95204

RECEIVED
CITY OF STOCKTON

APR 24 2007

PERMIT CENTER
PLANNING DIVISION

April 23, 2007

City of Stockton
c/o Community Development Dept.
Planning Division
345 N El Dorado St.
Stockton, CA 95202
Attn: David Stagnaro
Fax: 209-937-8893

RE: Review of a Draft Environmental Impact Report (DEIR)

For: Mariposa Lakes Specific Plan Project
Loc: S/O State Route 4, w/o Kaiser Rd., north and east of Mariposa Rd., and
the Burlington Northern Santa Fe R/R- Stockton
City's Reference: (DEIR 11-03); Date: March 2007
PG&E File WL 668

Dear Mr. Stagnaro,

Thank you for this opportunity to comment on this Draft Environmental Impact Report (DEIR) for Mariposa Lakes Specific Plan Project. PG&E has the following comments to offer:

Generally, PG&E owns and operates gas and electric facilities which are located within and adjacent to the proposed project. To promote the safe and reliable maintenance and operation of utility facilities, the California Public Utilities Commission (CPUC) has mandated specific clearance requirements between utility facilities and surrounding objects or construction activities. To ensure compliance with these standards, project proponents should coordinate with PG&E early in the development of their project plans. Any proposed development plans should provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities.

The following is a brief description of Pacific Gas and Electric Company's (PG&E) facilities required to serve this project or proposed to be constructed through the project boundaries within the next seven years.

PG&E ELECTRIC SERVICE REQUIREMENTS

To serve the large amount of new electric demand created by the proposed Mariposa Lakes Project an electric substation will need to be constructed within the project area, as well as all of the associated distribution feeders throughout the project. The following will be required as part of the overall project development:

- Within the electric transmission R/W, provisions will be made to allow for the installation of underground electric distribution lines as required.
- PG&E will tap into PG&E's existing Stockton A-Lockeford-Bellota 115 kilovolt (kV) electric transmission line located within the project boundary. This line generally runs in an east-west direction between Carpenter Road and Clark Drive and bisects the development area.
- A five acre (rectangular in shape) parcel will be required within the planned business/industrial area in the west portion of the project, along the existing Stockton A-Lockeford-Bellota 115 kilovolt (kV) electric transmission lines for the installation of an electric substation. The proposed location is east of Three Oaks Road, south of East Carpenter Road, north of and contiguous to the 115 kV transmission ROW between tower number 11/80 and 11/79. The substation will convert the 115 kV transmission voltage to either a 21 kV or 12 kV distribution voltage level. An alternate site has been identified in the same general location but south of the 60 kV transmission ROW between pole number 2/26 and 2/38.
- The electric substation site will require year-round, 24-hour, all-weather access. Moreover, roadway access to the site will need to accommodate very large trucks and cranes with a large turning radius.
- Along all roadways throughout the entire project, 15-foot-wide public utility easements will be required on both sides of each road for the installation of gas and electric distribution feeders along with other utilities as required.
- The project will required the relocation of the 60 kV line between where it turns north about 3/4 mile west of Kaiser Road and exits the site near the Duck Creek crossing of SR 4. The proposed relocation route for the 60 kV is to the west along existing 12kV tap line north to Farmington Rd and east to tie back into the existing 60kV line.

PG&E GAS SERVICE REQUIREMENTS

- Distribution Feeder Mains and a Distribution Regulator Station. The Stations will require approximately 20-foot by 80-foot easements and the Feeder Mains will require approximately 25 foot wide easements.
- Gas distribution mains and services.
- Above ground features include vertical pipeline markers as well as valve frame and covers which are at the ground surface level.
- All gas facilities will require 24-hour all-weather access for maintenance and operations.
- Along all roadways throughout the entire project, 15-foot-wide public utility easements will be required on both sides of each road for the installation of gas and electric distribution feeders along with other utilities as required.

Future analysis will also include studies indicating the need for any potential upgrades or additions to accommodate additional load on the gas system including facilities such as regulator stations, odorizer stations, valve lots, distribution and transmission lines.

The process of permit requirements for Utility Companies can add delays for development projects. Therefore we recommend the developer contact all of the utility companies to discuss the permit requirements of this development.

The developers will be responsible for the costs associated with the relocation of existing PG&E facilities to accommodate their proposed development. Because facilities relocation's require long lead times and are not always feasible, the developers should be encouraged to consult with PG&E as early in their planning stages as possible.

Relocations of PG&E's electric transmission and substation facilities (50,000 volts and above) could also require formal approval from the California Public Utilities Commission. If required, this approval process could take up to two years to complete. Proponents with development plans which could affect such electric transmission facilities should be referred to PG&E for additional information and assistance in the development of their project schedules.

Continued development consistent with Stockton's General Plans will have a cumulative impact on PG&E's gas and electric systems and may require on-site and off-site additions and improvements to the facilities which supply these services. Because utility facilities are operated as an integrated system, the presence of an existing gas or electric transmission or distribution facility does not necessarily mean the facility has capacity to connect new loads.

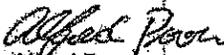
It is recommended that environmental documents for proposed development projects include adequate evaluation of cumulative impacts of utility systems, the utility facilities necessary to serve those developments and any potential environmental issues associated with extending utility service to the proposed project. This will assure the project's compliance with CEQA and reduce potential delays to the project schedule.

PG&E remains committed to working with the city of Stockton to provide timely, reliable and cost-effective gas and electric service to the planned area. We would also appreciate being copied on future correspondence regarding this subject as this project develops.

The California Constitution vests in the California Public Utilities Commission (CPUC) exclusive power and sole authority with respect to the regulation of privately owned or investor owned public utilities such as PG&E. This exclusive power extends to all aspects of the location, design, construction, maintenance and operation of public utility facilities. Nevertheless, the CPUC has provisions for regulated utilities to work closely with local governments and give due consideration to their concerns. PG&E must balance our commitment to provide due consideration to local concerns with our obligation to provide the public with a safe, reliable, cost-effective energy supply in compliance with the rules and tariffs of the CPUC.

Again, thank you for the opportunity to make comments on this Draft Environmental Impact Report (DEIR) for Mariposa Lakes Specific Plan Project. If you, the developer or anyone has any questions or concerns please contact me on (209) 942-1419.

Sincerely,



Alfred Poon

Land Agent

Stockton Land Services

External: (209) 942-1419

Fax: (209) 942-1485

PG&E-1

Thank you for your comment. The project applicant would coordinate with Pacific Gas and Electric Company (PG&E) as project plans are developed. No revisions to the DEIR are necessary.

PG&E-2

Thank you for providing information regarding PG&E facilities required to serve the proposed project or proposed to be constructed through the project boundaries within the next 7 years. The project applicant would coordinate with PG&E regarding necessary facilities as project plans are developed. No revisions to the DEIR are necessary.

PG&E-3

The commentor indicates that growth under the 2035 City General Plan may cumulatively affect PG&E's facilities and trigger the need for expansion of those facilities. DEIR Impacts 17-6 and 17-15 evaluate the need for new electrical service for the proposed project, and conclude that (1) because PG&E has indicated that it has available capacity to provide electrical service and associated infrastructure to the SPA, (2) because the increase in demand for electricity and associated infrastructure would not be substantial in relation to the existing electricity consumption in PG&E's service area, and (3) because the relocation of the existing facility would be coordinated with and approved by PG&E, impacts related to new electrical service would be less than significant.

DEIR Impacts 17-7 and 17-16 evaluate the need for new natural gas service for the proposed project, and conclude that because PG&E has indicated it is able to provide natural gas and associated infrastructure to the SPA, and because the increase in demand for natural gas would not be substantial in relation to existing natural-gas consumption in PG&E's service area, impacts related to new natural gas service would be less than significant.

DEIR Chapter 18, page 18-24, contains an analysis of cumulative impacts related to electrical and natural gas services that would be provided by PG&E. The analysis concludes that while cumulative development as a whole would increase the amount of demand for natural-gas and electrical supply, because PG&E has stated that it has adequate natural-gas and electrical supplies to support the proposed project without affecting service to existing customers, project-related cumulative impacts would be less than significant. Any expansion plans for PG&E facilities would be subject to CPUC jurisdiction and separate CEQA compliance. No revisions to the DEIR are necessary.

Mr. David Stagnaro, AICP
Senior Planner
Stockton Community Development Department, Planning Division
345 North El-Dorado Street
Stockton, CA 95202
(209) 937-8266

APR 1 1995

APR 1 1995

Written Comments

Mariposa Lakes Specific Plan DEIR

—State Clearinghouse #2006022035

Significant Impact on agricultural resources before mitigation

Mariposa Lakes is not your normal planned community. It has been described as an urban island surrounded by agriculture. This creates some unique problems that CEQA may not be designed to address. We have lived at 8868 E. Mariposa road for over 35 years. You might say that we are the first house east of Collegeville. Collegeville is a cluster of 170 residential units (#1), a store, church, school, fire and gas station, all surrounded by agriculture. Mariposa Lakes at Phase 1 buildout will have 4,536 residential units. That is equal to 26 Collegeville's! Problems to the surrounding agriculture community caused by the "Collegeville Island" are significant, when multiplied by phase one buildout of 26 times. (4,536 residential units (#2) divided by 170 residential units.)

Over the years the increased popularity in dirt bikes and ATVs has resulted in ever increasing losses to the surrounding agriculture in the form of damaged crops and broken sprinkler systems. Multiply the current conditions by 26 and you realize having a right to farm ordinance on the books will not reduce the impact to less than significant. In addition as more and more farmers erect gates to protect their investments and BNSF post more and more of its right-of-way, the incidents of ATV verses traffic will logically increase more than 26 times. At present the only large area, that I am aware of, that allows off road use is apt 181-090-29. (#3) Unfortunately BNSF has fenced access off to this parcel along its right-of-way and the owner refuses access via Mariposa road for fear of accidents. The DEIR is a large document, and I may have missed it, but if an ATV park is not planned for this development, the impact on the surrounding agriculture will be significant.

James L. Pilkington
8868 E. Mariposa road
Stockton, CA 95215
(209) 463-8116

#1

Home | City Home Page | City Business Page | Add Properties | Contact Us Print

New Demographic Report
Demographic Report

Center: 13225 E MARIPOSA RD
Distance: 3 miles

Population (2003)	
Total	%
2003 Population	681

Sex (2003)	
Total	%
Male	303 52.2%
Female	278 47.8%

Age Distribution (2003)	
Total	%
0-4	37 5.4%
5-9	41 7.1%
10-19	107 18.4%
20-29	78 13.4%
30-39	78 13.1%
40-49	69 10.2%
50-59	70 12.0%
60-64	34 5.9%
65+	79 13.6%

Race Distribution (2003)	
Total	%
White	330 56.8%
Black	14 2.4%
American Indian	4 0.7%
Asian	20 3.4%
Pacific Islander	0 0.0%
Other	164 28.2%
Multirace	49 8.4%
Hispanic	281 48.4%

2003 Total Households	
Total	%
Households	170
Families	139 81.8%

2003 Household Income Distribution	
Total	%
<\$10K	14 8.2%
\$10-\$20K	22 12.9%
\$20-\$30K	39 22.9%
\$30-\$40K	14 8.2%
\$40-\$50K	23 13.5%
\$50-\$60K	6 3.5%
\$60-\$75K	12 7.1%
\$75-\$100K	28 16.5%
> \$100K	12 7.1%

2003 Household Net Worth	
Total	%
\$0 or Less	19 11.2%
\$1-\$5000	23 13.5%

<http://advantage.stocktongov.com/stockton/ed.asp?cmd=demog2&maxx=6376150.0243110...> 4/6/2007

#2

**Table 3-6
Phasing Summary for the Mariposa Lakes Specific Plan**

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Totals
Residential Units	4,536	2,232	2,549	849	404	10,566
Commercial Square Footage ^a	643,000	170,000	197,000	0	0	1,010,000
Industrial and Business/ Professional Square Footage ^a	171,000	749,000	5.7 million	2.5 million	2.3 million	11.5 million
Total Population	14,242	7,007	8,004	2,662	1,265	33,178
Total Jobs	1,557	3,435	5,262	2,078	1,862	14,194

*Numbers have been rounded
Source: Randall Planning & Design, Inc.

PHASE 2

Phase 2 of the proposed project consists of approximately 515 acres (not including major roads). Substantial portions of the Phase 2 development area would be devoted to planned residential uses, including approximately 10 acres of estate, 95 acres of low-density, 123 acres of medium-density, and 32 acres of high-density residential development. This phase would involve the construction of approximately 2,232 residential units, approximately 749,000 square feet of industrial and business/professional uses, approximately 170,000 square feet of commercial uses, and would generate an estimated 3,435 jobs. This development phase would consist of the following components:

- ▶ 15.6-acre Farmington Road Village Center
- ▶ 18-acre area for church and other institutional development
- ▶ 57-acre Business/Professional area
- ▶ 22.3 acres of associated parks
- ▶ 24 acres of open space
- ▶ One high school
- ▶ One elementary school
- ▶ PG&E substation and natural gas processing facility
- ▶ Reconstruction of the Mariposa Road interchange (partial project responsibility)
- ▶ Widening of Mariposa Road from SR 99 to Austin Road
- ▶ Street improvements to Farmington Road
- ▶ One lake
- ▶ One new Cal Water water supply well
- ▶ Restoration of the Duck Creek corridor

PHASE 3

Phase 3 of the proposed project consists of approximately 1,045 acres (not including major roads). The majority of this phase would consist of low- and medium-density residential subdivisions. This phase does not include high-density residential development. This phase would produce approximately 2,549 residential units, approximately 6 million square feet of industrial uses, approximately 197,000 square feet of commercial uses, and an estimated 5,262 jobs. This development phase would consist of the following components:

- ▶ 329 acres of industrial development
- ▶ 18-acre Duck Creek Village Center
- ▶ One elementary school
- ▶ Satellite campus of San Joaquin Delta College
- ▶ Realignment of SR 4 through the SPA (partial project responsibility)

#3

Welcome to
Advantage Stockton

Parcel Information			
APN:	18109029		
Area:	16.72 acres		
Zoning			
Flood Information			
Zone	Panel	PCT_AREA	LOMRDATE
Source: Federal Emergency Management Agency FIRM Maps			

<http://advantage.stockton.gov/stockton/ed.asp?cmd=print&maxx=6367540.88351055&...> 4/8/2007

PILKINGTON-A

The DEIR does not characterize the proposed project as “an urban island surrounded by agriculture.” As stated on page 12-1 of the DEIR, urban land uses have already been developed along both the western and northwestern perimeters of the SPA. Furthermore, an additional 100 acres located between the BNSF railroad and the SPA, south of SR 4, have been annexed by the City and are designated and zoned for further industrial development. DEIR Figure 12-1 (page 12-2) shows the existing urban land uses adjacent to the northwestern, western, and southeastern project site boundaries. As discussed throughout Chapter 12, “Land Use,” of the DEIR, annexation of the proposed project to the City of Stockton would create an area of logical, orderly growth immediately adjacent to the city limits, in an area that has already been developed with urban land uses to the north and west.

The unspecified, existing “problems” on the agricultural community caused by the “Collegeville Island,” as termed by the commentator, fall outside the scope of evaluation required by CEQA for the proposed project. In any event, given the lack of specificity in the comment, further response is not possible.

The commentator expresses concerns about damage to agricultural property by trespassing all-terrain vehicle (ATV) users, and states that the “right-to-farm” ordinance does little to address this impact. The County’s “right-to-farm” ordinance was intended to support the continuation of agricultural practices in the face of expanding urban development. It was not intended to serve as a judicial remedy for trespassing. While the City understands that the commentator has a concern in this regard, the City believes that trespassing issues are properly addressed through the commentator’s interaction with the police department. Mr. Pilkington’s property is located immediately south of the project site, on the opposite side of East Mariposa Road in an area designated for “Industrial” land uses under the 2035 City General Plan. The City notes that open space buffers to the northeast, east, and southeast of the proposed project were specifically designed to help minimize conflicts with adjacent agricultural users (see DEIR Figure 3-11). Furthermore, SR 4 would provide a substantial buffer zone to the north of the project site. The proposed project also includes sound walls to the north and south of the project site that would provide an additional buffer zone (see DEIR Figure 13-3). Thus, Mr. Pilkington’s property would be separated from the proposed project site by East Mariposa Road, an open space buffer, and a soundwall. No revisions to the DEIR are necessary.

Mr. David Stagnaro, AICP
Senior Planner
Stockton Community Development Department, Planning Division
345 North El Dorado Street
Stockton, CA 95202
(209) 937-8266

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SEP 26

Written Comments

Mariposa Lakes Specific Plan DEIR

State Clearinghouse #2006022035

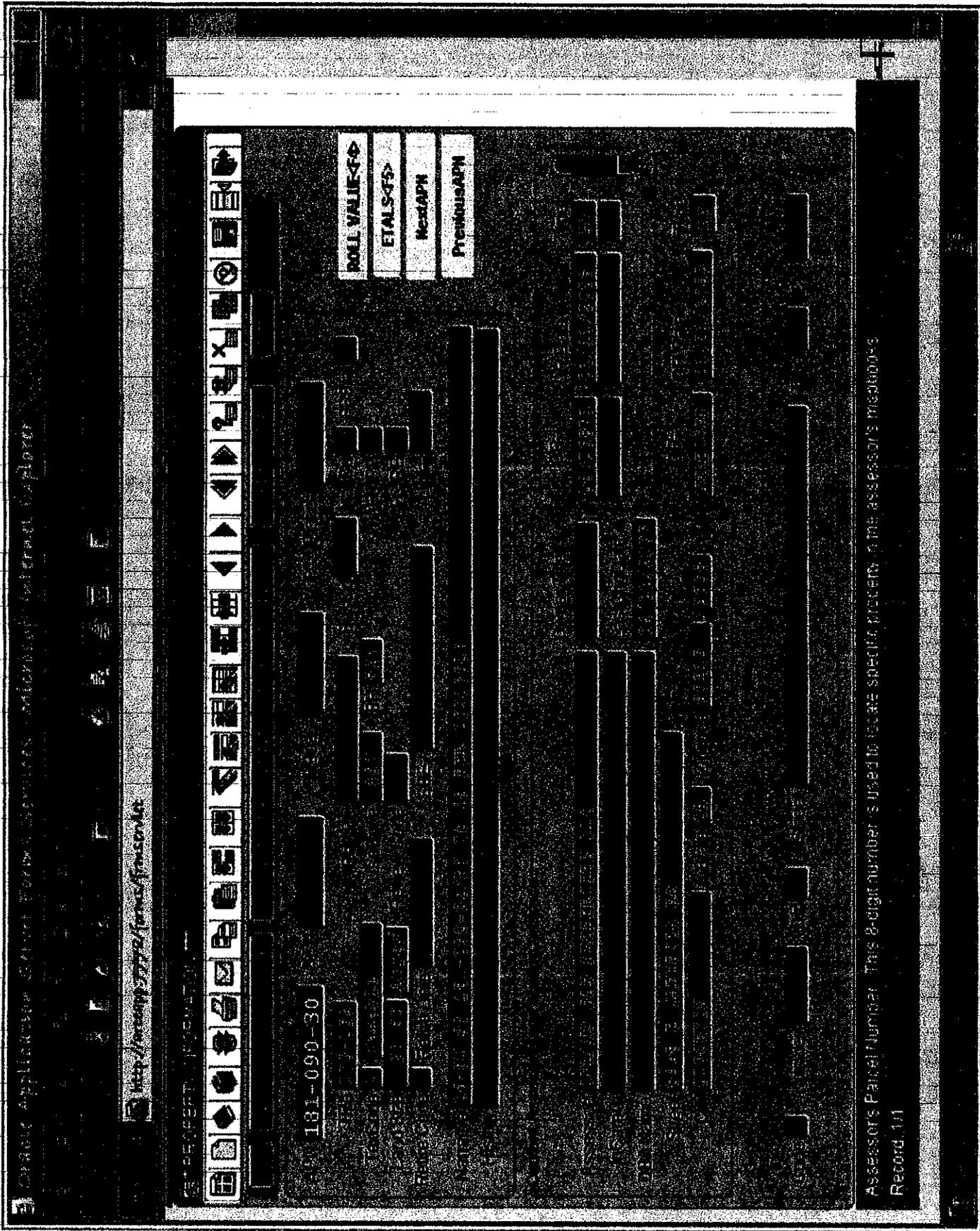
Information Update

Reference to Figure 3-28; APN 181 - 090 - 30 is incorrectly labeled as owned by Pilkington Cordia Ruth.

The owner of record is Inland Bay Properties, LLC. (#1)

James L. Pilkington
8868 E. Mariposa road
Stockton, CA. 95215
(209) 463-8116

Assessors 408.2630



Letter
PILKINGTON-B
Response

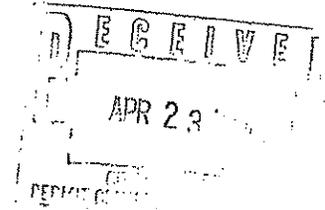
James Pilkington
April 26, 2007

PILKINGTON-B

Thank you for your comment. However, Figure 3-28 of the DEIR shows the “Proposed Mariposa Road Widening (Development Phase 1)” and does not relate to assessor’s parcel numbers (APNs). Figure 3-7 of the DEIR does show APNs and the recorded owners of record; however, no APN 181-090-30 is shown in Figure 3-7. Since it is unclear what the commentor is referring to, no revisions to the DEIR can be made. In any event, the proposed correction in the name of the owner of record would have no effect on the conclusions contained in the DEIR.



SANGUINETTI RANCH
7677 E. HWY. 4 466-0672
STOCKTON, CALIFORNIA 95215-9607
FAX #: (209) 937-9706



April 19, 2007

Dr. David Stagnaro, AICP
City of Stockton Community Development Department
345 North El Dorado Street
Stockton, Ca. 95202
(209) 937-8266

RE: Comments on DEIR 11-03- Mariposa Lakes Specific Plan Project

Gentleman:

I have received a document informing me of the Public Review of the Draft Environmental Impact Report for the above referenced project date March 8, 2007, and the incorporated WSA, dated October 2, 2006.

The two parcels described below in the specific plan for mariposa lakes on page 3-11 which state that they contain underground tanks is not correct. The tanks on the parcel where taken out in 1982 under a program the county had for ag operation.

There are no tanks underground on these parcel, Please correct so this document will be up to date.

- Paul M. Sanguinetti, located in the northern portion of the site, at 7677 E. Highway 4, appears on the HIST UST database due to the historical presence of two underground storage tanks (USTs) located at this address.
- Sanguinetti Feed Lot, located at 7761 E. Highway 4, appears on the HIST UST database due to the historical presence of two USTs located at this address.

If you have any comment or question please call Paul Sanguinetti at 209-466-0672

Thank You


Paul Sanguinetti

SANGUINETTI-1

The commentor requests a clarification in the DEIR's discussion of underground storage tanks (USTs). In particular, the commentor asks that the DEIR be updated to reflect the fact that two USTs on the commentor's property were removed. The Phase 1 ESA included a database search for known locations of USTs. Two USTs were reportedly installed at 7677 Highway 4 (Sanguinetti) and two were reportedly installed at 7761 Highway 4 (Sanguinetti Feed Lot). Professional standards require that the database search include both the proposed project site and all property within a 1-mile radius of the project site. Because no official records were found either in the database search or within files at SJCDEH indicating that any of these USTs had been removed, the specific plan cannot be corrected to indicate closure of these tanks. However, since the USTs are not on the project site, the specific plan text has been changed to remove the references to these tanks.

Furthermore, the text of DEIR Chapter 10, "Health and Safety," is hereby revised to reflect the fact that the USTs are not located on the project site, as described in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." These changes do not alter the conclusions of the DEIR.



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CITY OF STOCKTON

APR 23 2007

PERMIT CENTER
PLANNING DIVISION

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David Stagnaro
City of Stockton
Community Development Dept.
345 N. El Dorado Street
Stockton, CA 95202

23 April 2007

RE: Mariposa Lakes Draft Environmental Impact Report

Mr. Stagnaro:

We have reviewed the Draft EIR NOP for the above project and have these comments:

The project is a specific plan that would allow approximately 11,500 housing units and non-residential uses on 3,810 acres of farmland southeast of Stockton. More than one-third of the housing (4,200 units) would be typical, sprawl density 3.5 to 6 units per acre. Another 4,860 units (42% of the project) would be higher density but still single family for sale housing (7 to 12 units per acre). Thus, about three-quarters of the housing planned would end up with market rate, single family lots. Only 1,460 (13%) would be high density condos or apartments.

The project would be the equivalent of two more Weston Ranches, or five more Brookside.

Mischaracterization of Measure X

One of the developer's goals for the project is described as Objective 16 (page 1-4 and repeated in the Alternatives analysis on page 19-4) and states "facilitating economic and urban development in southeast Stockton, as approved by the Stockton electorate by its passage of Measure X..." This is a mischaracterization of Measure X and the EIR should be amended to more accurately describe the citizens initiative that was passed by voters in 2004. Measure X did not approve any project or any economic development in southeast Stockton; Measure X was written solely to exempt the project from the effects of Measure Q (the urban growth boundary initiative) if Measure Q had gone into effect.

Representing 20,000 members in 24 counties in Northern and Central California

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Inconsistency with Policies in the proposed 2035 GP

The analysis in the Land Use section (pages 12-16 et seq) of the DEIR fails to identify potentially significant impacts related to the inconsistency of the project's design and impacts with the several policies in the proposed 2035 GP. The DEIR refers to a consistency table in Appendix B and the results of this consistency analysis should be summarized in section 12. Appendix B notes the project's inconsistency with some policies; these should be listed and discussed in the DEIR

The project cannot be found to be consistent with several policies and the DEIR should recommend mitigation to be consistent.

For example, the project is not consistent with Policy PFS-2.7, since the DEIR notes that a permanent water supply has not been guaranteed. The project is not consistent with the Housing Element policies calling for affordable housing, since the project includes no dedicated affordable housing, but will consist of 100% market rate housing units. The project is not consistent with Conservation Goal 1, Policy 1, or Policy NCR-4.4, which calls for the retention of viable agricultural soils and establishment of an Ag Conservation Program, since the project would prematurely cancel over 3,200 acres of Williamson Act contracts and the DEIR does not require the project to comply with the City's recently adopted ag mitigation program (requiring purchase of a 1:1 easement).

Similarly, the DEIR fails to note that the project is inconsistent with draft GP policies related to aesthetics; air quality; traffic; utilities; the airport; and noise. The DEIR found significant and unavoidable impacts in each of these areas which means that the project cannot be found to be consistent with draft policies.

The DEIR should be revised to include a detailed analysis of GP policy consistency with the draft 2035 plan. For example, is the project consistent with all of the Village policies?

Project Would Require Cancellation of over 3,200 Acres of Williamson Act contracts

The DEIR fails to offer feasible and available mitigation for the loss of agricultural lands and the cancellation of Williamson Act contracts.

The project is located on prime Class II soils (approx. 30% of the site) and Class III non-prime soils considered Farmland of Statewide Significance (65%). Most of the site (84%) is under active Williamson Act contracts. Most of the contracts have been non-renewed, but won't come out of contract for another 7 to 9 years (until 2014-2016). The project proposes that 3,218 acres of contracts be cancelled.

The DEIR must be revised to provide a more accurate description of the significant and irreversible impacts that would be caused by such a widespread cancellation of contracts.

The DEIR analysis provides a very weak justification that the cancellations would be consistent with the findings required under State law (pages 5-12 et seq). The justification is not appropriate to include in an EIR, as it is a legal finding that must be provided by the applicant and the City, not the consultant writing an objective environmental document.

The DEIR conclusion that the cancellations would be consistent with the City General Plan (third bullet, page 5-12) cannot be made since the project is not included in the current 1990 GP. The 2035 GP is not the official adopted plan for the City, and a future plan that may be approved cannot be used to meet this legal finding.

The DEIR conclusion that the cancellations would not result in a discontinuous pattern (fourth bullet, page 5-12) cannot be made since the DEIR notes that the project would be inconsistent with LAFCo policies and would create an unincorporated island between the project and the City.

The DEIR conclusion that there is no proximate noncontracted land that is suitable for the use (fifth bullet, page 5-13) cannot be made since the DEIR admits “there may exist other noncontracted lands to the north and east that could be suitable for development.”

The cancellation of over 3,200 Acres of Williamson Act contracts is unacceptable. No jurisdiction in San Joaquin County has ever cancelled such a large amount of contracts at one time. In comparison, when the Mountain House new town (4,200 acres) was approved by the County in 1992, only 800 acres of contracts were cancelled. This would set a horrible precedent.

The DEIR analysis fails to objectively discuss how cancellation of such a large amount of land would affect other contracted lands throughout the Stockton and San Joaquin County area.

The project is grossly premature, and the land should not be considered for development until all of the contracts have non-renewed (expired).

Alternatively, the project should propose phasing so that a minimum amount of contracts would be cancelled, similar to one of the alternatives that was rejected out of hand.

DEIR Requires Inadequate Mitigation for Loss of Ag Lands

The DEIR fails to require mitigation for the loss of agricultural lands. The DEIR analysis (page 5-15) must include discussion and mitigation under the City’s recently approved ag mitigation program. The developer must be required to mitigate for the loss of ag land by purchasing an easement equal to the loss of land (3,810 acres). The project is not eligible to pay an in lieu fee. The easement would be required at the time of the first final subdivision map.

The DEIR underestimates the loss of ag land since it does not include the loss of ag land due off-site improvements (e.g., 320 acres of flood control and recharge area and transportation improvements).

Air Quality

Mitigation Measures 6-2b and c are a laundry list of SJVAPCD measures; the measures fail to specify exactly which strategies must be implemented by the project. The project applicant must be required to propose a detailed air quality mitigation plan that commits to implementing specific actions, e.g., use of non-gas vehicles within the project site, establishment of commercial

services in the earliest phases of home construction, electric solar panels and electric lawnmowers with every home, etc.

Biological Resources

The DEIR notes that at least 800 acres of the site is not eligible to participate in the SJMSCP program. The DEIR must more objectively describe the process by which this portion of the site could be included in a renewed "take" permit and fee program approved by the USFWS and CDFG, and what the possibilities are that such a renewed program would be approved and implemented with the time frame of the project's phasing.

What would happen if the wildlife agencies refused to allow the SJMSCP to be expanded?

The DEIR fails to require adequate mitigation for that portion that cannot pay a fee.

The DEIR inaccurately concludes that the cumulative impact of the loss of habitat on this 800 acres as "less than significant" (page 18-12). What is the factual justification for this conclusion?

The DEIR admits that there were no detailed biological studies prepared for the off-site improvement areas (page 7-37). What is the factual justification for concluding that would not be significant impacts related to development of this off-site land?

Water Supplies

The DEIR inaccurately considers a permanent water supply for the project to possibly include USBR water from New Melones delivered via the SEWD pipeline (pages 11-11 and 17-2). The DEIR must be revised to discuss the recent court decision that reaffirms that the water will never be delivered to SEWD.

Throughout the analysis of water supply, the DEIR consistently and inaccurately states that the SWRCB gave approval to the Delta Water Supply Project (DWSP) to "provide delivery up to 126,00 AFY" (e.g., page 11-11) The State only approved the first phase of 33,000 AFY.

The DEIR states project water needs would be met by "existing available surface and groundwater supplies, including the DWSP" (page 3-64). Yet, City officials have indicated in the past that Phase I of the DWSP is intended only to supply existing and planned development within the existing 1990 GP (Mark Madison comments at draft GP workshops and statements in the DWSP EIR).

The DEIR discussion of the DWSP should be revised to state that the City plan is to use the first phase of the DWSP to supply existing and planned development within the existing 1990 GP and for groundwater recharge, and not for new development allowed in the 2035 GP.

The DEIR should include a discussion of draft 2035 GP Policy PFS2.8 which states that the City shall not approve new development that relies on the DWSP until the water is allocated through a water right to the City by SWRCB, which the GP Policy Consistency analysis in Appendix B indicates has not be done (page B.2-12).

The DEIR should explain whether the project is consistent with this Policy PFS2.8 when Appendix B states the project is “potentially inconsistent.”

The DEIR should include more description and justification for construction of three new wells on the property. How will the operation of these wells contribute to overdrafting in the area?

The DEIR notes that the Kleinfelder study did not include specific actions (soil borings, monitoring wells, pumping tests) which are required to prove the feasibility of the proposed groundwater recharge system (page 11-38). The DEIR should explain why these additional tests have not been completed and why a major component of the project has not been reliably assured.

The DEIR should provide more description of why the recharge system may not work and how the recharge may actually cause further impacts (noted in Mitigation Measure 11-6b on page 11-40). This measure should be revised to require the deletion of the project's lakes if recharge does not work, to be consistent with the other Mitigation Measure 17.3 requiring deletion of the lakes if adequate nonpotable water supplies are not available.

Mitigation Measures 11-6a to d taken as a whole do not lead to a conclusion that potential impacts related to increased aquifer overdrafting will be reduced to a “less than significant level” (page 11-41). The text at the bottom of page 11-41 nonsensically argues that if “monitoring results showed that significant adverse effects were occurring,” then the measure would be implemented. However, by the time that the monitoring indicates a problem the impact has already occurred, and the potential impact is not “less than significant.” The impact should be significant and adverse.

Wastewater

The DEIR states that only Phase 1 of the project may be accommodated by the City's existing 42” sewer main in System 8. Further phases would probably require construction of a whole new System 12 force main that would traverse along Ralph Avenue across south Stockton.

What would be the potential land use impacts of the sewer main construction? How many homes and businesses would be potentially affected in south Stockton? The DEIR proposes a conceptual route for the new pipe (page 17-19), thus the DEIR must offer a program level analysis of potential land use impacts, not avoid the issue by stating that “the potential impacts resulting from construction of System 12 are unknown at this time.”

Are the System 12 improvements consistent with the existing and proposed Wastewater Master Plan, and 1990 and 2035 GPs?

Land Use

The DEIR correctly notes that annexation of the project would create an “island” of unincorporated land west of Mariposa and north of Arch Road (page 12-17). The DEIR incorrectly states there is no feasible mitigation. Why can't mitigation include the annexation of the island into the City?

Transportation

The DEIR calculates that the buildout of the project would generate 161,000 new vehicle trips, with 17,000 peak morning and 22,000 peak evening trips.

A major deficiency of the transportation analysis involves the use of future lane widenings (to 10 lanes!) on Route 99 that may not be consistent with Caltrans plans, and may never be approved and built.

The DEIR should be revised to explain if any 10 lane freeway has been constructed in northern California, and how a 10 lane freeway could operate with close interchanges in Stockton. Please explain if any Caltrans plans call for 10 lane freeways in Stockton or elsewhere.

The project and cumulative traffic analysis assumes either 6 lanes or 10 lanes on SR 99. Why was 8 lanes on SR 99 not analyzed? What would be the level of service on the mainline with the project if 8 lanes were in place?

The DEIR notes that “the City does not yet have sufficient information to assess the project-specific transportation-related impacts of the regional sports park” in Phase 3. Are worst case traffic projections for the sports park include in the traffic projections for SR 99 and other roadways? If not, does this mean that all of the traffic projections in the DEIR could be understated?

How can a plan for the project be approved if the details and impacts are unknown for a specific component of it?

Utilities

Mitigation Measures 17-1 and 17-2b (pages 17-13 and 17-15) are not consistent with SB 221 requirements.

Measure 17-1 should be rewritten as it not clear and/or it suffers from a typographical error in the first sentence. It says “...or before the City need not comply with Government Code Section 66473.7”? It is unclear whether the measure requires the City to make the necessary finding for project subdivisions under 500 units. If not, what would preclude the developer from chopping up the project phasing into small pieces to avoid this requirement?

The measure should cite the specific requirements of Government Code Section 66473.7 and delete the reference “impose conditions similar to those required” by the law; insert instead “conditions required by the law.”

The law (Government Code Section 66473.7) does not allow a subdivision to move ahead based on a finding that the delivery system for a future water supply “is assured through the use of bonds or other sureties to the City’s satisfaction.”

The law requires four items be proven to guarantee a water supply: water rights contracts; a capital program; agency permits in hand to allow the project; and other necessary regulatory approvals. These should be specified in both mitigation measures.

Government Code Section 66473.7 states:

“(d) When the written verification pursuant to subdivision (b) relies on projected water supplies that are not currently available to the public water system, to provide a sufficient water supply to the subdivision, the written verification as to those projected water supplies shall be based on all of the following elements, to the extent each is applicable:

(1) Written contracts or other proof of valid rights to the identified water supply that identify the terms and conditions under which the water will be available to serve the proposed subdivision.

(2) Copies of a capital outlay program for financing the delivery of a sufficient water supply that has been adopted by the applicable governing body.

(3) Securing of applicable federal, state, and local permits for construction of necessary infrastructure associated with supplying a sufficient water supply.

(4) Any necessary regulatory approvals that are required in order to be able to convey or deliver a sufficient water supply to the subdivision.”

Impact 17-3 admits that the City and Cal Water water supply analyses did not include non-potable water. The water supply studies should be updated to include a discussion of non-potable water supplies

As already noted above in “Water Supplies”, throughout, the DEIR fails to discriminate between the approved but unconstructed Phase 1 of the DWSP, and the latter phases of the DWSP which are not approved and are uncertain. The DEIR analysis obfuscates the difference between the phases and the uncertainty of water provided by later phases. The DEIR fails to describe the process and criteria to be used for approval of later phases of the DWSP, e.g., water supply taken from the Delta to be in proportion to the amount of tertiary treated wastewater that is discharged into the Delta. The DEIR analysis in Sections 11 and 17 must be revised to clarify these points

The DEIR states that “Pending negotiations with the City, nonpotable water would be delivered by SEWD and/or CSJWCD” (page 17-16). Why is there no indication from the agencies if they will even consider providing the water? When will the pending negotiations be completed? Have these agencies ever delivered nonpotable water to a City or development project?

The DEIR notes that there is uncertainty about whether the project could even build the lakes. Mitigation measure 17-3 says if the developer can't find water, then the lakes must be eliminated from the project. How would deletion of the lakes affect project design? How would the project manage storm waters if the lakes are deleted? What other impacts could occur if the lakes were removed?

The DEIR provides a worst case analysis of water supply and the worst case is that the project will not have an identified water source, in direct violation of the intent of SB 221. The DEIR drops the following bombshell on page 17-25: “Because Phase 1 was not specifically evaluated

in the WSA, ...it cannot be determined with certainty that sufficient water is available to serve Phase 1 of the project.”

What is the factual basis for the DEIR concluding, incredibly, that this potential impact (no verified water) can be mitigated to a “less than significant” level?

As noted above, Mitigation Measures 17-1 and 2b as written do not comply with SB 221 and do provide a guarantee of water delivery. Even if Mitigation Measures 17-1 is re-written, the text on page 17-25 indicates that the finding cannot be met, as documented in the water supply study.

Jobs/Housing

The DEIR fails to include adequate a mitigation measure to ensure that jobs and services are created with each phase of the housing. The DEIR should add a measure similar to the Mountain House project plan and EIR, which required monitoring of job creation during housing construction intervals (e.g., every 1,000 or 2,000 homes). If jobs are lagging, then appropriate actions are required, e.g., hiring a full time economic development coordinate or slowing sub map or building permit approvals.

Cumulative Impacts

The DEIR fails to adequately analyze the cumulative impacts of the Project for a number of reasons including an incomplete list of projects within the City of Stockton and a failure to quantify cumulative impacts. The discussion of cumulative impacts must include a summary of the expected environmental effects to be produced by those projects, a reasonable analysis of the cumulative impacts, and full consideration of all feasible mitigation measures that could reduce or avoid any significant cumulative effects of a proposed project.

The DEIR’s cumulative impact analysis fails to quantify cumulative impacts. The cumulative impact discussions are conclusory and devoid of meaningful qualitative and quantitative information. The EIR does not provide decision-makers with any objective measure of cumulative impacts and is inadequate.

The DEIR contains a list of “related projects” (Table 18-1) that is incomplete and which grossly underestimates the cumulative projects within the City. The table lists 16,000 housing units when the true cumulative pending projects total is closer to 42,000 units (see Table 1 below).

The cumulative impacts analysis relies exclusively on the existing 1990 General Plan to draw its conclusions, and fails to discuss and analyze cumulative impacts of the draft 2035 GP and the projects in that plan that are already being processed by the City. Thus, the cumulative agricultural impacts are referred to as “approximately 9,000 acres” in conjunction with the 1990 GP (top of page 18-8), and there is no mention that the loss of ag land identified in the 2035 GP DEIR is several times that number!

One of the greatest flaws of the DEIR is that it fails to even mention that over one half of the growth that is proposed in the Project (the 2035 General Plan) is already being processed by the City, and that the City has already adopted a Sphere of Influence for growth north of 8 Mile Road.

The DEIR discussion of baseline conditions fails to even discuss or mention this uncomfortable fact and a layperson reading this document could not even begin to understand how much development proposed north of 8 Mile Road, for example, is already a “done deal.” Actions by the City Council to sign development agreements with major developers prior to the November, 2004 election tried to inoculate the developers from the effects of Measure Q, if it were to be passed by voters. In the process of approving a premature SOI and agreements for lands that had not even been included within the existing City General Plan, the City Council pre-ordained the outcome of the GP Update process.

**TABLE 1
Large Development Projects In Development Process City Council**

Project/Location	Acres	Housing Units	Status
Arnaiz/North Stockton Village (part of Village D of draft GP)	771 acres	3,800 housing units	Master Development Plan proposed
Spanos/Thompson lands, north of 8 Mile Road (Villages B, C, and part of D of draft GP)	2,200 acres	7,500 housing units	Specific Plan in process; Development Agreement approved
Grupe Sanctuary project (Village A of draft GP)	2,000-acre Shima Tract	6,000 housing units	Development Agreement approved; EIR in process
Empire Ranch project, south of Morada (Village I of draft GP)	600 acres	2,200 housing units	EIR in process
Verner/Mariposa Lakes project, east of Route 99 between Mariposa Road and Route 4 (Villages J and K of draft GP)	3,650 acres	9,300 housing units	EIR in process
Arnaiz/Tidewater Crossing near French Camp part of Village L of draft GP)	800 acres	4,000 housing units	EIR in process
River Run/Western Pacific project, south of Weston Ranch (Villages N and part of M of draft GP)	1,850 acres	9,250 housing units	EIR in process
TOTAL	11,871 acres	42,050 units	----

Source: City of Stockton, Pending Projects Map

TABLE 2
Portion of Draft General Plan Growth
Already Approved for Processing

	Acres	Housing Units	Population
Development projects in process	11,871 acres	42,050 units	121,150*
Total "village" development in draft General Plan (minus Bear Creek West -Village H)	25,100 acres	79,200 units	237,600
Development projects in process as % of GP villages	47.3 %	53.1 %	53.1 %

*Assumes 3.0 persons per household.

The City Council has already given approval for the processing of some 11,900 acres of urban growth, or more than one half of all the new development that is proposed in the draft 2035 General Plan. A total of almost 12,000 acres of growth are in the pipeline, equal to 42,100 housing units. As Table 2 above notes, the approximately 12,000 acres of development that are being processed before the new General Plan is adopted compares to a total of about 25,000 acres of farmland that will be paved over if all the planned "villages" in the new General Plan are built (these figures are from the City). Thus, the Council has already set in motion the approval of over 50% of the total "village" growth proposed in the draft General Plan, and over half the proposed housing and population growth.

All of the above listed projects must be included in a revised environmental document that is circulated to the public. In order for the DEIR to be adequate it must list, analyze, and mitigate to the extent feasible the cumulative impacts from all of these development projects.

Alternatives

The DEIR fails to adequately demonstrate why some of the alternatives were rejected for further analysis. Thus, the range of alternatives chosen by the City to analyze in detail is very limited.

A major impact related to the project is cancellation of Williamson Act contracts. Thus, the DEIR must include an alternative that reduces the amount of cancellation required. The DEIR dismissed a "No Williamson Act Contract Cancellation" (page 19-5) but the DEIR should consider in detail an alternative that cancelled only the first phase, but precluded the latter phases from developing until the contract has expired.

The DEIR also rejected the Campaign for Common Ground alternative for further detailed analysis on the basis that other lands proposed for rezoning from industrial to residential "are owned or controlled by other development interests and are not available for acquisition or development by the project applicant(s)." CEQA Guidelines section 15126.6(f) and case law does not allow a lead agency to reject an alternative site simply because it is not controlled by the applicant. The determination to choose a limited number of alternatives may consider that factor, but it is only one of several factors.

We would like to see a new alternative that (1) reduced the amount of contracted land that had to be cancelled; (2) reduced the project so that there was more verifiable water and sewer service; (3) shifted some of the growth closer to SR 99 and the downtown; and (4) created a dedicated ag easement/ buffer along the east side of the project

Conclusion

This project would require the cancellation of a huge amount of Williamson Act contracts, it would create leap frog development beyond an unincorporated pocket of land, and it has no proven source of potable or nonpotable water supplies. It is grossly premature. The project should not be considered until the contracts have expired and services are available to serve future growth in this area.

If you have any questions about these comments, you may contact me at 209/462-7079 or eparfrey@sbcglobal.net.

Please send the Final EIR, and all legal notices regarding this project to my home address, 1421 W. Willow St., Stockton 95203. Do NOT send copies to the Sierra Club address in Sacramento at the top of this letterhead.

Sincerely,

Eric Parfrey, Executive Committee
Sierra Club, Mother Lode Chapter

SIERRA-1

The City disagrees with the commentor's assertion that the DEIR mischaracterizes Measure X. Page 1-4 of the DEIR states that Objective 16 of the proposed project is to "Achieve the purpose of Measure X, to facilitate economic development in southeast Stockton, in a timely and economically feasible manner." The quote referenced by the commentor (contained on page 19-2 of the DEIR) simply states that Measure X was approved by the voters, not that the proposed project was approved by the voters. Neither the MLSP nor the DEIR state that the voters' approval of Measure X constituted an approval of a specific development project. No changes to the DEIR are necessary.

SIERRA-2

The commentor asserts that the proposed project is not consistent with the 2035 City General Plan. The City included a comparison of proposed project features with policies contained in the 2035 City General Plan, in its current form, in DEIR Appendix B.

The commentor asserts that the proposed project is not consistent with Policy PFS-2.7. This is incorrect. As explained in DEIR Appendix B, Table B-2, the proposed project is in fact consistent with Policy PFS-2.7 with implementation of the mitigation that is already identified in the DEIR. Appendix B, Table B-2 states as follows: "Approval of the MLSP project is conditioned upon adoption of a Water Supply Assessment and a Water Supply Verification that will confirm the availability of water supply to serve the project site (see Chapter 17, 'Utilities and Service Systems'). The project is planned for phased development with full buildout in approximately 20 years."

The commentor asserts that the proposed project is not consistent with Conservation Goal 1, Policy 1. This is incorrect. That policy simply conserves agricultural land until it is needed for urban development. As explained in DEIR Appendix B, Table B-2, the proposed project is consistent with Conservation Goal 1, Policy 1 for the following reasons: "The proposed project is contiguous to existing development and represents a logical area for urban expansion. MLSP policies would encourage the retention of agricultural land in agricultural use within the SPA until it is needed for future project development phases."

The commentor asserts that the proposed project is not consistent with Policy NCR-4.4, which requires compliance with the City's agricultural conservation program. As correctly stated by the commentor, in advance of the City Council's review of the 2035 City General Plan, the City of Stockton has adopted an agricultural conservation program. However, the assertion that the project is not consistent with the program is incorrect. As explained in DEIR Appendix B, Table B-2, "The MLSP applicant(s) would participate in an Agricultural Conservation Program and pay appropriate fees, if such a program is adopted." As explained in Chapter 5 of this FEIR, such a program has been adopted, and, accordingly, Mitigation Measure 5-1 was amended as follows:

The project applicant(s) of all project phases shall pay the City's agricultural land conversion mitigation fees ~~if such a program is~~ of \$9,600 per acre and shall follow all other provisions of the City's "Agricultural Land Mitigation Program" as adopted by the City of Stockton on February 27, 2007. ~~If such a system is not adopted, the~~

~~project applicant(s) shall pay a fee of \$4,800 per acre subject to development. Said fee shall be paid to the City or to an entity designated by the City that is qualified to accept such fees, and used to purchase agricultural land at another location off the project site that would be placed in a conservation easement.~~

The commentor notes other generalized “inconsistencies” with the 2035 City General Plan. Without more details, no further response is possible except to direct the reader to DEIR Appendix B, Table B-2. No other revisions to the DEIR are necessary.

SIERRA-3

The commentor contends that the DEIR did not evaluate the impacts of lost agricultural land, and in particular did not evaluate the impacts arising from cancelled Williamson Act contracts. DEIR Mitigation Measure 5-1 required the project applicant to pay the City’s agricultural land conversion mitigation fees if such a program were adopted, or to pay a fee of \$4,800 per acre if said program was not adopted. Subsequent to circulation of the DEIR for public review, the City of Stockton adopted an agricultural fee mitigation program. The text of DEIR Mitigation Measure 5-1 has been revised as shown in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices” to require the project applicant’s participation in the adopted fee mitigation program. See the response to CONSERVATION-1, above, as well as response to SIERRA-2 above. Page 5-11 of the DEIR states that although payment into the City’s mitigation fee program would help to reduce impacts related to the loss of agricultural lands, full compensation for these losses cannot be achieved, and since no other feasible mitigation measures are available, the impact remains significant and unavoidable.

DEIR Impact 5-2 evaluates the cancellation of Williamson Act contracts. As stated on page 5-12 of the DEIR, most of the existing contracts will expire in 2012 and 2013. DEIR Mitigation Measure 5-2 requires that the project applicant work with agricultural operators to continue farming on land that is in future development phases of the project (Phases 2 through 5) until such time as that land is needed for urban development. However, page 5-2 of the DEIR also states that this mitigation would reduce the impact from cancellation of Williamson Act contracts, but not to a less-than-significant level; and since no other feasible mitigation measures are available, the impact remains significant and unavoidable. See the response to CONSERVATION-4, above.

Cumulative impacts of the proposed project related to agricultural resources, including cancellation of Williamson Act contracts, are evaluated in the DEIR on pages 18-7 and 18-8. Growth-inducing impacts of the proposed project related to the potential for subsequent conversion of adjacent agricultural land uses to urban development are evaluated in the DEIR on pages 20-4 and 20-5. No revisions to the DEIR are necessary.

SIERRA-4

The commentor asserts that there is inadequate justification for cancelling Williamson Act contracts for the proposed project. As an initial matter, the City agrees with the commentor that the justification for cancelling any or all Williamson Act contracts need not be discussed in the EIR; rather the EIR should focus on the environmental impacts of taking particular actions, not the policy wisdom of taking those actions. Policy decisions are committed to the decision makers. Nonetheless, there is no harm in providing a discussion of such policies and the City believes it promotes CEQA’s purpose of disclosing more information to the public.

The commentor asserts that the proposed project cannot be found to be consistent with the City’s General Plan, which is a consideration in Williamson Act contract cancellations under the California Government Code. This is incorrect. At page 5-12, the

DEIR explains that any cancellations of Williamson Act contracts would be considered only if, and only after, the proposed project has been approved by the City. Approval of the proposed project would include approval of amendments to the City's General Plan to allow the urban uses proposed by the project as well as rezoning. As a result, any requested Williamson Act contract cancellations would be for lands that have been designated for urban uses by the amended City General Plan and Zoning Ordinance, and would therefore be consistent with the general plan.

The commentor asserts that the proposed project would result in discontinuous development, which is a consideration in Williamson Act contract cancellations under the California Government Code. This is incorrect. At pages 5-12 through 5-13, the DEIR explains that the project site is contiguous to the existing City boundary along portions of its southwest boundary, in the vicinity of SR 4 and Stagecoach Road, and near Mariposa Road and Austin Road. Thus, a substantial portion of the project site's boundary is directly adjacent to the City's jurisdictional boundary, making the project site contiguous with the existing city limits and providing for a contiguous pattern of growth in southeast Stockton. The fact that a small island would be created within the new City boundary does not mean that the project would result in a "discontiguous growth pattern." Consequently, the City disagrees that the project would result in a discontiguous growth pattern.

The commentor asserts there is proximate and noncontracted land to the north and the south that is suitable for development, precluding cancellation of Williamson Act contracts at the proposed project site under the California Government Code. This comment misstates the conclusion that must be reached by the City to support its cancellation of the subject Williamson Act contracts. At pages 5-12 to 5-13, the DEIR explains that to adequately support the cancellation of a Williamson Act contract covering the project site, the City must find, "That there is no proximate noncontracted land that is both available and suitable for the use to which it is proposed the contracted land be put, or that development of the contracted land would provide more contiguous patterns of development than development of the contracted lands [emphasis added]" (fifth bullet, pages 5-12 to 5-13). Following this statement, the DEIR explains that no proximate noncontracted land is both available and suitable for the use proposed for the contracted land. Although the DEIR states that other noncontracted lands to the north and east may be suitable for development, these lands would not facilitate as contiguous a growth pattern as the project site because they are not as proximate to the City's existing urban development as the project site: "[t]here may exist other non-contracted lands to the north and east that could be suitable for development. None of these lands, however, would provide for any more contiguous patterns of development than would the proposed project. The SPA is contiguous to the existing City boundary and existing and approved development. More remote non-contracted lands [which are not under the project applicant's control] would not be contiguous to either the boundary or existing urban development; development of these areas would constitute 'leap-frog' development." Therefore, the DEIR's conclusion that there are no proximate noncontracted lands that are both available and suitable for the proposed use is correct. No revisions to the DEIR are necessary.

SIERRA-5

The commentor asserts that the proposed project should not be approved because the Williamson Act contracts have not been cancelled, and that in any event the project should be modified and phased to minimize the number of contracts that would be cancelled as proposed by one of the project alternatives that was "rejected out of hand." Approval of the proposed project does not require the cancellation of any Williamson Act

contracts. At page 5-12, the DEIR explains that any cancellations of Williamson Act contracts would be considered only if, and only after, the proposed project has been approved by the City. As suggested by the commentor, the project does propose phasing so that a minimum amount of Williamson Act contracts would be cancelled. As explained at page 5-12 of the DEIR, if the project is approved, “future Williamson Act cancellation requests would be submitted for areas of planned development within the SPA on an as-needed basis, in conjunction with tentative map or other entitlement actions for future development phases.” Furthermore, the DEIR also explains that notices of nonrenewal have already been filed on the majority of the lands covered by the Williamson Act contracts (as illustrated in Figure 5-1 [p. 5-4]), so these contracts will expire in 2012 and 2013 respectively. (DEIR at 5-12.) Under the phasing plan proposed for the project, Phase 1 buildout is expected to occur between 2007 and 2016. (DEIR at 3-79.) Therefore, it is anticipated that most Williamson Act contracts would expire pursuant to the filed notices of nonrenewal before the time such lands are needed for the planned development, and therefore no cancellation would be needed for most of the existing Williamson Act contracts at the project site. See also the response to CONSERVATION-4, above.

The “No Williamson Act Contract Cancellation” alternative was not rejected out of hand, as suggested by the commentor. The alternative was not evaluated at length in the DEIR because the alternative was deemed to be infeasible and, with the exception of avoiding the need to cancel Williamson Act contracts, the alternative did not avoid or significantly reduce the environmental impacts of the proposed project; rather, the impacts of the alternative would be identical to that of the proposed project except that such impacts might be temporarily deferred until the Williamson Act contracts expired by their own terms after nonrenewal. No revisions to the DEIR are necessary. See also response to SIERRA-33, below.

SIERRA-6

The commentor asserts that the DEIR fails to require mitigation for loss of agricultural lands under the City’s newly adopted agricultural mitigation program. The commentor is incorrect. See responses to CONSERVATION-1, SIERRA-2, and SIERRA-3, above.

The commentor’s statement regarding the lack of inclusion of agricultural impacts from off-site improvements is incorrect. The potential loss of agricultural land from off-site project-related improvements is included in the DEIR and is evaluated in Impact 5-3 (page 5-15) and Impact 5-6 (page 5-16). Mitigation Measures 5-1 and 7-3 address these impacts. No revisions to the DEIR are necessary.

SIERRA-7

The commentor asserts that Mitigation Measures 6-2b and 6-2c lack specificity. Contrary to the commentor’s assertion, the referenced mitigation measures do, in fact, specify exactly which strategies must be implemented by the project. The first paragraph of DEIR Mitigation Measure 6-2b (page 6-39) states, “The following SJVAPCD-recommended mitigation measures shall be implemented by the project applicant(s) of all project phases...” and then provides a bulleted list of requirements. The first paragraph of DEIR Mitigation Measure 6-2c (page 6-40) states, “Similar to Mitigation Measure 6-2b, the following SJVAPCD-recommended mitigation measures shall be implemented by the project applicant(s) of all project phases...” and then provides a bulleted list of requirements. As discussed on page 6-40 of the DEIR, even after implementation of these mitigation measures, emissions of reactive organic gases and oxides of nitrogen would not be reduced to a less-than-significant level, and therefore the impact would remain significant and unavoidable.

Implementation of an air quality mitigation plan as suggested by the commentor is voluntary, not mandatory. See response to SJVAPCD-2, above. No revisions to the DEIR are necessary.

SIERRA-8

The commentor asserts that the DEIR should have evaluated, as an alternative to the mitigation contained in the DEIR, the process whereby the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) would be amended to include areas of the project site currently excluded from that plan. As an initial matter, the commentor fails to explain why such a mitigation measure would be superior to the mitigation outlined in the DEIR. In any event, DEIR Impact 7-4 (page 7-29) discusses the fact that SJCOG may process an amendment to SJMSCP area to cover the remaining portions (800 acres) of the SPA. However, it is not certain when the amendment process will be completed. The City does not believe that the commentor's suggestion is feasible, because expansion of the SJMSCP requires a process that is completely separate from the proposed project, the timeline for that process is unknown and could extend past the time when mitigation for the proposed project is required, the action would occur at the discretion of another agency and therefore the lead agency would not have the power to implement it, and the action would require a separate environmental analysis. As stated by the Court of Appeal in *Los Angeles Unified School District v. City of Los Angeles* (2d Dist. 1997) 58 Cal.App.4th 1019, 1028–1030 (68 Cal.Rptr.2d 367), “[A]n EIR need not analyze every imaginable alternative or mitigation measure; its concern is with feasible means of reducing environmental effects. [Citation.] Under the CEQA statute and guidelines a mitigation measure is ‘feasible’ if it is ‘capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.’” See also State CEQA Guidelines Section 15364. Furthermore, the requirements of DEIR mitigation Measure 7-4 are nearly identical to, and provide the same level of species protection as, the requirements in DEIR Mitigation Measure 7-3 for lands within the SJMSCP. No revisions to the DEIR are necessary.

SIERRA-9

The commentor asserts that the DEIR fails to provide adequate mitigation for that portion of the proposed project site outside the current SJMSCP. The City believes that appropriate and adequate mitigation for the 800 acres of the proposed project site that is outside the SJMSCP is contained in DEIR Mitigation Measure 7-4. The requirements of DEIR Mitigation Measure 7-4 are nearly identical to, and provide substantially the same type of species protection (e.g., special status species surveys by a qualified biologist, establishment of buffer zones, curtailing the season and physical extent of construction activities, implementation of U.S. Fish and Wildlife Service standard avoidance measures, consultation with the California Department of Fish and Game, providing training to construction worker personnel, installation of temporary fencing) as the requirements in DEIR Mitigation Measure 7-3 for lands within the SJMSCP. DEIR Mitigation Measure 7-4 also requires compensation for loss of Swainson's hawk foraging habitat in the form of off-site mitigation lands. In fact, the only difference between the two mitigation measures is that DEIR Mitigation Measure 7-3 requires payment of the SJMSCP land conversion fees, which are used by SJMSCP to purchase off-site habitat mitigation lands. No revisions to the DEIR are necessary.

SIERRA-10

The commentor asserts that the DEIR does not justify the conclusion that cumulative habitat loss from the 800 acres outside the SJMSCP is less than significant. The factual justification for the conclusion of less-than-significant cumulative impacts to biological resources outside the areas covered by the SJMSCP is contained on DEIR pages 18-11 and 18-12. In addition, Mitigation Measures 7-1, 7-4, and 7-10a are hereby revised as

described in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices” to clarify additional actions that may be necessary on land outside the areas covered by the SJMSCP. These changes do not alter the conclusions of the DEIR.

SIERRA-11

The commentor asserts that no detailed biological studies were prepared for off-site improvement areas, citing to page 7-37 of the DEIR. Sections 15161 and 15168 of the State CEQA Guidelines provide that an EIR may consider impacts at either a “project” level or a “program” level, or both. As discussed on page 1-6 of the DEIR, the MLSP DEIR contains both levels of analysis. At a program level, the EIR need only consider the broad environmental effects of the overall specific plan, which is composed of a series of actions that can be characterized as one large project. Based on the program level of analysis, the EIR identifies performance standards (e.g., setbacks, measures to protect biological and visual resources) and mitigation measures that would apply to all subsequent, future project phases under the specific plan (as conditions of approval) at the MLSP project site. These performance standards would be incorporated into the MLSP or the mitigation monitoring and reporting plan to avoid or reduce impacts to the degree feasible. If this EIR is certified and the specific plan is adopted by the City, more detailed “project-level” environmental documents would be prepared as needed when individual development projects in development Phases 2–5 proceed to implementation. The extent of environmental review, if any, for future development entitlements would depend on a number of factors, including the streamlining provision of CEQA that is most applicable to a particular proposed entitlement; consistency of the development phase with the adopted specific plan; and the extent to which the programmatic analysis, performance standards, and mitigation measures have anticipated and accounted for the site-specific impacts of the requested entitlements. See also response to DANAMARK-B-1, above.

The commentor refers to DEIR Impact 7-10, which evaluates, at a programmatic level, the potential for impacts to biological resources from future phase (development Phases 2–5) off-site improvements. Mitigation Measures 7-10a, 7-10b, and 7-10c require that after the future development phases within the specific plan have been fully designed and planned at a project level, the project applicant must retain qualified biologists and/or botanists to conduct appropriate biological surveys, implement requirements of the SJMSCP according to the biological professionals’ recommendation, perform wetland delineations (if necessary), obtain appropriate wetland permits (if necessary), replace lost wetland acreage (if any) on a no-net-loss basis in consultation with USACE, perform a tree survey according to appropriate County protocols, install protective fencing for oak trees according to County requirements, and obtain any permits for tree removal. (DEIR at 7-37 and 7-38.) The agencies responsible for monitoring the implementation of this mitigation are identified in the DEIR on page 7-38. Implementation of these mitigation measures would therefore reduce programmatic impacts to a less-than-significant level. Project-level (development Phase 1) impacts from off-site improvements are evaluated in Impact 7-20. No revisions to the DEIR are necessary.

SIERRA-12

The commentor asserts that the DEIR inappropriately relied on New Melones water for the proposed project, and that SEWD will never receive water from the New Melones reservoir. The commentor is mistaken on both counts. See Master Response 2 contained in Chapter 3, “Master Responses,” of this FEIR.

SIERRA-13

Citing to DEIR page 11-11, the commentor asserts that the DEIR overstates the availability of water to serve the proposed project from the Delta Water Supply Project.

The commentor is mistaken. Although Chapter 11 of the DEIR contains a passing reference to the DWSP, it is not intended to evaluate the availability of water to serve the proposed project from the DWSP. Rather, the DEIR's analysis of available water from the DWSP is set forth in Chapter 17 of the DEIR. There, the DEIR fully and accurately assesses the availability of water to serve the proposed project from the DWSP. See also Master Response 3 contained in Chapter 3, "Master Responses," of this FEIR, as well as Section 5.3 of this FEIR.

SIERRA-14

The commentor asserts that the proposed project is not consistent with 2035 City General Plan Policy PFS2.8, which states that the City shall not approve new development that relies on the DWSP until the water is allocated through a water right to the City by the SWRCB. The SWRCB has already allocated water rights to the City for Phase I of the DWSP, and Phase I of the DWSP would provide ample new water supplies to serve the entire proposed project through buildout. See Chapter 17 of the DEIR, Master Response 3 contained in Chapter 3, "Master Responses," of this FEIR, and Section 5.3 of this FEIR. Thus, the proposed project is consistent with 2035 City General Plan Policy PFS2.8.

SIERRA-15

The commentor requests that the EIR include a description of the three new wells proposed on site and the justification for those wells. The project proposes to replace the existing 24 agricultural wells, with three water wells in Phases 1, 2, and 4. (See pages 3-80 through 3-84, and 17-1 of the DEIR.) The new wells, and their purposes, are described in the DEIR at Chapter 3 (see, e.g., pages 3-65, 3-67, and 3-75), Chapter 11 (see, e.g., page 11-8), and Chapter 17 (see, e.g., pages 17-1, 17-14, 17-15). As explained on page 3-80, only one of the wells are planned to occur within the Phase 1 development. (Compare figures 3-31, 3-32, and 3-33 of the DEIR.) The commentor also queries how the operation of those wells would contribute to the groundwater overdrafting in the area. The operation of the wells is not anticipated to contribute to groundwater overdrafting. See Master Response 4 contained in Chapter 3, "Master Responses," of this FEIR, as well as Section 5.3 of this FEIR. See also response to MORADA-2, MORADA-6, and and CSJWCD-4.

SIERRA-16

The commentor asserts that the Kleinfelder study did not include the test required to establish the feasibility of the groundwater recharge system. The commentor is mistaken. The *Groundwater Recharge Feasibility Assessment* attached as Appendix Q to the DEIR, which is summarized on pages 11-34 through 11-39 and on pages 11-59 through 11-61 of the DEIR, indicates that the proposed location for the recharge component is suitable for the amount of recharge necessary to meet project demand. The DEIR did acknowledge that additional studies were recommended to refine the analysis, and would for instance assist in detailed engineering designs, but the DEIR did not state that such studies were needed to assess the feasibility of the proposed site for a groundwater recharge system. See also Kleinfelder's (2007) *Supplemental Geotechnical Investigation, Groundwater Recharge Feasibility Assessment* attached as new Appendix BB to this FEIR, which provides additional information about the recharge capacity of the Arbini site. Establishment of the recharge program is a phased operation. As described in the Integrated Water Management Plan (DEIR Appendix P) and in Mitigation Measure 11-6a (pages 11-39 through 11-40) of the DEIR, a number of studies are required within each phase of recharge project implementation. The DEIR describes impacts and mitigation measures related to the recharge facility. However, hydrologic studies have already shown that the location proposed for recharge would function adequately to meet project demands. No changes to the DEIR are necessary.

SIERRA-17

The commentor requests that further information be added regarding the recharge system's potential to fail and to add mitigation measures that would account for this failure. Recharge system operations are fully described on pages 11-33 through 11-39, and on pages 11-59 through 11-61 of the DEIR. Mitigation measures are provided for potentially significant impacts. Mitigation Measure 11-6b identifies potential secondary impacts that could occur if, during an extended drought (longer than 3 years), the project applicant were not able to recover the full amount of banked (recharged) water necessary to meet the project's nonpotable water needs. Mitigation measures are identified for those potentially significant secondary impacts as well. See revisions to Mitigation Measure 11-6b that clarify its application as shown in Chapter 5, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices" of this FEIR. As demonstrated by the Non-Potable Water Supply Assessment prepared by SEWD on behalf of itself and CSJWCD (new Appendix Y attached to this FEIR), the project has a secured supply of nonpotable water. See Master Response 5 contained in Chapter 3, "Master Responses," of this FEIR. As stated in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices," the significance conclusion of Impact 7-3 has been reduced from potentially significant and unavoidable to less than significant, Mitigation Measure 17-3 has been deleted, and no further mitigation measures are required. Because the appropriate studies have shown the Arbini site is capable of providing recharge sufficient to meet the project's needs, and because the source of nonpotable surplus surface water is secured, the City believes there is no reason to include a new mitigation measure that would require deletion of the project's lake system.

SIERRA-18

The commentor has identified grammatical errors in the quoted text on page 11-41 ("Significance after Mitigation") that the commentor correctly notes could be construed as rendering that text nonsensical. The intent of the mitigation measures is to monitor and identify changes in groundwater quantity or quality, and to respond to such changes before they become significant problems (i.e., exceed appropriate regulatory thresholds). A portion of the text contained in "Significance after Mitigation" on page 11-41 of the DEIR is hereby revised as described in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." This change does not alter the conclusions of the DEIR.

SIERRA-19

The commentor asserts that after development Phase 1, a new wastewater System No. 12 would be needed to serve the proposed project, and that the impacts of System No. 12 were not evaluated. The commentor misstates the DEIR when he concludes "further phases would probably require construction of a whole new System 12 force main..." Page 17-19 of the DEIR states that System No. 8 is available to meet Phase 1 of the project's wastewater conveyance needs. The *Mariposa Lakes Study on Sanitary Sewer Service* (Appendix V to the DEIR) clearly identifies that System No. 8 has capacity to serve full build out of additional development projects (including Mariposa Lakes) on a first-come, first-served basis. Page 17-19 of the DEIR states that before construction of development Phase 2, the City would determine whether construction of a new sewer force main (System No. 12) was necessary. Page 17-19 goes on to state:

If the City determines System No. 12 is necessary to serve the proposed project, a separate CEQA review would be required to assess the effects of developing the System No. 12 wastewater collection system. The separate CEQA review would be prepared by the project applicant(s) and would identify environmental impacts associated with construction of System No. 12, some of which may remain significant and unavoidable even with implementation of all feasible mitigation. Construction of System No. 12 in

the vicinity of the SPA has the potential to result in many of the same significant environmental impacts as identified in this DEIR for the project, including significant and unavoidable impacts on farmland, construction-related air quality impacts, construction-related noise, and alteration of the visual character of the SPA.

*The infrastructure required for wastewater conveyance facilities necessary to serve the proposed project has not been constructed, nor have final design plans and specifications been submitted. Furthermore, it is unknown whether System No. 8 would be able to serve project buildout, and it could be determined by the City that development of the System No. 12 wastewater collection system will be necessary to serve the SPA. The potential impacts resulting from construction of System No. 12 are unknown at this time. Therefore, this impact is considered **significant**.*

Because the *Mariposa Lakes Study on Sanitary Sewer Service* (Appendix V to the DEIR) identifies that System No. 8 has capacity to serve full build out of additional development projects (including Mariposa Lakes), there is no reason to assume at this time that the project applicant would have to fund and construct a new sewer force main. Furthermore, the DEIR clearly states on pages 17-19 and 17-20, that if it were necessary to construct a new sewer force main (which would not occur, if at all, until development Phase 2), a separate CEQA review would occur. The DEIR also explains that the construction of a new sewer force main would likely involve many of the same impacts as the proposed project overall, including significant and unavoidable impacts on agricultural land, construction-related air quality impacts, and construction-related noise impacts. Because Impact 17-4 evaluates future phases of project development at a programmatic level, and because it is unknown at this time whether a new sewer force main would be necessary, it is appropriate for the City to include mitigation that requires additional CEQA review should additional construction be determined to be necessary in the future. Page 17-20 of the DEIR identified this impact as potentially significant and unavoidable after implementation of mitigation. No changes to the DEIR are necessary.

SIERRA-20 The commentor queries why the annexation of the SPA would necessarily create an unincorporated island (i.e., why doesn't the proposed project include the island?). Impact 12-2 (DEIR pages 12-16 through 12-17) states that annexation of the SPA would create an unincorporated island of land west of Mariposa Road, north of Arch Road, east of South Airport Way, and south of Charter Way. In the 2035 City General Plan, the City's Urban Service Boundary and sphere of influence has been expanded to include this "island" area; however, the 2035 City General Plan does not contain any plans to annex the "island" area into the city limits. The text of the DEIR Impact 12-2 has been changed as shown in Section 5.2 of this FEIR. The revised text indicates that San Joaquin Local Agency Formation Commission (LAFCO) General Standards for Annexation and Detachment policies, adopted on September 21, 2007, state that detailed development plans are not necessarily required for the remnant areas to avoid the creation of an island of development when annexation is requested (Policy 7). Policy 8, which addresses annexations that create islands, states:

An annexation will not be approved if it will result in the creation of an island of unincorporated territory o[r] otherwise cause or further the distortion of existing boundaries. The Commission may nevertheless approve such an annexation where it finds that the application of this policy would [not] be detrimental to the orderly development of the community and that a

reasonable effort has been made to include the island in the annexation but that inclusion is not feasible at this time.

A sizeable portion of the island area has been subdivided for urban-level uses under County jurisdiction, mostly adjacent to the City of Stockton boundary and SR 99. The area contains a range of rural-to-urban housing densities, commercial and industrial development along the SR 99 and Mariposa Road corridors, and a variety of other uses. As housing and land prices have increased in recent years, this area has been the subject of intensive development interest. Annexation to the City of Stockton is required to obtain urban wastewater collection services and domestic water supply within the City's service area. As a result, this has become an area of "infill" activity; several residential projects of considerable size have been approved and annexed into the City, and several others are being processed by the City.

It is anticipated that the island area will continue to be subject to intensive infill interest. As individual annexation and development proposals are considered, City utilities, street, and other improvements would be extended throughout the area. As time passes, the area would be expected to gradually be absorbed into the City. For the reasons described previously, annexation of the proposed project site would not be detrimental to the orderly development of the community, the island area is currently the subject of infill development, and inclusion of the island area is not feasible at this time. Therefore, it would be possible for San Joaquin LAFCO to adopt the proposed annexation despite the creation of an island area.

The commentor suggests that feasible mitigation is available if the City were to require the "island" area to be annexed. However, the owners of the properties that would compose the potential "island" area have had multiple opportunities to initiate or participate in proceedings that could lead to the annexation of their properties to the City, including public meetings and hearings on the MLSP project and the 2035 City General Plan. They have consistently stated that they do not want their properties annexed to the City at this time. The City does not intend to require any property owners to annex their property to the City involuntarily. However, the design of the MLSP project allows for these landowners to connect to City utilities in the future, and the City's land use planning in connection with the 2035 City General Plan anticipated that these lands would be within the City's Urban Service Boundary and sphere of influence. As noted above, however, the City believes it would be inappropriate to force these landowners to annex their properties to the City until they are prepared to initiate or voluntarily participate in annexation proceedings. Therefore, the City does not believe the commentor's suggestion is feasible. No other revisions to the DEIR are necessary.

SIERRA-21

See Master Response 1 in Chapter 3, "Master Responses," of this FEIR.

SIERRA-22

The commentor asserts that the transportation impacts of the regional sports complex were insufficiently analyzed in the DEIR. The regional sports park has been removed as a component of the proposed project. See Chapter 2, "Minor Modifications to the Project," and Chapter 5, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices," of this FEIR. This revision does not change the significance conclusions contained in the DEIR.

SIERRA-23

The commentor has identified a typographical error in Mitigation Measure 17-1. The sentence quoted by the commentor is hereby revised as shown in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." This revision does not alter the conclusions in the DEIR.

The commentor asserts that Mitigation Measure 17-2b misstates Government Code 66473.7. The commentor is mistaken. Mitigation Measure 17-2b is not intended to replace or supercede the requirements of Government Code Section 66473.7, which apply to applications for proposed tentative subdivision maps. Rather, as explained on p. 17-15 of the DEIR, Mitigation Measure 17-2b applies as a precondition to the issuance of building permits for all project phases, and so would apply after, and in addition to, the requirements of Government Code Section 66473.7. Note as well that Mitigation Measure 17-2b applies to subdivisions in excess of 500 units, as well as subdivisions with fewer than 500 units, and thus applies in situations in which Government Code Section 66473.7 might not apply.

The commentor's description of the requirements of Government Code Section 66473.7 is noted.

SIERRA-24

The commentor requests that a WSA be prepared for nonpotable water. Part 2.10 of the California Water Code, requiring the preparation of WSAs for new development projects, requires such WSAs only from those water providers that will be providing potable water to the project. See Water Code Section 10912(c). Nonetheless, a nonpotable WSA prepared by SEWD on behalf of SEWD and CSJWCD is attached to this FEIR as new Appendix Y, to assess the availability of nonpotable water supplies for the project.

SIERRA-25

The commentor asserts that the DEIR is unclear regarding the water that would be available to serve the proposed project from the DWSP. See Master Response 3 in Chapter 3, "Master Responses," of this FEIR, as well as Section 5.3 of this FEIR.

SIERRA-26

The commentor asserts that the EIR should indicate whether SEWD and/or CSJWCD are willing to provide water to the project site for its nonpotable needs. A nonpotable WSA prepared by SEWD on behalf of SEWD and CSJWCD is attached to this FEIR as new Appendix Y.

SIERRA-27

The commentor asserts that Mitigation Measure 17-3 provides for the possibility of the elimination of the lake system if insufficient water is found to be available and that the EIR should evaluate the impacts of eliminating the lake system. As demonstrated by the Non-Potable WSA prepared by SEWD on behalf of itself and CSJWCD (new Appendix Y attached to this FEIR), the project has a secured supply of nonpotable water. See Master Response 5 contained in Chapter 3, "Master Responses," of this FEIR. As stated in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices," the significance conclusion of Impact 17-3 has been reduced from potentially significant and unavoidable to less than significant, Mitigation Measure 17-3 has been deleted, and no further mitigation measures are required. Because the appropriate studies have shown the proposed Arbini site is capable of providing recharge sufficient to meet the project's needs, and because the source of nonpotable surplus surface water is secured, the City believes there is no reason to include a new mitigation measure that would require deletion of the project's lake system.

SIERRA-28

The commentor asserts that because the DEIR concludes a certain supply of potable water for development Phase 1 may not be available, the impact cannot be reduced to a less-than-significant level. Since the time the DEIR was published, additional analysis has demonstrated that sufficient water would be available to serve Phase 1 of the proposed project even without the completion of Phase 1 of the DWSP. See Master Response 3 contained in Chapter 3, "Master Responses," of this FEIR regarding the City's reliance on water from Phase I of the DWSP, as well as Section 5.3 of this FEIR.

Regarding potable water supply for MLSP development Phase 1, Stantec (2007b) performed a review of the water supplies identified in the City’s WSA (DEIR Appendix R). Development Phase 1 consists of approximately 1,000 acres of land in the southern portion of the SPA that is currently designated and used for agricultural purposes. Total existing agricultural water use within development Phase 1 is conservatively estimated to be approximately 3,000 afy based on an estimated average agricultural water usage rate of 3 afy. The total potable water demand for development Phase 1 (1,386 afy) would be approximately 1,614 afy less than the current agricultural uses on the project site (3,000 afy agricultural uses – 1,386 afy potable water demand = 1,614 afy). As a result, the conversion of the Phase 1 project site from agricultural uses to urban uses should ultimately produce a net positive increase in volume of water stored in the groundwater basin of approximately 1,614 afy.

While the City’s WSA does state that, “This WSA determines that the COSMA urban water retailers currently cannot support the Project without the DWSP Phase I project,” this determination is based on full buildout of the MLSP (3,080 acres). Development Phase 1, which is evaluated a project level in this DEIR, consists of approximately 1,000 acres. In its WSA, the City concludes that it has sufficient water supplies to serve all existing and foreseeable development (including the MLSP at full project buildout) through 2035, but that providing such service would require the City to exceed the average sustainable groundwater yield goal by approximately 5,157 afy (DEIR Appendix R, page 36). The difference in water demand between Phase 1 of the proposed project (1,386 afy) and full project buildout (7,535 afy) is 6,129 afy. Thus, because 6,129 afy less water would be needed to serve MLSP Phase 1, the City’s safe-yield goal would not be exceeded, and the City would be able to serve its existing and foreseeable development and remain approximately 974 afy below its targeted sustainable groundwater yield goal (6,129 afy water not used for MLSP – 5,157 afy exceedance of groundwater sustainable yield = 974 afy).

While converting the Phase 1 project site from agricultural to urban uses would have a positive impact on the groundwater basin, this positive impact would be even greater in the years prior to full buildout of Phase 1, because the uses that would eventually generate the 1,386 afy demand would be built in phases, or subphases. Consequently, the net positive impact on the groundwater basin would be even greater in the initial construction period of Phase 1, when agricultural uses have terminated but before all the urban uses have been built. Table 4-2 breaks down the Phase 1 water demand by years, from 2007 through 2016, and shows the corresponding annual savings in groundwater usage on the site from the preproject usage of 3,000 afy, eventually settling on the 1,614 afy of groundwater savings resulting from the conversion of the site from agricultural to fully developed urban uses.

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Estimated water demand for each yearly addition to Phase 1 (afy)	54	148	148	148	148	148	148	148	148	148
Accumulative Demand (afy)	54	202	350	498	646	794	942	1,090	1,238	1,386
Accumulative Net Positive Savings of Groundwater (afy)	2,946	2,798	2,650	2,502	2,354	2,206	2,058	1,910	1,762	1,614
	Total afy									3,000
Note:										
^a Estimated Phase 1 water demand = 1,386 acre-feet per year [afy]										
Source: Stantec 2007										

Several additional points bear mentioning. First, the benefit to the groundwater table described above is based on the assumption that the City would serve the Phase 1 site entirely from groundwater. However, the City has already confirmed in its WSA that it would continue to provide potable water to its service area through its conjunctive use program. Figure 11 of the WSA reveals that from 1994 through 2005, the City's supply was heavily weighted in favor of surface water supplies, with the surface-to-groundwater ratio ranging from approximately 1.3-to-1 (2004) to nearly 2.5-to-1 (1998). Thus, the net benefit to the groundwater basin described in the above table substantially underestimates the groundwater savings by incorrectly assuming that all water service to the Phase 1 site would be from groundwater and failing to account for the fact that the majority of the water supplied to the site would be surface water.

Second, two substantial constraints on the City's surface water supplies would be removed prior to or during construction of Development Phase 1, thereby increasing the City's surface water supplies and improving the City's ability to serve Development Phase 1 without increasing its use of groundwater. In its WSA, the City assumed that SEWD would maintain the existing 50 million gallons per day (mgd) treatment capacity at its surface water treatment plant until 2016, when its treatment capacity would be expanded to 60 mgd (WSA at 34). Since the WSA was published, however, the SEWD has confirmed that this expansion has already been completed and the plant is currently capable of treating up to 60 mgd now. Certification of the increased capacity by the California Department of Health Services is expected before the end of the year.

Third, the groundwater recharge facility proposed as part of the project is expected to be operational in 2011. The recharge facility is expected to divert up to 8,500 afy from surplus surface water supplies to the groundwater basin (see Master Response 5 of this FEIR). While much of this diversion would be used to meet the project's annual nonpotable water needs, a substantial portion would be used to create a nonpotable "reserve" supply for the project, which would remain in the groundwater basin until it becomes necessary to serve the project. The recharge facility would be required to apply at least 2 af of water to the ground surface for every 1 af that the facility retrieves to serve the project. As a result, on-going operation of the recharge facility would produce a net benefit to the groundwater basin.

Therefore, while the City anticipates that the DWSP will be operational in time to serve all of the proposed project, should a delay occur, the City would be able serve development Phase 1 of MLSP with its existing water supplies, without having a negative impact on the groundwater basin. Therefore, the direct impacts related to potable water supply for MLSP development Phase 1 would be less than significant, and Impact 17-10 has been revised to reflect this information as shown in Chapter 5, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." However, the proposed project would still contribute to significant indirect impacts identified in the DWSP EIR, and the project's contribution to those indirect impacts would remain significant and unavoidable.

SIERRA-29

The commentor asserts that a mitigation measure should be added to assure that the jobs to housing ratios remain in balance within the project site. The phasing plan for the proposed project provides for the development of job-generating land uses concurrent with the development of housing, as shown in Table 4-3, below.

Table 4-3 Mariposa Lakes Specific Plan Jobs/Housing Balance						
Job/Housing Factors	Project Development Phases					
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total
Residential Units	4,298	2,449	2,438	974	403	10,562
Total Population	13,496	7,690	7,654	3,060	1,265	33,165
Total Jobs	1,558	3,435	5,660	2,100	1,862	14,615
Jobs/Housing Balance	0.36	1.40	2.32	2.16	4.62	1.38
Source: Sutton, pers. comm., 2007						

As shown in Table 4-3, the project would generally provide a balanced mix of jobs to housing. Furthermore, as stated by the court in *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1st Dist. 1989) 209 Cal.App.3d 1502, 1526 [258 Cal.Rptr. 267], “Nothing in CEQA requires a local legislative body...to enact legislation which uniformly applies a certain level or standard of mitigation to all similar projects submitted for environmental review within its jurisdiction. Local entities retain legislative power to devise solutions to diminish environmental damage from future development.” Thus, there is nothing in CEQA that mandates that the City maintain a precise jobs-to-housing ratio within the boundaries of the project site. Therefore, the City does not believe a new mitigation measure is required. No revisions to the DEIR are necessary.

SIERRA-30

The commentor asserts that the cumulative impacts analysis is inadequate for several reasons. The commentor is mistaken on all counts. First, the commentor asserts that the DEIR fails to list the projects within the City of Stockton that were appropriately included within the cumulative impact analysis. As stated on pages 18-2, 18-5, and 18-6 of the DEIR, the cumulative impact analysis includes projects from the 2035 City General Plan. Figure 18-1 and Table 18-1 are hereby revised as shown in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices,” to include the Grupe Sanctuary, Empire Ranch, Arnaiz/Tidewater Crossing, and River Run/Western Pacific projects, which are not approved, but are in the process of environmental review. These projects were inadvertently left out of Figure 18-1 and Table 18-1, but were included within the analysis. The other projects suggested by the commentor are not approved, and are not in the environmental review process; therefore, the City believes it would be too speculative for meaningful consideration to include them in the cumulative analysis. These revisions do not change the conclusions of the DEIR. Because the traffic analysis performed for the proposed project included full buildout under the 2035 City General Plan, the traffic analysis included the four projects listed above, and therefore no revisions to the traffic, air quality, or noise analyses are necessary.

Second, the commentor asserts vaguely that the cumulative impact analysis “lacks meaningful qualitative and quantitative detail.” The commentor is mistaken. The DEIR contains extensive detailed and quantitative discussions of cumulative impacts. The cumulative impact analysis for the proposed project is contained in the DEIR at Chapter 18, which contains 24 pages of analysis, and Chapter 16, at Section 16.3.5, which contains 43 pages of data and analysis describing potential cumulative transportation impacts. To some degree, cumulative impacts related to water supply are also discussed in DEIR Chapter 17; for instance, at pages 17-12 to 17-13, the DEIR discusses the

project's contribution to significant and unavoidable impacts identified in the DWSP EIR. In Chapter 18 of the DEIR, entitled "Cumulative Impacts," the discussion of cumulative impacts is organized by issue area, and it includes a summary of the projected environmental impacts of the related projects, a summary of the project's cumulative contribution to impacts that may be caused by the related projects (if any), and inclusion of mitigation measures that could reduce or avoid the proposed project's contribution to any cumulative impacts. The commentor suggests no additional mitigation that would feasibly address any remaining cumulatively considerable contributions to significant and unavoidable cumulative impacts. To the degree that the commentor would have this project mitigate for the full cumulative impacts, the courts have consistently upheld the concept that CEQA does not require a lead agency to adopt mitigation measures that would apply to other projects in an attempt to offset those other projects' contribution to environmental impacts; rather, mitigation measures must actually relate to impacts caused by the proposed project under consideration. *Nollan v. California Coastal Commission* 483 U.S. 825 (1987) and *Dolan v. City of Tigard*, 512 U.S. 374 (1994). Where appropriate, cumulative impacts are discussed quantitatively (i.e., traffic and transportation); in other instances, as appropriate, cumulative impacts are discussed qualitatively. Therefore, the City believes the DEIR does provide decisionmakers with an objective measure of cumulative impacts and that the analysis is adequate; thus, no further revisions to the DEIR are necessary.

SIERRA-31

The commentor asserts that the DEIR relies "exclusively" on the 1990 City General Plan to draw its conclusions. The commentor is mistaken. As explained at pages 18-2 through 18-7, the DEIR relied on a number of planning documents in its analysis, including the now adopted 2035 City General Plan.

The commentor asserts that the cumulative impacts of agricultural resources is flawed because the DEIR characterizes them as involving only the loss of 9,000 acres. The commentor mischaracterizes the text. The DEIR does acknowledge, at page 18-8, that the 1990 City General Plan identified cumulative impacts associated with the loss of 9,000 acres, but that was by no means the only discussion of cumulative impacts. The DEIR also included a much broader discussion of cumulative impacts of lost farmland at page 18-7. For instance, the DEIR discusses potential cumulative impacts from lost farmland that were identified by the County in its General Plan 2010 Review, which estimated that about 110,000 acres of important farmland could be converted to urban uses by 2040. Although the DEIR, in this section, does not specifically rely on the certified DEIR for the 2035 City General Plan, which identified the potential loss of up to 32,520 acres of Important Farmland at page 13-32, the discussion in the DEIR at pages 18-7 and 18-8, is in line with the estimates contained in the DEIR for the 2035 City General Plan.

As stated on pages 18-2, 18-5, and 18-6 of the DEIR, the cumulative impact analysis includes projects from both the previously adopted 1990 City General Plan and the now adopted 2035 City General Plan. DEIR Figure 18-1 and Table 18-1 are hereby revised as shown in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices," to include the Grupe Sanctuary, Empire Ranch, Arnaiz/Tidewater Crossing, and River Run/Western Pacific projects, which are not approved, but are in the process of environmental review. These projects were inadvertently left out of DEIR Figure 18-1 and Table 18-1, but were included within the analysis. The other projects suggested by the commentor are not approved, and are not in the environmental review process; therefore, the City believes it would be too speculative to include them in the cumulative analysis. These revisions do not change the conclusions of the DEIR. Because the traffic analysis performed for the proposed project included full buildout under the

2035 City General Plan, the traffic analysis included the four projects listed above, and therefore no revisions to the traffic, air quality, or noise analyses are necessary.

SIERRA-32

The commentator alleges that the range of alternatives analyzed in the DEIR is too narrow. The City disagrees with this contention. Under CEQA, an EIR must describe a range of reasonable alternatives to the project, or to the location of the project, that “could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects [of the project].” (State CEQA Guidelines, Section 15126.6, subd. [c]) The goal of the requirement is to “produce information sufficient to permit a reasonable choice of alternatives so far as environmental aspects are concerned.” (*San Bernardino Valley Audubon Society, Inc. v. County of San Bernardino* [1984] 155 Cal.App.3d 738, 750–751.) “An EIR need not consider every conceivable alternative to a project,” so long as the range of alternatives “fosters informed decision making and public participation.” (State CEQA Guidelines, Section 15126.6, subd. [c].) CEQA allows considerable flexibility in fashioning a range of alternatives, in that “there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.” (*Ibid.*) Stated another way, there is no “categorical imperative” dictating the scope of alternatives to be analyzed in an EIR; rather, both the range of alternatives and level of analysis are subject to a “rule of reason.” (*Marin Municipal Water Dist. v. KG Land Corp. of California* [1991] 235 Cal.App.3d 1652, 1664–1665 [*Marin*]; *Laurel Heights Improvement Association of San Francisco v. Regents of the University of California* [1988] 47 Cal. 3d 376, 407 [*Laurel Heights I*]; *Citizens of Goleta Valley v. Board of Supervisors of Santa Barbara County* [1990] 52 Cal. 3d 553, 565–66 [*Goleta II*]; State CEQA Guidelines Section 15126.6, subd. [a]) The law is clear, moreover, that lead agencies, not project opponents, have the burden to formulate alternatives for inclusion in an EIR. (*Laurel Heights I, supra*, 47 Cal.3d at 406; *Goleta II, supra*, 52 Cal.3d at 568; *Citizens of Goleta Valley v. Santa Barbara County Board of Supervisors* [1988] 197 Cal.App.3d 1167, 1178.) Thus, lead agencies need not address potential alternatives simply because a member of the public suggests them, provided that the alternatives that are addressed satisfy CEQA requirements.

The commentator asserts that the DEIR provides insufficient details regarding why certain alternatives were eliminated from detailed consideration. Page 19-1 of the DEIR provides a bulleted list of the alternatives that were not carried forward for additional detailed analysis. Section 19.2 of the DEIR (pages 19-3 through 19-5), provides a detailed explanation of the reasons why each alternative was not carried forward; namely, the alternative (1) would not meet most of the objectives of the project, (2) would be infeasible, or (3) would not avoid or substantially reduce the significant environmental effects of the project (State CEQA Guidelines Section 15126.6). No revisions to the DEIR are necessary.

SIERRA-33

The commentator objects to the elimination of the “No Williamson Act Contract Cancellation” alternative from detailed consideration. See response to SIERRA-5, above. The Reduced Project Alternative (Option 2), discussed on pages 19-15 and 19-18 through 19-21 of the DEIR, meets the commentator’s request for inclusion of an alternative that reduces the amount of Williamson Act cancellations. Under this alternative, nine parcels of land currently under Williams Act contracts would be excluded from the proposed project, and the project site would be reduced by approximately 45% from 3,810 acres to approximately 2,010 acres. See Figure 5-1 of the DEIR (page 5-4) for an explanation of the status of Williamson Act contracts on project lands. As the DEIR explains (page 5-12), notices of nonrenewal have been filed on 25 of the 28 parcels within the SPA that are covered by the Williamson Act contracts, so these contracts will expire in 2012 and 2013

respectively. Therefore, it is anticipated that most Williamson Act contracts would expire under the filed notices of nonrenewal before such lands would be needed for the planned development. No revisions to the DEIR are necessary.

SIERRA-34

The commentor objects to the elimination of the “Campaign for Common Ground” (CCG) alternative from detailed consideration. As an initial matter, the City notes that the CCG alternative was not rejected from detailed consideration in its entirety. Many elements of the proposal from CCG were incorporated into various alternatives. As discussed on page 19-6 of the DEIR, the CCG “suggested redesignating industrial lands in the vicinity of SR 99 for residential use to provide housing opportunities closer to existing job centers. To the degree that this suggestion can be accommodated within the SPA, it is reflected in the Reverse Residential/Industrial Uses Alternative which is addressed in detail in Section 19.3.2. CCG also suggests the inclusion of a ‘significant buffer’ between planned urban development and agricultural lands; this concept is addressed in the Site Design Alternative addressed in Section 19.3.3. CCG also suggested that the EIR analyze an alternative that results in less conversion of agricultural land. This suggestion is addressed by the Reduced Project Alternative in Section 19.3.4. CCG’s remaining suggestions did not identify viable alternatives to the proposed project and were not subject to detailed analysis in this DEIR, as discussed below.” Thus, the key concepts suggested by CCG were evaluated in the DEIR in alternatives that were carried forward for further analysis. The CCG discussion suggests that the proposed project would result in less conversion of farmland if all or part of it were re-sited on land currently zoned for industrial use, located generally east of SR 99 and south of SR 4. These off-site elements of the CCG proposal were not carried forward for detailed consideration because these elements were not feasible, in as much as they involved the conversion of land that was already planned for other uses and that was not within the ownership or control of the project applicant. It should be noted that, even if the proposed project were sited on the lands suggested by CCG, this would not necessarily result in the conversion of less farmland, as suggested by CCG and the commentor. Rather, the industrial growth projected for the City, and currently planned for those sites, would likely be displaced to other undeveloped locations in the Stockton area. This displacement could result in environmental effects comparable to those of the proposed project, including conversion of agricultural lands and potential conflicts with Williams Act contracts. No revisions to the DEIR are necessary.

SIERRA-35

The commentor requests a new alternative that would do the following:

- (1) “reduce the contracted land that had to be cancelled”—this is included in the Reduced Project Alternative (Option 2) discussed on pages 19-15 and 19-18 through 19-21 of the DEIR;
- (2) “reduce the project so that there was more verifiable water and sewer service”—this is included in the Reduced Project Alternative (Options 1 and 2) discussed on pages 19-15 and 19-18 through 19-21 of the DEIR;
- (3) “shift some of the growth closer to SR 99 and the downtown”—Section 19.2.8 (pages 19-7 and 19-8) of the DEIR discusses alternative locations for the project. Figure 18-1 shows the relationship of the project site to other development in the area. As discussed throughout DEIR Chapter 12, “Land Use,” annexation of the proposed project to the City of Stockton would create an area of logical, orderly growth immediately adjacent to and contiguous with the city limits, in an area that has already been developed with urban land uses to the north and west;

- (4) “create a dedicated ag easement/buffer along the east side of the project”—this is included in the Site Design Alternative shown in Figure 19-2 and discussed on pages 19-12 through 19-15 of the DEIR.

No revisions to the DEIR are necessary. See also response to SIERRA-32, above.

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CITY OF STOCKTON

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PERMIT CENTER
PLANNING DIVISION

5136 E. ASHLEY LANE
STOCKTON, CA 95212
APRIL 22, 2006

CITY OF STOCKTON
COMMUNITY DEVELOPMENT DEPT.
345 EL DORADO STREET
STOCKTON, CA 95205
ATTN.: MIKE NIBLOCK/DAVE STAGNARO

DEAR MIKE NIBLOCK & DAVE STAGNARO,

Below are my comments and concerns on the Mariposa Lakes Specific Plan Draft State Clearinghouse #2006022035/Specific Plan:SP4-03.

I have serious concerns regarding this large project as it will severely impact the South Easternly County Area of Stockton. This project will add over 30,000 population plus all the workers in the industrial areas to the east side of Route 99 in the next 18 years. This large development east of Route 99 is very growth inducing development that is the beginning of Urban Sprawl to the east into more Agricultural Land and San Joaquin Rural Land.

The Stockton Police and Fire Departments would be severely strained to provide services with very few streets between the City and this Mariposa Lakes Development. There are only a few streets across the highway to the developments' homes and industrial parks. I realize that the developers recommend that a new police substation and firehouses be constructed east of the highway in the development. I remember that the North Stockton police substation took over 20 years to implement. With the tight budget situations, how will they be paid for and how many years will it take to build?

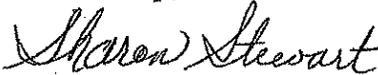
This large development adjacent to Route 99 will severely impact the highway and local streets. Most people will be using Route 99 to get in and out of the Mariposa Lakes area in addition to the increased truck traffic from the industrial parks. Even though CalTrans is starting on a project to widen Route 99 to 6 lanes, this development will cause this project to operate at a LOS F or E at the best. The developer is recommending 8 to 10 lanes in this area. There is not sufficient right of way to widen this section of highway and also there are several bridges that would require replacement to widen to 8-10 lanes. Does the developer propose to dedicate right of way thru his project for the widening the highway to 8-10 lanes? The Level of Service F or E on the highway or local roads is not acceptable!

At a recent Campaign for Commonground meeting, I was told that they were going to connect to CalWater and Stockton Water for their water and this water is surface water. They were not going to have any wells, although the Draft EIR for Mariposa Lakes states:

that they will be drilling at least 3 wells. These wells can pump 1,000 gallons/minute or 60,000 gallons/hour. If they operated for 24 hours/day at some periods, they would pump 1.44 million gallons. On the average, how many hours per day would the pumps operate? Then, there are 2 reservoirs with a capacity of 11.6 million gallons. With the underground water being currently overdrafted, this project would have a very significant impact on the groundwater. They also stated at this meeting that they would not get any water from the Delta Water Supply in the first 3 phases of this project. With the recent ruling on the pumping from the Delta near Tracy, I am beginning to wonder how this will affect the Delta Water Supply Project for the City of Stockton that many of the new proposed projects in Stockton are relying on. Their proposed recharge ponds will not begin to replenish much of the water used in the project. The Delta Water Supply is to provide water for the 1990 Stockton General Plan Growth Area and Mariposa Lakes area was not included in the 1990 General Plan. This project is too large to rely on groundwater as almost their sole water supply. This project is based on paper water which should not be allowed. They need to find another surface water supply before this project should move forward.

Thank you very much for the chance to comment on this proposed development.

Sincerely,



Sharon Stewart

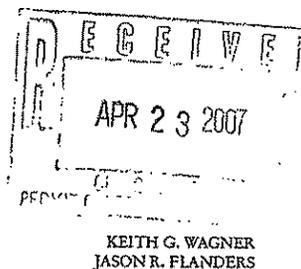
- STEWART-1** The commentor expresses concern about the size of the proposed project and its growth-inducing effects in the area east of SR 99. Potential growth-inducing impacts of the proposed project are evaluated in Chapter 20 of the DEIR, and are summarized on DEIR page 20-6. No revisions to the DEIR are necessary.
- STEWART-2** The commentor expresses concerns about the availability of public services, particularly police and fire, to serve the proposed project in the short term. The proposed project's potential impacts on public services are evaluated in Chapter 15 of the DEIR. As discussed on pages 3-77, 15-15, 15-16, 15-21, and 15-22 of the DEIR, the project applicant would fund and construct a temporary fire station that would serve Phase 1 of project development. The project applicant would also fund and construct a permanent police and fire station at the start of development Phase 2 to serve full project buildout on a 3.5-acre site in the central portion of the project (see DEIR Figure 3-8). Funding for the fire and police stations is detailed in the project applicant's Public Facilities Financing Plan, and the exact timing of construction would be coordinated with the City fire and police departments as these facilities are needed to support the proposed development. No revisions to the DEIR are necessary.
- STEWART-3** The commentor expresses concerns about the impacts to SR 99 from the proposed project. See Master Response 1 in Chapter 3, "Master Responses," of this FEIR.
- STEWART-4** The commentor expresses concern about the placement of three wells on the project site, and the impacts associated with the use of those wells. The sources of water that would be used to meet the project's potable and nonpotable demands are identified in the City and Cal Water WSAs (DEIR Appendices R and S, respectively), and in the SEWD WSA (attached as new Appendix Y to this FEIR). Regarding the project's use of groundwater and the installation of wells, see Master Response 4 contained in Chapter 3, "Master Responses," of this FEIR, as well as Section 5.3 of this FEIR. See also response to SIERRA-15, MORADA-2, MORADA-6, and CSJWCD-4. The proposed recharge project is intended to meet the project's nonpotable water demands and to provide a supply of "banked" surplus surface water that can be used to meet nonpotable demands during drought years. Regarding the City's reliance on water from Phase I of the DWSP, see Master Response 3 contained in Chapter 3, "Master Responses," of this FEIR. Regarding potable water supply to serve MLSP development Phase 1, see response to SIERRA-28, above. As stated in Chapter 5, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices," the direct impacts related to potable water supply for MLSP development Phase 1 (evaluated in Impact 17-10) are reduced from potentially significant and unavoidable to less than significant with no new mitigation measures. However, the project would still contribute to significant indirect impacts identified in the DWSP EIR, and the project's contribution to those indirect impacts would remain significant and unavoidable after implementation of mitigation measures identified in the DWSP EIR.
- Finally, the commentor expresses concerns about the installation of two storage reservoirs for the proposed project, particularly if those storage reservoirs would facilitate additional pumping from the three on-site wells. The storage reservoirs are not proposed for the purpose of storing water pumped from the on-site wells in particular; rather, the

on-site storage reservoirs are proposed to meet the City's identified need for storage in the south Stockton area, including 1) operational storage for maximum demand, 2) emergency storage, and 3) fire storage. (See page 4 of Appendix W of the DEIR.) Water for these tanks would primarily come from the identified potable and nonpotable water sources noted above.

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J. WILLIAM YEATES



April 20, 2007

David Stagnaro, AIPC
Senior Planner
Stockton Community Development Department
Planning Division
345 North El Dorado Street
Stockton, CA 95202

Re: *Mariposa Lakes Specific Plan Draft Environmental Impact Report* (SCH # 2006022035)

Dear Mr. Stagnaro:

On behalf of our client the Morada Area Association (MAA) we offer the following comments on the Mariposa Lakes Specific Plan Draft Environmental Impact Report (DEIR).

I. IMPACTS TO AGRICULTURAL RESOURCES

The DEIR fails to adequately discuss the proposed project's indirect significant impact of creating pressures to convert adjacent agricultural land to urban uses. Discussing the cancellation of Williamson Act contracts, the DEIR states that:

cancellation [of Williamson Act contracts] is not likely to result in the removal of adjacent lands from agricultural use. Lands to the north, east, and southeast are not presently within the City's Urban Services Boundary and are not available for development; none of these lands would be brought into the City of Stockton sphere of influence or urban services boundary in conjunction with the proposed project.¹

This description of indirect impacts is insufficient. It is not enough to say that, because the adjacent lands are outside of the City's Urban Service Boundary, they will not be developed. The DEIR may not ignore a likely impact simply because it would occur outside of the City's borders. Urban development of agricultural resources could occur under County jurisdiction, or the City could expand its City's Urban Services Boundary.

The DEIR's discussion of growth-inducing impacts does more fully describe the proposed project's indirect impact of creating pressures to convert adjacent agricultural resources to urban uses. However, the DEIR still fails to discuss whether or not this impact is *significant*, and if so, what mitigation measures could lessen the impact. The DEIR states:

¹ DEIR, p. 5-12.

Most of the areas north, east, and south of the SPA are located outside the City's sphere of influence, and the intended long-term use of these areas is for low-density residential and agriculture uses. As the proposed project develops, it would place urban development adjacent to agricultural land. Historically, this type of land use pattern results in conflicts between the ongoing agricultural operations and the urban development uses. Further, economic returns from urban development are typically substantially higher than continued agricultural use of land, and encroaching urban uses typically make it attractive to convert adjacent agricultural land to urban uses.

Thus, it can be expected that implementation of the proposed project could potentially place pressure on agricultural land to the north, east, and south of the SPA to convert to urban uses. Conversion of these lands to urban uses is not consistent with the long-term planning for the area. Potentially converting agricultural land to an urban use, and thus losing agricultural land, losing biological habitat, generating additional traffic, and creating air and noise impacts is a potential growth-inducing impact of the proposed project. However, development in this area would require the extension of unplanned infrastructure (water, wastewater, dry utilities, roads), which may or may not be available. Further, because it would require the City to amend its general plan, land use designations, zoning designations, or expand its jurisdictional boundary and sphere of influence, such a land use conversion is not assured.²

This discussion paints a more accurate description of the proposed project's significant indirect effect of creating pressures to convert adjacent agricultural resources to urban uses, admitting—contrary to the DEIR's discussion of Williamson Act contract cancellations—that the mere exclusion of adjacent lands from within the City's jurisdiction will not necessarily impede the conversion of these agricultural resources. Also, the DEIR's cumulative impacts discussion provides hard evidence that the same impact has occurred in and around other urbanizing projects in the Stockton area. For example, the DEIR notes that “between 2000 and 2040, 110,000 acres of Important Farmland in the county (17%) could be converted to urban uses.”³

However, the DEIR characterizes growth-inducing effects, including pressures to convert adjacent agricultural resources, as *not* environmental effects themselves, but rather ones that may *lead* to environmental effects.⁴ By not characterizing the growth-inducing effects as “impacts,” the DEIR fails to establish thresholds of significance for these effects, and fails to mitigate such impacts, where appropriate.

The DEIR must make a finding of significance for the proposed project's indirect impact of creating pressures to convert adjacent agricultural lands to urban uses. The DEIR simply casts growth-inducing impacts as an indirect impact on agricultural resources. CEQA requires a lead agency to address both the direct and indirect effects of a proposed project on the existing

² DEIR, p. 20-5.

³ DEIR, p. 18-7.

⁴ DEIR, p. 20-1.

environment. CEQA defines indirect effects to be “secondary effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects”⁵ Hence, growth-inducing effects are indirect impacts. The DEIR must make a finding of significance for the proposed project’s indirect impact of creating pressures to convert additional agricultural resources to urban uses.

In addition, promoting more sprawling development outside of the City will place more pressure on already strained water supplies, and require longer vehicle trips to reach destinations farther outside of the City. Thus, the DEIR should also evaluate the air quality, water supply, biological, and climate change related impacts that this growth-inducing pressure could create.

II. HYDROLOGICAL IMPACTS

A. FAILURE TO ADEQUATELY DESCRIBE EXISTING AND ANTICIPATED WATER SUPPLIES

The analysis in this comment section is based in large part on the attached memorandum from Morris L. Allen, Consulting Civil Engineer, which is incorporated as though fully reproduced herein.⁶ The DEIR has failed to adequately describe the available water sources for the proposed project, and has failed to show that adequate water exists to supply the proposed project along with existing demands in and around Stockton. The groundwater basin on which Stockton sits is currently in a state of critical overdraft,⁷ and the proposed project will likely worsen this condition.

As the DEIR admits, while the City has been able to meet existing water demands, it has only done so by contributing to groundwater overdraft at a rate of 20,000 to 40,000 acre feet per year (including pumping from surrounding agricultural areas). This current rate of overdraft is significant, unsustainable, and may completely fail to supply the City in a drought year. Groundwater levels are not only declining, but the rate of decline is increasing. Thus, any reliance upon groundwater by the proposed project would create a cumulatively significant impact by further depleting an already critically overdrafted groundwater basin. The DEIR fails to adequately describe this impact.

Declining groundwater levels will result in (1) increased pumping costs for all existing residential, commercial, agricultural and industrial users due to increased hydraulic lift; (2) decreased yields due to decreased aquifer saturated thickness, and (3) greater tendency for eastward migration of saline water from the west due to a steeper hydraulic gradient. Eastward movement of salinity will threaten and eventually eliminate many existing municipal wells on the westward edge of the City of Stockton Metropolitan Area (“COSMA”) as salinity exceeds the maximum contaminant levels set by the State for drinking water.

⁵ CEQA Guidelines, § 15358, subd. (a)(2).

⁶ Memorandum from Morris L. Allen to J. William Yeates, April 18, 2007 (Exhibit 1).

⁷ E.g., DEIR, Appendix R, p. 23-24.

While the DEIR points to a number of *potential* sources of water for the proposed project, there is no assurance that any additional water rights will be obtained. The DEIR must discuss the foreseeable impact of the proposed project's water demands if each of these potential water sources is not secured. Without these potential sources, water for the proposed project must come from the critically overdrafted groundwater basin. The DEIR has failed to analyze this foreseeable impact.

The DEIR should also discuss the uncertainty that the City faces in securing the water supplies that the DEIR relies upon. For example, the City has not consistently received water from the New Melones Dam. What factors will allow or prevent the City from receiving this water? Also, the City has no assurances it will be able to renew its contract with Oakdale and the South San Joaquin Irrigation Districts to receive water from the Stanislaus River. The DEIR must therefore make clear that this is a speculative water source. Perhaps most importantly, the Delta Water Supply Project ("DWSP") may not meet the proposed project's demands. DWSP Phase II is speculative, and may never be realized, and DWSP Phase I was only designed to handle buildout under the existing General Plan, and does not provide water for the urban expansion envisioned by the proposed project. What impacts will the proposed project have if DWSP Phase II does not occur? How long will it take for DWSP Phase I to become operational, and what impact on groundwater will the proposed project have during that time?

The DEIR states that the proposed project is consistent with the proposed Stockton 2035 General Plan. However, the 2035 general plan contains policy PFS-2.8, which states that "[t]he City shall not approve new development that relies on water from the [DWSP] until this delta water is allocated through a water right to the City by the State Water Resources Control Board or a replacement water supply is secured." Because the proposed project relies in part upon water secured under the DWSP, it may not be approved, as consistent with the 2035 General Plan, until water from the DWSP is actually secured.

The City has received a Water Rights Permit from the Water Resources Control Board to extract as much as 30,000 acre feet of water from the Delta. However, an actual project to finance and construct an intake and treatment facility to appropriate this water is not yet underway, much less completed. Constraints placed upon the City's facilities are so severe that it is unlikely that the City will be able to obtain more than a small fraction of this amount. Moreover, because the proposed project is outside the current Urban Services Area, the Water Rights Permit does not include the proposed project as a place of use for this water, and therefore it should not be relied upon to serve the proposed project.

The DEIR fails to adequately consider the cumulative impact of urban growth in nearby cities. The groundwater subbasin serves the cities of Ripon, Manteca, Lathrop, Stockton, and Lodi, in addition to agricultural areas generally east of the urbanized areas. All of these areas will increase their demands on this already overdrafted basin, creating cumulatively significant impacts along with the water demands of the proposed project.

The DEIR does not appear to account for the "Term 91" condition that would prohibit the City's diversions of Delta water when necessary to keep the Delta in balance. Also, the City must curtail diversions to protect Delta Smelt and other protected species. How might these

limitations affect the availability of water for the proposed project, and what physical impacts would such limitations create?

The DEIR should revise its water production estimates to accurately reflect maintenance and other operational constraints of existing and future water treatment facilities. The DEIR currently assumes that these facilities will meet 100% of their operational capacity. The DEIR could safely assume that various practical limitations would reduce a facility's operational time by 25%. This reduction will affect the amount of water available for the development envisioned by the proposed project. What additional sources will the City obtain to compensate for this shortfall, and what environmental impacts will taking from those sources have?

The DEIR's concept of groundwater credits for urban development of agricultural land is misleading. While the DEIR asserts that agricultural water consumption is greater than urban water consumption, thus meriting the groundwater "credit" for the proposed project's change in use, this is a misleading concept. The groundwater basin is currently in a state of overdraft, meaning that extraction currently exceeds recharge rates. Because the groundwater basin is already in a state of overdraft, or water debt, there are no "credits" available to issue.

The DEIR's analysis of groundwater recharge at the Arhini site is incomplete and inaccurate. Appendix P and Q contradict one another, stating that the recharge plan would need either 3,089 or 3,781 acre/feet of water per year, and appendix Q then recommends application of two acre feet of water for every one acre foot of recharge yield. Moreover, the DEIR fails to identify any specific source of this water, other than relying on "surplus" water. The DEIR must either (1) specifically describe the source of water for the recharge project, or (2) admit that none exists. Without specifying the water source for the recharge project, the DEIR has failed to discuss a potentially significant environmental impact of the project.

In addition, the DEIR's recharge estimates do not add up. The average infiltration rate for this area is 22 acre feet per day, not accounting for evaporation. Just to infiltrate the average annual non-potable water requirement, less an allowance for evaporation, would take 37 days per year. However, the intention of the project proponents is to establish and maintain a three-year recharge reserve of banked groundwater.⁸ Using the correct demand data, this would require a reserve of 22,686 acre feet (three years at 7,562 acre feet), and the proponents estimate that this would be achieved over time by recharging an additional 10% of the total annual requirement each year. This would mean that the total annual non-potable recharge volume would be 9,831 acre feet per year, which should be rounded upward to 12,000 acre feet per year to account for losses due to lateral percolation. Using the infiltration rate determined by the consultants of 22 acre feet per day at this site, water would have to be available 545 days per year to meet the project goals.

⁸ DEIR, p. 11-34.

B. THE DEIR SHOULD NOT RELY UPON THE 2035 GENERAL PLAN DEIR'S WATER SUPPLY EVALUATION

The DEIR's water supply assessment relies, in part, on the water supply evaluation performed for the City's 2035 General Plan DEIR.⁹ The Mariposa Lakes DEIR should not rely on demand projections from the General Plan DEIR, because the water supply evaluation for that DEIR is inaccurate and inconsistent. For example, the General Plan DEIR's water supply evaluation employs a lower growth rate than the General Plan does, yet the General Plan's water supply evaluation assumes a *higher* future population total, rendering the data incomprehensible. The General Plan's water supply evaluation projects "a total population at 2035 of 592,000 people assuming an average 2.4% growth rate,"¹⁰ while the General Plan DEIR background report projects a 2.5 % growth rate, leading to a total population of 578,000.¹¹ Moreover, figure 3 of the General Plan's water supply evaluation actually shows the population leveling off at 500,000 people in year 2035; yet figure 3 estimates total water demand to be the same as the land use diagram of table 1, 156,083 AF/ac/year, which assumes a higher population total. Neither the General Plan's DEIR nor its water supply evaluation ever reconciles these discrepancies.

Moreover, the General Plan's water supply evaluation fails to support its decision to employ a land-use based approach to demand predictions, rather than a population based approach. On what basis does the General Plan's evaluation determine that land use, rather than actual population, should be used to determine future demands? The General Plan's land use based approach inexplicably ignores water demand for open space and agriculture. Table 1 of the General Plan's water supply evaluation shows that these land uses constitute the largest land uses under the proposed General Plan's buildout; yet, Table 1 fails to include the open space/agricultural water demand in its total demand projection.¹² Any demand projection must take into account agricultural needs.

For all of these reasons, the Mariposa Lakes DEIR should not rely on demand projections from the water supply evaluation in the 2035 General Plan DEIR. The Mariposa Lakes DEIR must formulate accurate and consistent demand projections that take into account the actual population growth, and the actual land use demands that will occur in and around Stockton over the life of the proposed project.

C. FAILURE TO CONSIDER IMPACTS OF GLOBAL WARMING

The DEIR's assessment of water supplies available for the proposed project fails to adequately take into account changes occurring due to global climate change. In its discussion of *air* quality, the DEIR does admit to some significant impacts of global warming:

⁹ DEIR, Appendix S, p. 17. Note that the water supply evaluation for the 2035 General Plan was not required. Moreover, this office submitted substantial comments objecting to the supply and demand analyses in the General Plan's water supply evaluation, highlighting further reasons why that evaluation should not be relied upon by this DEIR.

¹⁰ 2035 General Plan DEIR, Appendix D, p. 8.

¹¹ 2035 General Plan DEIR, Background Report, p. 2-7.

¹² 2035 General Plan DEIR, Appendix D, p. 9.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shorter. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. According to a California Energy Commission (CEC) report, the snowpack portion of the supply could potentially decline by 70%–90% by the end of the 21st century (CEC 2006c). This phenomenon could lead to significant challenges securing an adequate water supply for a growing population.¹³

Sea level has risen approximately 7 inches during the last century and, according to the CEC report, it is predicted to rise an additional 22–35 inches by 2100, depending on the future GHG emissions levels (CEC 2006c). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion (especially a concern in the low-lying Delta, where potable water delivery pumps could be threatened), and disruption of wetlands (CEC 2006c).¹⁴

However, the DEIR fails to include this evidence in its discussion of water supply availability. Impacts from global warming are already occurring as part of the existing environment, and will continue to occur over the 20-30 year life of the proposed project. Last year was the hottest year in the United States on record, topping the previous year's record highs.¹⁵ With this trend continuing, impacts from global warming will have immediate cumulative impacts along with the proposed project. For example, the United Nations Intergovernmental Panel on Climate Change has shown that global climate change will cause temperatures to rise approximately three degrees Celsius over the next century.¹⁶ Such an increase averages out to a temperature increase of .3 degrees Celsius per decade. In turn, the California Department of Water Resources ("DWR") cites a report stating that an increase in temperature of three degrees Celsius will require 5% more irrigation.¹⁷ Thus, with average temperatures increasing .3 degrees Celsius per decade, irrigation in San Joaquin County will require .5% more water per decade. The DEIR must evaluate this impact on available water supplies.

The DWR lists several other cumulative impacts caused by global warming that planners must take into account:

¹³ DEIR, p. 6-17.

¹⁴ DEIR, p. 6-17.

¹⁵ "Climate Experts Worry as 2006 is Hottest Year on Record in U.S.," Marc Kaufman, Washington Post, January 10, 2007, p. A1 (Exhibit 2).

¹⁶ Intergovernmental Panel on Climate Change, "Climate Change 2007: The Physical Science Basis" (Exhibit 3).

¹⁷ California Department of Water Resources, July 2006, "Progress on Incorporating Climate Change into Management of California's Water Resources, pp. 7-1 to 7-26 (Exhibit 4). This report includes detailed data and models that the DEIR should incorporate to fully determine water supply and demand during a period of global warming.

Table 2-7 Summary of the Potential Effects of Climate Change on Future Water Demand

Type of Demand	Potential Effect
Crop Irrigation	<p>Increasing temperatures will increase evapotranspiration rates and related water demand where all other factors remain unchanged. Increasing concentrations of atmospheric carbon dioxide may act to reduce increases in plant transpiration (a component of evapotranspiration) in response to increased temperatures. Other factors related to climate change, such as possible changes in humidity, cloudiness and wind could also affect evapotranspiration rates.</p> <p>Evaporation rates from soil and plant surfaces may rise due to temperature increase, depending on changes in other factors that affect evaporation rates. Increased evaporation rates could increase salt accumulation on plant surfaces, especially where overhead irrigation is used. Salt accumulation in surficial soils could also increase. Additional irrigation water demand may result because of possible increased salt control requirements.</p> <p>Some changes in crop type, planting cycles, time of planting, and crop productivity will likely occur as the result of increased temperatures. Statewide and regional irrigation water demand may increase or decrease as the result of these changes.</p> <p>Use of water for frost protection will likely be reduced with increasing temperatures and projected reductions in the annual number of days when frost occurs. Frost protection is typically an important consideration for orchards and vineyards.</p>
Landscape Irrigation	<p>Increased temperatures, as well other atmospheric/climatic factors related to climate change, will affect landscape irrigation in manner similar to that described for crop irrigation, above.</p>
Domestic Water Uses (excluding landscape irrigation)	<p>Domestic water use typically increases with increasing temperature. Increased water demand can occur due to the use of evaporative cooling, increased laundering of clothing, increased bathing, increased drinking water requirements for humans and pets and recreational uses of water.</p>

Table 2-7 Summary of the Potential Effects of Climate Change on Future Water Demand
 (continued)

Type of Demand	Potential Effect
Commercial and Industrial Water Use (including agro-industrial facilities such as dairies, poultry farms, packing plants, etc.)	Commercial and industrial water use will likely increase as the result of warming due to such factors as increased evaporative cooling demand. Increased consumption of water by concentrated animal feeding facilities, such as dairies and poultry farms, would also likely occur.
Evaporation Losses from Natural Water Bodies and Open Water Storage and Conveyance Facilities	Evaporation losses from water bodies and open conveyances will probably increase as the result of rising temperatures especially in arid portions of the State with low humidity and limited cloud cover.
Environmental Water Requirements	Delta outflow requirements will likely increase to maintain Delta salinity conditions in response to sea level rise; if the Delta's existing configuration, operation of its water supply facilities, and its ecosystem conditions are to remain as they are now. Higher temperatures will likely result in increased environmental water demand for controlling water temperatures for sensitive aquatic species, including anadromous fish. Increased use of reservoir storage and thermal control releases from reservoirs will be required for controlling aquatic habitat temperatures.

Table 2-8 Selected Factors Affecting Future Water Demand in California that are Not Directly Related to Climate Change

Factor	Potential Effect
Population Change	Future increases in population will affect water demand, depending on the location and types of development needed to support an increased population. The conversion of agricultural lands into housing and related community development may not result in a significant increase in water use for a given area, depending on the agricultural use(s) that existed prior to land conversion, and on the type of housing and other facilities constructed. Redevelopment and densification of existing urban land may result in increased water demand in some areas. Development of raw, uncultivated land will directly increase water demand. In general, increases in California's population will tend to increase future water demand.
Changes in Agriculture	Changes in the type and amount of crops grown due to changes in agricultural markets and government crop subsidy programs may help increase or decrease agricultural water demand.
Changes in Landscaping Practices	Changes in consumer preferences and changes in land use ordinances relating to landscaping may affect future landscape water demand.
Changes in Environmental Water Use Requirements	The findings of continuing scientific research related to the condition and preservation of aquatic ecosystems in the State, including the Delta, may affect environmental water demand.
Water Law and Policy	Changes in water law and policy could affect water demand.
Technological Innovation	Lowered consumption rates could result from improvements in water use efficiency for irrigation, domestic, commercial, and industrial uses. Increased reuse of wastewater could help reduce demand on existing and future sources of water. Advances in desalination technology may reduce demands on the State's freshwater resources, especially in areas along the south coast.

The DEIR must specifically discuss each of these factors, highlighted by the DWR, as they relate to the water supply and demand created by the proposed project. In particular, the DEIR must

analyze the impacts that sea-level rise will have on the Delta.¹⁸ The DEIR must consider the impacts as they are occurring, and will occur over the life of the project, and may not simply look to century-end projections. How do these cumulative impacts of global warming change the proposed project's impacts on available water supplies?

III. IMPACTS TO CLIMATE CHANGE SHOULD BE MITIGATED

Based on the information in the DEIR, the proposed project will contribute roughly 60,000 tons of CO₂ equivalent emissions per year in excess of AB 32's goal of 1990 GHG emission levels. The DEIR declares this to be a significant and unavoidable impact. However, the proposed project can mitigate this impact by purchasing carbon offsets for approximately 60,000 tons of CO₂ per year.¹⁹ Also, the proposed project may be re-designed to reduce vehicle miles traveled per household by reducing internal trips that rely on single occupancy vehicles and improving public transit options and opportunities. The DEIR needs to discuss and evaluate ways that this project can reduce the greenhouse gas contribution consistent with the standard established by the State of California in AB 32.

IV. AIR QUALITY

The DEIR states that air quality impacts associated with vehicle trip generation were calculated using the URBEMIS 2002 Version 8.7.0 computer program, which estimates trip generation rates for the proposed land use designations in the proposed project.²⁰ Does this model take into account the unique position Stockton occupies by providing housing for many long-distance commuters who work in the San Francisco Bay area? Elsewhere, the DEIR states that "many San Joaquin County residents commute to jobs in Bay Area communities. The net number of residents who live in San Joaquin County and commute to the Bay Area has increased from 17,585 to 29,800 between 1990 and 2000, or from approximately 9% to 14% of the total workforce (San Joaquin County 1992)."²¹ It is unclear whether the extra emissions created by these long commutes are accounted for in the trip-generation models for the proposed project.

V. ECONOMIC IMPACTS LEADING TO PHYSICAL CHANGE

A. PHYSICAL IMPACTS TO AGRICULTURAL ECONOMY

While the DEIR acknowledges that the proposed project will eliminate the \$3.9 million dollars of direct revenue by converting farmland to urban uses, the DEIR fails to discuss the indirect economic impacts the conversion will have on surrounding agricultural areas, and how those indirect losses could result in physical impacts to the environment.

¹⁸ California Department of Water Resources, July 2006, "Progress on Incorporating Climate Change into Management of California's Water Resources," pp. 5-1 to 5-42 (Exhibit 4).

¹⁹ A variety of carbon offset services are available, such as CarbonFund, available at <http://www.carbonfund.org/site/>, AtmosClear, available at <http://www.atmosclear.org/>, and see San Francisco Chronicle, January 11, 2007, "Pocket change to change the world, PG&E sells offsets for carbon-neutral living" (Exhibit 5).

²⁰ DEIR, p. 6-37.

²¹ DEIR, p. 20-4.

The agricultural industry in and around Stockton is a highly integrated system that includes up to 15,000 farm workers, distribution services such as packaging and trucking, farm supply companies, farm veterinarians, and local sales at produce stands and in local stores. What physical changes could these economic impacts lead to in areas nearby the converted farmland? Does the DEIR account for the fact that a local business in a neighboring area that depends on agricultural products will face hardships that may force the business to close or relocate? Where will the thousands of displaced farm workers in and around the proposed project relocate? Will this affect the residential areas they currently inhabit?

The DEIR should not consider the economic revenues from new residential and commercial developments in formerly agricultural areas to be a mitigating factor for the loss of agricultural business. The agricultural industry is a sustainable, perpetual, and renewable source of revenue.²² New home construction, on the other hand, only generates revenue at the time of the first sale; thereafter, the land use will no longer sustain a local economy similar to that sustained by agriculture.²³ Indeed, it is questionable whether the City's model of urban expansion is economically sustainable, as many similar new sprawling developments tend to depreciate in property value in a short period of time, and many of the new inhabitants to this area will commute to jobs outside of Stockton.²⁴ What physical impacts could the proposed project create by replacing a stable and sustainable agricultural economy with a speculative construction economy driven by one time profits?

B. PHYSICAL IMPACTS TO RETAIL ECONOMY

Numerous studies show that urban expansion that includes "big-box" retail centers can have a negative impact on the environment by depressing the local economy, and leading to urban decay.²⁵ For example, one five year case study showed an 18 % decline in local retail businesses following the construction of new Wal-Marts in the area.²⁶ The proposed Specific Plan would create land-use areas, such as the proposed project's Austin Road Town Center, that could allow for new big-box retail stores, which could potentially result in adverse physical impacts to small businesses.²⁷ The DEIR must evaluate the proposed Specific Plan's impact of allowing big-box retail development that could result in urban decay.

²² DEIR, p. 5-1.

²³ "Ag impact felt in the county," www.recordnet.com, May 26, 2006 (Exhibit 6).

²⁴ Compare DEIR, p. 5-1, showing the sustainable output of agribusiness in San Joaquin County, with "The price isn't right," December 24, 2006, available at

http://www.recordnet.com/apps/pbcs.dll/article?AID=/20061224/A_NEWS/612240304, (Exhibit 7), and "Valley home prices decrease," December 23, 2006, available at

http://www.recordnet.com/apps/pbcs.dll/article?AID=/20061223/A_BIZ/612230302/-1/A_BIZ03, (Exhibit 8) both showing home values declining after new homes are initially purchased.

²⁵ E.g., "On the Economics and Social Impacts of Supercenter Expansion in California," San Marcos Chamber of Commerce, October 2003, (Exhibit 9); "What Happened When Wal-Mart Came to Town? A Report on Three Iowa Communities with a Statistical Analysis of Seven Iowa Counties," Thomas Muller and Elizabeth Humstone, May 1996, (Exhibit 10).

²⁶ "What Happened When Wal-Mart Came to Town? A Report on Three Iowa Communities with a Statistical Analysis of Seven Iowa Counties," Thomas Muller and Elizabeth Humstone, May 1996, p. 17-18, (Exhibit 10).

²⁷ DEIR, p. 3-27, 3-28.

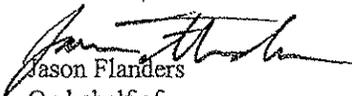
VI. LAND USE IMPACTS

The majority of residential development in the proposed project is low-density.²⁸ This type of development will create a larger overall project footprint, converting more agricultural lands to urban uses, and unnecessarily lengthening the average vehicle trip-length in and around the proposed project area, causing greater air quality, traffic, and climate change impacts. The DEIR should evaluate an overall reduction of project size by converting most or all of the low-density land use designation to high or medium density uses. The goal would be to accommodate the same number of residential units, on less land, to avoid or mitigate some of the proposed project's significant impacts to agricultural resources, air quality, and climate change.

VII. CONCLUSION

Thank you for your attention to these concerns.

Sincerely,



Jason Flanders
On behalf of
Morada Area Association

²⁸ DEIR, p. 3-25.

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MEMORANDUM

DATE: April 18, 2007

TO: J. William Yeates, Esq.

SUBJECT: MARIPOSA LAKES SPECIFIC PLAN DRAFT EIR

Background

The consulting firm of EDAW\AECOM has developed a draft EIR (DEIR) for the Mariposa Lakes Specific Plan (MLSP) for the City of Stockton. This Plan is intended to provide for expansion of public services to an approximately 3,810 acre, mainly residential subdivision development with an anticipated population of 31,000 residents. This Specific Plan Area is not in the current Urban Services Area and therefore not in the projections of population and water use in the 1990 General Plan. In preparing this DEIR, the Consultant has relied upon the following documents to justify extension of public water services to this new subdivision:

- Appendix L - Mariposa Lakes Off-Site Regional Hydrologic Investigation
- Appendix M - Mariposa Lakes Water Quality Report
- Appendix P - Integrated Water Management Plan, Mariposa Lakes Development
- Appendix Q - Revised Groundwater Recharge Feasibility Assessment
- Appendix R - Water Supply Assessment for the Mariposa Lakes Specific Plan (prepared by the City of Stockton)
- Appendix S - Mariposa Lakes Specific Plan Project SB 610 Water Supply Assessment, Stockton, California (prepared by Cal-Water)
- Appendix W - Mariposa Lakes Study on Water Service

As requested by the Client, Morada Area Association, I have carefully reviewed all of the above documents, including pertinent sections of the MLSP DEIR that pertain to water supply for this project, and have the following comments:

As noted by the consultants in the MLSP DEIR, historically, the City of Stockton metropolitan area (COSMA) has met its water supply requirements by total reliance on groundwater. San Joaquin County's groundwater system is the Northeastern San Joaquin subbasin of the larger San Joaquin Valley Groundwater Complex. The largest historical user in terms of volume of groundwater has been agriculture. Because the volume of groundwater withdrawals has grossly exceeded natural recharge, this subbasin has been classified by the Department of Water Resources as "in a critical condition of overdraft". The actual amount of the overdraft

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has been estimated by different authorities as 160,000 acre feet/year (San Joaquin County); 200,000 acre feet/year (USA Corps of Engineers); and 150,000 acre feet/year (US Geological Survey). The MLSP DEIR admits that this subbasin is being overdrafted by 160,000 acre feet per year. As a result of the overdraft, the basin has lost 1,000,000 acre feet of active storage, and groundwater levels have declined by as much as 100 ft (USACE) over the last 30 to 40 years. The subbasin serves the cities of Ripon, Manteca, Lathrop, Stockton, and Lodi, in addition to agricultural areas generally east of the urbanized areas. According to the *Eastern San Joaquin Groundwater Management Plan*, "Current and historical groundwater pumping rates exceed the sustainable yield of the underlying groundwater basin on an average annual basis."

As a result of this situation, in 1977, the Stockton East Water District (Stockton East) began to supply treated surface water to the urban area to replace groundwater. At that time, the source of this surface water was the Calaveras River via New Hogan Dam. In approximately 1990, this supply was extended to the north Stockton area. In 1983, as noted in the MLSP DEIR, Stockton East contracted with the US Bureau of Reclamation (Bureau) for an additional supply of water from the Stanislaus River; however, this is not a firm supply as the DEIR claims. The Bureau characterizes this supply as "long-term interim". In addition, the Central San Joaquin Water Conservation District's (Central) contract with the Bureau for New Melones Water calls for 49,000 acre feet of firm and 31,000 acre feet of "long-term interim" supply per year. However, neither Stockton East nor Central has received this supply on a reliable basis each year, and as a result, Stockton East sued the federal government to perfect this right. Stockton East recently lost its case before the Court of Claims to force the Bureau to live up to the terms of its contract with the Districts. In addition, Stockton East receives excess water from the Stanislaus River under a temporary contract with Oakdale and South San Joaquin Irrigation Districts. As noted in the MLSP DEIR, this contract expires in 2009. While negotiations are currently underway to renew this agreement, the agreement has not been renewed, and therefore this water cannot be assured to the City or Cal-Water, and should not be shown as available to this Specific Plan.

Existing Water Sources

Therefore, the only firm water sources available at this time to support the increased water demands described in the MLSP DEIR are as follows:

- Surface Water via Stockton East Water District (Second Amended Agreement) – 20,000 acre feet/yr, supplied to the City of Stockton's Water Utility, and to Cal-Water

Non-firm supplies being relied upon by the City of Stockton's Water Utility and Cal-Water to meet demand:

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- Groundwater basin (currently in critical overdraft). In my professional opinion, the existing groundwater basin cannot be considered a firm water supply for the MLSP since it has been found by the Department of Water Resources to be in critical overdraft, and the authorities noted above, and even the consultants who have prepared the MLSP DEIR concur with this assessment.
- Surface water supplied from Stockton East from the Stanislaus River under contract from the US Bureau of Reclamation – quantity varies from 0-35,000 acre feet/yr
- Surface water supplied from Stockton East from the Stanislaus River under contract from OID/SSJID – quantity varies from 8-30,000 acre feet/yr

While this combination of sources has been meeting the demands of the COSMA, they can not be considered firm or reliable, and the net result of COSMA utilizing increasing amounts of groundwater to meet the needs of an increasing number of customers has been to make a significant contribution to the groundwater overdraft in this subbasin.

Existing Water Demands

Water use for the COSMA has varied over the years, consisting of a mix of groundwater and surface water supplied by Stockton East. Average use of surface water over the last twelve years has been 39,527 acre feet per year, as reported by the City of Stockton. During this same period, an average of 23,422 acre feet per year of groundwater has been used (please refer to Figure 6, from the City's *Water Supply Assessment*). Average total COSMA water demand is therefore 62,949 acre feet per year, and the 2005 water year use is 68,777 acre feet. Although the Stockton East Water District has been able to consistently supply to the COSMA almost 20,000 acre feet per year is in excess of its firm supply, this amount cannot be relied upon in extended drought cycles, and should therefore not be allocated to new developments. Also, COSMA urban uses have been contributing to the existing groundwater basin overdraft by an average of over 23,000 acre feet per year. This amount represents at least 10% of the existing Eastern San Joaquin groundwater basin overdraft.

Not accounted for in the above water use statistics is water used within the COSMA by agriculture, which amounts to approximately 17,000 acre feet of groundwater per year. Figure 6 should be corrected to reflect this additional 17,000 acre feet per year of groundwater use. Therefore, including agricultural use, the total existing overdraft within the COSMA is closer to 40,000 acre feet per year.

Delta Water Supply Project

In 1996, the City of Stockton submitted an Application to the State Water Resources Control Board (SWRCB) for the right to divert water from the San Joaquin River Delta. The intent of the Application was to correct existing supply deficiencies and provide sufficient supplies to

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support the population projections of the 1990 General Plan, and anticipated growth in water demands to 2050. The Application was later bifurcated to request water rights sufficient to support only the requirements anticipated in the 1990 General Plan. This right was requested in accordance with Section 1485 of the Water Code, which provides that the City of Stockton has the right to obtain water from the Delta in an amount roughly equal to the amount of reclaimed water discharged to the Delta via the San Joaquin River. Any future needs above this amount must be the subject of a future Application process. In December, 2005, the SWRCB issued a Permit to the City to divert up to a maximum of 33,000 acre feet per year, subject to Standard Term 91 and other conditions. Standard Term 91 is imposed by the SWRCB to prevent diversions whenever the diversion would require the release of State or Federal Project water. This means that, if the State or Federal projects are required to release water to keep the Delta in balance, in consideration of existing exports and inbasin uses, the City (or other Term 91 users) must curtail diversions. Also, the City must curtail diversions to protect Delta Smelt and other protected species.

Based upon the *City of Stockton Delta Water Supply Project Modeling Technical Appendix*, Tables 4-5, 4-13, and 4-20, for the majority of the time that Stockton proposes to divert at either the current Permitted 30 MGD level, or at the projected 160 MGD level, the Delta is in a "balanced" condition. Quoting from this report, at page 4-13: "Balanced water condition diversions must be off-set by a corresponding increase in Delta inflow from CVP-SWP storage release, or a reduction in CVP-SWP exports." Therefore, under Term 91, the City will be unable to divert water at these times. The additional yields noted by the Water Supply Assessment for the Delta Water Supply Project to meet immediate, foreseeable and long-term demands will not be available at the levels indicated in the City's *Water Supply Assessment for the Mariposa Lakes Specific Plan* (Appendix R), and cannot be included in the determination of sufficiency for this MLSP.

Water Production Estimates

The City's *Water Supply Assessment for the Mariposa Lakes Specific Plan* (Appendix R), Cal-Water's *Mariposa Lakes Specific Plan Project SB 610 Water Supply Assessment* (Appendix S) and the *Water Supply Evaluation for the General Plan* (Appendix D) consistently overstate the water production from the existing and proposed water treatment facilities by confusing capacity with production. A water treatment facility cannot produce treated water up to its design capacity on a consistent basis due to operational considerations, even if there is a consistent incoming water source of supply. For example, filters are taken off line routinely for backwashing. Equipment malfunctions or fails and must be repaired. Routine maintenance of all of the facilities is required to keep them operating efficiently. For planning purposes, it should not be assumed that a water production facility can be more than 75% efficient. This means that, for a 45 MGD water treatment plant, the facility owned and operated by Stockton East, only 34 MGD can be produced on a long-term, reliable basis.

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This compares favorably with actual statistics from Stockton East, and shows that the District is doing a first-class job in maintaining their water treatment plant. Therefore, the total water production estimates given in the referenced documents are overstated by 25% and must be reduced accordingly. Also, the analysis in the City's and Cal-Water's *Water Supply Assessments* assume that capacity of the Stockton East Water Treatment Plant will be increased to 60 MGD by 2016, and a production amount of 66,000 acre feet is assumed. This amount, which should be reduced to 49,500 acre feet/year for the reasons noted above, is highly speculative and requires that Stockton East acquire rights to new sources of water from the SWRCB. At the present time, water sources available to Stockton East will only support current Plant capacity. In my professional judgment, this type of speculation has no place in a water supply assessment, and is not allowed by the statute.

Additional Water Supplies Necessary to support the MLSP

The several technical reports cited above which are intended to justify the sufficiency of water supplies necessary to support the additional demand of the Mariposa Lakes Specific Plan along with other anticipated growth in water demand rely on overstated water production from existing and new water treatment plants, and highly optimistic assumptions of the availability of water sources and allocation of additional water rights. In my professional opinion, the speculations and wishful thinking contained in these documents is highly inappropriate in a Draft EIR or Water Supply Assessment. The DPEIR must undertake a rigorous analysis of supply and demand and resource limitations.

According to the City's Water Supply Assessment, at page 13 and 14, the average per capita water use in the COSMA is estimated to be between 235 and 241 gallons/capita/day. This is equivalent to approximately 0.25 acre feet/capita/year. Therefore, the current population supported by the COSMA water system is 276,000 persons. Page 13 of the City's Water Supply Assessment notes that the average water demands within COSMA are expected to increase to 156,083 acre feet per year at buildout of the proposed *2035 General Plan Update*. In order to meet this average water demand, the COSMA will have to develop an average of about 90,000 acre feet per year of new water supplies. Considering the fact that the COSMA now has only 20,000 acre feet per year of firm water supplies to rely on, by 2035, COSMA will be exceeding firm supplies by 136,000 acre feet per year.

While the City of Stockton and the Stockton East Water District are engaged in a number of activities to develop additional water rights for additional water supplies to serve COSMA, there is no assurance whatsoever that any additional water rights will be obtained for either expanding the Delta Water Supply Project as planned, or for expanding the Stockton East Water Treatment Plant as assumed in the City's and Cal-Water's Water Supply Assessments. This means that the additional 136,000 acre feet per year required to support growth contemplated in the City's proposed General Plan Update-2035 must come from groundwater,

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which is already seriously overdrafted. This will increase the groundwater overdraft in the subbasin to at least 300,000 acre feet per year, which, in my professional judgment, would be at the crisis level.

Setting aside the issue of firm water supplies for a moment, let's assume for purposes of argument that, on average, the COSMA continues to receive its allotment from Stockton East Water District, and that Stockton East Water District does expand its Water Treatment Plant to 60 MGD by 2016. Let's also assume that the City is able to pump 50% of the time from the Delta (even though its own analysis indicates this will not be possible due to "balanced conditions" prohibitions). Under these most favorable conditions, this means that a total of 61,875 acre feet of surface water will be available, on average, to meet a COSMA average demand of 156,083 acre feet, and the remaining demand of 94,208 acre feet must come from the existing overdrafted groundwater basin. This would still create an overdraft of at least 250,000 acre feet per year in this subbasin, also at the crisis level.

Impact on Groundwater Basin

As previously noted, the Eastern San Joaquin Groundwater Basin is in a "critical condition of overdraft." The City and its consultants and Cal-Water need to acknowledge in the Water Supply Assessments that the Eastern San Joaquin Groundwater Basin is one basin, and that it does not have a hydrogeologic barrier that divides the agricultural areas from the urban areas. Even though some of the urban area's monitoring wells do show an increase in groundwater elevations, the basin as a whole is still in critical condition of overdraft, and therefore cannot be counted upon as a firm source of water until the basin is in hydrologic balance.

Appropriators of groundwater such as the City and Cal-Water cannot legally rely on this source of water unless there is an excess of water in the groundwater basin, since to do so jeopardizes the rights of individual groundwater pumpers extracting water legally from beneath their properties. A groundwater basin in a critical condition of overdraft does not have an excess of water available for appropriation. Also, the MLSP DEIR and the Water Supply Assessments do not acknowledge the fact that other San Joaquin County cities, including Ripon, Lathrop, Manteca, and Lodi all rely heavily on groundwater use, and that significant growth is also occurring in these cities.

The City of Stockton must combine its current and planned uses of groundwater with those of all other San Joaquin County cities to determine what impact all cities, including Stockton, will have on groundwater availability. There are no estimates in any of Stockton's documentation that attempt to quantify the groundwater demands of the other cities overlying the Eastern San Joaquin Groundwater Basin. This is a serious flaw in the analysis, because it underestimates the City's significant adverse direct and cumulative impacts on regional groundwater supplies.

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The *Stockton Delta Water Project Draft EIR*, at page 5-18, presents graphic illustrations of the effect this additional pumping will have on groundwater.

Figure 5-5 of this report, reproduced below, illustrates the simulated responses to the groundwater basin represented by six wells located in and around the COSMA. This figure shows that, despite the City's claim that the portion of the groundwater basin under the COSMA is at "equilibrium", groundwater levels have continued to decline, and the rate of decline is increasing. Unless substantial amounts of surface water are imported into the COSMA to reduce groundwater pumping and offset this trend, growth contemplated by the General Plan 2035 DPEIR and this MLSP DEIR will cause an even more rapid decline in groundwater levels. Declining groundwater levels will result in (1) increased pumping costs for all existing residential, commercial, agricultural and industrial users due to increased hydraulic lift; (2) decreased yields due to decreased aquifer saturated thickness, and (3) greater tendency for eastward migration of saline water from the west due to a steeper hydraulic gradient. Eastward movement of salinity will threaten and eventually eliminate many existing municipal wells on the westward edge of the COSMA as salinity exceeds the maximum contaminant levels set by the State for drinking water.

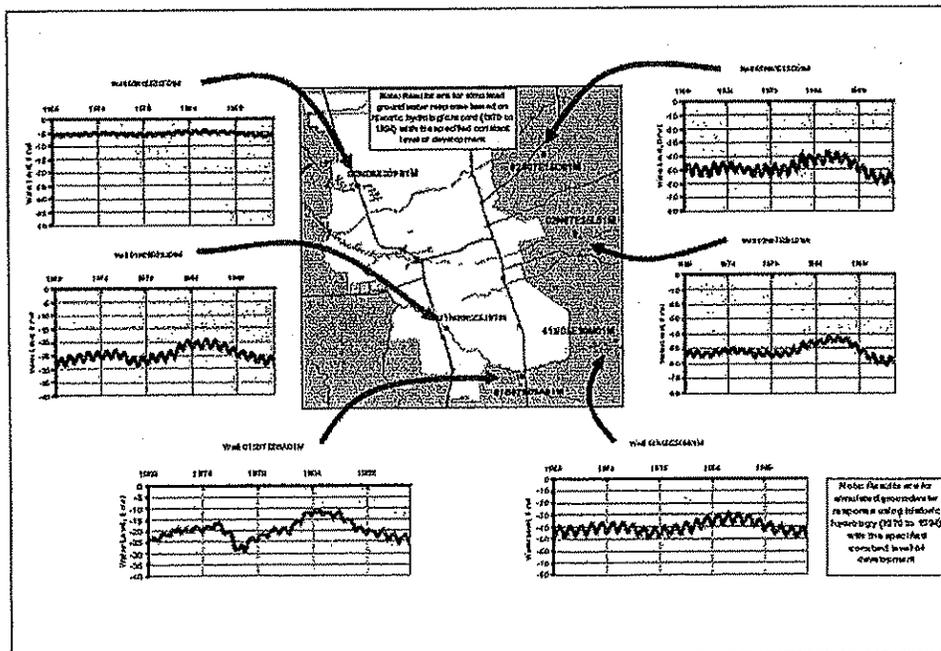
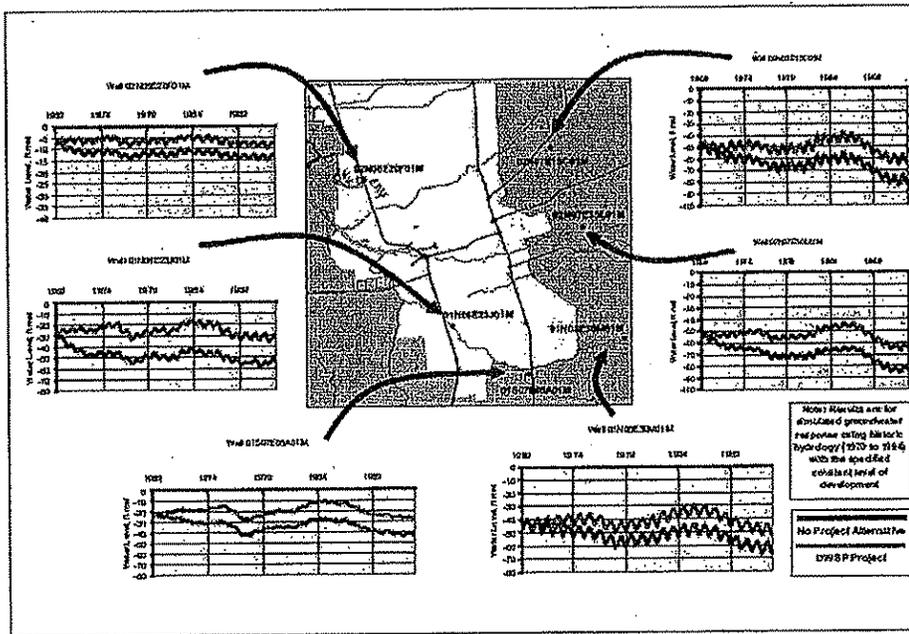


Figure 5-5

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Figure 5-7 reproduced below illustrates the effect on groundwater if growth contemplated in the GPU-2035 continues until 2050. Also illustrated is the effect of the importation of surface water developed from the proposed Delta Water Supply Project at the Delta Water Supply's ultimate development. This figure shows that, even in the unlikely event of full development of the water supply contemplated by the Delta Water Supply Project, groundwater levels will continue to decline, although, of course, groundwater levels would be significantly improved by the addition of this surface water. However, as noted above, it is highly unlikely that the City will ever be able to achieve the level of importation of Delta water contemplated and desired, due to the restriction on pumping during "balanced conditions" in the Delta. Furthermore, the figure assumes that the City will be able to recharge the groundwater aquifer with any surface water pumped from the Delta and not immediately needed by water users within COSMA. The City does not have the rights for this additional water over and above the Phase I Project, nor does it have the right to store this water underground, or have any project or system contemplated to do this. Therefore, what can only be predicted from the impact of population growth projected from the GPU-2035 is an average of a 20 foot decline in groundwater levels by 2050.



Delta Water Supply Project / DWSRP 02
 SOURCE: CDEG, 1101, and Environmental Services Assessment, 2001

Figure 5-7
 Simulated Groundwater Level Response
 Comparison of Project and No Project - 2050 Cumulative Conditions

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The USGS has evaluated groundwater in wells in the Eastern San Joaquin County subbasin of the Central Valley Groundwater Basin and has published a report of its findings (Open File Report 2006-1309). They have found that water levels have declined, and chloride concentrations have increased in a number of public supply, agricultural and domestic wells in this area. Many of the wells now exceed the USEPA Secondary maximum Contaminant Level for chloride of 250 milligrams per liter. The USGS found that the high chloride levels have been found further to the east since measurements began to be taken in 1984. While the USGS found a number of sources for the high chloride water found in wells, lowering of the ground water table by pumping in excess of natural recharge has and will continue to exacerbate the problem.

Agricultural Credits

In its *Water Supply Assessment*, at Page 46, the City refers to the concept of "Agricultural Credits" which it introduced in its *Water Supply Evaluation* for the General Plan 2035 Update Draft Program EIR. The City attempts to justify this "credit" by stating that this "acknowledges that the groundwater basin was being used for agriculture prior to urbanization." To account for this prior agricultural pumping, which has not been quantified with any documentation, the City uses a "credit" of not to exceed 1.0 acre foot per acre per year as a firm yield from the groundwater basin in these areas. In my professional opinion, there is absolutely no merit to this argument, and it runs completely contrary to what the City says it is trying to achieve by setting a "target" yield from the groundwater basin of not more than 0.6 acre feet per acre per year.

As noted above, the groundwater basin is in a critical condition of overdraft. This has resulted from all users exceeding the safe yield of the groundwater basin. In the case of a basin in critical overdraft, no "credit" can be assumed by converting from one groundwater use to another. At best, the "critical condition of overdraft" has been slightly reduced by some unquantified level of agricultural pumping. This type of speculation is a very poor substitute for actual documentation of prior water uses on the subject property, and has no place in a Water Supply Assessment.

The basic flaw in the analysis of "groundwater credits" can be taken from Exhibit "F" to the City's *Water Supply Evaluation* for the General Plan 2035 Update Draft Program EIR at Page 1. This report states that "If any one of these groundwater extractors are [sic] removed or are [sic] taken off of groundwater there is a recognition that, if *groundwater elevations are acceptable today* [my emphasis] and the *groundwater basin is in a state of equilibrium*, [my emphasis] that groundwater pumping can continue at the same rate without further impacting the groundwater basin". As noted in the above discussion, the Department of Water Resources, San Joaquin County, and the US Geological Survey all classify the groundwater

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basin as being overdrafted with groundwater elevations declining. The City can not therefore claim any "groundwater credits". The City's report goes on to state that the City is interested in reducing reliance on groundwater over time and wishes to target groundwater use to below today's level.

In my professional judgment, the Consultant who prepared Exhibit "F" used questionable assumptions as input to the "IGSM" model to derive a "credit" for COSMA groundwater firm yields due to lack of definitive data on cropping history and actual groundwater extractions. This will result in further degradation of the groundwater basin, and result in extractions of groundwater by the City far in excess of what the City considers firm groundwater yields. Records of groundwater production in the agricultural areas proposed for urbanization are either not available or not accurate. COSMA should therefore not use "agricultural credits" in any calculation of groundwater yield. The intent of this proposed action by the City is clear on Page 5 of Exhibit "F" by the statement: "the COS wishes to take some credit for this benefit by extracting a greater amount of groundwater until recharge technologies or more surface water becomes available to replace this need". In my professional opinion, this statement meets the classic definition of a "mining" of groundwater, and application of this "credit" by the City will result in an adverse impact on the groundwater basin.

Mariposa Lakes Groundwater Recharge

With reference to Text Table 1 from the *Integrated Water Management Plan, Mariposa Lakes Development* (Appendix P to the MLSP DEIR), at page 13, the total potable water demand of the proposed subdivision is 13,393 acre feet per year. The total non-potable water demand, including evaporation from residential lakes, is estimated to be 4,815 acre feet per year. Rainfall and storm runoff to the lakes are estimated to contribute 1,034 acre feet per year, for a net non-potable demand of 3,781 acre feet per year. As noted in this *Plan*, the intent is to provide this water from purchases of surface water for groundwater banking. No hydrologic information is provided in the *Plan* for verification of the availability of any quantities of surface water from Stockton East or Central for groundwater banking purposes.

Appendix Q to the MLSP DEIR is a feasibility assessment of the groundwater recharge proposal briefly discussed in Appendix P. This report understates the required amount of non-potable demand as 3,089 acre feet per year, instead of the 3,781 acre feet as required in Appendix P. Appendix Q at page 2 recommends the application of 2 acre feet of water for every 1 acre foot of average yield. This means that an average of 7,562 acre feet per year of non-potable surface water will have to be obtained. No documentation is provided relative to the source or sources of this surface water, although at page 11-35 of the MLSP DEIR, the source is given as "surplus (e.g. winter spill water)."

At page 16 of Appendix Q, the consultant provides a summary of estimated infiltration rates

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obtained via field testing of the proposed Arbini recharge site. Although the average is not provided in Appendix Q, from the data provided, the average infiltration rate achieved on the Arbini property is calculated as 0.111 feet per day, which is the equivalent of 0.111 acre feet/acre/day. This is an extremely slow infiltration rate, and confirms the City of Stockton's assessment of this area at page 11-8 of the MLSP DEIR as a "none to slight" recharge area. The recharge area is given as 204 acres at page 17 of Appendix Q. This means that the average infiltration rate for this area is 22 acre feet per day, not accounting for evaporation. Just to infiltrate the average annual non-potable water requirement, less an allowance for evaporation, would take 37 days per year. However, in accordance with the discussion at page 11-34 of the MLSP DEIR, the intention of the project proponents is to establish and maintain a three-year recharge reserve of banked groundwater. Using the correct demand data, this would require a reserve of 22,686 acre feet (three years at 7,562 acre feet), and the proponents estimate that this would be achieved over time by recharging an additional 10% of the total annual requirement each year. This would mean that the total annual non-potable recharge volume would be 9,831 acre feet per year. As in the MLSP DEIR, this number should be rounded upward to 12,000 acre feet per year to account for losses due to lateral percolation.

Using the infiltration rate determined by the consultants of 22 acre feet per day at this site, water would have to be available 545 days per year, which is obviously impossible. If, as is assumed in Appendix Q at page 18 that "surplus" water would be available for the full 220 days per year (which, in my professional opinion, is a wildly optimistic assumption), 500 acres of recharge site would need to be made available. While absolutely no documentation of "surplus" water availability is provided in the MLSP DEIR, it has been my professional experience in San Joaquin County for over 20 years that 12,000 acre feet of "surplus" water will not be available to this project on an annual basis to meet the non-potable water demand. The MLSP DEIR is therefore inadequate for not providing the necessary documentation of "surplus" surface water available for non-potable recharge demands, and for providing no alternative analysis of impacts if this "surplus" water is unavailable.

Summary

Approval of the development proposed in the MLSP DEIR will result in an additional demand on the COSMA potable water system of at least 8,578 acre feet per year, and potentially 13,393 acre feet per year, if the proposed groundwater recharge facilities do not function as envisioned and/or suitable sources of "surplus" surface water cannot be obtained. This additional demand was not anticipated in the 1990 General Plan, nor was it provided for in the City's Delta Water Supply Project Phase I project application to the State Water Resources Control Board, which applies only to water demands forecasted in the 1990 General Plan.

COSMA water utilities currently rely on an overdrafted groundwater basin and favorable

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hydrologic conditions to provide for an estimated 276,000 persons, with an estimated total demand of approximately 70,000 acre feet per year. Firm sources of water supply available to the COSMA amount to only 20,000 acre feet per year under a contract with the Stockton East Water District. Under historical drought conditions, Stockton East has only been able to supply approximately 12,000 acre feet per year to the COSMA. The groundwater basin is not a firm source of supply to the COSMA appropriators because it is in a “critical condition of overdraft.”

In order to partially alleviate this problem, the City has received a Water Rights Permit from the Water Resources Control Board to extract as much as 33,000 acre feet of water from the Delta. An actual project to finance and construct an intake and treatment facility to appropriate this water is not yet underway, much less completed. Constraints placed upon the City's facilities are so severe that it is unlikely that the City will be able to obtain more than a small fraction of this amount. However, because the MLSP Area is outside the current Urban Services Area, the Water Rights Permit does not include the MLSP Area as a place of use for this water, and therefore it should not be relied upon to serve the MLSP Area in the City's or Cal-Water's *Water Supply Assessments*.

The only source of water supply available for this proposed MLSP development is therefore from the already overdrafted groundwater basin. This will increase the overdraft in the basin by at least 8,578 acre feet per year, and potentially 13,393 acre feet per year without the proposed recharge facilities. This is an unacceptable adverse impact which has not been mitigated.

MORRIS L. ALLEN, P.E.
CONSULTING CIVIL ENGINEER

Jason R. Flanders of the Law Office of J. William Yeates prepared and submitted comments on behalf of his client, the Morada Area Association. Attached to Mr. Flanders' comments were additional comments prepared by consulting civil engineer Morris Allen. For ease of reference, both sets of comments are identified as "Yeates." Furthermore, since comments YEATES-2 through YEATES-13 merely summarize the comments contained in Mr. Allen's letter, the City notes that the responses to YEATES-2 through YEATES-13 and YEATES-21 through YEATES-32 are interrelated, and should be taken together as a whole. Please note that the attachments to the Yeates and Allen comment letters are contained in Appendix DD. At the time the DEIR for the proposed project was circulated, the EIR for the 2035 City General Plan was also in process. The City notes that concerns regarding the information contained in the 2035 City General Plan should have been provided to the City in the form of comments on the EIR circulated for that project, rather than in comments on the MLSP DEIR.

YEATES-1

The commentator suggests that the DEIR must not only acknowledge the potential to induce growth on adjacent agricultural lands but must also reach a significance conclusion regarding that impact and provide mitigation for that impact. The potential for project implementation to create pressure that could result in eventual conversion of adjacent agricultural land to urban uses is discussed in the DEIR in Chapter 20, "Growth Inducing Impacts." Page 20-5 concludes, "Thus, it can be expected that implementation of the proposed project could potentially place pressure on agricultural land to the north, east, and south of the SPA to convert to urban uses. ... Potentially converting agricultural land to an urban use...is a potential growth-inducing impact." This same paragraph on page 20-5 also states that subsequent conversion of agricultural land to urban uses could result in the loss of biological habitat, generate additional traffic, increase air pollution, and result in noise conflicts. The City therefore believes that the commentator's concern regarding pressure to convert additional agricultural land is appropriately identified in the DEIR.

As stated above, the commentator further suggests that Chapter 20 of the DEIR should provide significance conclusions, rather than identifying whether certain factors could or could not be growth inducing. However, Section 15126.2(d) of the State CEQA Guidelines states:

Growth-Inducing Impacts of the Proposed Project. Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment [emphasis added].

Some growth is inevitable and in fact desirable. CEQA acknowledges this: “It is the intent of the Legislature that all agencies of the state government...shall regulate [activities within their jurisdiction] so that major consideration is given to preventing environmental damage, *while providing a decent home and satisfying living environment for every Californian.*” (Pub. Resources Code Section 21000[g]) Mandating mitigation measures to preclude growth in any particular area, outside of a comprehensive planning effort, would infringe on the agencies’ legislative powers and unduly hamper large scale planning efforts. In point of fact, the City of Stockton is presently engaged in such a planning effort as it updates its general plan.

This understanding of section 15126.2(d) is supported by the Court of Appeal’s opinion in *Napa Citizens for Honest Government v. Napa County Board of Supervisors* (2001) 91 Cal.App.4th 342. That case provides the most comprehensive discussion of growth-inducing impacts in the context of an EIR and explains that “Nothing in the Guidelines, or in the cases, requires more than a general analysis of projected growth.” (*Id.* at p. 369.) Here, such a discussion is necessarily limited because the precise growth-inducing impacts of the proposed project are difficult to forecast and to a large degree are speculative. Contrary to the commentor’s suggestion, CEQA does not require mitigation for these growth-inducing impacts; as the *Napa Citizens* court explained: “Neither CEQA itself, nor the cases that have interpreted it, require an EIR to anticipate and mitigate the effects of a particular project on growth in other areas.” (*Id.* at p. 371.) Rather, such precise mitigation is best determined at the time specific projects are proposed. (*Ibid.*) “[I]t is enough that the [DEIR] warns interested persons and governing bodies of the possibility or probability of growth inducement, so that the agency can take appropriate steps in its planning efforts. (*Ibid.*)

Therefore, because the State CEQA Guidelines state that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance, the City believes it would be inappropriate to assign a significance conclusion to the growth-inducing impacts identified in Chapter 20 of the DEIR or to provide mitigation for those impacts. No revisions to the DEIR are necessary.

YEATES-2

The commentor takes issue with the conclusions in the EIR about the availability of water to serve the project. The City, Cal Water, SEWD, and CSJWCD believe they have adequately described the available water sources for the project, as required under Water Code Sections 10910–10915, as set forth in the WSAs prepared for this project (DEIR Appendices R and S, and new Appendix Y attached to this FEIR). The City disagrees with the commentor’s conclusions regarding groundwater for the reasons set forth in Master Response 4 in Chapter 3, “Master Responses,” of this FEIR, as well as Section 5.3 of this FEIR. See also Master Response 6 in Chapter 3, “Master Responses,” of this FEIR. See also responses to YEATES-21 through YEATES-32.

YEATES-3

The commentor suggests that the water sources relied on by the City are not sufficiently secure as to represent viable water supply sources. As indicated by the potable WSAs prepared by the City and Cal Water (DEIR Appendices R and S, respectively), by the nonpotable WSA prepared by SEWD, on behalf of itself and CSJWCD (attached as new Appendix Y to this FEIR), and by the revised text contained in DEIR Impacts 17-3, 17-10, and 17-12 (as shown in Chapter 5 of this FEIR), the City believes there are secured sources of surface water to meet the project’s potable and nonpotable water demands in both the short and long term. Regarding potable water, the City and Cal Water believe they have adequately described the available water sources for the project, as required

under Water Code Sections 10910–10915, as set forth in the potable WSAs prepared for this project (DEIR Appendices R and S). The City disagrees with the commentor’s conclusions regarding groundwater for the reasons set forth in Master Response 4 in Chapter 3, “Master Responses,” of this FEIR. See also Master Response 6 in Chapter 3, “Master Responses,” of this FEIR, as well as Section 5.3 of this FEIR.

YEATES-4

The commentor asserts that certain sources of water are insecure and that said insecurity should be discussed in the EIR. The DEIR, as well as the WSAs attached to the DEIR, have discussed the uncertainties associated with the various sources of water used in the COSMA. That said, these uncertainties do not prevent the City from relying on these water sources to the extent that they are relied on. Moreover, the City disagrees with the commentor’s conclusion regarding water from New Melones Dam, and from Oakdale and SSJID water from the Stanislaus River, as indicated in the response to YEATES-21 below, and in Master Response 2 contained in Chapter 3 “Master Responses,” of this FEIR. Regarding water from the DWSP, see Master Response 3 contained in Chapter 3, “Master Responses,” of this FEIR. No revisions to the DEIR are necessary.

YEATES-5

The commentor asserts that the proposed project is not consistent with the 2035 City General Plan, and specifically policy PFS-2.8. The proposed project is consistent with Policy PFS-2.8 of the 2035 City General Plan, which precludes reliance on water from the DWSP until that water has been allocated from the SWRCB. As stated in Master Response 3 in Chapter 3, “Master Responses,” of this FEIR, the SWRCB has issued permit 21176 for Phase I of the DWSP. Therefore, the project would be consistent with 2035 City General Plan Policy PFS-2.8. No revisions to the DEIR are necessary.

YEATES-6

The commentor suggests that the City should not rely on DWSP water because the facilities are not yet constructed, and in any event Place of Use limitations preclude reliance on this water for the proposed project. The commentor is mistaken. The City disagrees with the commentor’s conclusion for the reasons set forth in Master Response 3 in Chapter 3, “Master Responses,” of this FEIR. The commentor also vaguely suggests that “severe” “constraints” placed on City facilities would limit the availability of DWSP water; without more details, the City cannot respond to this charge except to say that the City is unaware of any such severe constraints that would ostensibly limit the City’s use of DWSP water to “a fraction” of its entitlements.

YEATES-7

The commentor suggests that the DEIR fails to adequately study the cumulative water demands of other users in the area, and the impacts of that use due to increasing urban development. See response to MORADA-4, above. Additionally, the commentor fails to explain how this increasing urban development would necessarily result in cumulative impacts to groundwater. It should be noted that the evidence indicates that generally speaking in the region, agricultural users rely more heavily on groundwater than urban users; thus, the conversion of agricultural users to urban ones would tend to reduce groundwater overdrafting rather than exacerbate it. (See, for example, DEIR Appendix R; FEIR Appendix, at page 58.)

DEIR Chapter 18, “Cumulative Impacts,” considers cumulative impacts in the context of planned growth under the 2035 City General Plan. The City believes that the cumulative impact of urban growth in other cities, such as Ripon, Lathrop, Manteca, and Lodi, is outside the scope of the CEQA analysis required for this project. See also Master Response 4 and Master Response 6 in Chapter 3, “Master Responses,” of this FEIR.

Furthermore, the City believes that the cessation of approximately 11,000 afy of existing groundwater pumping for agricultural irrigation at the project site, in combination with

implementation of the proposed recharge project, would result in a net benefit to the groundwater aquifer. The project's cumulatively considerable contribution to other water-related impacts are addressed on page 18-21 through 18-23 of the DEIR. No revisions to the DEIR are necessary.

YEATES-8

The commentor states that the DEIR fails to account for the effects of "Term 91" in discussing the extent and reliability of water from Phase I of the DWSP. "Term 91" is a requirement placed by the SWRCB in certain water rights permits to provide water flows at certain times of year to provide for fish passage and/or habitat. As stated in SWRCB Permit No. 21176 for Phase I of the DWSP, Phase I is governed by Water Code section 1485, and therefore Term 91 is not imposed as part of the permit. No revisions to the DEIR are necessary.

YEATES-9

Contrary to the commentor's assertion, the WSAs prepared for this project do not assume that existing and future water treatment facilities would meet 100% of their operational capacity. The amount of available water discussed in the City's and Cal Water's WSAs (DEIR Appendices R and S, respectively) takes into account the projected maintenance and operational constraints at treatment facilities. See also response to YEATES-25, below. No revisions to the DEIR are necessary.

YEATES-10

The City's disagrees with the commentor's assertion that the groundwater subbasin in the vicinity of Stockton is currently in a state of overdraft, for the reasons set forth in Master Response 4 in Chapter 3, "Master Responses," of this FEIR. The City's WSA (DEIR Appendix R) considers water supply for the MLSP project in conjunction with water supply under full buildout of the 2035 City General Plan. While the City's WSA does discuss the concept of agricultural "credits" based on a cessation of groundwater pumping when land is converted from agricultural to urban uses, the potential agricultural credits, if applied, would only occur after the DWSP was completed. The City's WSA does not include agricultural credits for the proposed project at the present time. As indicated in the City's WSA on page 46, "The determination of how the agricultural credit concept is summarized below and a detailed technical memorandum is available upon request from COSMUD [City of Stockton Municipal Utilities Department][emphasis added]."

Pages 48 and 49 of the City's WSA (DEIR Appendix R) discuss application of the agricultural credit concept as follows:

The approach taken to determine the validity of assuming agricultural credits is based on a proven theoretical approach of determining the agricultural water supply requirement and use of the integrated groundwater surface model (IGSM) for San Joaquin County. The IGSM calculates agricultural supply requirements given the various parameters of agricultural crop types, their irrigation efficiencies, soil conditions, field capacities, root zones, etc. The IGSM is run first applying the agriculture to establish the baseline condition. The second run removes the agriculture to see how the basin rebounds as a result of no agricultural pumping in the urban services boundary. Urban land use and water demand (groundwater and surface water) are then applied and the impacts are evaluated as follows:

Impacts to the groundwater elevations can occur in three ways:

- 1. the gradient (or slope) of the groundwater piezometric surface (groundwater table) would not increase in the area of the salinity front (See Figure 9 on Page 29 [of the City's WSA] for approximate location of salinity front),*
- 2. groundwater elevation would not drop more than a foot in the agricultural area where the credit is applied, and*
- 3. the lowest elevation of the regional cone of depression would not be impacted by the application of urban groundwater extractions in the agricultural areas.*

Each IGSM scenario that includes urban extractions in areas where agricultural extraction are removed is measured against the three impact constraints listed above. The lesser of the applied groundwater extractions is used as the incremental increase to account for agricultural credits. In no case should groundwater extractions exceed 1.0 AF/ac/year of urban developed area. For purposes of evaluation, the agricultural credit is only applied after it is demonstrated that the 0.60 AF/ac/year factor is exceeded as a result of the Project water demands.

Therefore, the City believes that its concept of application of agricultural credits is appropriate. See also Master Response 6 in Chapter 3, "Master Responses," of this FEIR.

YEATES-11

The commentor criticizes minor inconsistencies between studies prepared for the groundwater recharge program. The preparation of studies regarding the groundwater recharge project is a phased process, as discussed in the *Mariposa Lakes Integrated Water Management Plan* (DEIR Appendix P). This plan was prepared as the first step in the process, and was prepared well in advance of the DEIR. Various reports such as the *Groundwater Recharge Feasibility Assessment* (DEIR Appendix Q) would continue to be prepared as the project moves forward. These reports are described in Mitigation Measures 11-6a and 11-6c. Suitability of the site for recharge is also discussed in the DEIR on pages 11-36 through 11-38, and pages 11-59 through 11-61. The *Groundwater Recharge Feasibility Assessment* concluded that the Arbini property is a suitable site for the proposed recharge operation, and that site soil types are suitable for the amount of recharge necessary to meet the project's nonpotable water needs. Since the DEIR was circulated for public review and comment, Kleinfelder (2007) has completed a *Supplemental Geotechnical Investigation, Groundwater Recharge Feasibility Assessment* that further defines the recharge capacity of the Arbini site. That study is attached to this FEIR as new Appendix BB. See also Master Response 5 in Chapter 3, "Master Responses," of this FEIR.

The commentor also states that the DEIR fails to identify the sources of water for the proposed recharge project. The commentor is mistaken. Sources of water for the recharge project are identified on DEIR pages 11-35, 11-39, 17-16, and 17-17, as well as the nonpotable WSA prepared by SEWD on behalf of itself and CSJWCD (new Appendix Y attached to this FEIR). See also revisions to Impact 17-3 of the DEIR contained in Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." These revisions change the significance conclusion regarding the demand for nonpotable water supply from potentially significant and unavoidable to less than significant, and no mitigation measures are required.

YEATES-12

The City disagrees with the commentor's assertion that "the DEIR's recharge estimates do not add up." The commentor's calculations appear to be based on an average of the harmonic means presented in Table 2 of the *Groundwater Recharge Feasibility Assessment* (DEIR Appendix Q) and Table 11-5 on page 11-36 of the DEIR. In that report, harmonic means of infiltration rates of multiple soil layers in 90-foot soil columns were used to estimate percolation rates. (See page 11-36 of the DEIR for an explanation on the use of harmonic means.) The commentor's suggested infiltration rate of 22 acre-feet per day is an average of the harmonic means, and is therefore an "average of averages." Thus, the commentor's calculation has no statistical value. Furthermore, this 22-acre-foot-per-day "average of averages" fails to account for natural variations in the subsurface with respect to hydraulic conductivity (vertical or horizontal). Groundwater will follow the most permeable path, which includes both lateral and vertical flow. Therefore, the calculations presented by the commentor are not valid. Furthermore, the quantity of banked groundwater need only meet the demand posed by each incremental development phase of the project. The quantity needed for the first phase would be less than that required by later phases. Therefore, the need to accumulate the 3-year reserve for the final phase demand would occur many years after the first phase is built. See also Master Responses 5 and 6 in Chapter 3, "Master Responses," of this FEIR. No revisions to the DEIR are necessary.

YEATES-13

The commentor asserts that the WSA prepared by the City for the MLSP (DEIR Appendix R) and the DEIR should not rely on a water supply evaluation (WSE) prepared in conjunction with the 2035 City General Plan because the WSE is "inaccurate and inconsistent." The only two facts that the commentor provides to support his claim that the WSE is "inaccurate and inconsistent" are the following: (1) the use of "inaccurate" population projections, and (2) the use of a land-based approach (which supposedly ignores water demand for open space and agriculture) to determine water demand, rather than a population-based approach.

As an initial matter, we note that this criticism is principally directed at inconsistencies between the WSE and the 2035 City General Plan. These are not necessarily criticisms of the WSE itself. Moreover, these are not criticisms of the WSA prepared for the Mariposa Lakes DEIR. The Mariposa Lakes DEIR relies, in part, on certain information in the WSE, but not on the 2035 City General Plan's water supply analysis. The commentor has not identified any errors in the WSE, and the City disagrees with the commentor's suggestion that the WSE is inaccurate. The City has reviewed the population projections in its WSE prepared for the 2035 City General Plan and made revisions to reconcile the discrepancies identified by the commentor, and the revisions do not require changes to the water demand calculations developed for the WSE or the WSA prepared for the Mariposa Lakes DEIR because these demand calculations are based on land use acreages and not population projections. The City disagrees with the commentor's suggestion that the WSAs prepared for the proposed project are not accurate and consistent, and the commentor has not identified any inaccuracies or inconsistencies in these documents. The remainder of this comment is directed at the WSE prepared in support of the 2035 City General Plan, and not the MLSP WSA or the Mariposa Lakes DEIR.

Regarding the commentor's concerns related to population projections, Chapter 5 of this FEIR includes errata to the City's WSA. The errata provides a new Figure 3 (of the City's WSA) that corrects the population projection curve ending in 2035 from 500,000 capita to 581,000 capita. The higher population growth now depicted was not known at the time the WSA was developed. There is no corresponding change in water demand as a result of this change in population growth, however, because water demands are based on land use acreages and not on a per capita basis.

The City utilized a land-based approach to determine the project's water demands, rather than a population-based approach, because the City believes that the land-based methodology is more accurate. Water demand determinations based on land use reflect the type of water use taking place on each parcel, and geographically place the demand where the use is actually occurring. By contrast, demand determinations based on population may underestimate the demands associated with commercial and industrial uses, because there are generally no population figures attributable to such uses. Population-based approaches are normally used only when accurate land use information is not available. Here, detailed land use information is available for the proposed project, so it is preferable to use the land-based methodology.

For the foregoing reasons, the City believes the WSA prepared for the MLSP DEIR appropriately relies on information from the WSE prepared for the 2035 City General Plan. See also Master Response 6 in Chapter 3, "Master Responses," of this FEIR.

YEATES-14

The commentor asserts that the EIR should analyze the effects of global climate change on the proposed project. In general, the impacts of climate change, while generally acknowledged on a global scale, have not been determined with any degree of certainty at the local level, and therefore the City believes it would be speculative to predict what impacts would occur as a result of global climate change in the COSMA area. An assessment of global climate change impacts on the proposed project, including impacts on water supply, is included in Chapter 6 of this FEIR, "New Chapter 23 of the DEIR – Impacts of Global Climate Change on the Project." The characterization of climate change and the analysis of environmental issue areas provided in that analysis show that the potential effects of climate change on the project are either too speculative for meaningful evaluation or would not result in:

- ▶ the proposed project having one or more new significant environmental effects not discussed in the previous impact evaluations contained in the DEIR;
- ▶ substantial increases in the severity of adverse environmental effects identified in the previous impact evaluations contained in the DEIR;
- ▶ identification of a new mitigation measure or project alternative considerably different from others already analyzed in the DEIR that would lessen the significant impacts of the project; or
- ▶ the proposed project, or elements of the proposed project, becoming infeasible since publication of the DEIR.

See also changes to Chapter 3, "Project Description," and Environmental Setting, Regulatory Background, Thresholds of Significance, and Impact 6-4 of the Air Quality Chapter (contained in Chapter 5 of this FEIR) regarding greenhouse gas emissions.

YEATES-15

See response to YEATES-14, above.

YEATES-16

The commentor suggests additional mitigation to address potential climate change impacts. In particular, the commentor suggests purchasing carbon offset credits for about 60,000 tons of carbon dioxide (CO₂) per year. Impact 6-4 (DEIR pages 6-41 and 6-42) concludes that the proposed project would generate, on an annual basis, approximately twice the amount of the CO₂ per person that would be allowed to meet the cap on emissions imposed by Assembly Bill 32 (approximately 60,000 tons). This is incorrect, for several reasons. First, Assembly Bill 32 does not impose a per person cap on CO₂

emissions. Also, the DEIR requires implementation of Mitigation Measures 6-2a, 6-2b, and 6-2c, which would reduce emissions of CO₂ from both mobile (e.g., through reduction in vehicle miles traveled) and area sources. This would in fact reduce the emissions by 15% as calculated in the DEIR. Thus, after mitigation the project would result in annual emissions of about 51,000 tons of CO₂, not 60,000 tons as suggested by the comment. In any event, the commentor suggests that additional mitigation should be required in the form of purchased carbon offsets. To date, carbon offset programs in the United States are not regulated by any agency. Regulation by an agency such as EPA, California Air Resources Board (ARB), or a local air quality district is necessary to ensure that the offsets purchased for each project are calculated in the same way using the same methodology with the same cost, and to ensure that payment into an offset program results in actual, quantifiable reductions in greenhouse gases, thereby ensuring the effectiveness of related mitigation measures. To date, neither ARB nor EPA have created or adopted any official programs relating to offsets for the generation of greenhouse gas emissions, and therefore the City does not believe that the commentor's suggested mitigation is appropriate, because the actual effectiveness of this proposed mitigation measure cannot be assured. If and when such programs are established and adopted by ARB, the project applicant(s) of all project phases would be required by law to participate. Regarding the comment that the project could be redesigned to reduce vehicle miles traveled, the commentor provides no specifics with respect to how the project could be redesigned to achieve that goal. The proposed project has been designed to reduce vehicle trips by providing employment-generating uses in close proximity to new residential uses, and by providing neighborhood-serving retail and commercial uses in close proximity to residents consistent with the City's "village" concept for new communities.

See also changes to Chapter 3, "Project Description," and the Environmental Setting, Regulatory Background, Thresholds of Significance, and Impact 6-4 of the Air Quality Chapter (contained in Chapter 5 of this FEIR) regarding greenhouse gas emissions.

YEATES-17

The commentor queries whether the air quality modeling took into account commuting trips between the project site and the Bay Area. URBEMIS modeling conducted for the DEIR to determine long-term mobile-source emissions associated with implementation of the proposed project was performed in accordance with SJVAPCD-recommended methodologies and settings (i.e., default lengths for vehicle trips in the SJVAB). It would be highly speculative for the City to attempt to determine and perform a quantitative analysis of how many future MLSP residents would choose to work in the City of Stockton, in other areas of San Joaquin County, or potentially in the San Francisco Bay area, because any such analysis would have to be based on human behavior, which is not predictable. The response to SIERRA-29 above provides information about the projected jobs/housing balance of the proposed project. The City does note that the project incorporates a new Amtrak Substation within Phase I, providing transit between Stockton and the Bay Area. (See pages 3-79 and 3-60 to 3-61.) No revisions to the DEIR are necessary.

YEATES-18

The commentor criticizes the lack of analysis of indirect economic impacts to the agricultural economy as a result of the conversion of agricultural land to urban uses. The potential for project implementation to create pressure that could result in eventual conversion of adjacent agricultural land to urban uses is discussed in the DEIR in Chapter 20, "Growth Inducing Impacts." Page 20-5 concludes "Thus, it can be expected that implementation of the proposed project could potentially place pressure on agricultural land to the north, east, and south of the SPA to convert to urban uses. ... Potentially converting agricultural land to an urban use... is a potential growth-inducing impact." This same

paragraph on page 20-5 also states that subsequent conversion of agricultural land to urban uses could result in the loss of biological habitat, generate additional traffic, increase air pollution, and result in noise conflicts. Thus, the DEIR identifies potentially significant direct and indirect physical changes to the environment. The commentor is requesting that the DEIR include an analysis of the economic impacts of the potential loss of agricultural business as a result of the project's contribution to potential future conversion of additional agricultural land. State CEQA Guidelines Section 15131 states that "Economic or social effects of a project shall not be treated as significant effects on the environment" unless those economic effects result in reasonably foreseeable adverse physical changes in the environment. Here, the commentor points to no evidence of such reasonably foreseeable significant adverse physical changes in the environment. The City believes that indirect, growth-inducing impacts regarding potential conversion of agricultural land have been appropriately identified in the DEIR, and no revisions are necessary.

YEATES-19

The commentor requests that the DEIR analyze the adverse physical consequences, often called "urban decay," that could potentially result if any "big box" retail stores were developed within the MLSP. Such an analysis is unnecessary and in any event would be speculative at this time. The MLSP does not propose or include the construction of any new "big-box" retail stores. The commercial land use designations proposed for the SPA do not include the CL (Commercial, Large Scale) designation; rather, the proposed project includes the CG (Commercial, General) land use designation. The intent of the proposed CG designations within the SPA is to promote local and community-serving retail uses, rather than regional-serving uses. Furthermore, on August 24, 2007, the City adopted Ordinance No. 018-07, which provides that commercial development within the CG designation that includes warehouse retail stores devoting 10% or more of the total sales floor area to the sale of nontaxable merchandise cannot contain more than 100,000 square feet of gross floor area. This ordinance effectively precludes the ability of "big box" retail stores to be constructed within the project site. No revisions to the DEIR are necessary.

YEATES-20

The commentor suggests that the FEIR analyze a high-density alternative to address significant impacts of the proposed project. As discussed in Chapter 19, "Alternatives to the Proposed Project," the DEIR evaluates a range of reasonable alternatives that would feasibly obtain most of the project objectives and would avoid or substantially lessen the significant effects of the project, pursuant to State CEQA Guidelines Section 15126.6. The commentor's stated goal of developing "less land to avoid or mitigate some of the proposed project's significant impacts to agriculture, air quality, and climate change" is already accommodated by the Reduced Project Alternative (Option 2) discussed on pages 19-15 and 19-18 through 19-21 of the DEIR. No revisions to the DEIR are necessary.

YEATES-21

This comment asserts that water supplies from the Stanislaus River and New Melones water described in the City's WSA should not be considered "firm" sources of water, and therefore should not be shown as being available to the proposed project. The following two comments (YEATES-22 and YEATES-23) also rely on the commentor's characterization of certain of the City's water supplies as "firm," "non-firm," and "interim." The commentor does not explain or define these terms, or offer any evidence to support its use of these terms. The City disagrees with the commentor's assertions, as explained below. Section 5.4 of Chapter 5 of this FEIR includes errata to Table 6 and to the text on pages 20–22 of the City's WSA. This response relies on these errata to the City's WSA.

As stated in the City's WSA, COSMUD considers all water supplies that are available in wet hydrologic years to be "firm" in the context of a conjunctive use program. With

reliance on supplies in wet years, it is reasonable to conclude that a significant portion of any so-called “interim” supplies will be available in the wet years over the long term. Water contracts that are acknowledged in the WSA to be “interim” are those that may have a planned future use that supports increased water demands within the contracting agency’s service area or points of diversion.

The City’s total existing “firm” supplies for municipal and industrial (M&I) uses yield 104.1 thousand acre-feet per year (TAF/year) under wet and above average hydrologic conditions. Including interim supplies, the COSMA currently has 134.17 TAF/year. COSMA’s full entitlements in wet years, including interim and future supply sources, could yield as much as 180 TAF/year. However, as required by the State Water Code, the WSA only considers existing “firm” surface water contracts, which yield 104.17 TAF/year.

Currently, SEWD’s ability to use the water available to it, pursuant to the applicable contracts with Reclamation for New Hogan and New Melones water, and with the SSJID and Oakdale Irrigation District (OID), is constrained by one or more of the following factors in any given year:

- ▶ the hydrologic year type (i.e., dry year curtailment provisions in surface water contracts and reductions in surface water contracted from other agencies),
- ▶ the operation of statutory provisions such as the Endangered Species Act and the Central Valley Project (CVP) Improvement Act,
- ▶ the COSMA M&I water demand,
- ▶ the raw water delivery system to the SEWD water treatment plant,
- ▶ the rated SEWD water treatment plant capacity, and
- ▶ the treated water conveyance capacity from the water treatment plant to the COSMA.

The above types of constraints are common to the available water supplies of most water agencies in the region. All surface water supplies are subject to deficiencies in dry hydrologic years. Furthermore, certain provisions of the Endangered Species Act and the CVP Improvement Act may also impinge on a portion of the City’s contractual water supply in certain years. However, this does not mean that the water supply is not firm. A water supply is considered “firm” if it is under contract and will be delivered when it is hydrologically available (*Vineyard Area Citizens For Reasonable Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal. 4th 412, 431). For this reason, many of the assertions contained throughout the commentator’s letter regarding the lack of a “firm” water supply in the City’s WSA are incorrect.

SEWD has full entitlements to its apportionment under the Reclamation/SEWD/Calaveras County Water District (CACWD) contract. The apportionment of water under the contract is based on SEWD receiving 56.5% and CACWD receiving 43.5% of the total 71,000 afy of Reclamation contract water. While New Hogan is not operated as part of the CVP, deficiencies in supply do occur in dry hydrologic years and the actual amount of water available to the City of Stockton Municipal Utilities Department (COSMUD) under the New Hogan contract will be less in years of dry hydrologic conditions.

**Table 4-4
SEWD Water Sources and Critical Year Availability**

Source	Annual Contract Amount (TAF)	Projected "Critical Year" ¹ Annual Availability (Acre-Foot/Year)			
		Planning Year			
		2000	2010	2020	2035
Current and Future "Firm" Sources of Supply					
Reclamation–New Hogan Water Supplies, SEWD entitlement	Total Yield 84.1 TAF ² SEWD Entitled to M&I or Ag 40.171 TAF	20,000	12,000	12,000	12,000
Reclamation–New Hogan Water Supplies, CACWD unused entitlement ³	CACWD Entitled to 30.928 TAF and are currently using approximately 3 TAF with SEWD using slightly over 24.0 TAF of CACWD's unused portion. This amount is projected to decrease to 10 TAF at buildout of the general plans of both Calaveras County and the City of Stockton	24,000	24,000	10,000	10,000
Reclamation–New Melones Interim Water Contract and Section 215 "Spill" Water	Total Contract 75 TAF ⁴ (M&I 40 TAF)	Not available in dry years			
SSJID Transfer– Stanislaus Water	(Interim M&I 15 TAF)	4,000	4,000	0	0
OID Transfer–Stanislaus River (includes contract renewal to 2025)	(Interim M&I 15 TAF)	4,000	4,000	4,000 ⁵	0
Total	(Firm M&I 104.1 TAF initially to 94.1 TAF at buildout) (Approximate Max Future M&I 180 TAF)	48,000	30,000	26,000	22,000

Notes:

TAF = Thousand Acre-Feet; CACWD = Calaveras County Water District; SEWD = Stockton East Water District; M&I = municipal and industrial; SSJID = South San Joaquin Irrigation District; OID = Oakdale Irrigation District; CSJWCD = Central San Joaquin Water Conservation District; WSA = water supply assessment.

¹ The WSAs as well as all other water planning documents for Eastern San Joaquin County use the San Joaquin Valley 60-20-20 Water Year Hydrologic Classification Index (San Joaquin Index). The San Joaquin Index is equal to 0.6 times the current April to July unimpaired runoff + 0.2 times the current October–March unimpaired runoff + 0.2 times the previous year's index (if the previous year's index exceeds 4.5, then 4.5 is used). The San Joaquin Index classifies types of "water years" as follows: (1) a "Wet" year occurs when the Index is equal to or greater than 3.8; (2) an "Above Normal" year occurs when the Index is greater than 3.1 but less than 3.8; (3) a "Below Normal" year occurs when the Index is greater than 2.5 but equal to or less than 3.1; (4) a "Dry" year occurs when the Index is greater than 2.1 but equal to or less than 2.5; and (5) a "Critical" year occurs when the Index is equal to or less than 2.1 (SWRCB 1999). The foregoing definitions are used and are applicable throughout all the responses to comments contained in this FEIR.

² SEWD has a right to 56.5% of the yield, and CACWD has rights to the remaining 43.5%. The estimated New Hogan yield of 84,100 acre-feet is further reduced by 13,000 acre-feet annually for prior riparian rights. CACWD currently uses approximately 3,500 acre-feet of its allocation.

³ Based on an agreement between CACWD and SEWD, SEWD currently has use of the unused portion of CACWD's appropriative water rights. This yielded approximately 28 TAF to SEWD in 2005, but is expected to be reduced to 23 TAF by 2025.

⁴ Wet and normal year water is available now and will be available indefinitely. The interim supply will continue indefinitely. The "interim" condition will occur until such time as the "upper basin," particularly portions of Tuolumne and Calaveras Counties, uses the water. No substantial uses are currently contemplated by Tuolumne or Calaveras County in the reservation area. In September of 1980 the U.S. Department of the Interior issued a document entitled *Stanislaus River Basin Alternative and Water Allocation Report* (Basin Report). The Basin Report is available at the Office of the Bureau of Reclamation, Mid-Pacific Region, in Sacramento, California. The Basin Report weighed various alternatives for defining the Basin of the Stanislaus River (required by the Act reauthorizing the New Melones Dam and Reservoir) and for allocating the water of the new Melones Project. The final conclusion of the Basin Report as adopted in a subsequent Record of Decision was that the Basin included the South San Joaquin and Oakdale Irrigation Districts, which were already entitled to Stanislaus River Water, narrow areas along the Stanislaus River, the CSJWCD, and two large areas in the Sierra foothills (the Farmington Area primarily in the Calaveras County with a small portion in Stanislaus County, and the Cooperstown area in Tuolumne County with a small portion in Stanislaus County). The water was then allocated to the areas. Because there was no demand for water in the Farmington and Cooperstown areas, interim water was allocated, including 31,000 acre-feet to CSJWCD and 75,000 acre-feet to SEWD; see Basin Report. The Farmington and Cooperstown areas have water reserved for them and the water so reserved is allocated for interim use by CSJWCD and SEWD (Basin Report). Since 1980 there has been no development in either the Farmington or Cooperstown areas. The Farmington and Cooperstown Areas consist primarily of rolling, thin, nonalluvial soils. A logical use of that land would be irrigated pasture, but irrigated pasture has not been developed during the 27 years since the allocation and there are no known plans for such development because the cost of development and water would exceed the economic value of irrigated pasture. It is not likely there will be water used in the Farmington and Cooperstown areas, thus the interim condition will likely last for a long period of time. (This information was provided with assistance from T.J. Shephard, Sr. who served as attorney for the Counties of Calaveras, Tuolumne, Stanislaus and San Joaquin in the "main" New Melones litigation, *Environmental Defense Fund, Inc. v. Armstrong* [Civil Case No. C-72-1057-CBR] [1972] and represented some or all of the same parties in the other New Melones cases and administrative proceedings. As to the SEWD [and other parties'] lawsuit against the United States, SEWD has appealed the decision of the Court of Claims to the District of Columbia Court of Appeals. SEWD filed a notice of appeal with the United States Court of Federal Claims in the District of Columbia dated June 27, 2007 [Case 04-541 LJ].)

⁵ The OID Contract is assumed to be renewed for an additional period. OID is undertaking agricultural system improvements, funded in part by water sales. OID's long-term plans specifically contemplate water sales; see SEWD WSA at page 11. Accordingly, an estimate of availability extending to 2019 is reasonable; see City's WSA pages 21 and 22 and the Cal Water WSA at page 18. The SEWD WSA assumes, unlike the other WSA's, that OID and SSJID water will continue to be available on a permanent basis. This is based on the opinion of Kevin Kauffman, General Manager of SEWD, who was engaged in the negotiation of the OID and SSJID contracts.

Source: City of Stockton 2006; Shephard, pers. comm., 2007

SEWD is clearly entitled by contract to use any unused water entitlement of CACWD. A detailed discussion of this issue is provided in the City's errata to pages 20–22 of its WSA, which is contained in Section 5.4 of Chapter 5 of this FEIR, "Corrections and Revisions to the DEIR and Errata to DEIR Appendices." The City believes no alternative use exists for the CACWD New Hogan supply other than future development within the New Hogan Place of use, which is within CACWD. The contract among Reclamation, SEWD, and CACWD expressly prohibits the use of New Hogan water outside of the boundaries of the two districts. Furthermore, in Article 10 of the SEWD-CACWD contract, CACWD expressly agreed that no water from the New Hogan Project shall be used by it or through it by a third party beyond the place-of-use boundaries.

Consequently, if projected growth within Calaveras County does not require CACWD's full water entitlements, any unused CACWD water entitlements will be available to SEWD pursuant to the New Hogan agreements. Currently, up to 24,000 afy of excess CACWD water is being used by SEWD. This amount will gradually reduce to 10,000 afy over time as demands of water increase with growth in accordance with the current Calaveras County General Plan.

SEWD is also a Reclamation CVP contractor and has a contract for water from New Melones Reservoir and the Stanislaus River. Contract documents, agreements, and applications for these surface water supplies are contained in Exhibit "C" of the City's WSA (DEIR Appendix R). The Reclamation contract for water stored in New Hogan Reservoir is a repayment contract that provides a firm supply of water in all hydrologic year types. The amount available for M&I is approximately 40.171 TAF/year. The historical supplies of water from New Hogan to SEWD are discussed on page 8 of the SEWD WSA (attached as new Appendix Y to this FEIR). From 1999 to 2006, deliveries to SEWD from New Hogan for M&I ranged from 7,954 afy to 18,037 afy. The City's WSA (DEIR Appendix R, page 20) indicates that the use of New Hogan water by CACWD, which is presently 3,500 afy, will increase so that in the year 2035 there will be only 10,000 afy of CACWD water available. Similarly, the Cal Water WSA at page 18 (DEIR Appendix S) predicts that 10,000 afy of surplus CACWD New Hogan water will be available in 2035. During the period 1999 to 2006, SEWD has received from New Hogan close to its full contractual entitlement; see Table 3 on page 8 of the SEWD/CSJWCD WSA (new Appendix Y).

YEATES-22

The commentor asserts that water supplies from the groundwater basin, as well as surface water supplied by SEWD from the Stanislaus River under contracts with Reclamation and OID/SSJID, cannot be considered "firm" or "reliable" sources of water for the proposed project. The City disagrees with the commentor's assertions. See response to YEATES-21 above.

Regarding use of water from the groundwater basin, please see Master Response 4 in Chapter 3, "Master Responses," of this FEIR.

Regarding water supplied by SEWD from the Stanislaus River under contracts with Reclamation and the OID/SSJID, see response to YEATES-21, above. See also Master Response 6 in Chapter 3, "Master Responses," of this FEIR.

No revisions to the DEIR are necessary.

YEATES-23

The commentor asserts that the City cannot rely on the availability of water from SEWD to supply the COSMA because that water may not be available in extended drought cycles and contributes to the existing groundwater basin overdraft. The City disagrees

with the commentor's suggestion that the City cannot rely upon the water supplies from SEWD. The commentor concedes that SEWD "has been able to consistently supply to COSMA almost 20,000 acre feet per year in excess of its firm supply," and has not provided any basis for its claim that this supply cannot be relied upon in the future. The City also disagrees with the commentor's assertion that the groundwater basin is in a critical overdraft condition, for the reasons stated in pages 22-27 of the City of Stockton's WSA. See also Master Response 4 of this FEIR (pp. 3-2 through 3-6).

The commentor also asserts that the City's water supply assessment does not account for water used within the COSMA by agriculture, and claims that this amounts to approximately 17,000 acre-feet of groundwater per year, thereby increasing the alleged overdraft of the groundwater basin to approximately 40,000 acre-feet per year. The City's WSA does not identify agricultural users among its customers or quantify their use because the City does not supply water to agricultural users. Consequently, the absence of agricultural use in the City's WSA does not constitute a defect in the WSA.

The commentor provides no data or support for his claim that agricultural uses in the entire COSMA amount to approximately 17,000 afy of groundwater, nor does the commentor offer any estimate of the existing groundwater usage for agricultural activities on the proposed project site. However, the data in the City's WSA prepared for the proposed project shows that the existing groundwater usage for the project site is between 10,962 and 12,789 afy (3 to 3.5 acre-feet per acre per year x 3,654 acres of existing agricultural use) (see page 46 of WSA and page 5-10 of DEIR). The total potable water demand for the entire project is estimated to be approximately 7,535 afy (WSA at page 6 [Table 1]), and the total nonpotable water demand for the entire project is estimated to be approximately 2,593 afy (Appendix Y [*Non-Potable Water Supply Assessment for the Proposed Mariposa Lakes Development*]), making the total water demand for the entire project (potable + nonpotable) approximately 10,128 afy. Therefore, the current groundwater usage on the project site exceeds the total water demand for the project by between 834 afy and 2,661 afy, assuming that all water supplied to the project is drawn from the groundwater basin, without any recharge of the groundwater basin from surplus surface water supplies. However, as explained in the DEIR, the potable water demand for the project would be met almost entirely by surface water supplies (WSA sections 3 and 4). Moreover, the proposed project would implement a groundwater recharge program that would divert purchased surplus surface water to the groundwater basin, providing for the application of at least 2 acre-feet of surplus surface water for recharge for every 1 acre-foot of banked groundwater used by the project. As noted in the WSA, in total, the project would result in "a clear water benefit to the groundwater basin." (WSA at page 5.)

The commentor's suggestion that agricultural demand within the COSMA has not been considered is also incorrect. Agricultural demand for groundwater has been factored into the calculations of sustainable yield by reducing the total acreage of allowable allocation towards the sustainable yield by the agriculture water demands that have existed over time (e.g., total urban acreage x 0.60 acre feet/acre/year = sustainable yield; whereas, total agricultural acreage = sustainable yield for existing agricultural production). Furthermore, the WSA recognizes that agricultural water demands have priority water rights to both surface water and groundwater. In the DWSP Report, agricultural water demands were considered in the determination of the sustainable yield of the groundwater basin in the following manner:

*AGRICULTURAL WATER DEMAND PROJECTIONS FOR
GROUNDWATER MANAGEMENT PURPOSES - The 17,000 acre feet/year*

of groundwater demand for agricultural uses presented in Table 2-3 [not shown] is added to the amount of groundwater for urban uses and included as part of the City's overall management of the groundwater supply. Over time, the 17,000 acre feet/year is assumed to decrease as agricultural areas shown within the General Plan Boundary (within and outside of the Urban Service Area) are urbanized. At General Plan build-out (anticipated to be 2015), the agricultural water demand served by groundwater within the Urban Service Area is estimated at 12,400 acre feet/year. Because the COSMA's water rights application extends beyond General Plan build-out, continued decreases in agricultural demands are assumed to occur until agricultural groundwater demands have been replaced with urban demands. (DWSP Report, January 2003, pg. 2-14)

Based on the 0.75 acre feet/ac/year factor, the COSMA's Urban Services Area of 66,000 acres could potentially use up to 50,000 acre feet/year of groundwater. Currently, the total estimated groundwater extraction within the Urban Services Area is 44,000 acre feet/year that includes approximately 17,000 acre feet/year from agricultural uses, and 27,000 acre feet/year from municipal uses including the COSMA, Cal Water, and County service areas. (DWSP Report, January 2003, pg. 3-10)

This approach finds that existing groundwater extractions by agriculture and municipal uses fall well below the sustainable yield of 0.75 af/ac/yr. With the displacement of agriculture due to urbanization, total groundwater use is expected to remain below the sustainable yield of the groundwater basin and sub-basins.

YEATES-24

The commentor questions the City's reliance on water from the DWSP to serve the proposed project, arguing that the water is already targeted to serve growth planned in the 1990 City General Plan and in any event would be subject to cutbacks, potentially severe cutbacks, under water contract Standard Term 91. The commentor is mistaken on both counts. The DWSP is a product of the effort to obtain new surface water supplies from the Delta through a water right application to SWRCB on January 6, 1996. That application requested an increasing amount of surface water from approximately 20,000 afy initially, up to 125,900 afy in 2050. The DWSP is intended to achieve the following three objectives:

- ▶ replace declining and unreliable surface water supplies;
- ▶ protect and restore groundwater resources;
- ▶ provide adequate water supplies to accommodate planned growth (including the MLSP).

On November 8, 2005, the Stockton City Council certified the DWSP EIR and also authorized the City staff to proceed with the project. The certified document was included as part of the water rights application package submitted to SWRCB, which in turn issued a permit for a Delta diversion for Phase I in the amount of 33,600 afy on March 8, 2006. The City is proceeding with design and construction of Phase I of the DWSP. As stated in the City's WSA (DEIR Appendix R), water from Phase I of the DWSP is sufficient to meet buildout water demands of the proposed project. See Master Response 3 in Chapter 3, "Master Responses," of this FEIR.

The commentator incorrectly states that Term 91 applies to the Water Right Permit for Phase I of the DWSP issued on March 8, 2006, and therefore incorrectly asserts that full DWSP Phase I water would not be available to the proposed project. In fact, the Water Right Permit issued by SWRCB provides that Term 91 does not apply to water diverted during Phase I of the DWSP; that is, to water diverted under Section 1485 of the Water Code. Specifically, Water Right Permit No. 21176 issued to the City provides that Term 91 will apply to water diverted under Water Code Section 11460, et seq., but not to water diverted pursuant to Water Code Section 1485. In a letter from Victoria Whitney, Chief of the Division of Water Rights of the SWRCB dated November 16, 2005 to Allen Short of the San Joaquin River Group dismissing the protest of the San Joaquin River Group to the City's water right application pursuant to stipulation between the City and the San Joaquin River Group, Ms. Whitney summarized the City's permit as to Term 91 as follows:

If and when the State Water Board approves the application by the City, any permit issued under bifurcated Application 30531 will incorporate, within the authority of the State Water Board, the water right permit term which implemented the Agreement and Stipulation between the City and the Authority, including (1) Standard Terms 80, 90, and 91 for all appropriations made from the flow of the San Joaquin River, but not as to the water diverted under Water Code Section 1485 and; (2) terms assuring that the City adequately accounts for appropriations made under Water Code Section 1485. [Emphasis added.]

As indicated by Ms. Whitney, the Water Code Section 1485 water is Phase I of the DWSP. Phase I was bifurcated from the remaining application to cover just the Section 1485 water of the City, which is based on a specific statutory right to recover water released from the City's wastewater treatment plant. Term 91 may apply to Phase II of the DWSP, which will be based on Section 11460 et seq. of the Water Code (the Watershed and Area of Origin Statutes); however, the proposed project relies only on water from DWSP Phase I, not Phase II. No revisions to the DEIR are necessary.

YEATES-25

The commentator claims that the City overstates the amount of water available to serve the proposed project because it confuses "capacity with production;" the gist of the comment is the claim that the City's (and SEWD's) water treatment systems would be insufficient to serve the proposed project. The commentator also assumes that SEWD would have to increase its supply to increase its water treatment production.

First, the City notes that the commentator cites to Appendix D, which is ostensibly the Water Supply Evaluation prepared for the 2035 City General Plan; DEIR Appendix D in fact consists of the BNSF Health Risk Assessment. The water supply evaluation prepared for the 2035 City General Plan is not attached to the DEIR as an appendix, although it is incorporated by reference in the City's WSA and is attached to this FEIR as new Appendix CC.

Second, the commentator incorrectly assumes that the water treatment plant production data provided in the City and Cal Water WSAs (DEIR Appendices R and S, respectively) are overstated. Specifically, the commentator assumes there is no redundancy at the water treatment plants. In fact, however, redundancy is provided. Total design capacity includes raw water, conveyance water, production capacity, reconveyance, and necessary redundancy. According to COSMUD, the SEWD treatment plant has recently demonstrated its ability to operate at a production rate of 60 million gallons per day (mgd). Redundancy is incorporated as part of the water facilities to account for

backwashing of filters and other equipment maintenance or repair including emergency repairs. (Madison and Granberg, pers. comm., 2007.) Therefore, the water treatment plant production data provided in DEIR Appendices R and S is accurate.

Third, the City does not believe that an increase in design capacity to 60 mgd at the SEWD Treatment Plant will require new sources of water. During wet and normal years, SEWD has more than enough water to supply the increased capacity. With a conjunctive use approach, water can be taken safely from the groundwater basin in dry years because there will be significant reductions in groundwater pumping during the wet and normal years when larger surface supplies are available to SEWD. Please note that according to Kevin Kauffman, SEWD general manager, the expansion of the SEWD water treatment plant to a 60 mgd capacity has been completed, and the facility is awaiting issuance of permits from SWRCB (Kauffman, pers. comm., 2007). See also Master Response 4 in Chapter 3, "Master Responses," of this FEIR.

For the reasons discussed above, in Master Response 4, and in the City and Cal Water WSAs, it is the opinion of COSMUD and SEWD and their engineering consultants that their WSAs do not overstate water supplies for the MLSP project. Rather, these agencies believe that their WSAs properly recognize that surface water supplies would be available to serve the proposed project in wet years, and that groundwater would be available to serve the proposed project in severe dry years without adversely affecting the groundwater basin. The assumptions made in the WSAs regarding available surface water and groundwater are consistent with various policy documents of the City and County and would, among other things, achieve the objectives of the DWSP Phase I, as stated in previous responses. See also Master Response 6 in Chapter 3, "Master Responses," of this FEIR. No revisions to the DEIR are necessary.

YEATES-26

The commentor implies that there is little evidence to support the City's conclusion that there would be water to serve the proposed project and implies that the water supply evaluations severely underestimate future water demand. The City disagrees on both counts. The City disagrees with the commentor's assertion that its studies regarding water supply are based on "speculations and wishful thinking." The scientific rationale for the conclusions reached by the City regarding water supply are contained in DEIR Appendices R and S. See also new FEIR Appendix CC, which is the Water Supply Evaluation prepared by the City in support of the 2035 City General Plan, and which was incorporated by reference in Appendix R. See Master Response 6 contained in Chapter 3, "Master Responses," of this FEIR.

As stated previously, Chapter 5 of this FEIR includes an Errata to the City's WSA. The errata corrects the population estimates and water demand over time as shown in Figure 3 of the WSA. However, there is no corresponding change in water demand as a result of this change in population growth, because water demands are based on land use acreages and not on a per capita basis. Therefore, the City disagrees with the commentor's calculations of the amount of water demand, the amount of new water supplies, and the amount of exceedance of firm supplies.

The City disagrees with the commentor's assertions regarding water from Phase I of the DWSP and expansion of the SEWD water treatment plant. Phase I of the DWSP already has an SWRCB permit. See Master Response 3 contained in Chapter 3, "Master Responses," of this FEIR regarding water from DWSP. The expansion of the SEWD water treatment plant has, in fact, been completed. This facility now has the capacity to treat up to 60 mgd, and is awaiting an operational permit from SWRCB (Kauffman, pers. comm., 2007). Therefore, the City disagrees with the commentor's assertion that an

additional 136,000 afy would be required to support growth contemplated in the 2035 City General Plan, and furthermore, the City disagrees that this 136,000 afy of water would come from the groundwater basin.

Contrary to the commentor's assertion, Phase I of the DWSP does not contain any Term 91 provisions (see response to YEATES-24, above), and therefore the City will be able to pump more than the 50% claimed by the commentor. Because the City disagrees with the commentor's calculations of overall COSMA water demand and overall COSMA water supply, the City does not believe that 94,208 afy would be required from the groundwater basin. See Master Response 6 contained in Chapter 3, "Master Responses," of this FEIR.

YEATES-27

The commentor expresses concern that the DEIR and supporting studies do not acknowledge that the Eastern San Joaquin Groundwater Basin (the "ESJ Basin") is one basin that does not contain hydrogeologic barriers dividing agricultural areas from urban areas, and asserts that the entire ESJ Basin is in a critical condition of overdraft. The commentor is incorrect that the City has not acknowledged the unity of the groundwater basins in its studies. As explained at page 47 of the City's WSA, "the general approach taken to determine the adequacy of the groundwater basin from a basin-wide perspective, assuming all existing and future users of the groundwater basin to 2035, is based on using the integrated groundwater surface model (ISGM) for San Joaquin County[.]" See DEIR, Appendix R at 47; see also Master Response 4 in this FEIR (pg. 3-2 through 3-6).

The City also disagrees with the assertion that the ESJ Basin is in a "critical condition of overdraft," for the reasons stated in pages 22-27 of the City's WSA. See also Master Response 4 of this FEIR (pg. 3-2 through 3-6).

The commentor claims that the City cannot legally rely on groundwater as a source of water supply because doing so would infringe on other groundwater users. As a matter of law, the extraction of groundwater from a basin such as Eastern San Joaquin County is not restricted unless the groundwater basin has been adjudicated, which is not the case with the Eastern San Joaquin County basin or any of its sub-basins in the Central Valley. A groundwater adjudication is brought about by a lawsuit filed in Superior Court. The lawsuit must name all of the water users within the basin.

The Superior Court may refer to the SWRCB or to a referee to deal with factual issues. The ultimate decision is then made by the Court and is subject to appeal. To date, in the entire Central Valley Basin, including Eastern San Joaquin County, the large cost of adjudication has outweighed the possible benefits of adjudication. California groundwater is not regulated or administered through an administrative agency but only by the courts. "[A]n overlying water right...is the right to take water from the ground underneath the land for use on the land." (*Tehachapi-Cummings County Water Dist. v. Armstrong* (1975) 49 Cal.App.3d 992, 1001) "Appropriation is the use of water for non-overlying purposes such as exportation to lands outside the basin or for municipal use within the basin." (*Id.* at p. 1000, fn. 6.) An overlying owner or any other person having a legal right to surface or ground water may take only such amount as he reasonably needs for beneficial purposes. Public interest requires that there be the greatest number of beneficial uses which the supply can yield, and water may be appropriated for beneficial uses subject to the rights of those who have a lawful priority. Any water not needed for the reasonable beneficial uses of those having prior rights is excess or surplus water. In California, surplus water may rightfully be appropriated on privately owned land for nonoverlying uses, such as devotion to a public use or exportation beyond the basin or watershed. As between overlying owners, these rights, like those of riparian rights, are correlative and are referred to as belonging to all in common; each may use only his reasonable share

when water is insufficient to meet the needs of all. As between appropriators, however, the one first in time is the first in right, and a prior appropriator is entitled to all the water he needs, up to the amount that he has taken in the past, before a subsequent appropriator may take any (*Pasadena v. Alhambra* (1949) 33 Cal.2d 908). Once a surplus ceases to exist, an overlying user or appropriator may institute legal proceedings to safeguard a percolating water supply, and may restrain any additional user beyond the safe yield (*Id.*).

The commentor also asserts that the DEIR and WSAs do not account for the fact that other growing San Joaquin County cities rely heavily on groundwater use, and that significant growth is occurring in these other cities. The commentor is incorrect. As explained at page 47 of the City's WSA, "the general approach taken to determine the adequacy of the groundwater basin from a basin-wide perspective, assuming all existing and future users of the groundwater basin to 2035, is based on using the integrated groundwater surface model (ISGM) for San Joaquin County[.]" See DEIR, Appendix R at 47; see also Master Response 4 in this FEIR (pp. 3-2 through 3-6).

The commentor also claims that growth contemplated by the 2035 City General Plan, together with the growth anticipated from the proposed project, would cause a decline in groundwater levels. As explained in the City's WSA, the City disagrees with the commentor's claim that anticipated growth in the COSMA would cause a decline in groundwater levels. (DEIR Appendix R at 46-48)

Finally, the commentor refers to the USGS Open File Report 2006-1309 (Izbicki et al. 2006) and notes that historic groundwater pumping, primarily for agricultural uses, resulted in a decline of the groundwater table in Eastern San Joaquin County and an increase in chloride concentrations in the Eastern San Joaquin groundwater sub-basin. The commentor claims that lowering the groundwater table by future increases in groundwater pumping would exacerbate this problem. For the reasons explained at pages 46-49 of the City's WSA, the City disagrees with the claim that the proposed levels of future groundwater pumping would result in a decline in the groundwater table. In addition, the City is well aware of the issues with saline intrusion into groundwater, and the City's WSA addresses and discusses the City's approach to conjunctive management of water resources in order to reduce the threat of saline intrusion. See DEIR Appendix R; see also response to MORADA-8 above, and Master Response 4 in Chapter 3, "Master Responses," of this FEIR

Therefore, the City disagrees that the analysis contained in the DEIR or the WSA underestimates the City's direct and cumulative impacts on regional groundwater supplies. See Master Response 6 in Chapter 3, "Master Responses," of this FEIR.

YEATES-28

The commentor questions the use of agricultural credits by the City given the current state of groundwater overdraft generally. The City disagrees with the commentor's assertions. See response to comment YEATES-10, above and Master Response 6 in Chapter 3, "Master Responses," of this FEIR. No revisions to the DEIR are necessary.

YEATES-29

The commentor criticizes the MLSP groundwater recharge program, especially the Integrated Water Management Plan. As an initial matter, we note that the commentor relies on incorrect nonpotable water demand numbers. (See response to SWRCB-7 above.) The proposed recharge project is a phased process, and studies are ongoing. DEIR Appendix Q, which indicated a nonpotable demand of 3,089 afy, was the correct demand number, as evaluated in the DEIR in Impacts 11-6 and 17-3. That demand number has since been further refined, as explained in Master Response 5 in Chapter 3, "Master Responses," of this FEIR. As part of Master Response 5, revisions have been

made to DEIR Impacts 11-6, 17-3, and 17-12 as shown in Chapter 5 of this FEIR, “Corrections and Revisions to the DEIR and Errata to DEIR Appendices.” Those changes alter the significance conclusion of Impacts 17-3 and 17-12 from potentially significant and unavoidable to less than significant, and no mitigation measures are required. The significance conclusion of Impact 11-6 remains unchanged.

The commentor also questions the availability of surplus surface water for the recharge program. DEIR Impact 17-3 included a quotation from a letter provided by SEWD indicating that the sources of nonpotable water for the proposed project would be surplus surface water from SEWD and/or CSJWCD. This information has since been formalized in a Senate Bill 610-compliant WSA prepared by SEWD, on behalf of SEWD and CSJWCD, which is attached to this FEIR as a new Appendix Y. Therefore, the source of nonpotable water for the proposed project is documented and secured.

The last two paragraphs of this comment include a discussion of infiltration rates at the Arbin recharge site. As discussed in the response to YEATES-12 above, the commentor’s calculations appear to be based on an average of the harmonic means presented in Table 2 of the *Groundwater Recharge Feasibility Assessment* (DEIR Appendix Q) and Table 11-5 on page 11-36 of the DEIR. In that report, harmonic means of infiltration rates of multiple soil layers in 90-foot soil columns were used to estimate percolation rates. The commentor’s suggested infiltration rate of 22 acre-feet per day is an average of the harmonic means, and is therefore an “average of averages.” Thus, the commentor’s calculation has no statistical value. Furthermore, this 22-acre-foot-per-day “average of averages” fails to account for natural variations in the subsurface with respect to hydraulic conductivity (vertical or horizontal). Groundwater will follow the most permeable path, which includes both lateral and vertical flow. Therefore, the calculations presented by the commentor are not valid. See Master Response 6 in Chapter 3, “Master Responses,” of this FEIR. Furthermore, the quantity of banked groundwater need only meet the demand posed by each incremental development phase of the project. The quantity needed for the first phase would be less than that required by later phases. Therefore, the need to accumulate the 3-year reserve for the final phase demand would occur many years after the first phase is built.

YEATES-30

The commentor reiterates some of his earlier statements. The City disagrees with the commentor’s statements for the reasons stated above. The proposed project would result in an increased demand on the COSMA potable water system of 7,525 afy at full project buildout, as evaluated in DEIR Impact 17-1. The supply of surplus surface water for the project’s nonpotable water demands is secured (see new Appendix Y attached to this FEIR). Regarding the City’s right to use water from Phase I of the DWSP to serve the proposed project, the City disagrees with the commentor’s assertion—see Master Response 3 in Chapter 3, “Master Responses,” of this FEIR. See also Master Response 6 in Chapter 3, “Master Responses,” of this FEIR. No revisions to the DEIR are necessary.

YEATES-31

The commentor reiterates some of his earlier statements. The City disagrees with the commentor’s statements for the reasons stated above. The City disagrees that the COSMA relies on an overdrafted groundwater sub-basin. See Master Response 4 in Chapter 3, “Master Responses,” of this FEIR and pages 22–27 of the City’s WSA. The City disagrees with the commentor’s assertions regarding the amount of “firm” water available; see response to YEATES-21, above and Master Response 2 in Chapter 3, “Master Responses,” of this FEIR.

The City believes it appropriately relies on water from the DWSP and, as discussed in the response to YEATES-24 above, the Term 91 conditions do not apply to Phase I of the

DWSP. Information regarding the capacity of the City's treatment plants is contained in the response to YEATES-24. Therefore, the City asserts that there is no factual basis to support the commentor's claim that "constraints placed upon the City's facilities are so severe that it is unlikely that the City will be able to obtain more than small fraction of this amount [33,000 afy from DWSP]." Water use from the DWSP place of use is discussed in Master Response 3 in Chapter 3, "Master Responses," of this FEIR. No revisions to the DEIR are necessary.

YEATES-32

The commentor reiterates some of his earlier statements. The City disagrees with the commentor's statements for the reasons stated above. For the reasons stated by the City in responses to YEATES-2 through YEATES-4, YEATES-6 through YEATES-10, YEATES-13, and YEATES-21 through YEATES-30; in Master Responses 2-6 contained in Chapter 3, "Master Responses," of this FEIR; and based on the information contained in DEIR Appendices R, S, and Y, the City disagrees that the only source of water supply for the proposed project is the groundwater basin, and the City disagrees that the sub-basin in the vicinity of Stockton is currently in a state of overdraft. The City does not believe that the proposed project would result in an adverse impact to the groundwater basin, and therefore no mitigation measures are required, and no revisions to the DEIR are necessary.

5 CORRECTIONS AND REVISIONS TO THE DEIR AND ERRATA TO DEIR APPENDICES

5.1 INTRODUCTION

This chapter includes revisions to the text in the DEIR following its publication and public review. The changes are presented in the order in which they appear in the original DEIR and are identified by DEIR page number. Revisions are shown as excerpts from the DEIR text, with strikethrough (~~strikethrough~~) text for deletions and underline (underline) text for additions.

5.2 CORRECTIONS AND REVISIONS TO THE DEIR

TABLE OF CONTENTS, APPENDICES, PAGE IV

The following new appendices are hereby added on CD at the back of the FEIR text volume:

<u>X</u>	<u>Phase I Environmental Site Assessment, Mariposa Lakes Development, Stockton, California</u>
<u>Y</u>	<u>Non-Potable Water Supply Assessment for the Proposed Mariposa Lakes Development</u>
<u>Z</u>	<u>Modeling Results, Health Risk Assessment based on Emissions from Danamark Processing Facility</u>
<u>AA</u>	<u>Memorandum Regarding Mariposa Lakes Revised Non-Potable Water System Analysis</u>
<u>BB</u>	<u>Supplemental Geotechnical Investigation, Groundwater Recharge Feasibility Assessment</u>
<u>CC</u>	<u>Water Supply Evaluation Prepared for the Proposed 2035 City of Stockton General Plan Update</u>
<u>DD</u>	<u>Exhibits to Comment Letter from Law Office of William Yeates</u>
<u>EE</u>	<u>Draft State Route 4 Realignment Project Traffic Forecast and Traffic Operations Report</u>
<u>FF</u>	<u>Greenhouse Gas Emissions Modeling</u>

PROJECT DESCRIPTION, FIGURE 3-8, PAGE 3-11

Figure 3-8 is hereby revised to reflect the correct City of Stockton city limit boundary, and to reflect the change in the land use plan removing the 30-acre sports park and converting it to an industrial land use.

PROJECT DESCRIPTION, FIGURE 3-9, PAGE 3-15

Figure 3-9 is hereby revised to show the correct City of Stockton city limit boundaries, and to provide additional detail regarding the parcel numbers.

PROJECT DESCRIPTION, FIGURE 3-10, PAGE 3-16

Figure 3-10 is hereby revised to show the correct City of Stockton city limit boundaries, and to indicate which properties within the project site are not under the project applicant's control and therefore would not be annexed to the City as part of the proposed project.

PROJECT DESCRIPTION, FIGURE 3-11, PAGE 3-17

Figure 3-11 is hereby revised to reflect the land use changes shown in Figure 3-8, and to show the correct City of Stockton city limit boundary.

PROJECT DESCRIPTION, FIGURE 3-16, PAGE 3-24

Figure 3-16 is hereby revised to reflect the land use changes shown in Figure 3-8, and to show the correct City of Stockton city limit boundary.

PROJECT DESCRIPTION, BUSINESS/PROFESSIONAL AREAS, PAGE 3-26

The text describing the proposed business/professional areas is hereby revised as follows:

Business/Professional Areas

An approximately 57-acre area located immediately west of the Austin Road extension would be developed for proposed Business-Professional uses. As opposed to the more traditional industrial uses discussed above, the Business-Professional area is envisioned as an administrative headquarters/research office campus area. The proposed floor area ratio for this area is 0.3. This area would accommodate development of approximately 749,000 square feet and would generate approximately ~~615~~ 2,995 jobs.

PROJECT DESCRIPTION, COMMUNITY PARKS, PAGE 3-30

The first paragraph on page 3-30 is hereby revised as follows:

Six community parks would be located throughout the SPA. These parks would provide a variety of recreational uses and facilities such as baseball fields, tot lots, soccer fields, basketball courts, picnic areas, and multiuse lawn areas. The facilities and park space also may serve as community centers for social meetings and other events. Many parks are adjacent to schools to allow for shared use of public facilities, such as public restrooms. Community parks would typically be located adjacent to linear open spaces to encourage use of multiuse trails. A master community park is located within the Austin Road Town Center. ~~One of the community park facilities would be designed as a 30-acre regional sports complex located within development Phase 3 in the northern part of the SPA, at the corner of Gillis Road and the proposed SR 4 realignment. The regional sports park would include approximately 8 to 12 baseball/softball fields, along with soccer fields, which would be lighted at night to accommodate tournament play.~~

PROJECT DESCRIPTION, FIGURE 3-20, PAGE 3-42

Figure 3-20 is hereby revised to show the following:

- ▶ corrected City of Stockton city limit boundaries,
- ▶ additional types of streets and associated rights-of-way,
- ▶ an expanded right-of-way of the proposed SR 4 realignment from 174 feet to 180 feet, and
- ▶ a future City Class I bike path west of the project site between Marfargoa Drive and Clark Drive.

PROJECT DESCRIPTION, TRANSIT, PAGE 3-58

The first paragraph of the transit discussion on page 3-58 is hereby revised as follows:

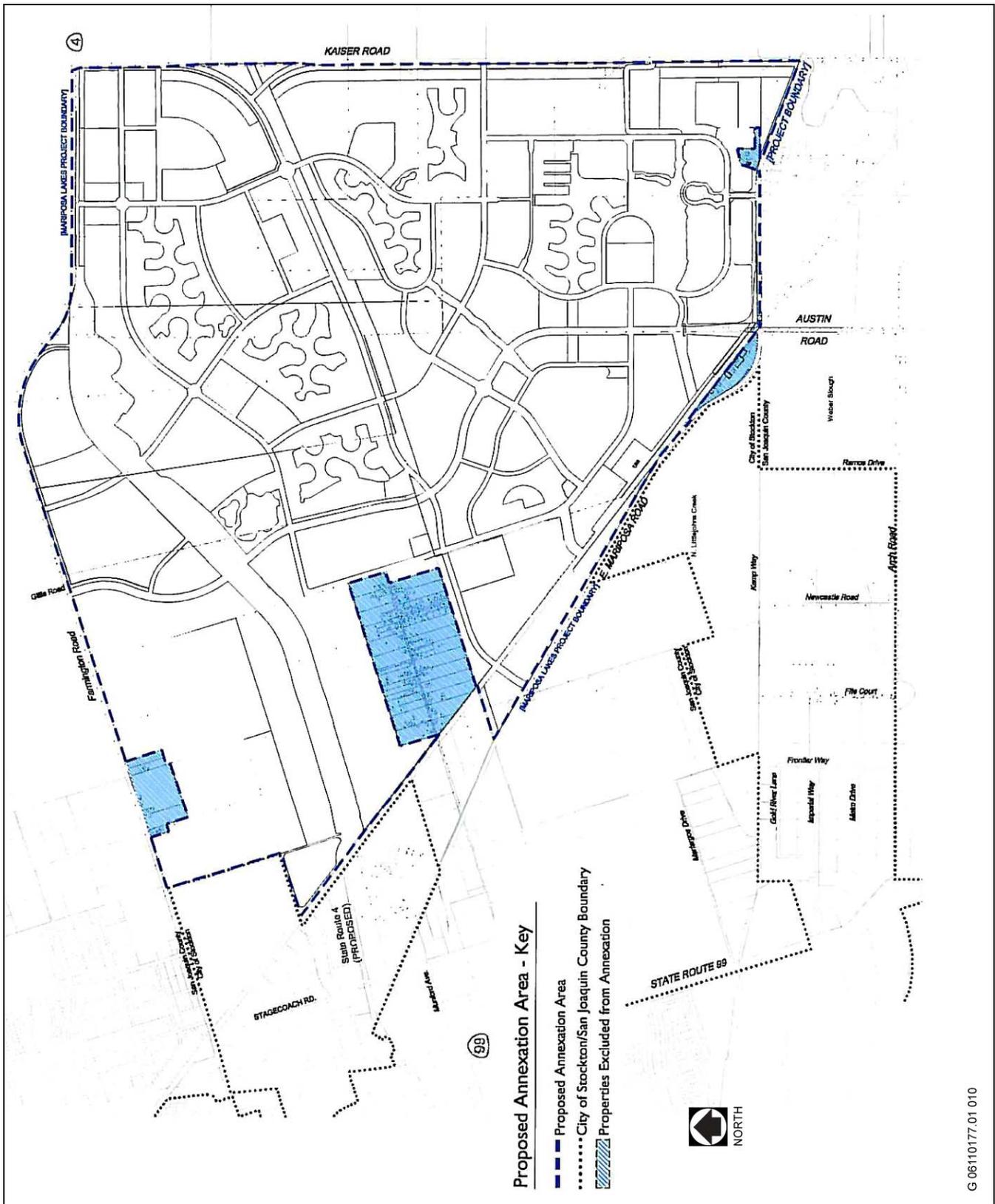
The proposed project includes ~~relocation of the existing Amtrak station in downtown Stockton to the SPA. The proposed construction of an Amtrak rail/multimodal station would be located~~ in the Austin Road Town Center. This facility, described in more detail below, would be constructed during Phase 1 of the proposed project. The MLSP envisions that San Joaquin Regional Transit District (SJRTD) service would be extended to this location and other locations in the project vicinity. The MLSP would



Source: Randall Planning & Design, Inc. 2007

Mariposa Lakes Land Use Plan

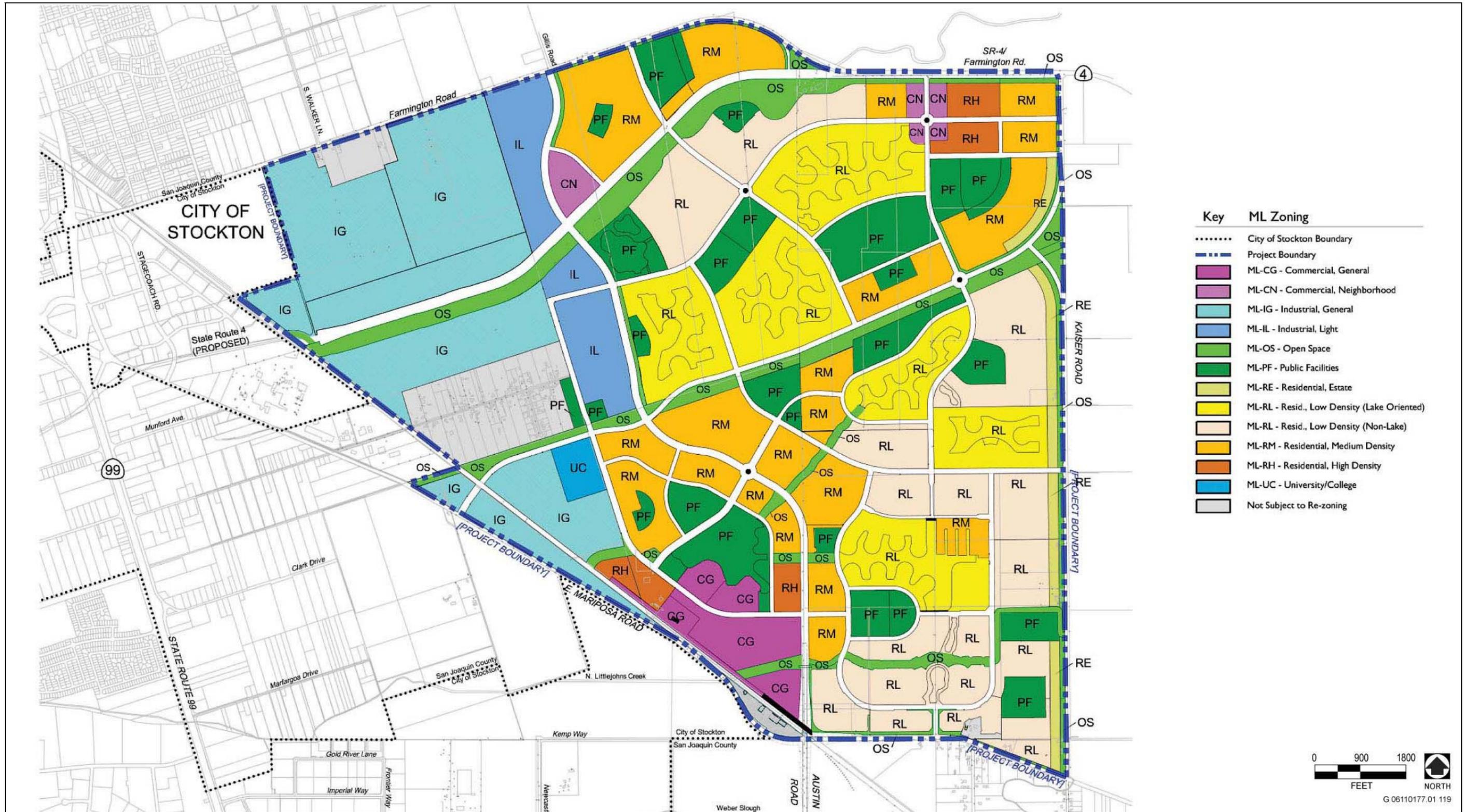
Figure 3-8



Source: Randall Planning & Design, Inc.

Proposed Annexation Area

Figure 3-10



Source: Randall Planning & Design, Inc. 2007

Prezoning Map

Figure 3-11



Source: Randall Planning & Design, Inc. 2007

Illustrative Plan

Figure 3-16

incorporate transit improvements recommended by SJRTD into proposed arterial street systems and areas of commercial development.

PROJECT DESCRIPTION, STOCKTON AMTRAK RAIL/MULTIMODAL STATION, PAGE 3-60

The second paragraph on page 3-60 is hereby revised as follows:

The proposed land use plan designates a 14.9-acre site within the proposed Austin Road Town Center for development of a new Stockton Amtrak station as part of development Phase 1. The existing Amtrak station is currently located on South San Joaquin Street in downtown Stockton. ~~As mentioned in the “Transit” section above, the proposed project would include the relocation of the facility to the SPA. Upon the proposed relocation, the existing Amtrak station would be used as a hub for bus transportation of passengers to the new station site within the SPA. The relocated~~ The Amtrak station proposed as part of the project, in addition to serving as a hub for Amtrak passengers, may also find future use in connection with other regional passenger rail services; these potential uses are being explored by the project applicant(s) with Caltrans and other rail transportation agencies.

PROJECT DESCRIPTION, STOCKTON AMTRAK RAIL/MULTIMODAL STATION, PAGE 3-60

The last paragraph on page 3-60 is hereby revised as follows:

Caltrans has been considering relocation of the Amtrak station to the southeast area of Stockton for many years. Caltrans also considered a new site adjacent to the BNSF railroad line at SR 4. The project applicant(s) and Caltrans have executed a Memorandum of Understanding (MOU) that provides for ~~the relocation of the downtown Stockton~~ a new Amtrak station to in the SPA. However, it has not been determined whether or not the existing downtown Amtrak station would be closed or relocated. The closure and relocation of the existing Amtrak station would be the subject of a separate environmental document that would be prepared by Caltrans to address direct and indirect effects of that action.

PROJECT DESCRIPTION, STORM DRAINAGE, PAGE 3-66

The seventh paragraph on page 3-66 is hereby revised as follows:

Proposed industrial areas would be drained by conventional storm drainage catch basins and collection lines leading to a series of 12 detention basins averaging about 4.7 acres in size (Figures 3-17 and 3-18). The proposed detention basins would also be designed as “wet pond” features. The wet ponds would provide stormwater treatment; and floodwater detention, and may also serve as groundwater recharge basins. The 18.6-acre detention basin in the northwest corner of the project site may also serve as a groundwater recharge basin, should it be deemed suitable.

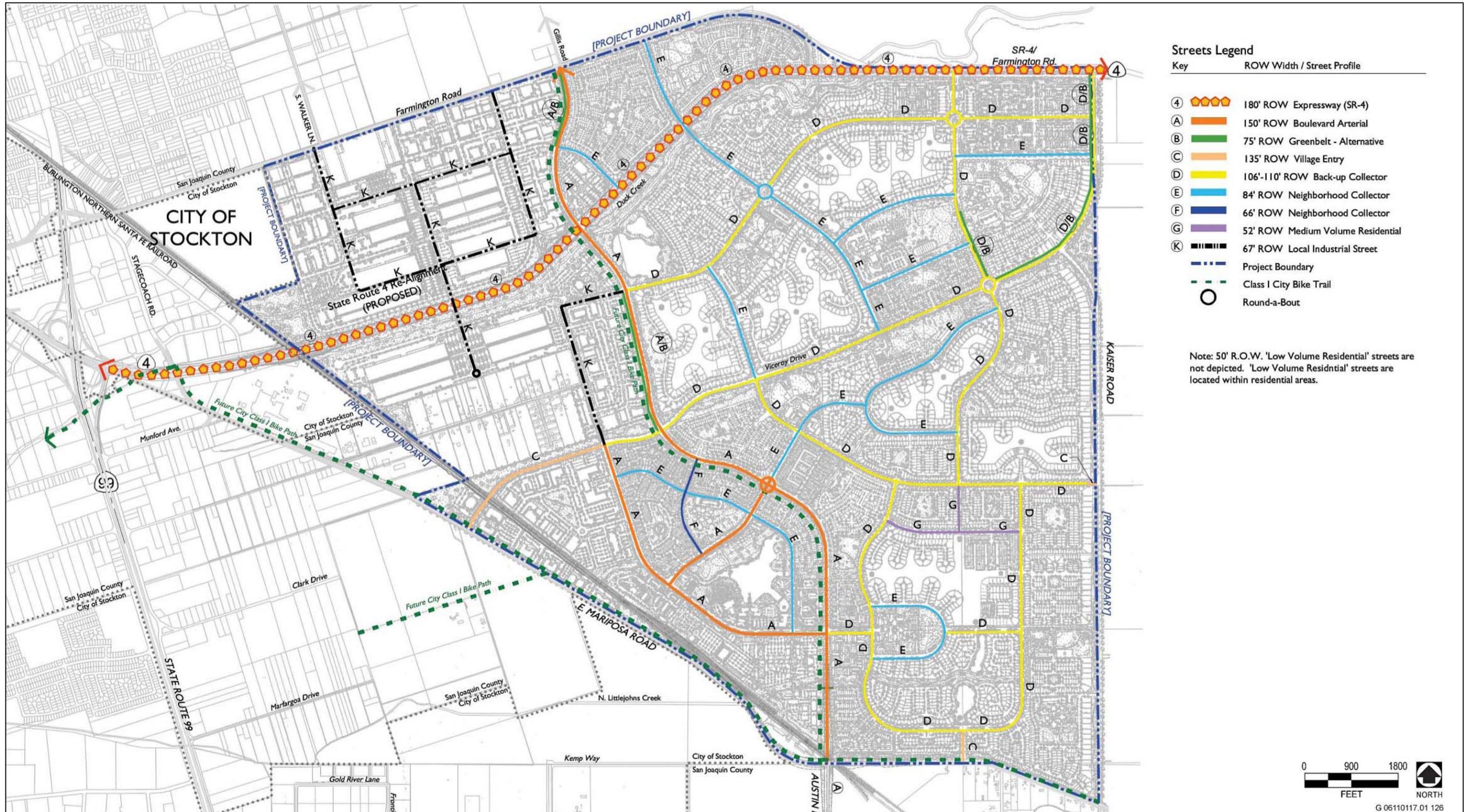
PROJECT DESCRIPTION, FIGURE 3-31, PAGE 3-67

Figure 3-31 is hereby revised to reflect the correct City of Stockton city limit boundary.

PROJECT DESCRIPTION, STORM DRAINAGE, PAGE 3-70

The third paragraph on page 3-70 is hereby revised as follows:

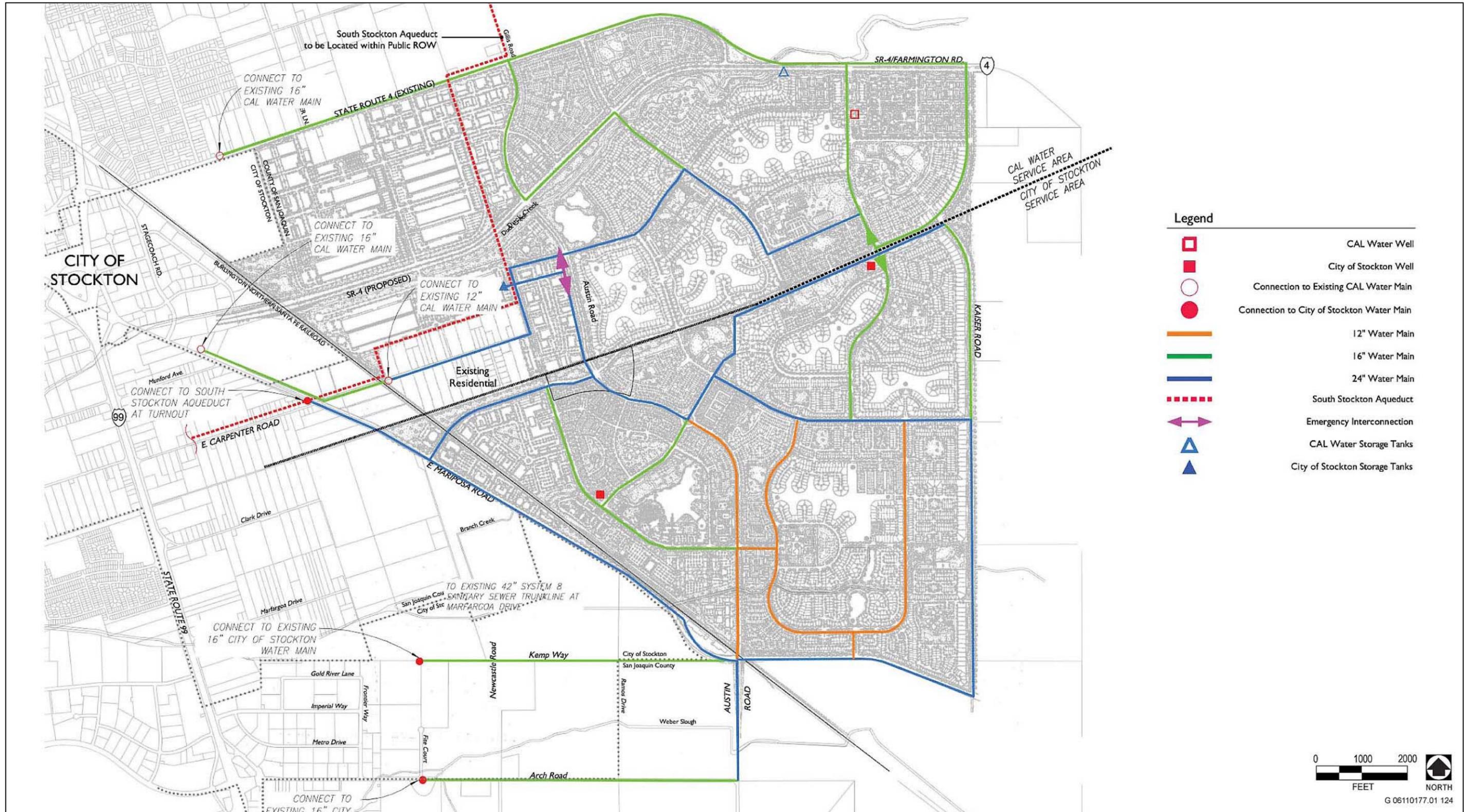
~~Some or all of the wet detention ponds may be designed to serve also as groundwater recharge facilities; in this case, the bottoms of the basins would be unlined. To maintain the recharge function, the basins~~



Source: Randall Planning & Design, Inc.

Proposed Circulation Diagram

Figure 3-20



Source: Stantec 2007

Proposed On- and Off-site Potable Water Supply Infrastructure

Figure 3-31

~~would be periodically drained and basin bottoms would be scraped, tilled, or otherwise maintained to improve the water percolation rate.~~

PROJECT DESCRIPTION, FIGURE 3-35, PAGE 3-74

Figure 3-35 is hereby revised to reflect the correct City of Stockton city limit boundary, and to show the proposed connection to the System No. 8 sewer force main.

PROJECT DESCRIPTION, LIBRARIES, PAGE 3-79

The first paragraph on page 3-79 is hereby revised as follows:

Sufficient land area is available within proposed parks and open spaces in the SPA to adequately accommodate a new southeast Stockton branch library, if warranted. If the Stockton Library Facilities Master Plan indicates that a branch library located in the SPA is warranted, costs associated with the development of a new library would be provided from a bond grant from the California State Library. Additional costs would be recovered through payment of public facilities fees for libraries, which are collected for all development projects within the Stockton city limits. The new community library would be located within the Town Center Community Park, next to the lake (see Figure 3-8), in the southwestern portion of the SPA. The project applicant(s) would provide the library site and would be responsible for site preparation costs, thus providing the City with a site ready for library facility construction.

PROJECT DESCRIPTION, PROJECT LEVEL DEVELOPMENT-PHASE 1, PAGE 3-80

The text at the top of page 3-80 is hereby revised as follows:

Approximately 71 acres of artificial lakes would be created. The Amtrak rail/multimodal station, and the interim fire station, ~~and the public library~~ would be developed during Phase 1. This phase would produce approximately 4,535 new residential dwelling units and would generate an estimated 1,557 new jobs.

Phase 1 development involves construction of the following on- and off-site infrastructure, roadway, and other improvements required to support MLSP development.

On-Site Improvements

- ▶ Construction of one new City of Stockton water supply well
- ▶ Construction of a new interim fire station

PROJECT DESCRIPTION, FIGURE 3-37, PAGE 3-81

Figure 3-37 is hereby revised to reflect the land uses shown in Figure 3-8, and to show the correct City of Stockton city limit boundary.

PROJECT DESCRIPTION, PHASE 5, PAGE 3-84

The first paragraph of the description of Phase 5 is hereby revised as follows:

Phase 5 of the proposed project consists of approximately 422 acres (not including major roads). Less than half of the acreage would be devoted to planned residential areas. This phase would produce

approximately 904 400 residential units, 2.3 million square feet of industrial uses, and an estimated 1,862 jobs. This development phase would include the following components:

PROJECT DESCRIPTION, MEASURES TO REDUCE GREENHOUSE GAS EMISSIONS, PAGE 3-84

The following text is hereby added to the bottom of page 3-84:

3.5 Measures Incorporated into the Proposed Project to Reduce Greenhouse Gas Emissions

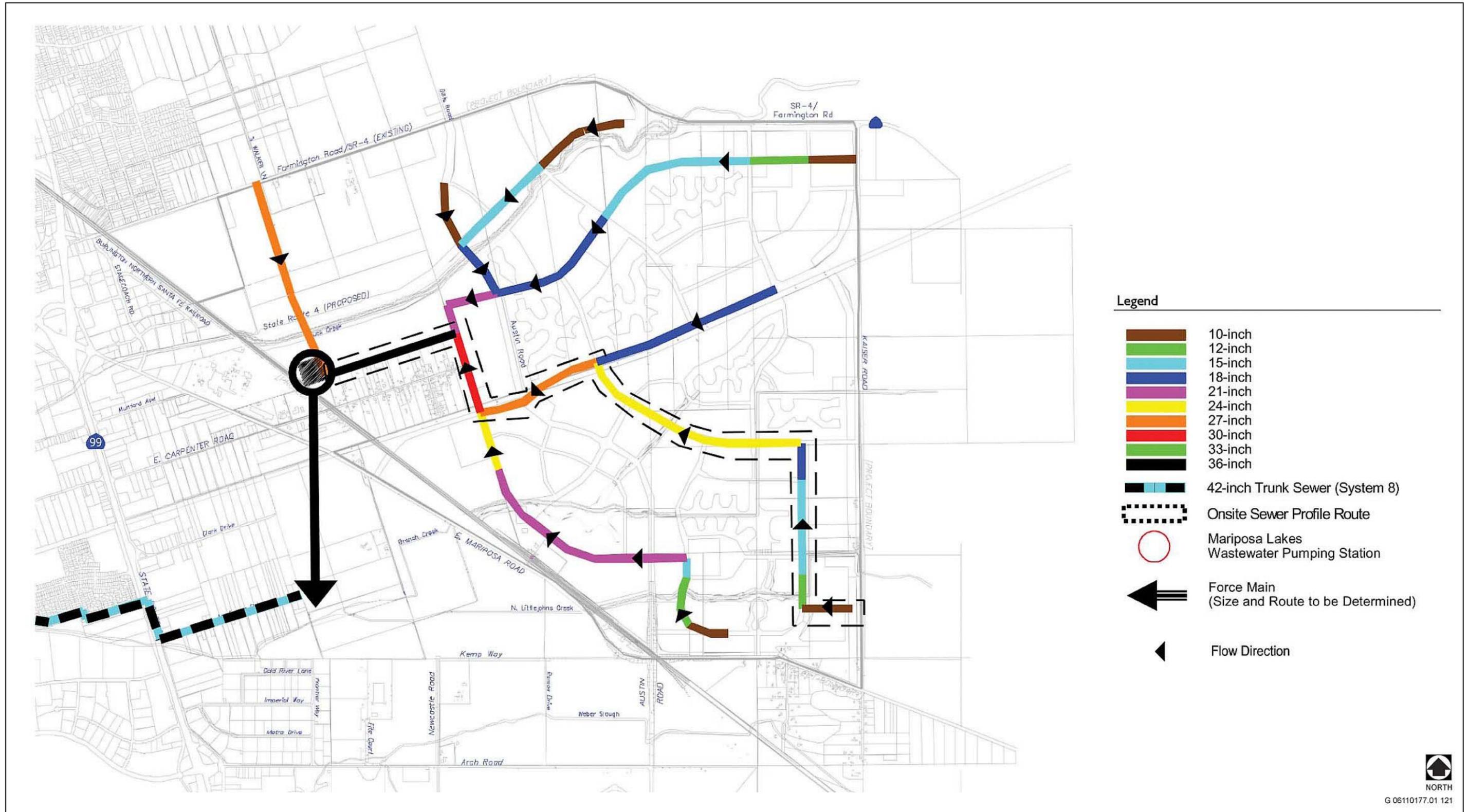
In March 2008, the California Attorney General’s (AG’s) office published information to assist local government agencies in carrying out their duties under the California Environmental Quality Act (CEQA) as they relate to global warming. This publication, titled *The California Environmental Quality Act—Addressing Global Warming Impacts at the Local Agency Level*, identifies various measures that can be incorporated into development projects to help combat the adverse effects of global warming.

A primary goal of the City and the project applicant has been to set a new standard for “green” development in the Stockton region. This goal has guided the design and development of the proposed project, resulting in multiple land use and design features intended to create a community that is less dependent on the automobile, more energy efficient, and that promotes increased conservation of natural resources. The MLSP incorporates various features designed to reduce the proposed project’s contribution to global climate change, by reducing the emissions of greenhouse gases. The proposed land use plan calls for compact, mixed-use development providing housing, schools, parks, and neighborhood-serving commercial and retail uses within an extensive network of bicycle and pedestrian trails and corridors, thereby providing access to necessary services without the need for automobile travel. It also provides for development of a substantial number of employment-generating land uses (industrial, commercial, retail, office) in close proximity to a variety of housing types, densities, and lot sizes, thereby reducing in both number and length the vehicle trips required between housing and jobs.

A list of the AG’s “Generally Applicable” measures to reduce greenhouse gas emissions that have been incorporated into the MLSP is provided below. The MLSP achieves a compliance rating of over 90% for these project-specific measures. As discussed in detail in Impact 6-4 (DEIR Chapter 6, “Air Quality”), an individual project by itself cannot generate enough greenhouse gas emissions to substantially influence global climate change. A project participates in this impact by its incremental contribution which, when combined with the cumulative contributions of all other sources of greenhouse gases, cause global climate change impacts. As noted in the AG’s memo, specific measures should not be considered in isolation, but as part of a larger set of measures implemented by all projects for the reduction of greenhouse gas emissions and the subsequent effects of global warming.

A. Energy Efficiency

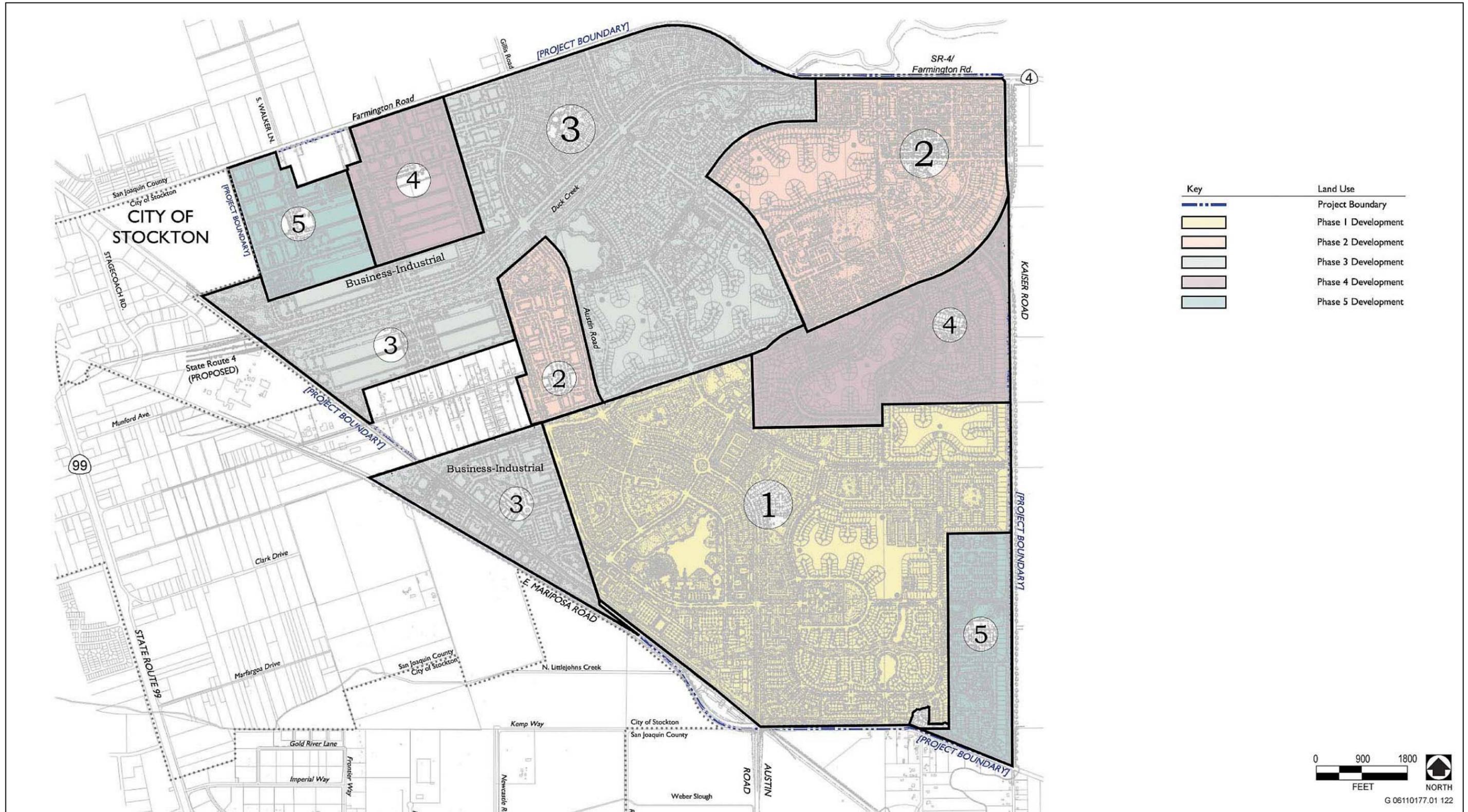
- ▶ Design buildings to be energy efficient. Site buildings to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use.
- ▶ Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings.
- ▶ Install light colored “cool” roofs, cool pavements, and strategically placed shade trees.
- ▶ Provide information on energy management services for large energy users.



Source: Stantec 2007

Proposed Sanitary Sewer Plan

Figure 3-35



Source: Randall Planning & Design, Inc. 2007

Proposed Phasing of the Mariposa Lakes Specific Plan

Figure 3-37

- ▶ Install energy efficient heating and cooling systems, appliances and equipment, and control systems.
- ▶ Install light emitting diodes (LEDs) for traffic, street and other outdoor lighting.
- ▶ Limit the hours of operation of outdoor lighting.
- ▶ Use solar heating, automatic covers, and efficient pumps and motors for pools and spas.
- ▶ Provide education on energy efficiency.

B. Renewable Energy

- ▶ Install solar and wind power systems, solar and tankless hot water heaters, and energy-efficient heating ventilation and air conditioning. Educate consumers about existing incentives.

C. Water Conservation and Efficiency

- ▶ Create water-efficient landscapes.
- ▶ Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.
- ▶ Use reclaimed water for landscape irrigation in new developments and on public property. Install the infrastructure to deliver and use reclaimed water.
- ▶ Design buildings to be water-efficient. Install water-efficient fixtures and appliances.
- ▶ Use graywater.
- ▶ Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.
- ▶ Restrict the use of water for cleaning outdoor surfaces and vehicles.
- ▶ Implement low-impact development practices that maintain the existing hydrologic character of the site to manage storm water and protect the environment.
- ▶ Devise a comprehensive water conservation strategy appropriate for the project and location. The strategy may include many of the specific items listed above, plus other innovative measures that are appropriate to the specific project.
- ▶ Provide education about water conservation and available programs and incentives.

D. Solid Waste Measures

- ▶ Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).
- ▶ Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.
- ▶ Provide education and publicity about reducing waste and available recycling services.

E. Land Use Measures

- ▶ Include mixed-use, infill, and higher density in development projects to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods.
- ▶ Educate the public about the benefits of well-designed, higher density development.
- ▶ Incorporate public transit into project design.
- ▶ Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.
- ▶ Develop “brownfields” and other underused or defunct properties near existing public transportation and jobs.
- ▶ Include pedestrian and bicycle-only streets and plazas within developments. Create travel routes that ensure that destinations may be reached conveniently by public transportation, bicycling or walking.

F. Transportation and Motor Vehicles

- ▶ Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations).
- ▶ Build or fund a transportation center where various public transportation modes intersect.
- ▶ Incorporate bicycle lanes and routes into street systems, new subdivisions, and large developments.
- ▶ Incorporate bicycle-friendly intersections into street design.
- ▶ Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.
- ▶ Work with the school district to restore or expand school bus services.

AESTHETICS, IMPACT 4-4, PAGE 4-9

The second paragraph of Impact 4-4 is hereby revised as follows:

The proposed project would involve a substantial increase in night lighting in the SPA and potential for glare impacts on proposed land uses within the SPA as well as on surrounding properties. Potential light and glare and nighttime skyglow effects would result from new street lighting throughout the SPA; illumination of parking areas in new industrial and commercial developments; security lighting associated with new industrial, commercial, and residential structures; nighttime lighting associated with sports fields at proposed schools; and the potential for high mast nighttime lighting ~~at the proposed 30-acre regional baseball/softball complex in the northern part of the project site as well as for~~ tennis courts at the private recreation facility.

AGRICULTURAL RESOURCES, FIGURE 5-1, PAGE 5-4

Figure 5-1 is hereby revised to show the correct City of Stockton city limit boundary.

AGRICULTURAL RESOURCES, MITIGATION MEASURE 5-1, PAGE 5-11

The first paragraph of Mitigation Measure 5-1 is hereby revised as follows:

5-1: The project applicant(s) of all project phases shall pay the City's agricultural land conversion mitigation fees ~~if such a program is of \$9,600 per acre and shall follow all other provisions of the City's "Agricultural Land Mitigation Program" as adopted by the City of Stockton on February 27, 2007. If such a system is not adopted, the project applicant(s) shall pay a fee of \$4,800 per acre subject to development. Said fee shall be paid to the City or to an entity designated by the City that is qualified to accept such fees, and used to purchase agricultural land at another location off the project site that would be placed in a conservation easement.~~

AGRICULTURAL RESOURCES, IMPACT 5-6, PAGE 5-16

The fourth paragraph of Impact 5-6 is hereby revised as follows:

Use of the Arbini property for groundwater recharge would involve construction of recharge basins and flooding the current agricultural fields and allowing water to percolate through the ground. ~~Therefore, project implementation would permanently remove these lands from agricultural production. However, construction of the recharge basins would occur only on part of the Arbini site; the remainder of the Arbini property would continue to be used for agricultural purposes. Therefore, because agricultural uses would continue, and because water facilities are a compatible use under Section 51238 of the Williamson Act, Williamson Act contracts would not be cancelled on the Arbini site as a result of Phase 1 project improvements, and thus this would be considered a less-than-significant impact.~~

AIR QUALITY, UPDATES REGARDING GREENHOUSE GAS EMISSIONS

Since the DEIR was published, the regulatory framework and the analysis tools available with respect to greenhouse gas emissions and global climate change in the context of CEQA have changed. The analysis conducted in the DEIR was based on the best information available at that time. In the time that has passed, Senate Bill 97 was signed into law, which amended CEQA and established a new level of attention to a project's incremental contribution to climate change (related to greenhouse gas emissions) and the potential foreseeable impacts of climate change on projects. The computer modeling program URBEMIS 2007 was also released, which contains emission factors for carbon dioxide (the primary measure of greenhouse gas emissions) from activities associated with development projects such as the proposed MLSP. No such standardized modeling tool was available at the time the DEIR was published. As was the case at the time of the DEIR, and is still the case at the current time of writing, there are no standardized or recommended methodologies for conducting an analysis of greenhouse gas emissions or standard thresholds of significance for such an analysis. Thus, the analysis of greenhouse gas emissions for the proposed project (Impacts 6-4 and 6-11) has been updated to reflect the application of the most recent modeling tools available, and the Environmental Setting, Regulatory Background, and Thresholds of Significance of Chapter 6, "Air Quality," have been updated to reflect changes to the regulatory environment since the DEIR was published. The analysis in the DEIR concluded that the program and project level impacts related to GHG emissions were significant and unavoidable after implementation of all feasible mitigation measures; the revised analysis contained in this FEIR does not change this impact conclusion, and does not require any additional mitigation measures.

AIR QUALITY, ENVIRONMENTAL SETTING, PAGES 6-16 THROUGH 6-18

The text on pages 6-16 through 6-18 is hereby revised as follows:

6.1.4 EXISTING AIR QUALITY—GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

Constituent gases of the Earth's atmosphere called atmospheric greenhouse gases (GHGs) play a critical role in the Earth's radiation budget by trapping infrared radiation emitted from the Earth's surface, which would have otherwise escaped to space. Prominent GHGs contributing to this process include carbon dioxide (CO₂), methane (CH₄), ozone, water vapor, nitrous oxide (N₂O), and chlorofluorocarbons (CFCs). This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. Anthropogenic emissions of these GHGs in excess of natural ambient concentrations are responsible for the enhancement of the greenhouse effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Global warming inducing emissions of these gases are attributable to human activities associated with industrial/manufacturing, utilities, transportation, residential, and agricultural sectors (CEC 2006a).

Transportation is responsible for 41% of the state's GHG emissions, followed by electricity generation (CEC 2006a). Emissions of CO₂ and NO_x are byproducts of fossil fuel combustion. Methane, a highly potent GHG, results from off-gassing associated with agricultural practices and landfills. Sinks of CO₂ include uptake by vegetation and dissolution into the ocean.

Global warming is a global problem, and GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Worldwide, California is the 12th–16th largest emitter of CO₂, and is responsible for approximately 2% of the world's CO₂ emissions (CEC 2006a, 2006b). In 2004, California produced 492 million gross metric tons of carbon dioxide equivalent (CEC 2006a).

Various local and statewide initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the possible outcomes and feedback mechanisms associated with climate change are not yet fully understood, global warming is already upon us and the potential for environmental, social, and economic disaster over the long term has the potential to be great. Cooperation on a global scale will be required to reduce GHG emissions to a level that will slow the warming trend, and the direct air quality impact of increasing GHG emissions into the global system is incrementally cumulative.

In September 2006, California Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions, and is the first of its kind worldwide. AB 32 applies to major stationary sources of emissions only, but acknowledges the urgency of this potential threat to the environment.

At the time of this writing, no air districts within California, including SJVAPCD, have a recommended emission threshold for determining significance associated with GHGs from development projects.

Other resource areas could be affected as a result of GHGs, including from incremental increases of new GHG emissions. For example, the increased global average temperature increases ocean temperatures, and the Pacific Ocean strongly influences the climate within California. If the temperature of the ocean warms, it is anticipated that the winter snow season would be shorter. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. According to a California Energy Commission (CEC) report, the snowpack portion of the supply could potentially decline by 70%–90% by the end of the 21st century (CEC 2006c). This phenomenon could lead to significant challenges securing an adequate water supply for a growing population. Further, the increased ocean temperature could result in increased moisture flux into the state;

however, since this would likely come increasingly in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential for flood events, placing more pressure on California's levee/flood control system. Sea level has risen approximately 7 inches during the last century and, according to the CEC report, it is predicted to rise an additional 22–35 inches by 2100, depending on the future GHG emissions levels (CEC 2006c). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion (especially a concern in the low-lying Delta, where potable water delivery pumps could be threatened), and disruption of wetlands (CEC 2006c). As the existing climate throughout California changes over time, mass migration of species, or worse, failure of species to migrate in time to adapt to the perturbations in climate, could also result.

FEEDBACK MECHANISMS AND UNCERTAINTY

Additionally, change in ocean temperature would be expected to lead to changes in ocean current circulation (which incidentally is a function of salinity and temperature; parameters that would also change as sea ice and glaciers melt and air temperature increases). Many complex mechanisms compete within Earth's energy budget to establish the global average temperature.

Direct and Indirect Aerosol Effects

Aerosols, including particulate matter, reflect sunlight back to space. As attainment designations for particulate matter are met, and fewer PM emissions occur, the cooling effect of anthropogenic aerosols would be reduced, and instead, the greenhouse effect would be further enhanced. Similarly, aerosols act as cloud condensation nuclei (CCN) to aid in cloud formation and increase cloud lifetime. Clouds efficiently reflect radiation back to space. The indirect effect of aerosols on clouds and precipitation efficiency would be reduced, amplifying the greenhouse effect again.

Cloud Effect

As global temperature rises, the ability of the air to hold moisture increases, and it becomes easier for clouds to form. If the increase in cloud cover occurs at low or middle altitudes, resulting in clouds with greater liquid water path such as stratus or cumulus clouds, more radiation would be reflected back to space, resulting in a negative feedback, wherein the side effect of global warming acts to balance itself. If cloud formation occurs at higher altitudes in the form of cirrus clouds, these clouds actually allow more light to pass through than they reflect and ultimately, act as GHG themselves, thus resulting in a positive feedback, wherein the side effect of global warming acts to enhance the process. This feedback mechanism, known as the Cloud Effect, is poorly understood.

Other Feedback Mechanisms

As global temperature continues to rise, methane gas, which is trapped in permafrost, would be released into the atmosphere. Methane is approximately 20 times as efficient a GHG as CO₂. This phenomenon would accelerate and enhance the warming trend. Additionally, as polar and sea ice continues to diminish, the Earth's albedo, or reflectivity, would also decrease simultaneously. More incoming solar radiation would be absorbed by the Earth, rather than being reflected back to space, in turn, further enhancing the greenhouse effect and associated global warming. These, and other competing feedback mechanisms, are still in the process of being coupled and forecast by the scientific community. It is not known at this time how the ultimate balance between all the variables will be equated to a particular temperature increment. Regardless, there is no longer debate within the scientific community that anthropogenic GHG emissions are linked to a trajectory of unnatural warming of the planet.

Certain gases in the Earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A

portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth, not as high-frequency solar radiation, but lower frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency (longer wavelength) radiation. Most solar radiation passes through GHGs; however, GHGs have strong absorption properties in wavelength bands along the electromagnetic spectrum where the atmosphere, in its natural composition, does not. This range of absorption spectra (from wavelengths of 8-13 micrometers) is known as the "infrared atmospheric window" region of the electromagnetic spectrum, where infrared radiation is selectively absorbed by GHGs. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth. Without the greenhouse effect, earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are CO₂, methane (CH₄), ozone, nitrous oxide (N₂O), and fluorinated compounds. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is extremely unlikely that global climate change of the past 50 years can be explained without the contribution from human activities (Intergovernmental Panel on Climate Change 2007).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 54% is sequestered through ocean uptake, uptake by northern hemisphere forest regrowth, and other terrestrial sinks within a year, whereas the remaining 46% of human-caused CO₂ emissions remains stored in the atmosphere (Seinfeld and Pandis 1998).

Similarly, impacts of GHGs are borne globally, as opposed to localized air quality effects of criteria air pollutants and TACs. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice to say, the quantity is enormous, and no single project alone would be expected to measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or micro climate.

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (CEC 2006a). In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CEC 2006a). Emissions of CO₂ are byproducts of fossil fuel combustion. CH₄, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) largely associated with agricultural practices and landfills. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through photosynthesis and dissolution, respectively, two of the most common processes of CO₂ sequestration.

California is the 12th to 16th largest emitter of CO₂ in the world (CEC 2006a). California produced 484 million gross metric tons of CO₂ equivalent (CO₂-e) in 2004. CO₂-e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, as

described in Appendix C, “Calculation References,” of the General Reporting Protocol of the California Climate Action Registry (CCAR) (CCAR 2007), 1 ton of CH₄ has the same contribution to the greenhouse effect as approximately 23 tons of CO₂. Therefore, CH₄ is a much more potent GHG than CO₂. Expressing emissions in CO₂-e takes the contributions of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Combustion of fossil fuel in the transportation sector was the single largest source of California’s GHG emissions in 2004, accounting for 41% of total GHG emissions in the state (CEC 2006a). This sector was followed by the electric power sector (including both in-state and out-of-state sources) (22%) and the industrial sector (21%) (CEC 2006a).

An analysis of the impacts of global climate change on the project is contained in Chapter 6 of the FEIR.

Various local and statewide initiatives to reduce the state’s contribution to GHG emissions have raised awareness that, even though the possible outcomes and feedback mechanisms associated with climate change are not yet fully understood, global warming is already upon us and the potential for environmental, social, and economic consequences over the long term has the potential to be great. Cooperation on a global scale will be required to reduce GHG emissions to a level that will slow the warming trend, and the direct air quality impact of increasing GHG emissions into the global system is incrementally cumulative. Cumulative impacts of the proposed project are evaluated in Chapter 18 of the DEIR.

AIR QUALITY, REGULATORY BACKGROUND, STATE PLANS, POLICIES, REGULATIONS, AND LAWS, PAGE 6-20

The following text is hereby added at the top of page 6-20:

GREENHOUSE GAS EMISSIONS

Various statewide and local initiatives to reduce the state’s contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for adverse environmental, social, and economic effects in the long term. Because every nation emits GHGs and therefore makes an incremental cumulative contribution to global climate change, cooperation on a global scale will be required to reduce the rate of GHG emissions to a level that can help to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed AB 1493 (Stats. 2002, ch. 200) (amending Health & Safety Code Section 42823 and adding Health & Safety Code Section 43018.5). AB 1493 requires that ARB develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the State.”

To meet the requirements of AB 1493, ARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California’s existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR Sections 1900, 1961), and adoption of Section 1961.1 (13 CCR Section 1961.1) require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and

medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds (lbs) that is designed primarily for the transportation of persons), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 lbs or less, the GHG emission limits for the 2016 model year are approximately 37% lower than the limits for the first year of the regulations, the 2009 model year. For light-duty trucks with LVW of 3,751 lbs to gross vehicle weight (GVW) of 8,500 lbs, as well as medium-duty passenger vehicles, GHG emissions are reduced approximately 24% between 2009 and 2016.

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against ARB to prevent enforcement of 13 CCR Sections 1900 and 1961 as amended by AB 1493 and 13 CCR 1961.1 (*Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in Her Official Capacity as Executive Director of the California Air Resources Board, et al.*). The suit in the U.S. District Court for the Eastern District of California contended that California's implementation of regulations that, in effect, regulate vehicle fuel economy violates various federal laws, regulations, and policies.

In January 2007, the judge hearing the case accepted a request from the State Attorney General's office that the trial be postponed until a decision is reached by the U.S. Supreme Court on a separate case addressing GHGs. In the Supreme Court case, *Massachusetts, et al., v. Environmental Protection Agency, et al.*, the primary issue in question was whether the CAA provides authority for EPA to regulate CO₂ emissions. EPA contended that the CAA does not authorize regulation of CO₂ emissions, whereas Massachusetts and 10 other states, including California, sued EPA to begin regulating CO₂. As mentioned above, the U.S. Supreme Court ruled on April 2, 2007, that GHGs are "air pollutants" as defined under the CAA and EPA is granted authority to regulate CO₂ (*Massachusetts v. U.S. Environmental Protection Agency* [2007] 549 U.S. 05-1120).

On December 12, 2007, the Court rejected the automakers claim that if California receives appropriate authorization from EPA (the last remaining factor in enforcing the standard), these regulations would not be consistent with federal law. This authorization to implement more stringent standards in California was requested in the form of a CAA Section 209, Subsection (b) waiver in 2005. Since that time, EPA failed to act on granting California authorization to implement the standards. Governor Schwarzenegger and Attorney General Edmund G. Brown filed suit against EPA for the delay. EPA denied California's request for the waiver to implement AB 1493 in late December 2007. The State of California has filed suit against EPA for its decision to deny the CAA waiver.

Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80% below the 1990 level by 2050.

The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary will also submit biannual reports to the governor and state legislature describing progress made toward reaching the emission targets, impacts of global warming on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created the California Climate Action Team (CCAT) made up of members from various state agencies and commissions. CCAT released its first report in March 2006. The report proposed to achieve

the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Senate Bill 97

Senate Bill (SB) 97, signed August 2007, acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA (Stats. 2007, ch. 185 (enacting Pub. Resources Code, Sections 21083.05 and 21097.)) This bill directs the State Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA by July 1, 2009. The Resources Agency is required to certify and adopt those guidelines by January 1, 2010. This bill also removes, both retroactively and prospectively, as legitimate litigation causes of action any claim of inadequate CEQA analysis of effects of GHG emissions associated with environmental review for projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1B or 1E). This provision will be repealed by operation of law on January 1, 2010, at which time such projects, if any remain unapproved, will no longer enjoy the protection against litigation claims based on failure to adequately address climate change issues. This bill would only protect a handful of public agencies from CEQA challenges on certain types of projects for a few years time.

AIR QUALITY, REGULATORY BACKGROUND, LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES, PAGE 6-25

The following text is hereby added at the top of page 6-25:

2035 CITY GENERAL PLAN UPDATE

The City's recent 2035 General Plan Update EIR, which was adopted after circulation of the Mariposa Lakes DEIR, considered the issue of GHGs on a city-wide basis. In the context of the 2035 General Plan Update's analysis, the City adopted a general plan policy requiring it to continue to monitor the development of greenhouse gas analysis and mitigation, and to likewise adopt measures to mitigate greenhouse gas emissions within the City as those methodologies evolve. General Plan Policy HS-4.20 applies to this project and is as follows:

Develop Policies Requiring Minimizing of Greenhouse Gas Emissions. The City shall adopt new policies, in the form of a new ordinance, resolution, or other type of policy document, that will require new development to reduce its greenhouse gas emissions to the extent feasible in a manner consistent with state legislative policy as set forth in Assembly Bill (AB) 32 (Health & Saf. Code, Section 38500 et seq.) and with specific mitigation strategies developed by the California Air Resources Board (CARB) pursuant to AB 32. In furtherance of this effort, the City shall monitor the process by which CARB promulgates rules, regulations, limits, plans, and reduction measures pursuant to AB 32 to determine whether they result in recommended or mandatory principles or strategies by which greenhouse gas emissions reductions or minimization can be achieved through the land use planning process. If CARB does formulate any such principles or strategies, the City's own greenhouse gas emission reduction and minimization strategies shall be consistent with those promulgated by CARB. If CARB's efforts pursuant to AB 32 do not result in recommended or mandatory principles or strategies by which greenhouse gas emissions reductions or minimization can be achieved through the land use planning process, the City shall develop its own such principles and strategies.

In doing so, the City shall consider the following potential mitigation strategies:

(A) Increased density or intensity of land use, as a means of reducing per capita vehicle miles traveled by increasing pedestrian activities, bicycle usage, and public or private transit usage;

(B) Increased energy conservation through means such as those described in Appendix F of the State Guidelines for the California Environmental Quality Act;

(C) Greenhouse gas sequestration measures, such as increasing the effectiveness of carbon dioxide sinks through tree-planting, for example;

(D) The payment of fair share fees, or participation in fair share measures, that are imposed pursuant to a reasonable mitigation plan under which the fair share payment or fair share participation will foreseeably result in actual, enforceable mitigation that will offset some or all of the greenhouse gas emissions of development projects (e.g., through energy conservation, greenhouse gas sequestration, or increased usage of energy sources that do not contribute, or contribute only minimally, to global warming). In order to help achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions, and in furtherance of the inter-agency coordination objectives of AB 32, such a reasonable mitigation plan may include a multiple-agency program by which City-imposed fees are used to fund mitigation strategies implemented in whole or in part by regional or state agencies (e.g., the Air Resources Board, the Public Utilities Commission, or the State Energy Resources Conservation and Development Commission).

(E) Public education measures intended to instruct future landowners, tenants, and users with respect to means by which they can reduce their own greenhouse gas emissions.

For purposes of this policy, “feasible” shall have the same meaning as that set forth in section 15364 of Title 14 of the California Code of Regulations and in case law interpreting the California Environmental Quality Act (Pub. Resources Code, Section 21000 et seq.).

AIR QUALITY, SIGNIFICANCE THRESHOLDS, PAGE 6-49

The first three paragraphs on page 6-29 are hereby revised as follows:

Regarding GHG, SJVAPCD has not identified a significance threshold. Further, it appears that no other air district in California has generated a significance threshold pertaining to GHG. The state has identified emissions in the year 1990 as a goal through adoption of AB 32. If this goal is attained, California would generate less GHG than today. It is recognized, though, that there is no simple metric available to determine if a single project would advance toward or away from this goal. Because GHG are global, a project that shifts the location of where someone lives or works, by itself, may or may not contribute new GHG. For example, someone may move from Southern California (and from the South Coast Air Quality Management District) to the SPA, and while this would likely increase emissions within SJVAPCD, it is not conclusive that this would result in generation of more GHG globally. In fact, if a person moves from one location, where they have long commutes and a land use pattern that requires substantial energy use, to a project that promotes shorter and fewer vehicle trips, more walking and less energy use, it could be argued that the new project would result in a potential reduction in generation of global GHG.

A possible metric that could be used to determine if the proposed project would contribute to global GHG would be to determine if, on a per capita basis, the proposed project would generate more GHG than a benchmark level based on a policy, in this case AB 32. Although AB 32 would only directly apply to

~~stationary sources of emissions, mobile and area source emissions generated by a project can be addressed on a per capita basis, in order to be consistent with statewide goals to reduce global warming impacts. A project would increase GHG above the 1990 goal if it would result in generation of more than 2 tons of CO₂ per capita annually. This figure is the calculated per capita CO₂ emissions level generated in California in 1990, discounted because the state's population has grown considerably since 1990 and is projected to continue to grow. The basis for this number is discussed further below.~~

~~For this EIR, a project's contribution to GHG would be considered significant if it would generate a substantial increase in GHG based on whether it exceeded the 2 tons per person metric, the degree to which this metric would be exceeded, and whether the number of persons inhabiting the SPA as a result of project implementation would be substantial.~~

No air district or other regulatory agency in California, including SJVAPCD, has identified a significance threshold for GHG emissions generated by a proposed project, or a methodology for analyzing impacts related to GHG emissions or global climate change. By adoption of AB 32 and SB 97, however, the State of California has established GHG reduction targets and has determined that GHG emissions as they relate to global climate change are a source of adverse environmental impacts in California that should be addressed under CEQA. Although AB 32 did not amend CEQA, the legislation does include language identifying the various environmental problems in California caused by global warming (Health & Safety Code, Section 38501(a).) SB 97, in contrast, did amend CEQA to require OPR to prepare CEQA Guidelines revisions addressing the mitigation of GHGs or their consequences. By only giving certain limited projects protection against CEQA claims based on the alleged failure to properly assess climate change impacts in the environmental documents used to approve them, the Legislature implied that the environmental review for other projects would have to address the issue of global warming when impacts are potentially significant (project-specific or cumulative). In any event, the proper context for addressing the issue in an EIR is in the discussion of cumulative impacts, since 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.

To meet GHG emission targets of AB 32, California would need to generate in the future less GHG emissions than current levels. It is recognized, however, that for most projects there is no simple metric available to determine if a single project would substantially increase or decrease overall GHG emission levels or conflict with the goals of AB 32.

Although the text of AB 32 strongly suggests that, when ARB interprets and applies the definition of "Greenhouse gas emission source," the regulations promulgated pursuant to the legislation will apply primarily, if not exclusively, to stationary sources of GHG emissions (see Health & Safety Code, Section 38505(i)), this mandate demonstrates California's commitment to reducing the rate of GHG emissions and the state's associated contribution to climate change, without intent to limit population or economic growth within the state. Thus, to achieve the goals of AB 32, which are tied to GHG emission rates of specific benchmark years (i.e., 1990), California would have to achieve a lower rate of emissions per unit of population (per person) than it has now. Further, in order to accommodate future population and economic growth, the state would have to achieve an even lower rate of emissions per unit than was achieved in 1990. (The goal to achieve 1990 quantities of GHG emissions by 2020 means that this will need to be accomplished with 30 years of population and economic growth beyond 1990 in place.) Thus, future projects that would not encourage reductions in GHG emissions (or continue at "Business as Usual" emission rates) would conflict with the policy decisions contained in the spirit of AB 32, thus impeding California's ability to comply with the mandate.

While the text of AB 32 focuses on major stationary and area sources of GHG emissions, the primary objective of AB 32 is to reduce California's contribution to global warming by reducing California's total annual production of GHG emissions. The impact that GHG emissions 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 consistency with the state's requirements for GHG emissions reductions is the best metric for determining whether a project would contribute to global warming. In the case of the proposed project, if the project does not conform with the state mandate to reduce GHG emissions to 1990 levels by the year 2020 and the associated increase in the amount of mass emissions is considered to be substantial, then the impact of the project would be cumulatively considerable (significant). Because the nature of global climate change impacts of GHG emissions are cumulative, this impact is discussed further in Chapter 18 of the DEIR, "Cumulative Impacts."

AIR QUALITY, IMPACT 6-2, PAGE 6-40

The following text is hereby added to the last paragraph on page 6-40:

Implementation of Mitigation Measures 6-2a, 6-2b, and 6-2c would result in at least the required minimum 33.3% reduction in NO_x emissions and a 50% reduction in PM₁₀. These mitigation measures reduce emissions that are byproducts of combustion engines, including CO₂. Since the majority of GHG emissions from the proposed project would come from combustion byproducts from transportation sources, the same mitigation measures that would reduce emissions of criteria air pollutants and precursors (i.e., NO_x), would also act to reduce GHG emissions (i.e., CO₂) from project operation. If these reductions are not attained by the on-site measures described above, they would occur through off-site reductions as a result of payment of fees. Implementation of these measures would reduce project-generated, operation-related (regional) emissions of ROG and NO_x, but not to a less-than-significant level, as emissions would still exceed SJVAPCD's significance thresholds because of the large size of the proposed development (refer to Table 6-6). As a result, this impact would remain **significant and unavoidable**.

AIR QUALITY, IMPACT 6-4, PAGES 6-41 AND 6-41

The text of Impact 6-4 is hereby revised as follows:

~~Operation-related activities would result in project-generated emissions of GHGs. GHGs include CO₂, water vapor, methane, nitrous oxide, and ozone. These gases are of concern because of their potential to enhance Earth's atmospheric greenhouse effect, through selective absorption of radiation. This results in an associated rise in Earth's global average temperature, and a phenomenon known as global warming (Ahrens 2003). With respect to the proposed project, CO₂ would be the primary pollutant of concern from mobile (vehicle trips) and stationary (e.g., power generation, industry) sources.~~

~~GHG emissions associated with the proposed project were estimated using CO₂ emissions as a proxy for all GHG emissions. This is consistent with the current reporting protocol of the California Climate Action Registry. CO₂ emissions associated with vehicle miles traveled are the best indicator of GHGs associated with a land development project. However, it is important to note that other GHGs have a higher global warming potential (GWP) than CO₂. For example, 1 pound of methane has an equivalent GWP of 21 pounds of CO₂ (EPA 2002, California Climate Action Registry 2006). In other words, as a GHG, methane is 21 times as efficient as CO₂. Nonetheless, emissions of other GHGs would be low relative to CO₂, and would be roughly proportional to vehicle miles traveled (VMT) as well. Annual VMT/person for the year 1990 was estimated based on 1989 census data, and this rate corresponds to an annual rate of 8,703 VMT/person. Based on a fleetwide emission factor for the year 1990, this would result in a statewide annual emission rate of approximately 3.5 tons CO₂/person associated with VMT (ARB 2002). In addition, population growth must also be considered to obtain the 1990 emissions target. The population of the state is forecast to grow to 43,851,741 people by the year 2020 (California Department of Finance 2006). To achieve the mass of emissions that occurred in 1990, the emission rate per capita must be~~

further reduced to compensate for increased VMT associated with increased population growth. Thus, the annual rate must be reduced by approximately 33% below the 1990 rate, to approximately 2 tons CO₂/person, in order to achieve the 1990 baseline promulgated by AB 32.

As discussed previously, beginning in the year 2012, stationary sources of GHG emissions would be regulated under AB 32. Mobile sources of GHG emissions are not regulated, and would be the primary emission source of GHGs associated with the proposed project. Also as discussed above, VMT would be the greatest indicator of CO₂ emissions from the proposed project, and CO₂ emissions are the greatest indicator of total GHG emissions. According to the traffic analysis conducted by TJKM, full project buildout would result in approximately 161,012 total average daily trips (1,014,376 total daily VMT) (TJKM 2007). The proposed project would accommodate 33,178 new residents (according to Chapter 14, "Population, Housing, and Employment") and thus would generate 11,159 VMT/person annually. Assuming an emissions factor for future CO₂ emissions from vehicles of approximately 366 grams CO₂/mile (ARB 2002), approximately 4 tons CO₂/person would be generated by the proposed project annually. These emissions would be nearly 2 times the per capita level that would be needed to achieve 1990 GHG levels, if the goals of AB 32 were extended to all sources of emissions. (See Appendix C for detailed calculations and a list of assumptions.) Because project-generated, longer-term operation-related emissions of GHGs would be two times the per capita level used to determine the potential for significant GHG emissions, and the proposed project would accommodate more than 30,000 new residents, which is substantial, this impact would be **significant**.

Mitigation Measures:

Implement Mitigation Measures 6-2a, 6-2b, and 6-2c.

Implementation: Project applicant(s) of all project phases.

Monitoring: City of Stockton Community Development Department, Planning Division and San Joaquin Valley Air Pollution Control District.

Significance after Mitigation:

Implementation of Mitigation Measures 6-2a, 6-2b, and 6-2c would reduce GHG emissions from mobile sources by approximately 15%. However, a reduction in project-generated emissions of approximately 47% would be required to achieve the threshold of 2 tons CO₂/person. Thus, this impact would remain significant and unavoidable.

An individual project by itself cannot generate enough greenhouse gas (GHG) emissions to substantially influence global climate change. A project participates in this impact related to GHG emissions by its incremental contribution which, when combined with the cumulative contributions of all other sources of GHGs, cause global climate change impacts. See the revised information provided above for Chapter 6, "Air Quality" for a discussion of the current physical and regulatory setting related to climate change and GHG emissions.

The following analysis reviews the proposed project's potential generation of GHGs and its incremental contribution to the cumulative effect resulting from emissions of GHGs. A two-tiered approach is used, as follows: (1) a discussion of project-generated GHG emissions, and (2) project implementation of feasible GHG-reduction measures.

Long-term operation of the proposed project would generate associated GHG emissions from area and mobile sources, and indirectly from stationary sources associated with energy consumption. Mobile-source emissions of GHGs would include project-generated vehicle trips associated with residents of, and

visitors to, the project site. Area-source emissions would be associated with activities such as landscaping and maintenance of proposed land uses, natural gas consumption for space and water heating, and other sources. Increases in stationary-source emissions could occur at off-site utility providers associated with electricity consumption. Indirect GHG emissions would also be generated through off-site waste disposal. Project construction would also generate GHG emissions from heavy-duty construction equipment exhaust, construction worker vehicle trips, and transport of building materials. The quantity of GHG emissions associated with the production and manufacture of building construction materials is unknown.

GHG emissions generated by the proposed project would predominantly consist of CO₂. In comparison to criteria air pollutants, such as ozone and PM₁₀, CO₂ emissions persist in the atmosphere for a substantially longer period of time. While emissions of other GHGs, such as methane (CH₄), are important with respect to global climate change, emission levels of other GHGs are less dependent on the land use and circulation patterns associated with the proposed land use development project than are levels of CO₂.

Mobile sources (vehicle trips and associated miles traveled) would be the primary emission source of GHGs associated with the proposed project. Transportation is also the largest source of GHG emissions in California and represents approximately 41% of annual CO₂ emissions generated in the state (CEC 2006a). Like most land use development projects, vehicle miles traveled (VMT) is the most direct indicator of CO₂ emissions from the proposed project and associated CO₂ emissions function as the best indicator of total GHG emissions. Use of standard traffic engineering methodologies that treat all trips to and from a project site as a “net increase” or “new” trips and all VMT associated with the project as “new” VMT, is appropriate for localized and regional air quality or traffic analyses, where the location of criteria air pollutant emissions within a distinct air basin or impacts to the local roadway network, respectively, are important. However, given the global nature of the global warming phenomenon and the statewide context through legislation for regulating California’s contribution to this global impact, it may be inappropriate to assess GHG emissions in the same manner as for air quality or traffic.

Residential uses occur in response to population growth in the state and the need to accommodate residents. When a resident vacates his or her prior home to move to a newly developed home, a different resident would then occupy the relocated resident’s previous home. Thus, development projects can be viewed as “accommodating” GHG emitters rather than “creating” GHG emissions. However, it is considered speculative to attempt to quantify the change in behavioral patterns that the residents of the proposed project would exhibit as compared to their previous accommodations. Therefore, for purposes of this analysis, it is assumed that all GHG emissions attributable to the proposed project are “new.” This is the most conservative approach to GHG analysis in the context of CEQA.

According to the traffic analysis conducted by TJKM, full project buildout would result in approximately 161,012 total average daily trips (1,014,376 total daily VMT) (TJKM 2007). The proposed project would accommodate 33,178 new residents (as discussed in DEIR Chapter 14, “Population, Housing, and Employment”) and thus would generate 11,159 VMT/person annually. If the total trips, as well as area-source and off-site stationary-source GHG emissions are considered, operation of Phase 1 of the proposed project would generate total GHG emissions of approximately 91,793 metric tons CO₂-e annually during the lifetime of the project, and Phases 2-5 would introduce approximately 213,593 metric tons/year of CO₂-e (see Table 6-7). Thus, at full project buildout, approximately 305,386 metric tons/year of CO₂-e emissions would be attributable to operation of the proposed project. Emission factors in future years would likely be lower due to improvements in vehicle fuel economy and emissions control technologies; however, the degree that technology would influence project-generated GHG emissions over the proposed project’s lifetime cannot not be determined at this time. Construction of the proposed project would generate a finite quantity of approximately 100,167 metric tons of CO₂ over the duration of construction activities (see Table 6-7). Construction activities would contribute GHG emissions to a much lesser extent than operational activities of the proposed project.

**Table 6-7
Summary of Modeled Greenhouse Gas (CO₂-e) Emissions**

Source	Projected CO ₂ -e Emissions
Construction Emissions (to occur over Phase 1 buildout period of approximately 10 years)	
Total Direct Emissions	metric tons¹ 26,860
Operational Emissions at Completion of Phase 1 (to occur during 2015 through 2028)	
Area-Source Emissions	11,027
Mobile-Source Emissions	61,637
Stationary-Source Emissions (Energy Consumption ²)	19,130
Total Direct and Indirect Emissions	91,793
Worst-Case³ Construction Emissions (to occur over Phases 2-5 buildout period of approximately 13 years)	
Total Direct Emissions	metric tons¹ 73,307
Operational Emissions at Completion of Program (to occur following 2028, in addition to Phase 1 emissions)	
Area-Source Emissions	14,987
Mobile-Source Emissions	109,367
Stationary-Source Emissions (Energy Consumption ²)	89,239
Total Direct and Indirect Emissions	213,593

- 1 Emissions were modeled using the URBEMIS 2007 (v9.2.4) (ARB 2008) computer model, based on trip generation rates contained in the traffic analysis prepared for the project (TJKM 2007), proposed land uses identified in the project description, and default model assumptions where detailed information was not available. URBEMIS accounts for emissions from vehicles and natural gas use. URBEMIS output is in units of tons CO₂-e/year, whereas a standard unit for reporting GHG emissions is in metric tons CO₂-e/year. Conversions of URBEMIS output to metric units are contained in Appendix FF.
- 2 Indirect emissions associated with stationary sources (increased energy consumption) were calculated using the CCAR GRP (v2.2). These emissions are reported here for disclosure purposes and would clearly be anticipated to be regulated under AB 32, subject to mandatory emissions cap and trade programs, and, thus, would be consistent with AB 32 targets.
- 3 Worst-case construction-generated emissions for full project buildout were determined based on the assumption that emissions from construction during subsequent phases would be similar to those calculated for Phase 1. The worst-case year of emissions from Phase 1 was applied over the remaining 13 years of the buildout period. This was a conservative assumption used in absence of project-specific construction details for Phases 2-5.

Notes: The values presented in Table 6-7 do not include the full life-cycle of GHG emissions that may occur over the production/transport of materials used during construction of the proposed project, solid waste or waste water disposal over the life of the proposed project, end-of-life of the materials and processes that would contribute to GHG emissions that occur as an indirect result of the proposed project, etc. Doing so would be speculative and would require analysis beyond the current state of the art in impact assessment, and would lead to a false and misleading level of precision in reporting of project-related GHG emissions. Further, indirect emissions associated with in-state energy production, solid waste disposal, and waste water treatment would be regulated under AB 32 at the source or facility that would handle these processes. The emissions associated with off-site facilities in California would be closely controlled, reported, capped, and traded under AB 32 and ARB programs. Therefore, this category of emissions would be consistent with AB 32 requirements.

CO₂-e = carbon dioxide equivalent; a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect.

Refer to Appendix FF for detailed assumptions and modeling output files.

Source: Data modeled by EDAW 2008.

It is important to consider an appropriate context for GHG emissions. GHG emissions are dispersed throughout the atmosphere worldwide, and the effects of climate change are borne globally, unlike criteria air pollutant emissions, which have regional and/or local impacts on air quality. As noted earlier, the extent to which GHG emissions attributable to the proposed project can be treated as “new” is uncertain. For this reason and as discussed previously in the section describing the significance thresholds, it is

relevant to consider the GHG-efficiency of a project rather than the mass of GHG emissions by itself. As noted previously, the proposed project would accommodate 33,178 new residents. If GHG emissions were distributed on a per-capita basis, the GHG-efficiency of the proposed project would be approximately 9.2 metric tons CO₂-e/capita.

California Governor Arnold Schwarzenegger announced on June 1, 2005 through Executive Order S-3-05 (Climate Change) GHG emission reduction targets as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80% below 1990 levels.

AB 32 required that ARB determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. This would have to be accomplished with 30 years of population and economic growth in place. Effectively, California will need to be more GHG-efficient in all areas to achieve this mandate, which is equivalent to a total GHG emission reduction of approximately 30% in California, across all emissions sectors. Land use development is not its own sector, but draws on emissions from the energy, transportation, agricultural, waste, and manufacturing sectors. All sectors will need to do their fair share in becoming more GHG-efficient.

The best metric for determining if the proposed project would contribute substantially to the cumulative impact of climate change is whether or not the project could accommodate residents and visitors to the project site in a way that reduces GHG emissions to become compliant with AB 32 requirements. For the purposes of this analysis, if the proposed project would result in a substantial increase in GHG emissions, this would constitute a considerable, and therefore significant, contribution to this cumulative impact.

The quantity of the proposed project's annual emissions (305,000 metric tons CO₂-e/year) that would truly be "new" emissions is unknown. However, it is likely that a substantial portion of this total would constitute a net increase in GHG emissions. Because the proposed project would generate an increase in emissions of GHGs, and the proposed project would accommodate more than 30,000 residents, which is substantial, this impact would be **significant**.

Project Features that Reduce Greenhouse Gas Emissions

The MLSP contains many features that are designed to reduce GHG emissions, either directly or indirectly. These features are consistent with the climate change measures identified by the Office of the California Attorney General (AG) as "Generally Applicable," and would reduce emissions below the values reported in Table 6-7, although the current state of the science precludes an exact quantification of the reduction in GHG emissions that would occur from implementation of these measures. The MLSP design features, and features incorporated into the proposed project through other mitigation measures in the DEIR, that would reduce GHG emissions are itemized below and are listed in Chapter 3, "Project Description" of the DEIR.

A. Energy Efficiency

1. Design buildings to be energy efficient. Site buildings to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use.

Section 11.2.4 of the MLSP implements the 2035 City General Plan requirement that "all new development . . . incorporate conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems."

In addition, DEIR Mitigation Measure 6-2c requires all development within the SPA to “orient buildings to take advantage of solar heating and natural cooling and use passive solar designs (residential, commercial, and industrial).”

2. Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings.

Section 11.2.4 of the MLSP promotes the use of efficient lighting and lighting control systems for residential, industrial, and office development in the SPA, including features designed to reflect and transfer daylight to the interior of buildings (e.g., skylights, light pipes, light shelves, and reflectors).

DEIR Mitigation Measure 6-2c requires project applicant(s) within the SPA to utilize “day lighting systems such as skylights, light shelves, and interior transom windows.”

3. Install light colored “cool” roofs, cool pavements, and strategically placed shade trees.

Section 11.2.3 of the MLSP requires that “roofs shall have matte finishes to reduce glare.”

DEIR Mitigation Measure 6-2c requires project applicant(s) within the SPA to “provide highly reflective [high albedo] roofing materials and radiant heat barriers... as appropriate to each development.” In addition, the placement of shade trees to improve the energy efficiency of buildings within the SPA is addressed in Section 12.6 of the MLSP.

4. Provide information on energy management services for large energy users.

Section 11.2.4 of the MLSP addresses the provision of energy conservation information to industrial and office developers (the likely energy users) via the following requirements: “incorporate energy conservation and green building practices to maximum extent feasible” and “encourage builders to provide a full array of energy efficient design options for the buyer...”

5. Install energy efficient heating and cooling systems, appliances and equipment, and control systems.

Section 11.2.4 of the MLSP provides that builders would make available “a full array of energy efficient design options” for home buyers, and for residential and non-residential building designs to include “high efficiency heating and cooling systems and window systems, tank-less water heaters, soy-based insulation, reflective radiant barriers, high efficiency lighting systems, and photovoltaic solar panels and/or fuel cells to generate power and reduce fuel consumption.”

DEIR Mitigation Measure 6-2c requires residential and non-residential project applicant(s) to implement numerous energy-efficient design measures. The measures include the use of solar, low-emissions, or central water heaters, increased insulation that exceeds Title 24 requirements, building orientation techniques (see above), energy efficient windows, reflective roofing materials, passive solar cooling and heating systems, ceiling and whole-house fans, and programmable thermostats.

6. Install light emitting diodes (LEDs) for traffic, street and other outdoor lighting.

The City requires conformance with Caltrans Standard Specifications for Signal, Lighting and Electrical Systems. Section 86-4 of these specifications requires the use of LED’s. Section 11.2.4 of the MLSP promotes the use of “modern efficient lighting.” The City may additionally require LEDs for public and outdoor lighting facilities as conditions of project-specific development approvals within the SPA in the future.

7. Limit the hours of operation of outdoor lighting.

Section 11.2.4 of the MLSP promotes the use of “modern efficient lighting” and requires “all new development... to incorporate energy conservation and green building practices to the maximum extent feasible.” Additionally, the project applicant(s) would coordinate with City public safety and school officials to determine opportunities for limiting the hours of operation for outdoor lighting.

8. Use solar heating, automatic covers, and efficient pumps and motors for pools and spas.

Section 11.2.4 of the MLSP and DEIR Mitigation Measure 6-2c provide for the use of various high efficiency heating systems, including the use of photovoltaic and non-photovoltaic solar heating systems and passive (i.e., pool blankets) heating systems, most or all of which are adaptable to pool and spa heating and maintenance applications.

9. Provide education on energy efficiency.

Section 11.2.4 of the MLSP addresses the provision of energy conservation information to residential, industrial, and office developers via the following provisions: “incorporate energy conservation and green building practices to maximum extent feasible” and “encourage builders to provide a full array of energy efficient design options for the buyer...”

B. Renewable Energy

1. Install solar and wind power systems, solar and tankless hot water heaters, and energy-efficient heating ventilation and air conditioning. Educate consumers about existing incentives.

Section 11.2.4 of the MLSP and DEIR Mitigation Measure 6-2c provide for the use of various high efficiency heating systems, including the use of photovoltaic and non-photovoltaic solar heating systems and passive heating systems. Section 11.2.4 of the MLSP addresses the provision of energy conservation information to residential, industrial and office developers via the following provisions: “incorporate energy conservation and green building practices to maximum extent feasible” and “encourage builders to provide a full array of energy efficient design options for the buyer...”

2. Install solar panels on carports and over parking areas.

The City may require solar panels on carports and over parking areas as conditions of project-specific development approvals within the SPA in the future. However, it is currently infeasible to impose enforceable requirements for solar panels on carports and over parking areas because there are no project-specific development applications before the City at this time and because the identity of the builders of such structures and their respective designs have not been determined.

C. Water Conservation and Efficiency

1. Create water-efficient landscapes.

The MLSP includes a Water Conservation section that imposes numerous water conservation measures applicable to the SPA, including the use of non-potable water for landscaping, irrigation, and public spaces and the use of drought-tolerant plants for private yard and public area landscapes developed and installed by the developers. See MLSP Appendix C.

2. Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.

The MLSP's Water Conservation section requires the use of non-potable water for irrigation and the installation of high-efficiency irrigation systems for private yard and public area landscapes developed and installed by the developers. See MLSP Appendix C.

3. Use reclaimed water for landscape irrigation in new developments and on public property. Install the infrastructure to deliver and use reclaimed water.

The MLSP provides for development and implementation of a state-of-the-art Integrated Water Management Plan to manage the community's water supply. The Integrated Water Management Plan provides infrastructure to deliver and use non-potable water for the community's landscape irrigation needs. See MLSP, Section 8.2 and Appendix C.

4. Design buildings to be water-efficient. Install water-efficient fixtures and appliances.

The MLSP's Water Conservation plan requires that a broad array of water efficient design features, fixtures, and appliances be implemented by water system operators and users, to the extent feasible, including low-flow toilets and showerheads, faucet aerators, and various operational measures to reduce water use. See MLSP Appendix C, Section C.3.

5. Use graywater.

The MLSP's Water Conservation plan promotes the use of gray water by homeowners (MLSP Appendix C, Section C.3) and the Integrated Water Management Plan provides a dual plumbing system to facilitate the use of non-potable water for private yards and public area landscapes developed and installed by the developers. See MLSP, Section 8.2 and Appendix C.

6. Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.

Runoff would be controlled by the proposed project's interconnecting lake and canal system, which also provides a reservoir system for non-potable water used to recharge the groundwater aquifer and irrigate the SPA's private yards and public area landscapes developed and installed by the developers. MLSP Appendix C, Section C.3: Operational Measures and Landscape Irrigation-Residential Yards, provides detail for restricting watering methods. However, this measure may be difficult to enforce because there are no project-specific development applications pending before the City, and because the identities of the ultimate water users are not presently known and such users are not within the control of the project applicant(s). Such requirements would be most appropriately imposed through Citywide ordinances.

7. Restrict the use of water for cleaning outdoor surfaces and vehicles.

MLSP Appendix C, Section C.3: Operational Measures and Landscape Irrigation-Residential Yards, provides detail for restricting watering methods. However, it may be difficult to impose enforceable requirements to restrict water use, methods, and behavior by homeowners and businesses because there are currently no project-specific development applications pending before the City, and the identities of the ultimate water users are not presently known and such users are not within the control of the project applicant(s). Such requirements would be most appropriately imposed through Citywide ordinances.

8. Implement low-impact development practices that maintain the existing hydrologic character of the site to manage storm water and protect the environment.

DEIR Mitigation Measures 11-1 and 11-2 require all development within the SPA to implement multiple Best Management Practices and techniques to control the volume and improve the quality of storm water runoff from pre-project conditions. In addition, the MLSP's Integrated Water Management Plan would reduce the need for imported water by establishing a groundwater recharge facility, in conjunction with the proposed project's design to capture storm runoff within a system of on-site lakes, which would provide non-potable water for landscape and irrigation needs.

9. Devise a comprehensive water conservation strategy appropriate for the project and location. The strategy may include many of the specific items listed above, plus other innovative measures that are appropriate to the specific project.

As noted above, the MLSP would implement a unique Integrated Water Management Plan and a suite of water conservation measures. DEIR Mitigation Measures 11-1 and 11-2 require all development within the SPA to implement multiple Best Management Practices and techniques to control the volume and improve the quality of storm water runoff from pre-project conditions. In addition, the MLSP's Integrated Water Management Plan would drastically reduce the need for imported water by establishing a groundwater recharge facility, in conjunction with the proposed project's design to capture storm runoff within a system of on-site lakes, which would provide non-potable water for landscape and irrigation needs.

10. Provide education about water conservation and available programs and incentives.

The MLSP's Water Conservation plan requires the developers to provide all residential home buyers in the MLSP community with educational materials regarding water use efficiency. See MLSP Appendix. C, Section C.3.

D. Solid Waste Measures

1. Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).

The MLSP includes a Community Solid Waste Services Plan that applies to all construction and demolition activities within the SPA. The City's Construction and Demolition Debris Ordinance also applies to all construction and demolition activities within the SPA. See MLSP, Section 8.5.3. The Plan and the Ordinance apply to all construction and demolition wastes generated by implementation of the proposed project, and are not limited to specific types of waste.

In addition, the project applicant(s) has agreed to voluntarily comply with the "Build It Green" organization's (see www.builditgreen.org) requirements for recycling construction and demolition job-site waste.

2. Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.

The City currently provides recycling services, including multiple recycling containers for different types of materials, to all areas of the City. These services would be extended to all areas of the proposed project upon annexation of the SPA to the City. See MLSP, Section 8.5.

3. Provide education and publicity about reducing waste and available recycling services.

The City of Stockton provides education, information, and recycling services through its domestic solid waste collection services and its “Stockton Goes Green” program (see www.stocktongov.com/GoGreen/index.cfm). These services would be available to all residents and businesses within the SPA.

E. Land Use Measures

1. Include mixed-use, infill, and higher density in development projects to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods.

The proposed project’s land use plan calls for compact, mixed-use development providing housing, schools, parks, and neighborhood-serving commercial and retail uses within an extensive network of bicycle and pedestrian trails and corridors, thereby providing access to necessary services without the need for automobile travel. The proposed project would provide housing in a wide range of densities, including high-density residential areas in close proximity to schools and commercial and retail services to promote bicycle and pedestrian travel. The proposed project also provides for the development of a substantial number of employment-generating land uses (industrial, commercial, retail, office) in close proximity to a variety of housing types, densities, and lot sizes, thereby reducing in both number and length the vehicle trips required between housing and jobs. See MLSP, Chapters 1, 4-7; see also, Chapter 3, “Project Description” of the DEIR.

2. Educate the public about the benefits of well-designed, higher density development.

As part of the MLSP approval process, the City of Stockton has conducted numerous public hearings and workshops, and will conduct additional public hearings before the City’s Planning Commission and City Council, to inform the public of the City’s planning and development goals and evaluate the extent to which the MLSP achieves those goals. If approved, the MLSP would be a public document available for public review.

3. Incorporate public transit into project design.

The MLSP would provide extensive facilities to promote and encourage the use of public transit, including an Amtrak multi-modal transit station and extensive bus service facilities. See MLSP, Section 7.4; see also DEIR Mitigation Measures 16-6a and 16-6b.

4. Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.

The MLSP would provide extensive open space and parks, in excess of what is required by the City’s 2035 General Plan Update. See MLSP, Sections 4.4.5 and 4.5.4 and Figure 4.3 (Land Use Map), and Chapter 9 (Parks and Recreation Plan). The MLSP also requires all developers to comply with the City’s Heritage Tree Ordinance and to minimize, to the extent feasible, the impacts of tree removal within the MLSP area. See MLSP, Section 10.3.2 (Riparian and Habitat Management Plan) and policies 10.3.2 through 10.3.9 (tree preservation policies); see also DEIR Mitigation Measures 7-1 (special status plant protection), and 7-2 (tree protection).

5. Develop “brownfields” and other underused or defunct properties near existing public transportation and jobs.

There are no “brownfields” within the SPA. However, the SPA is adjacent to existing industrial uses and the proposed project would extend the industrial area and provide extensive housing and public transportation options adjacent to these job-generating uses. See MLSP, Chapters 1, 4-7, and Chapter 3, “Project Description” of the DEIR.

6. Include pedestrian and bicycle-only streets and plazas within developments. Create travel routes that ensure that destinations may be reached conveniently by public transportation, bicycling or walking.

The MLSP would provide extensive bicycle and pedestrian facilities, including pedestrian/bicycle only “paseos” that would connect neighborhoods and public areas with village centers and community facilities. See MLSP, Section 7.5 and Figure 7.17; see also DEIR Mitigation Measures 16-5, 16-6, 16-12, and 16-13.

F. Transportation and Motor Vehicles

1. Limit idling time for commercial vehicles, including delivery and construction vehicles.

All development within the SPA would be required to comply with the current City and SJVAPCD criteria for construction and commercial vehicles, which include regulations designed to minimize idling time of commercial/construction vehicles. See also DEIR Mitigation Measure 6-1.

2. Use low or zero-emission vehicles, including construction vehicles.

As noted above, development within the SPA must comply with the current City and SJVAPCD criteria for construction and commercial vehicles. Among other things, these criteria require replacing fossil-fueled equipment with electrically driven equipment where feasible. See also DEIR Mitigation Measure 6-1.

3. Promote ride sharing programs e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides.

DEIR Mitigation Measure 6-2b provides for the establishment of ridesharing and transit incentives and programs, including preferential parking spaces for ridesharing vehicles and incentive-based parking fees designed to deter single-occupant vehicle use.

4. Create car sharing programs. Accommodations for such programs include providing parking spaces for the car share vehicles at convenient locations accessible by public transportation.

DEIR Mitigation Measure 6-2b provides for the establishment of ridesharing and transit incentives and programs, including preferential parking spaces for ridesharing vehicles and incentive-based parking fees designed to deter single-occupant vehicle use.

6. Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations).

In conjunction with the regional electric service provider and the City, the MLSP would provide electrical charging stations for electric vehicles at key locations throughout the SPA.

7. Increase the cost of driving and parking private vehicles by, e.g., imposing tolls and parking fees.

DEIR Mitigation Measure 6-2b provides for the establishment of ridesharing and transit incentives and programs, including preferential parking spaces for ridesharing vehicles and incentive-based parking fees designed to deter single-occupant vehicle use.

8. Build or fund a transportation center where various public transportation modes intersect.

The MLSP includes a multi-modal transit station that would connect various modes of public transportation. See MLSP, Section 7.4.

9. Provide shuttle service to public transit.

DEIR Mitigation Measure 6-2b provides for the establishment of shuttle service between worksites and public transit hubs, including the on-site multi-modal transit station.

10. Provide public transit incentives such as free or low-cost monthly transit passes.

DEIR Mitigation Measure 6-2b provides for the establishment of transit incentives to encourage the use of public transit and discourage the use of single-occupant vehicles.

11. Incorporate bicycle lanes and routes into street systems, new subdivisions, and large developments.

The MLSP contains an extensive bicycle lane system that connects to the City's existing bicycle lane system. See MLSP, section 7.5 and Figure 7.17.

12. Incorporate bicycle-friendly intersections into street design.

The MLSP would incorporate intersection designs that provide traffic calming measures to improve pedestrian and bicycle safety, including raised intersections and bulb-outs. See MLSP, Figure 7.19. In addition, most street designs would incorporate multi-use pedestrian/bicycle paths that would be protected from vehicle traffic by planting strips or other types of medians. See MLSP, Section 7.3.

13. For commercial projects, provide adequate bicycle parking near building entrances to promote cyclist safety, security, and convenience. For large employers, provide facilities that encourage bicycle commuting, including, e.g., locked bicycle storage or covered or indoor bicycle parking.

DEIR Mitigation Measure 6-2b provides for the establishment of bicycle infrastructure, including bicycle parking and storage facilities at residential and non-residential land uses, and including showers and lockers for bicycle commuters at larger workplaces.

14. Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.

The MLSP would provide extensive bicycle and pedestrian facilities, including pedestrian/bicycle only "paseos" that would connect neighborhoods and public areas with schools, parks, and other destination points. See MLSP, section 7.5 and Figure 7.17; see also DEIR Mitigation Measures 16-5 and 16-12.

15. Work with the school district to restore or expand school bus services.

The MLSP includes planned locations for elementary schools within easy walking/biking distance (0.5+ miles) of all residential neighborhoods, and the project applicant(s) would work closely with the Stockton

Unified School District for design of efficient circulation patterns. See also DEIR Mitigation Measures 16-7 and 16-20.

16. Institute a telecommute work program. Provide information, training, and incentives to encourage participation. Provide incentives for equipment purchases to allow high-quality teleconferences.

It is currently not feasible to implement telecommuting programs for employers within the SPA because the identities of such employers are not presently known. However, DEIR Mitigation Measure 6-2b provides for the establishment, as appropriate to subsequent development projects within the SPA, of compressed work schedules and home-based telecommuting programs.

AG-Suggested Measures Related to Greenhouse Gas Emissions Not Incorporated into the Proposed Project

Measures identified by the AG's office that are not applicable or not feasible for the proposed project include the following:

B. Renewable Energy

3. Use combined heat and power in appropriate applications.

Combined heat and power (CHP), also known as cogeneration, is an approach to generating power and thermal energy from a single fuel source. It is infeasible for the project applicant(s) to construct a cogeneration facility at the project site because such a facility is outside the control of the project applicant(s). Furthermore, the City believes that the establishment of new power generation plants is best addressed by utility providers such as Pacific Gas & Electric Company.

D. Solid Waste

4. Recover by-product methane to generate electricity.

The MLSP does not include any land uses that would be bulk methane generators; therefore, this measure does not apply to the proposed project.

F. Transportation and Motor Vehicles

5. Create local "light vehicle" networks, such as neighborhood electric vehicle (NEV) systems.

Because the proposed project provides housing, employment, and commerce within the public roadway framework, it is subject to the City's public roadway design criteria, which does not provide for segregated lanes dedicated to NEV systems. Therefore, it is infeasible to create an NEV system within the SPA and implementation of such a measure is outside the control of the project applicant(s).

17. Provide information on all options for individuals and businesses to reduce transportation-related emissions. Provide education and information about public transportation.

It is currently infeasible to provide information on transportation-related options to individuals and businesses within the SPA because the identities of such individuals and businesses are not known at this time, and because the City does not currently have any such educational program in place to which developers could contribute. If the City were to adopt such a program in the future with a developer fee program, the project applicant(s) would be required by law to participate.

G. Carbon Offsets

If, after analyzing and requiring all reasonable and feasible on-site mitigation measures for avoiding or reducing greenhouse gas-related impacts, the lead agency determines that additional mitigation is required, the lead agency may consider additional off-site mitigation. The project proponent could, for example, fund off-site mitigation projects (e.g., alternative energy projects, or energy or water audits for existing projects) that will reduce carbon emissions, conduct an audit of its other existing operations and agree to retrofit, or purchase carbon “credits” from another entity that will undertake mitigation.

The topic of offsets can be complicated, and a full discussion is outside the scope of this summary document. Issues that the lead agency should consider include:

1. The location of the off-site mitigation. (If the off-site mitigation is far from the project, any additional, non-climate-related benefits of the mitigation will be lost to the local community.)
2. Whether the emissions reductions from off-site mitigation can be quantified and verified.
3. Whether the mitigation ratio should be greater than 1:1 to reflect any uncertainty about the effectiveness of the offset.

To date, carbon offset programs in the United States are not regulated by any agency. Regulation by an agency such as EPA, ARB, or a local air quality district, such as SJVAPCD, is necessary to ensure that the offsets purchased for each proposed project are calculated in the same way using the same methodology with the same cost, and to ensure that payment into an offset program results in actual, quantifiable reductions in GHGs, thereby ensuring the effectiveness of related mitigation measures. To date, neither ARB, EPA, nor SJVAPCD have created or adopted any official programs relating to offsets for the generation of GHG emissions, and therefore the actual effectiveness of this proposed mitigation measure cannot be assured. If and when such programs are established and adopted by ARB, the project applicant(s) of all project phases would be required by law to participate.

Mitigation Measures:

Implement Mitigation Measures 6-2a, 6-2b, and 6-2c.

DEIR Mitigation Measures 6-2a, 6-2b, and 6-2c require implementation of measures that have been designed by SJVAPCD to reduce emissions that are byproducts of combustion engines, including NO_x and CO₂. Since the majority of GHG emissions from the proposed project would come from combustion byproducts from transportation sources, the same mitigation measures that would reduce emissions of criteria air pollutants and precursors (i.e., NO_x), would also act to reduce GHG emissions (i.e., CO₂) from project operation.

Implementation: Project applicant(s) of all project phases.

Monitoring: City of Stockton Community Development Department, Planning Division and San Joaquin Valley Air Pollution Control District.

Significance after Mitigation:

Implementation of Mitigation Measures 6-2a, 6-2b, and 6-2c would reduce emissions of the combustion byproduct CO₂ by 33% as discussed previously in Impact 6-2. Therefore, GHG emissions from mobile sources would also be reduced by a corresponding 33%. As described above, the MLSP would implement 90% of the “Generally Applicable” mitigation measures suggested by the AG. Implementation of these

mitigation measures would further reduce the proposed project's GHG emissions; however, the current state of the science precludes an exact quantification of the additional percentage reduction that would occur from implementation of these additional mitigation measures. Therefore, because the proposed project has implemented all feasible mitigation measures, and because the proposed project would still result in a net increase in GHG emissions, this impact would remain **significant and unavoidable**.

AIR QUALITY, IMPACT 6-5, PAGE 6-43

Impact 6-5, Stationary Sources, is hereby revised as follows:

Stationary Sources

According to SJVAPCD, permitted facilities as well as facilities that represent potential TAC emitters within one-quarter mile of the SPA include two concrete batch plants, a truck coating (i.e., painting) facility, a rice processing facility, two standby generators and California Spray Dry, a protein product processing facility. All of these facilities are subject to SJVAPCD emission controls and do not represent major sources of criteria pollutants or TAC emissions. ~~Thus, long-term operation of the proposed project would not result in the exposure of sensitive receptors to substantial emissions of TACs from existing stationary sources.~~

However, the Danamark nut processing facility includes operation of a fumigation chamber that emits ammonia, methyl bromide, and phosphine. This facility is located near the southwest corner of the project site, west of the BNSF railroad line near the intersection of East Mariposa Road and Austin Road. The closest proposed land use to the Danamark facility would be the Village Center/Commercial area N-20 shown in Figure 3-8. People working or shopping in the N-20 area could be as close as 300 feet to the fumigation chamber.

According to SJVAPCD permitting records, the exhaust fan of the fumigation chamber operates 4 hours per day, 7 days per week, for 12 weeks per year (SJVAPCD 2003). The Office of Environmental Health Hazard Assessment (OEHHA) has identified exposure to the type of TACs emitted from the nut processing facility as having the potential to pose adverse health impacts to the public, including acute health impacts from short-term exposure to ammonia or methyl bromide and chronic health impacts from long-term exposure to ammonia, methyl bromide, or phosphine. There is no known level of cancer risk associated with these TAC emissions.

To evaluate the potential adverse health impacts that fumigation operations at the Danamark facility might have on residents and employees at the proposed project site, a refined health-risk assessment (HRA) using meteorological data from Stockton, CA was prepared (ENSR 2007 and EDAW 2007) to determine 1-hour and annual average TAC emission concentration estimates. Using U.S. EPA's AERMOD dispersion model, potential TAC emission concentrations from long-term project operations were estimated at sensitive receptor locations around the Danamark facility, including multiple points inside the proposed specific plan area. A concentric (polar) grid extending from 100 meters to 1,000 meters (1 kilometer) was modeled to ensure the maximum impacts were identified. Unitized modeled concentrations based on an emission rate of 1 gram per second were multiplied by actual emission rates (also in grams per second), to determine actual ground-level concentrations throughout the receptor array. Acute and chronic hazard indices (HIs) were determined based on the ratio of the actual short-term and annual TAC concentrations to the respective Reference Exposure Levels (REL) for each TAC. The health risk assessment calculated the acute and chronic hazard index based on the REL's published in the California Air Pollution Control Officers Association (CAPCOA) AB 2588 Risk Assessment Guidelines (CAPCOA 1993), as updated in September 2003 by the OEHHA in the Consolidated Table of

OEHHA/ARB Approved Risk Assessment Health Values (OEHHA 2003). The modeling files and health risk calculations are included in new Appendix Z to this FEIR.

The risk analysis modeling yielded predictions for the Point of Maximum Impact (PMI) at a hypothetical sensitive receptor location; in this case, a location approximately 300 feet from the fumigation chamber that represents Village Center/Commercial area N-20. At the PMI, the chronic and acute noncancer impacts (HI) are estimated to be 0.205 and 0.186, respectively. Because these values do not exceed SJVAPCD's applicable thresholds for both chronic and acute noncarcinogenic health effects (i.e., an HI of 1.0), development of the land uses proposed by the MLSP would not expose new residents to acute or chronic health risks. Therefore, this impact would be **less than significant**.

AIR QUALITY, IMPACT 6-11, PAGES 6-50 AND 6-51

The text of Impact 6-11 is hereby revised as follows:

Impact 6-11: Generation of Long-term Operation-Related Emissions of Greenhouse Gases.

~~According to the traffic analysis, buildout of Phase 1 would result in approximately 69,356 total average daily trips (436,943 total daily VMT) (TJKM 2007). Phase 1 of the proposed project would accommodate 14,019 new residents (according to Chapter 14, "Population, Housing, and Employment") and thus would generate 11,376 VMT/person annually. Assuming an emission factor for future CO₂ emissions from vehicles of approximately 366 grams CO₂/mile (ARB 2002), approximately 4 tons CO₂/person would be generated by Phase 1 annually. These emissions would be nearly two times the per capita level that would be needed to achieve 1990 GHG levels, if the goals of AB 32 were extended to all sources of emissions. (See Appendix C for detailed calculations and a list of assumptions). Thus, as discussed above under the program level, because project-generated, operation-related emissions of GHGs would be two times the per capita level used to determine the potential for significant GHG emissions, and that the project would accommodate more than 14,019 new residents, which is substantial, this impact would be **significant**.~~

~~Refer to Impact 6-4 for further discussion of this impact.~~

~~Implementation of Mitigation Measures 6-2a, 6-2b, and 6-2c would reduce GHG emissions from mobile sources by approximately 15%. However, a reduction in project-generated emissions of approximately 48% would be required to achieve the threshold of 2 tons CO₂/person. Thus, this impact would remain **significant and unavoidable**.~~

According to the traffic analysis, buildout of Phase 1 would result in approximately 69,356 total average daily trips (436,943 total daily VMT) (TJKM 2007). Phase 1 of the proposed project would accommodate 14,019 new residents (according to Chapter 14, "Population, Housing, and Employment") and thus would generate 11,376 VMT/person annually. If the total trips, as well as area-source and off-site stationary-source GHG emissions are considered, operation of Phase 1 of the proposed project would generate total GHG emissions of approximately 91,793 metric tons CO₂-e annually during the lifetime of the project (see Table 6-7). The quantity of Phase 1 of the proposed project's annual emissions (91,793 metric tons CO₂-e/year) that would truly be "new" emissions is unknown. However, it is likely that a substantial portion of this total would constitute a net increase in GHG emissions. Because the proposed project would generate an increase in emissions of GHGs, and Phase 1 of the proposed project would accommodate more than 14,000 residents, which is substantial, this impact would be **significant**.

Refer to Impact 6-4 for further discussion of this impact.

The MLSP contains many features that are designed to reduce GHG emissions, either directly or indirectly. These features are consistent with the climate change measures identified by the AG as "Generally

Applicable,” and would reduce emissions below the values reported in Table 6-7, although the current state of the science precludes an exact quantification of the reduction in GHG emissions that would occur from implementation of these measures. The MLSP design features, and features incorporated through other mitigation measures in the DEIR, that would reduce GHG emissions are itemized above in Impact 6-4 and are listed in Chapter 3, “Project Description” of the DEIR.

Implementation of Mitigation Measures 6-2a, 6-2b, and 6-2c would reduce emissions of the combustion byproduct CO₂ by 33% as discussed in Impact 6-2. Therefore, GHG emissions from mobile sources would also be reduced by a corresponding 33%. As described above, the MLSP would implement 90% of the “Generally Applicable” mitigation measures suggested by the AG. Implementation of these mitigation measures would further reduce the proposed project’s GHG emissions; however, the current state of the science precludes an exact quantification of the additional percentage reduction that would occur from implementation of these additional mitigation measures. Therefore, because the proposed project has implemented all feasible mitigation measures, and because the proposed project would still result in a net increase in GHG emissions, this impact would remain **significant and unavoidable**.

BIOLOGICAL RESOURCES, MITIGATION MEASURE 7-1, PAGE 7-24

The fifth paragraph of Mitigation Measure 7-1 on page 7-24 is hereby revised as follows:

Rose-mallow and Delta tule pea: These species are considered widely distributed by the SJMSCP, and dedication of conservation easements is the preferred option for mitigation. If these species are found during preconstruction surveys, the possibility of establishing a conservation easement shall be evaluated with the SJMSCP. If dedication of a conservation easement is not a feasible option, payment of SJMSCP development fees may be used to reduce significant impacts on these species. If these species are found in project areas not covered by the SJMSCP, then a mitigation plan shall be developed by the botanist, with review and input from DFG. The mitigation plan shall identify specific measures for any populations affected by the proposed 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 loss of on-site habitat. All mitigation measures that the City determines through this consultation to be necessary shall be implemented by the project applicant(s) of each project phase before the start of construction activities.

BIOLOGICAL RESOURCES, MITIGATION MEASURE 7-4, PAGE 7-30

The fifth paragraph of Mitigation Measure 7-4 on page 7-30 is hereby revised as follows:

- (d) Giant Garter Snake:** To minimize potential project effects on giant garter snakes, the project applicant(s) of all project phases outside the covered SJMSCP area shall implement measure (d) in Mitigation Measure 7-3 and these additional measures:
- ▶ If it is not possible to complete in-water and bankside construction by October 1, such activities may continue beyond that date, provided a qualified biological monitor is present on the project site and USFWS provides concurrence that such activities are not likely to adversely affect giant garter snake.
 - ▶ If a live giant garter snake is encountered during construction activities, the project’s biological monitor and USFWS shall be immediately notified. The biological monitor shall stop construction activity in the vicinity of the giant garter snake. The monitor shall remain in the area for the remainder of the workday to make sure the snake is not harmed or if it leaves the site, that

it does not return. If the giant garter snake does not leave on its own within one working day, further consultation with USFWS shall be conducted.

BIOLOGICAL RESOURCES, MITIGATION MEASURE 7-10, PAGE 7-37

Mitigation Measure 7-10a is hereby revised as follows:

7-10a: To minimize effects on special-status species, the project applicant(s) of all future phases (development Phases 2–5) shall implement the following measures before issuance of a grading permit for any off-site improvement in these development phases:

- ▶ Retain qualified biologist(s) and/or botanist(s) to conduct appropriate biological surveys and habitat assessments in accordance with established survey protocols and guidelines.
- ▶ If the biologist/botanist determines that there is no potential for occurrence of any special-status plant or wildlife species, special-status species may be presumed absent and no further mitigation shall be necessary.
- ▶ If special-status species are present within areas covered by the SJMSCP, the project applicant(s) shall consult with a SJCOG biologist to make sure that all applicable measures contained in the SJMSCP are implemented.
- ▶ If special-status species are present in areas that are not covered by the SJMSCP, then the project applicant(s) shall consult with DFG or USFWS, as appropriate depending on the species' listing status, and implement the species-specific measures outlined in Mitigation Measure 7-4.

HEALTH AND SAFETY, ENVIRONMENTAL CONTAMINATION WITHIN THE SPA, PAGE 10-7

The first paragraph is hereby revised as follows:

The ASTM regulatory agency database search found five facilities within the required 1-mile search radius but outside the SPA known to contain underground storage tanks (USTs). These permitted facilities are not listed on the Leaking UST databases and are considered to be functioning properly, with no leaks. These USTs do not represent a source of environmental contamination, ~~but would require removal before project development pursuant to California Department of Toxic Substances Control (DTSC) regulations~~ and because they are not located on the project site, would not require removal before project development.

HEALTH AND SAFETY, IMPACT 10-4, PAGE 10-15

The third paragraph of Impact 10-4 is hereby revised as follows:

As discussed in the “Environmental Setting” section, the SPA contains several ~~USTs~~, ASTs, debris piles, pole-mounted transformers, and other features that would require treatment in conjunction with project development.

HYDROLOGY AND WATER QUALITY, IMPACT 11-6, RECHARGE WATER SOURCE AND QUANTITY, PAGES 11-34 AND 11-35

The text of the discussion of recharge water source and quantity is hereby revised as follows:

RECHARGE WATER SOURCE AND QUANTITY

Nonpotable Recharge Water Demand

At full project buildout, the projected annual consumptive demand for nonpotable water, to meet lake level management and irrigation demands, is approximately ~~3,089~~ 2,593 afy. The analysis below considers the amount of water that would be needed at full project buildout to meet the project’s recharge goals. This analysis forms the design basis for the surface water diversion structure requirements.

The yearly project demand of recharged groundwater at full buildout is approximately ~~1,800 to 3,000~~ 2,593 afy during a normal water delivery year. However, if all nonpotable water demands were to be met by artificially-recharged groundwater, and using the City of Stockton’s 2:1 application-to-realization ratio for recharging operations, then approximately ~~6,178~~ 5,186 afy would need to be applied at the Arbini recharge facility at full project buildout, and would represent the “worst-case” base recharge demand for annual nonpotable water.

In the event of a drought, surface water may not be available for diversion to the recharge facility. This in turn could result in a reduced amount of water that would be available from recharged groundwater. The proposed establishment and maintenance of a groundwater reserve would reduce the risk that nonpotable water required by the project would not be available. As a planning horizon, the applicant(s) intend to establish and carry a 3-year reserve supply of surplus banked groundwater to meet normal demand during drought years when annual recharge objectives may not be achieved in any given year. Three years was the planning horizon selected for maintaining a reserve of recharged groundwater to meet the nonpotable water demand based on SB 610 WSA requirements.

The amount of water necessary to meet the 3-year drought condition would change with each phase of the project as a larger area of the project site is developed under each phase. The following calculations show the total amount of water that would need to be banked to meet the 3-year drought demand at full project buildout:

$$\begin{aligned} & 3 \times 5,186 \text{ afy} = 15,558 \text{ af water} \\ & + 5\% \times 15,558 = 778 \text{ af water (to account for estimated unrecoverable banked groundwater)} \\ & \text{Total} = 16,336 \text{ af water (full project buildout, 3-year drought demand)} \end{aligned}$$

During critically dry years, when little or no surface water is available from SEWD or CSJWCD, water would be pumped from the banked reserve. As wet years follow, and surface water is again available from SEWD or CSJWCD, the banked storage would be returned to the desired reserve amount (16,336 af at full project buildout, smaller amounts for each development phase). To meet the 3-year drought demand for each phase of the project, extra water would be applied during wet years, up to a total of 8,500 afy, as necessary to accumulate the appropriate banked reserve for each development phase.

~~At full project buildout, the groundwater recharge reserve requirement would be approximately 18,528 af (three years at 6,176 afy). This proposed reserve bank would be achieved and maintained over time by recharging up to an additional 1,800 afy (approximately 10% of total annual requirement). Based on these~~

~~estimates, the annual nonpotable recharge demand would be 7,878 afy (6,178 afy [annual recharge requirement] + 1,800 afy [additional 10% factor to build and maintain reserve over time]). Assuming that 5% of the recharged water becomes unrecoverable as a result of groundwater migration under the influence of the natural gradient, this would add approximately 400 afy to the annual nonpotable water demand, for an estimated total of 8,278 afy of nonpotable water applied annually at the fully builtout and operational Arbini recharge site. Furthermore, for planning purposes and to provide a more conservative estimate of maximum required recharge (to meet project nonpotable water demands and establish and maintain a 3-year reserve), the approximately 8,278 afy was rounded upwards to 10,000 afy. It should be noted that the above-referenced nonpotable recharge demand estimates are based on maximum requirements under worst-case scenarios, and the actual water demand for any given year would likely be much less than 10,000 afy. However, these estimates are useful in providing conservative rationale and design basis for the surface water diversion structure requirements.~~

To meet the maximum nonpotable water demand of 10,000 afy, a surface water diversion pump station has been designed to divert up to 23 cfs from SEWD in Duck Creek. At this diversion rate, a total of approximately 220 days would be required to meet the maximum “worst case” total annual demand of 10,000 afy. All water diversion facilities (pump stations, diversion structures, and piping) would be sized to accommodate the maximum nonpotable water recharge capacity of the Arbini site, which Kleinfelder (2007) has determined to be 8,500 afy. If the applicants were to purchase surface water from CSJWCD in the future, the diversion structure on North Little Johns Creek (side weir, see Impact 11-16 below), currently proposed solely for flood control diversions, would need to be modified to provide a controlled diversion of flow from the creek to the recharge facility. Potential future modifications to this weir are analyzed under Impact 11-8 below.

Because the proposed Duck Creek diversion structure would be used to divert purchased surplus water under a contract from SEWD and/or CSJWCD, a water right permit would not be required (Shephard, pers. comm., 2007) (see also the discussion under “Surface Water – Contract Supply” in Section 11.2.1 above). An evaluation of the construction-related water quality and hydrologic effects of the proposed surface water diversion structure at Duck Creek is provided in Impact 11-16 below.

Nonpotable Recharge Water Source

~~Under the proposed recharge program, purchased nonpotable surface water, obtained primarily during periods of surplus (e.g., winter spill water), would be diverted into the Arbini recharge facility. Surplus water is water that is in excess of water demands for municipal and industrial use (including an expanded SEWD Treatment Plant) and in excess of existing agricultural demand. Water would be taken first from flood and spill water and then from surplus water that accumulates at other times. Surplus water would be diverted to the Arbini recharge facility from Duck Creek and possibly from North Little Johns Creek and possibly from Duck Creek. Purchased surface water would be obtained from CSJWCD SEWD (for development Phase 1) and possibly SEWD CSJWCD. Surface water purchased from SEWD would be delivered through Duck Creek. Surface water that the applicant(s) may purchased from CSJWCD would be delivered through North Little Johns Creek. SEWD/CSJWCD has have indicated that adequate surface water is available to meet maximum program level nonpotable water demands for a given year (i.e., 10,000 2,593 afy at full project buildout) (see Appendix Y). However, while total demand may be deemed available in whole, it is possible that surface water may not be available in North Little Johns Creek and/or Duck Creek at the necessary rate and duration to meet the annual demands of full project buildout in any given year during a drought. While the 3-year reserve banked via the Arbini recharge facility would allow for water demands to be met during years when annual recharge water may not be available, this condition could extend beyond a 3-year period. Because there is uncertainty regarding surface water availability in Duck Creek or North Little Johns Creek at the necessary rate and duration for recharge needs to be met at the full project buildout level, The potential lack of nonpotable water in the event a drought were to last longer than 3 years this would be a **potentially significant** impact.~~

Nonpotable Recharge Water Delivery

~~Use of North Little Johns Creek and/or Duck Creek for delivery of purchased water (for diversion at the downstream Arbini facility) would not result in additional flows in the either creek channel, up to the maximum proposed 23 cfs rate of diversion at full project buildout because the applicants would purchase surplus water that is already flowing down the creek. Studies are under way to evaluate the Duck Creek channel in regards to conveyance capacity; however, the results are not currently available for use in this analysis. Therefore, it is uncertain whether the Duck Creek channel could effectively convey additional water delivered for project recharge purposes. North Little Johns Creek could also be used for delivery of purchased water to the Arbini recharge facility. Like Duck Creek, the ability of North Little Johns Creek to safely convey additional water is also unknown. Because it is uncertain whether expanded use of Duck Creek and North Little Johns Creek for delivery of purchased water would exceed the current conveyance capacity of these channels and ultimately increase the potential for flooding of adjacent lands, this impact would be potentially significant. Therefore, there would be no increase in erosion or flooding hazards, and no required changes to the channel conveyance capacity.~~

HYDROLOGY AND WATER QUALITY, FIGURE 11-4, PAGE 11-37

Figure 11-4, “Conceptual Layout, Proposed Recharge System,” is hereby revised to reflect the use of the entire Arbini property as both a flood control basin and/or tier III groundwater recharge.

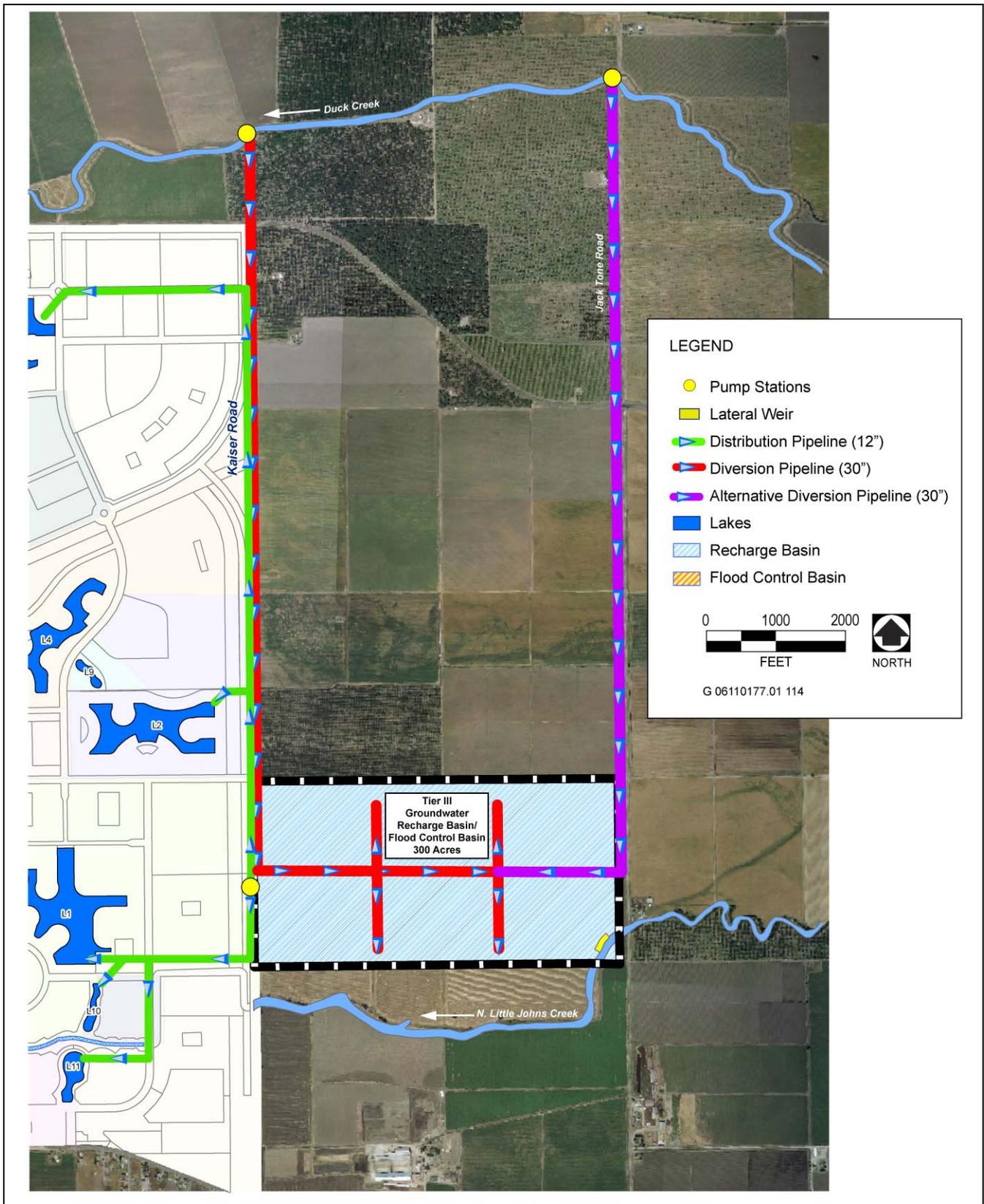
HYDROLOGY AND WATER QUALITY, IMPACT 11-6, ARBINI RECHARGE FACILITY, PAGES 11-38 AND 11-39

The last paragraph on page 11-38 and the first two paragraphs on page 11-39 are hereby revised as follows:

~~Project development would pump groundwater supplied by the recharge operation for landscape irrigation purposes when surface water supplies are not available. In normal water delivery years, when groundwater pumping would average between 300 and 500 af per month for as long as 6 months out of the year, a total of approximately 1,800 to 3,000 af would be pumped annually for the proposed project. This results in safe yield factors that would range from 0.47 to 0.78 af per acre.~~

~~Preliminary studies (Kleinfelder 2006a) suggest that proposed project effects on groundwater quantity underlying the SPA and vicinity would result in a net long term decrease in existing groundwater usage within the SPA (from approximately 11,000 afy of existing groundwater to a maximum of approximately 3,089 afy).~~

In summary, it is estimated that although the amount of impervious surfaces constructed under the project would increase runoff (with a corresponding decrease in groundwater recharge) by approximately 2,180 afy with buildout of the proposed project, approximately 11,000 afy of groundwater that is currently being pumped for use by agricultural operations would remain in the groundwater aquifer. This would more than offset the approximately 2,180 afy of potential recharge that would be lost as a result of project development of impervious surfaces. The project applicant(s) plan to meet a portion of the nonpotable water demands through “banked” surplus surface water for annual demands and establish a reserve equal to a 3-year supply of recharge water in the aquifer to allow use of banked water during dry years. This would involve the purchase of surplus surface water from ~~SEWD~~ CSJWCD that would be conveyed through ~~Duck Creek~~ North Little Johns Creek, and possibly the purchase of surplus surface water from ~~CSJWCD~~ SEWD that would be conveyed through ~~North Little Johns~~ Duck Creek; the ~~increased use of installation of diversion structures in those channels for delivery of the purchased water; and the diversion of purchased water into the recharge facility at a rate and duration that varies depending on a variety of circumstances. Assessments to determine the additional conveyance capacities of the~~



Source: PACE, Inc.

Conceptual Layout, Proposed Recharge System

Figure 11-4

~~channels and availability of surplus surface water at the rate and duration necessary have not been completed.~~ Additionally, the final design specifications of the recharge facility, ~~the recharge feasibility assessments,~~ and the final quantification of proposed recharge operations on groundwater supply, have not been completed or submitted for review. Finally, operation of the proposed recharge system would require creation of an entity with experience in water management; this entity has not yet been established. Therefore, project-related impacts on substantial depletion of groundwater supplies, or substantial interference with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level, are considered **potentially significant**.

HYDROLOGY AND WATER QUALITY, MITIGATION MEASURE 11-6B, PAGE 11-40

Mitigation Measure 11-6b is hereby revised as follows:

11-6b: Prior to final subdivision map approval, or improvement plan approval for nonresidential uses, the project applicant(s) shall prepare a groundwater monitoring plan covering all project phases, which shall be used to direct, assess, and report routine observations regarding groundwater conditions at the Mariposa Lakes development and the Arbini recharge site. If the results of the monitoring plan indicate that ~~the recharge project is having a negative effect on groundwater recharge~~ recharge operations are not functioning at the level necessary to serve project development (for example, in an extended drought situation longer than 3 years where there is not enough banked water to meet project needs), the recharge program shall be halted until appropriate actions, approved by the City and the appropriate regulatory agencies, are implemented. Furthermore, groundwater shall not be withdrawn at a ratio greater than 1:2 (i.e., no more than 1 acre-foot of banked water withdrawn for every 2 acre-feet of surface water applied). ~~These~~ Appropriate actions that could be taken would include one or more of the following:

- ▶ expansion of the Arbini recharge facility onto additional land (to allow for increased recharge and/or storage);
- ▶ purchase of surface water supplies from a water supplier to supply all of the project's water needs without the use of groundwater recharge; or
- ▶ decreasing project water demands through reductions in the surface area of the proposed on-site lakes (and associated evaporation loss make-up water requirements) and/or landscaped areas (and associated irrigation requirements); if this option is selected, the applicants shall plant drought-tolerant vegetation around the margins of the on-site lakes to reduce potential adverse visual impacts.

Implementation of any or all of these actions could result in potentially significant impacts to biological resources, cultural resources, and/or hydrology and water quality; impacts in all other issue areas would be less than significant. Implementation of Mitigation Measures 7-10a, 7-10b, 7-10c, 8-5a, 8-5b, 11-1a, 11-1b, 11-4a, 11-4b, and 11-8 would reduce these subsequent potentially significant impacts to less-than-significant levels.

HYDROLOGY AND WATER QUALITY, MITIGATION MEASURE 11-6C, PAGE 11-41

Mitigation Measure 11-6c is hereby revised as follows:

11-6c: Prior to final subdivision map approval, or improvement plan approval for nonresidential uses, the project applicant(s) shall prepare a nonpotable off-site water source feasibility assessment covering all project phases. This assessment shall describe the location and availability of off-site sources of surplus surface water that could be delivered to the SPA for use in irrigation and groundwater recharging operations. This assessment shall examine such issues as availability and quantity of off-site surface water

supplies, delivery mechanisms from the source to the SPA, and a cost-benefit analysis for each identified off-site source. The assessment shall include:

- ▶ water supply from SEWD and/or ~~potentially~~ CSJWCD, via Duck and/or North Little Johns Creeks;
- ▶ issues related to SEWD and CSJWCD coordination;
- ▶ final water availability calculations; and
- ▶ final water delivery schedule; ~~and~~
- ▶ ~~channel conveyance capacity of Duck Creek and North Little Johns Creek for expanded use of this facility for delivery of additional water.~~

~~If it is determined that Duck Creek and/or North Little Johns Creek do not have the additional capacity to safely convey additional delivery water, delivery of water shall not occur until appropriate actions, approved by the City and the appropriate regulatory agencies, are implemented. These actions may include one or more of the following:~~

- ~~▶ construction of a berm or engineered levee;~~
- ~~▶ channel widening; or~~
- ~~▶ channel maintenance such as vegetation removal.~~

~~Implementation of any or all of these potential actions could result in subsequent potentially significant impacts to biological resources, cultural resources, and/or hydrology and water quality; impacts on all other issue areas would be less than significant. Implementation of Mitigation Measures 7-10a, 7-10b, 7-10c, 8-5a, 8-5b, 11-1a, 11-1b, and 11-8 would reduce these subsequent potentially significant impacts to a less than significant level.~~

HYDROLOGY AND WATER QUALITY, MITIGATION MEASURE 11-6E, PAGE 11-41

A new paragraph is hereby added after Mitigation Measure 11-6d and before “Implementation”:

11-6e: If the results of the groundwater monitoring plan required in Mitigation Measure 11-6b show that recharge operations are not functioning at the level necessary to serve proposed development, the City shall not issue building permits for any additional phases of project development until the applicant(s) has demonstrated to the satisfaction of the City that appropriate corrective actions (as contemplated in Mitigation Measure 11-6b) have been implemented.

HYDROLOGY AND WATER QUALITY, MITIGATION MEASURE 11-6 IMPLEMENTATION, PAGE 11-42

The text regarding implementation of Mitigation Measure 11-6 is hereby revised as follows:

Implementation: Project applicant(s) of all project phases (Mitigation Measures 11-6a, 11-6b, 11-6c, and 11-6e) and project applicant(s) ~~for of~~ Phase 1 (Mitigation Measure 11-6d). ~~If needed, project applicant(s) of all project phases (Mitigation Measures 7-10a, 7-10b, 7-10c, 8-5a, 8-5b, 11-1a, 11-1b, 11-4a, 11-4b, and 11-8) to reduce secondary impacts).~~

HYDROLOGY AND WATER QUALITY, IMPACT 11-6, IMPLEMENTATION, PAGE 11-41

The first paragraph is hereby revised as follows:

Project applicant(s) of all project phases (Mitigation Measures 11-6a, 11-6b, and 11-6d) and project applicant(s) of Phase 1 (Mitigation Measures 11-6c and 11-6d).

HYDROLOGY AND WATER QUALITY, IMPACT 11-6, SIGNIFICANCE AFTER MITIGATION, PAGE 11-42

The first paragraph is hereby revised as follows:

Implementation of Mitigation Measure 11-6d would ensure that a suitable entity, with experience in groundwater management, would be formed to appropriately operate and maintain the proposed recharge system. Implementation of Mitigation Measure 11-6e would require that further development not proceed if results from the groundwater monitoring program (required by Mitigation Measure 11-6a) showed that recharge was not effective to meet project needs. Therefore, implementation of Mitigation Measures 11-6a, 11-6b, 11-6c, ~~and 11-6d,~~ and 11-6e (and secondary mitigation measures to address indirect impacts as necessary) would reduce potentially significant direct and indirect impacts resulting from depletion of groundwater supplies or substantial interference with groundwater recharge to a **less-than-significant** level.

HYDROLOGY AND WATER QUALITY, FIGURE 11-5, PAGE 11-55

Figure 11-5, “Proposed Flood Control/Tier I Recharge Basin at the Arbini Property,” is hereby deleted from the DEIR.

HYDROLOGY AND WATER QUALITY, FIGURE 11-6, PAGE 11-56

Figure 11-6, “~~Proposed Flood Control~~ Diversion Weir at North Little Johns Creek,” is hereby revised to reflect the addition of a diversion structure that would allow measured flow diversions from purchased surface water, in addition to flood flow diversions. Because the existing DEIR Figure 11-5 has been deleted, this figure is hereby renumbered as Figure 11-5.

HYDROLOGY AND WATER QUALITY, FIGURE 11-7, PAGE 11-60

Figure 11-7, “Proposed Groundwater Recharge and Flood Control Facilities at the Arbini Property,” is hereby revised to reflect the use of the entire Arbini property as both a flood control basin and/or groundwater recharge basins. Because the existing DEIR Figure 11-5 has been deleted, this figure is hereby renumbered as Figure 11-6.

LAND USE, IMPACT 12-2, PAGE 12-17

The text on page 12-17 is hereby revised as follows:

However, annexation of the SPA into the City would create an unincorporated island of land west of Mariposa Road, north of Arch Road, east of South Airport Way, and south of Charter Way. ~~If~~ Since the 2035 City General Plan Update ~~were~~ has been adopted, the City’s urban service boundary and sphere of influence ~~would~~ will be expanded to include this “island” area; however, the 2035 General Plan Update does not contain any plans to annex the island area into the city limits.

As cited above, the creation of an unincorporated island is generally inconsistent with LAFCO policy. However, San Joaquin LAFCO General Standards for Annexation and Detachment policies, adopted on September 21, 2007, state that detailed development plans are not necessarily required for the remnant areas in order to avoid the creation of an island of development when annexation is requested (Policy 7). Policy 8, which addresses annexations that create islands, states:

An annexation will not be approved if it will result in the creation of an island of unincorporated territory o[r] otherwise cause or further the distortion of existing boundaries. The Commission may nevertheless approve such an annexation where it finds that the application of this policy would be detrimental to the orderly development of the community and that a reasonable effort has been made to include the island in the annexation but that inclusion is not feasible at this time.

A sizeable portion of ~~this~~ the island area has been subdivided for urban-level uses under County jurisdiction, mostly adjacent to the City of Stockton boundary and SR 99. The area contains a range of rural-to-urban housing densities, commercial and industrial development along the SR 99 and Mariposa Road corridors, and a variety of other uses. As housing and land prices have increased in recent years, this area has been the subject of intensive development interest. Annexation to the City of Stockton is required to obtain urban wastewater collection services and domestic water supply within the City’s service area. As a result, this has become an area of “infill” activity; several residential projects of considerable size have been approved and annexed into the City, and several others are being processed by the City.

It is anticipated that the island area will continue to be subject to intensive infill interest. As individual annexation and development proposals are considered, City utilities, street, and other improvements would be extended throughout the area. As time passes, the area would be expected to gradually be absorbed into the City. ~~Nonetheless, the creation of this unincorporated island represents a potentially significant impact.~~ For the reasons described previously, annexation of the Mariposa Lakes project site would promote the orderly development of the City and the logical extension of City services to southeast Stockton and adjacent areas within the City’s Sphere of Influence. Although the proposed project would create an unincorporated island, because a reasonable effort has been made to include the island in the annexation but, for the reasons described earlier, such annexation is not feasible at this time, the San Joaquin LAFCO could approve the proposed annexation despite the creation of an island area, and therefore this impact would be less than significant.

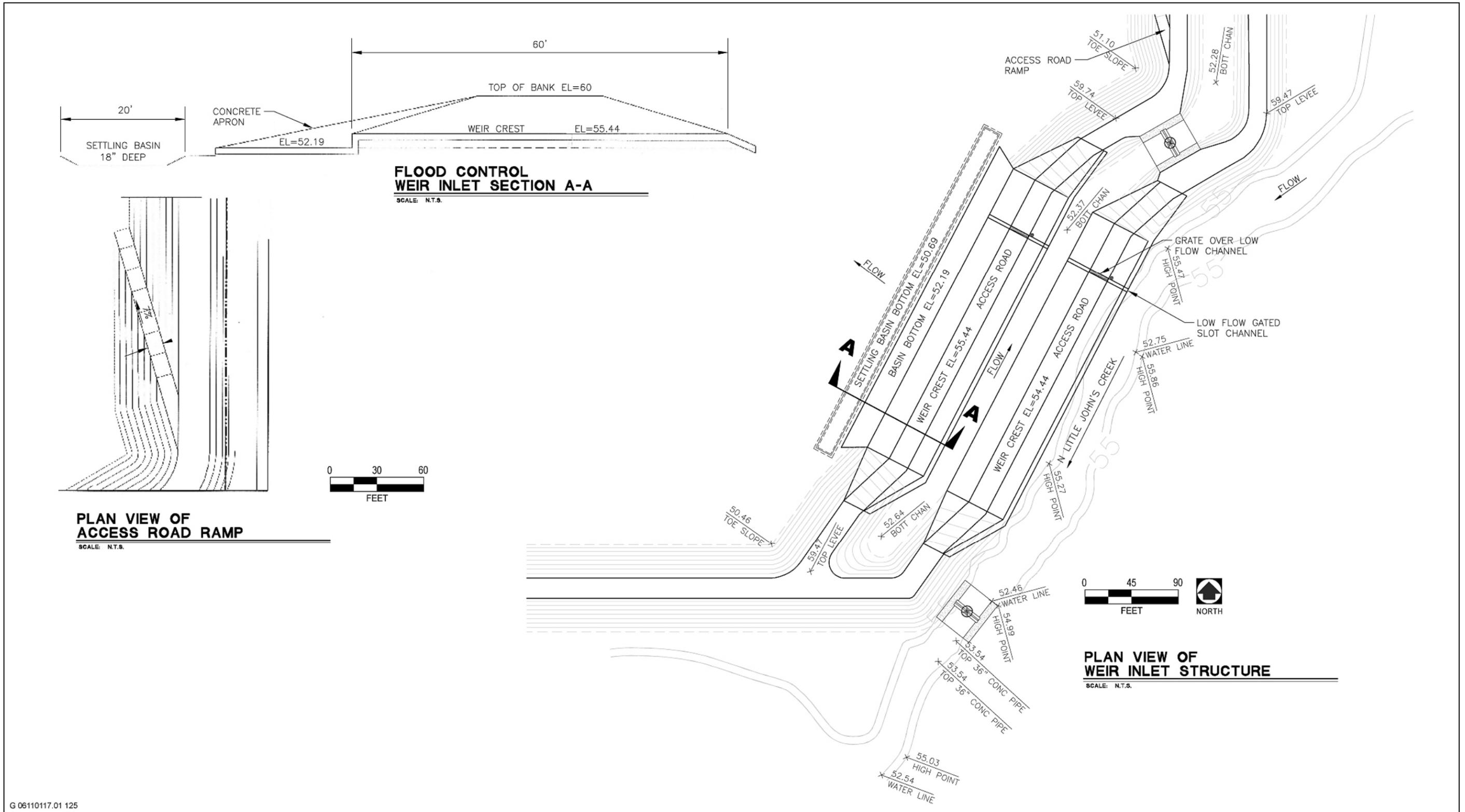
Mitigation Measures: ~~No feasible mitigation measures are available at this time~~ None required

~~No feasible mitigation measures are available to mitigate the creation of an unincorporated island of land; therefore, this impact would remain significant and unavoidable.~~

LAND USE, IMPACT 12-5, PAGE 12-19

The second paragraph of Impact 12-5 is hereby revised as follows:

Provision of utilities to the SPA would be subject to annexation of the project site into the City of Stockton urban service boundary and sphere of influence, a decision that falls under the jurisdiction of the San Joaquin LAFCO. Impacts related to potential LAFCO conflicts would be the same as those discussed above in Impact 12-2, and would be less than significant~~potentially significant. Because no feasible mitigation measures are available to mitigate the creation of an unincorporated island of land, this impact would remain significant and unavoidable.~~

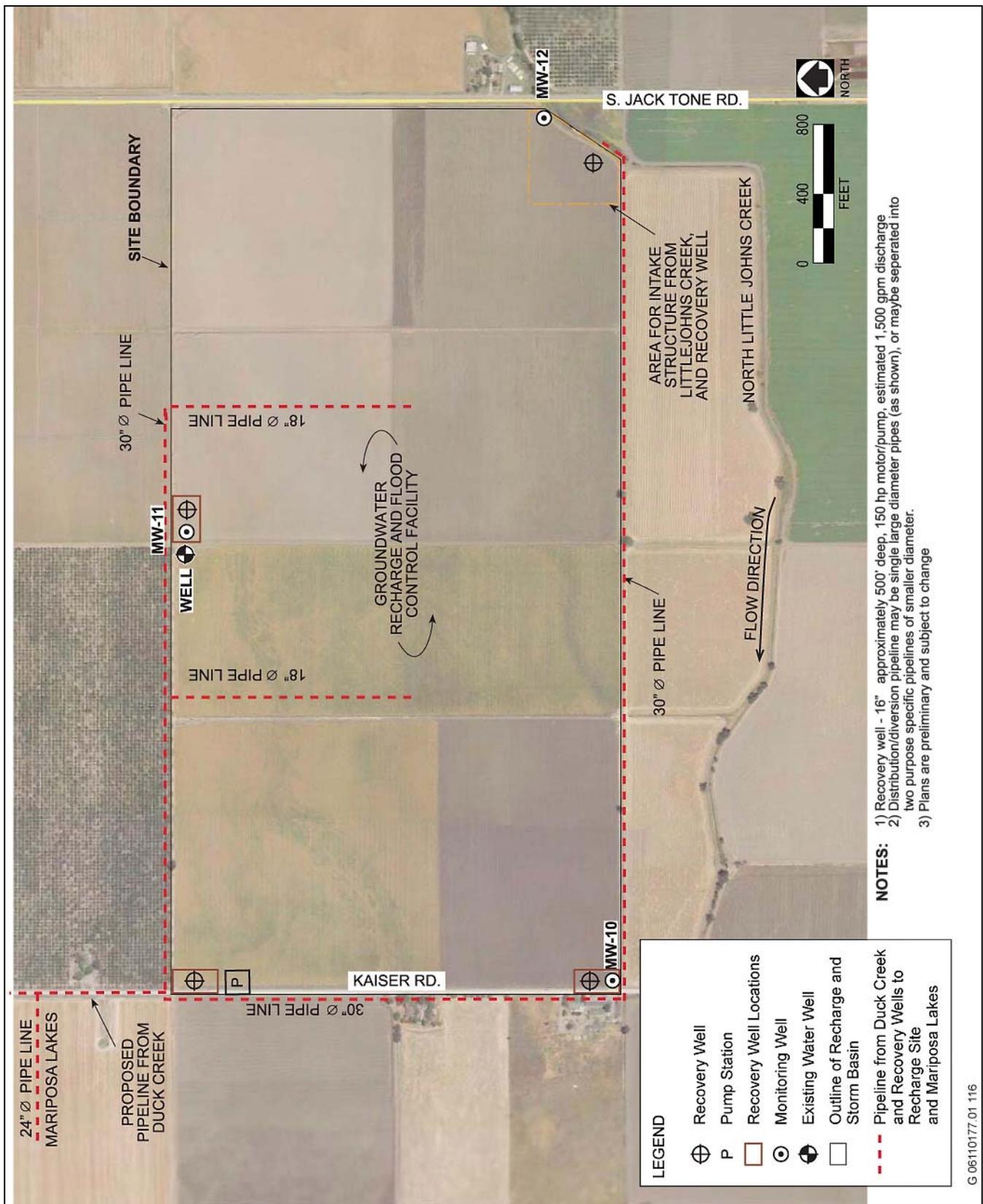


G 06110117.01 125

Source: Stantec 2007

Proposed Flood Control Diversion Weir at North Little Johns Creek

Figure 11-65



- NOTES:**
- 1) Recovery well - 16" approximately 500' deep, 150 hp motor/pump, estimated 1,500 gpm discharge
 - 2) Distribution/diversion pipeline may be single large diameter pipes (as shown), or maybe separated into two purpose specific pipelines of smaller diameter.
 - 3) Plans are preliminary and subject to change

LEGEND	
	Recovery Well
	Pump Station
	Recovery Well Locations
	Monitoring Well
	Existing Water Well
	Outline of Recharge and Storm Basin
	Pipeline from Duck Creek and Recovery Wells to Recharge Site and Mariposa Lakes

Source: Kleinfelder, Inc.

Proposed Groundwater Recharge and Flood Control Facilities at the Arbini Property **Figure 11-76**

LAND USE, IMPACT 12-11, PAGE 12-24

The third paragraph of Impact 12-11 is hereby revised as follows:

Provision of Phase 1 utilities to the MLSP would be subject to annexation of the project site into the City of Stockton sphere of influence, a decision that falls under the jurisdiction of the San Joaquin LAFCO. Impacts related to potential LAFCO conflicts would be the same as those discussed above in Impact 12-2, and would be ~~less than significant~~~~potentially significant. Because no feasible mitigation measures are available to mitigate the creation of an unincorporated island of land, this impact would remain~~ **significant and unavoidable.**

LAND USE, RESIDUAL SIGNIFICANT IMPACTS, PAGE 12-24

Section 12.3.4 is hereby revised as follows:

~~Residual significant impacts would remain related to inconsistencies with San Joaquin LAFCO guidelines as a result of the proposed project's annexation into the City of Stockton, because an incorporated "island" of land, some of which has been developed, some of which has not, would be created. Because there are no feasible mitigation measures available to reduce the significance of this impact, the impact remains~~ **significant and unavoidable.**

Residual significant impacts would remain from the development of schools; because detailed site plans are not available, no feasible mitigation can be identified at this time to ensure that the CDE minimum criteria are met. Additionally, an ultimate level of significance of this impact cannot be determined at this time. Therefore, until a detailed site plan is available and SUSD conducts a separate, site-specific CEQA environmental review, the impacts must be assumed to remain **significant and unavoidable.**

NOISE, EXISTING NOISE CONDITIONS, NOISE SOURCES AND LEVELS, PAGE 13-8

The third full paragraph on page 13-8 is hereby revised as follows:

Noise from surrounding industrial operations (e.g., ~~industrial uses~~ Danamark nut processing facility) and noise from outdoor activities (e.g., people talking, dogs barking, operation of landscaping and agricultural equipment) also contribute to the existing noise conditions ~~to a lesser extent.~~

NOISE, EXISTING NOISE CONDITIONS, NOISE SOURCES AND LEVELS, PAGE 13-12

The following text is hereby added before the heading "Ambient-Noise Survey" on page 13-12:

Industrial Uses

The Danamark nut processing facility is located at 7367 East Mariposa Road, west of the southwest portion of the project site. The Danamark facility is a seasonal operation conducted from September through April. Hours of operation are from 5:00 a.m. to 12:00 a.m. Primary noise-generating activities at the facility include HVAC units, blowers, fumigation vents, and a variety of hoppers, conveyor belts, shakers, and screeners that are operated within the building structure. Forklifts are also operated within the building to maneuver product. The product is transported by heavy truck or railway freight containers.

Short-term noise measurements were conducted by EDAW on June 20, 2007. A short-term noise level measurement was conducted directly across from the Danamark HVAC blowers at approximately 135 feet. The measured noise level at 135 feet was 62 dBA L_{eq} .

NOISE, IMPACT 13-5, PAGE 13-39

The text and headings at the top of page 13-39 are hereby revised as follows:

Impact 13-5: Land Use Compatibility of Sensitive Receptors with Noise Levels from Existing and Future Stationary and Area Sources.

The Danamark nut processing facility is an existing noise source located approximately 600 feet west of proposed residential housing neighborhood N-3. A variety of noise sources are associated with future development within the SPA, which has the potential to create noise levels exceeding the applicable noise standards or to result in annoyance at existing and future noise-sensitive developments within the SPA. Such uses include industrial, commercial, parks, schools, the Amtrak rail/multimodal station, the San Joaquin Delta College campus, and other supporting infrastructure (e.g., water distribution system) as discussed separately below.

Specific uses are not yet known and detailed site and grading plans have not yet been developed. As a result, it is not feasible to identify specific noise impacts associated with each of the proposed uses. However, a general discussion and assessment of impacts is provided based on the possible types of uses associated with these land use types.

Existing Industrial Uses

Based on the noise measurements conducted by EDAW on June 20, 2007, at the Danamark nut processing facility, proposed project-related noise sensitive land uses would be exposed to noise levels that would exceed applicable stationary noise standards. The nearest noise sensitive land use to the Danamark facility is proposed residential housing neighborhood N-3, which would be located approximately 600 feet to the east. Extrapolated noise levels attributable to the Danamark facility (48.1 dBA L_{eq} at 600 feet) would exceed the nighttime standard of 45 dBA L_{eq} . As a result, this impact would be significant.

Proposed Industrial and Commercial/Office Uses

NOISE, IMPACT 13-5, PAGE 13-42

The text on page 13-42 regarding the regional sports park is hereby revised as follows:

Regional Sports Park

~~At the regional sports park, activities on the play fields would include sports team practices and games that would occur seven days per week. The amount of noise generated at the regional sports park would depend mainly on crowd size, level of interest in the sporting event, and design of the PA system.~~

~~Noise level data collected by j. c. brennan & associates staff at various sporting venues in recent years were used for the assessment of playing field noise impacts. The proposed regional sports park would likely include approximately 15 play fields (e.g., baseball/softball diamonds and soccer fields). Noise sources at these areas would be primarily people shouting and cheering intermittently during the sporting events and practice sessions.~~

~~For baseball games, the focal point tends to be near the pitcher's mound, with the participants and spectators all centrally located around and generally facing that position. For soccer games, the focal point is more variable; considerable excitement is generated when the ball is near either goal, but the~~

~~sound of the participants generally spreads out over the entire field and the sounds of spectators spread out along the sidelines. This analysis assumed that the cumulative noise generation is centered at the baseball pitcher's mound and at the approximate center of the soccer fields.~~

~~It is expected that the regional sports park could be used during daytime (7 a.m. – 10 p.m.) or nighttime (10 p.m. – 7 a.m.) hours. Noise generation from daytime operation of the play fields would be exempt under the City Municipal Code. However, without special authorization from the City Manager, nighttime noise generation would be subject to the City's nighttime exterior noise level standards. Therefore, noise generated at the regional sports park may need to comply with the City's nighttime exterior noise level standards at the nearest residential and religions/institutional uses. Because the noise from the sports park would likely include noise from the use of a PA system, the City's exterior noise level standards should be lowered by 5 dBA to account for noise consisting primarily of speech or music. Therefore, it is recommended that the noise levels from the sports park comply with exterior noise level standards of 40 dBA L_{eq} and 60 dBA L_{max} . Based on the reference noise level data discussed above, the 40 dBA L_{eq} noise contour would be located approximately 5,000 feet from the center of the play fields. The 60 dBA L_{max} contour would be located at approximately 2,811 feet from the center of the play fields.~~

~~In summary, noise levels from the proposed sports park would generate noise levels exceeding the applicable City standards for exterior noise levels at the nearest noise sensitive uses. As a result, this impact would be **potentially significant**.~~

NOISE, MITIGATION MEASURE 13-5, PAGE 13-43

The first paragraph of Mitigation Measure 13-5 is hereby revised as follows:

13-5: The project applicant(s) of all project phases shall implement measures described below to reduce exposure of sensitive receptors to excessive noise levels from existing and future stationary and area sources.

NOISE, MITIGATION MEASURE 13-5, PAGE 13-44

The following new text is hereby added immediately below mitigation measure (a)(5):

(6) Based on existing site grade and preliminary calculations, the project applicant(s) shall construct, at a minimum, a 6-foot-high sound wall to reduce nighttime noise levels at the nearest proposed residences (N-3) from the existing Danamark nut processing facility to levels below 45 dBA L_{eq} . The higher sound wall that is already required under Mitigation Measure 13-4 will serve to reduce noise generated by the Danamark facility to acceptable levels as set forth in the Stockton Municipal Code.

NOISE, MITIGATION MEASURE 13-5, PAGE 13-45

Mitigation Measure 13-5(d) is hereby revised as follows:

~~(d) Regional Sports Park. The project applicant(s) of project phases involving the regional sports park shall coordinate with the City of Stockton to facilitate implementation of the following measures to comply with the City's standards for exterior noise levels at the nearest residential and religions/institutional uses to the regional sports park high:~~

- ~~► Before building permits are issued, retain an acoustical consultant to review the proposed park design and implement any recommended improvements to reduce exterior noise levels.~~

- ▶ ~~Construct an earthen berm along the perimeter of the play fields, if recommended by the acoustical engineer.~~
- ▶ ~~Construct all bleachers or seating to have solid backs to prevent sound from flanking to the south and east.~~
- ▶ ~~Schedule all contests to end by 10 p.m.~~
- ▶ ~~Before the park is constructed, design the stadium PA system to comply with the applicable City noise standards.~~

~~Careful implementation of these mitigation measures would achieve compliance with the applicable City noise standards. However, because sounds consisting of speech have been shown to be more annoying than broadband noise, the potential for annoyance associated with these uses cannot be eliminated practically. Therefore, the project applicant(s) of all project phases in the vicinity of the regional sports park shall:~~

- ▶ ~~Notify home buyers/renters in Residential Community N 63 and the tenants/owners of Religious/Institutional N 78 of potential noise impacts from the park.~~

NOISE, IMPACT 13-12, PAGE 13-49

Impact 13-12 is hereby revised as follows:

Impact 13-12: Land Use Compatibility of Sensitive Receptors with Noise Levels from Existing and Future Stationary and Area Sources.

Impacts under Phase 1 would be the same as those discussed above for the program level (entire SPA) analysis. Refer to Impact 13-5 for further discussion of this impact.

Implementation of measures (a) and (e) under Mitigation Measure 13-5 would reduce this impact to a **less-than-significant** level. However, because implementation of measures (b), (c), and (d e) are under the control of SUSD and Caltrans, neither the City nor the applicants would have control over the timing or implementation of these mitigation measures. Thus, the impact would remain **significant and unavoidable**.

NOISE, IMPACT 13-14, PAGE 13-49

The last paragraph on page 13-49 is hereby revised as follows:

However, implementation of Mitigation Measure ~~13-7~~ 13-2 would not reduce traffic source noise impacts to a less-than-significant level; therefore, this impact would remain **significant and unavoidable**.

PUBLIC SERVICES, PUBLIC SCHOOLS, PAGE 15-5

The sixth paragraph on page 15-5 is hereby revised as follows:

SUSD is funded by ~~50%~~ 40% state and ~~50%~~ 60% local sources.

PUBLIC SERVICES, SOLID WASTE, PAGE 15-7

The second full paragraph on page 15-7 is hereby revised as follows:

Three landfills serve the City: privately owned Forward Landfill, County-owned Foothill Landfill, and North County Sanitary Landfill, with ~~Foothill~~ Forward Landfill being the predominate landfill. Since the Forward landfill is privately owned, it serves other customers in addition to Stockton. The City of Stockton has signed a 15-year agreement with the landfill effective January 2004 for the storage of solid waste. Upon its expiration, the agreement can be extended an additional 5 years. To a lesser extent, some residential and commercial waste from the City of Stockton is transported to the Foothill Sanitary Landfill in Linden, and some city of Stockton commercial and industrial waste is also transported to the North County landfill. However, the North County landfill is primarily used by the City of Lodi. (City of Stockton 2005.) The majority of other solid waste is transported to Foothill Landfill on Austin Road. Although Foothill Landfill receives an average of 810 tons per day (tpd) of solid waste, it is permitted to receive up to 1,500 tpd. The landfill has a permitted capacity of 51 million tons, which, based on its current remaining capacity of 47.5 million tons, is expected to be reached by the year 2054 (CIWMB 2004a). As Foothill Landfill has capacity until 2054, there are no plans at this time to expand the facility or build a new landfill (City of Stockton 2005).

At present, the Forward Landfill is permitted to accept 8,668 maximum tons per day (tpd) of solid waste. The landfill has a total capacity of 51 million cubic yards, and a remaining capacity of 40 million cubic yards. Currently, the landfill has a closure date of 2053 (California Integrated Waste Management Board 2004a).

PUBLIC SERVICES, IMPACT 15-8, PAGE 15-20

The fourth full paragraph on page 15-20 is hereby revised as follows:

... Much lower generation rates would occur at project initiation, with gradual increases in the rate as development progressed. ~~Although Foothill Landfill receives an average of 810 tpd of solid waste, it is permitted to receive up to 1,500 tpd. At present, the Forward Landfill is permitted to accept 8,668 maximum tpd of solid waste, and the estimated 86.1 tpd of solid waste generated by the proposed project would be approximately 0.1 1% of the total 810 8,668 tpd currently being received, and would make up approximately 0.06% of the permitted capacity of 1,500 tpd. Foothill~~ The Forward Landfill has approximately 47.5 40 million tons cubic yards of available capacity, which is estimated to last for more than 40 years. ...

PUBLIC SERVICES, IMPACT 15-17, PAGE 15-25

The fourth full paragraph on page 15-25 is hereby revised as follows:

... Much lower generation rates would occur at project initiation, with gradual increases in the rate as development progressed. ~~Although Foothill Landfill receives an average of 810 tpd of solid waste, it is permitted to receive up to 1,500 tpd. At present, the Forward Landfill is permitted to accept 8,668 maximum tpd of solid waste, and the estimated 20 tpd of solid waste generated by Phase 1 of the proposed project would be approximately 0.02 0.2% of the total permitted capacity of 810 8,668 tpd. currently being received and would make up approximately 0.06% of the permitted capacity of 1,500 tpd. Foothill~~ The Forward Landfill has approximately 47.5 40 million tons cubic yards of available capacity, which is estimated to last for more than 40 years. ...

TRANSPORTATION AND CIRCULATION, FIGURE 16-4.2, PAGE 16-12

Figure 16-4.2 is hereby revised as follows:

Eastbound turning movement arrows have been redrawn to reflect one through lane and one right turn lane.

TRANSPORTATION AND CIRCULATION, TABLE 16-3, PAGE 16-14

Intersection 28 data are hereby revised as follows:

A.M. Peak Hour Delay (sec)	P.M. Peak Hour Delay (sec)
3.0	2.4 <u>2.5</u>
(18.5) <u>(18.7)</u>	(15.6) <u>(17.5)</u>

TRANSPORTATION AND CIRCULATION, REGIONAL TRANSPORTATION IMPROVEMENTS, PAGE 16-25

The second bullet regarding SR 99 is hereby revised as follows:

SR 99 is currently over capacity and needs to be widened to six lanes. Caltrans is developing a PSR and planning, environmental, and preliminary design studies in the Project Approval and Environmental Document (PA&ED) phase so that a six-lane improvement project can be constructed as soon as funds are available.

TRANSPORTATION AND CIRCULATION, TRIP GENERATION, PAGE 16-35

The second paragraph is hereby revised as follows:

TJKM concluded that an internal capture rate of approximately 20% is appropriate for the proposed project and that this rate falls well within conservatively acceptable ranges. ~~Furthermore, TJKM expects that internal trip generation rates would exceed 20% at full buildout for this community, approaching the 35% internal capture rate produced by the City of Stockton's model.~~

TRANSPORTATION AND CIRCULATION, FIGURE 16-5.2, PAGE 16-39

Intersection 17, EPAP plus Project, is hereby revised as follows:

The southbound right turn lanes have been removed.

Intersection 27, 2035 General Plan No Project, is hereby revised as follows:

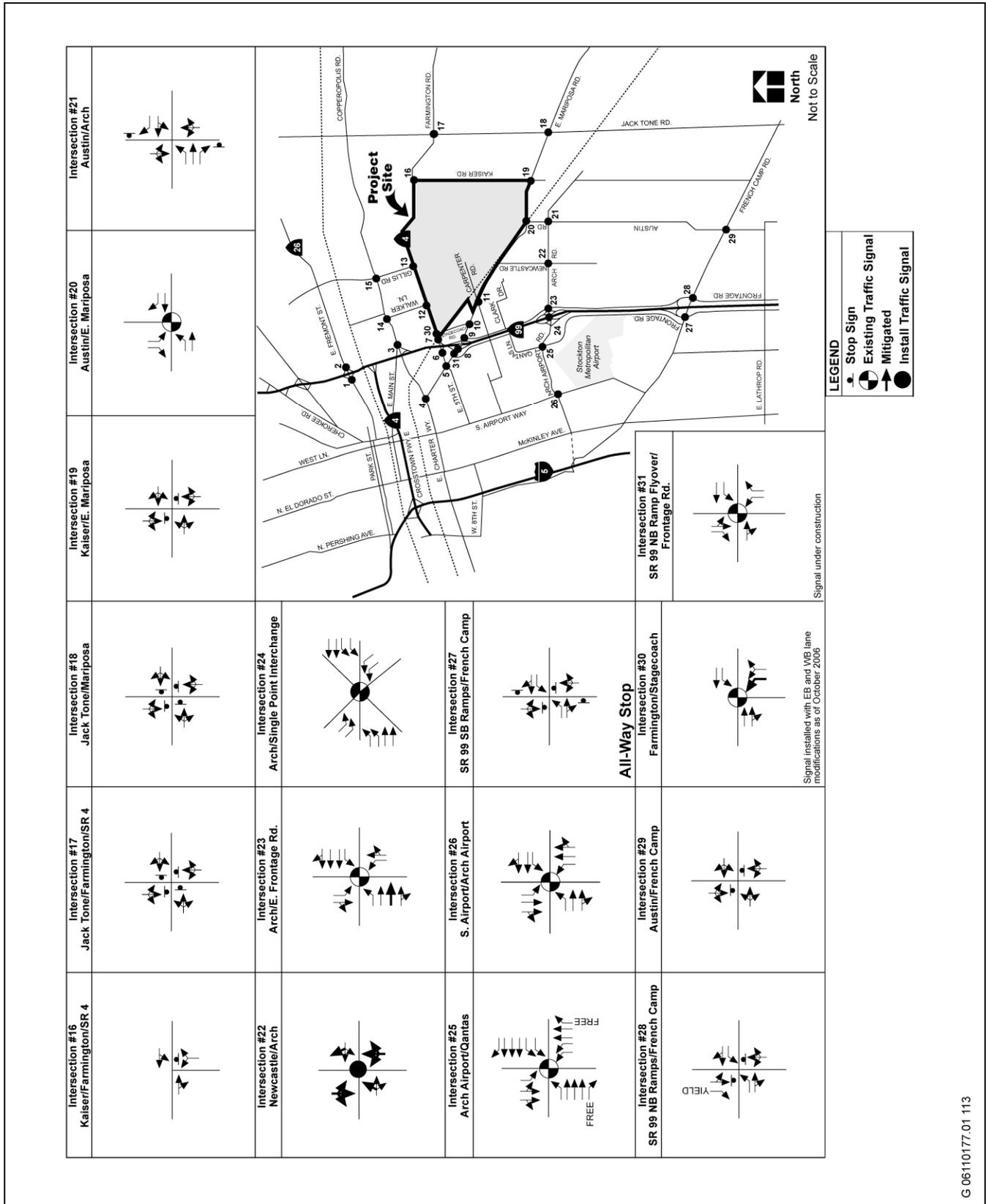
Another eastbound through lane, mitigated, has been added.

Intersection 27, 2035 General Plan Plus Project, is hereby revised as follows:

The eastbound through lane is no longer shown as mitigated.

Intersection 31, EPAP No Project, is hereby revised as follows:

The eastbound lane geometry has been revised to show one through lane and one right turn lane only—the mitigated single through lane has been removed.



Source: TJKM 2007

Lane Geometry for Existing plus Approved Projects Conditions

Figure 16-4.2

ID	Scenario	Existing	EPAP No Project	EPAP + Phase I	EPAP + Project	1990 General Plan No Project	1990 General Plan + Project	2035 General Plan No Project	2035 General Plan + Project
17	Jack Tone Rd./ Farmington Rd.								
18	Jack Tone Rd./ E. Mariposa Rd.								
19	Kaiser Rd./ E. Mariposa Rd.								
20	Austin Rd./ E. Mariposa Rd.								
21	Austin Rd./ Arch Rd.								
22	Newcastle Rd./ Arch Rd.								
23	E. Frontage Rd./ Arch Rd.								
24	Arch Rd./ SR 99 Single-Point Intersection								
						Significant unavoidable impact.	Significant unavoidable impact.	Significant unavoidable impact.	Significant unavoidable impact.
25	Qantas Ln./ Arch Airport Rd.								
		FREE	FREE	FREE	FREE	FREE	FREE	FREE	Significant unavoidable impact
26	S. Airport Way/ Arch Airport Rd.								
27	SR 99 SB Ramps/ French Camp Rd.								
28	SR 99 NB Ramps/ French Camp Rd.								
		YIELD	YIELD	YIELD	YIELD	FREE	FREE	FREE	FREE
29	Austin Rd./ French Camp Rd.								
30	Farmington Rd./ Stagecoach Rd.								
			Signal Installed as of October 2006	Signal Installed as of October 2006					
31	Mariposa Rd./ W. Frontage Rd.								
			Signal under construction	Signal under construction	Signal under construction				

Source: TJKM 2007

**Existing plus Approved Projects plus Full Project Buildout—
Intersection Lane Geometry Summary**

Figure 16-5.2

NOTE:
Mitigation measures are shown in bold only when they are initially triggered.



LEGEND	

TRANSPORTATION AND CIRCULATION, IMPACT 16-1, PAGE 16-55

The significance conclusion of Impact 16-1 is hereby revised as follows:

Significance after Mitigation:

Implementation of Mitigation Measures 16-1a, 16-1b, and 16-1c would reduce this impact to a **less-than-significant** level because the project applicant(s) of all project phases would be responsible for the project phase's participation in the funding and because the project applicant(s) of all project phases would construct the intersection and roadway improvements identified in Table 16-14. However, some of the identified improvements to intersections and roadways involve modifications that would affect freeway interchanges, which fall under the jurisdiction of Caltrans and San Joaquin County. However, because neither the City and nor the project applicant(s) have primary control over these improvements and or over their timing and implementation. Implementing these mitigation measures would reduce significant impacts on study intersections, roadways, and freeways to a less-than-significant level, this impact would remain significant and unavoidable. If Caltrans and San Joaquin County cooperate in allowing the necessary improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

TRANSPORTATION AND CIRCULATION, IMPLEMENTATION OF TABLE 16-17, PAGES 16-61 THROUGH 16-120

All references to implementation of roadway improvements contained in "Table 16-14" on pages 16-61 through 16-120 are hereby revised to refer to implementation of roadway improvements contained in "Table 16-17."

TRANSPORTATION AND CIRCULATION, IMPACT 16-3, MITIGATION MEASURES, PAGE 16-62

The first paragraph of Impact 16-3 is hereby revised as follows:

Implement Mitigation Measures 16-1a, 16-1b, and 16-1c, including the traffic improvements for arterial roadways indicated in the "EPAP Plus Phase I" column of Table ~~16-17~~ 16-18.

TRANSPORTATION AND CIRCULATION, IMPACT 16-6, PAGE 16-64

The first paragraph of Impact 16-6 is hereby revised as follows:

Development Phase 1 would involve increases in demand for transit service. It is anticipated that SJRTD service would be extended to the SPA as demand warrants. Phase 1 would include development of the Amtrak multimodal station. Transfers between local and regional bus service would be accommodated at the multimodal station. Increased demand for transit service is considered **potentially significant** because the provision of transit service would be facilitated by the provision of transit infrastructure but funding has not been identified for this expansion of service.

TRANSPORTATION AND CIRCULATION, IMPACT 16-9, PAGE 16-68

The text regarding internal study intersections is hereby revised as follows:

Internal Study Intersections

TJKM analyzed the LOS at planned internal intersections under EPAP plus Full Project Buildout Conditions. The analysis of 39 planned intersections (Table 16-22) indicated that acceptable LOS would be maintained under EPAP plus Full Project Buildout Conditions at all study intersections; none of the study intersections would operate below LOS D. The minor approach to Intersection 65 would function at LOS E. With the projected traffic, however, this intersection did not meet warrants for signalization. The intersection operates acceptably overall, but one approach may experience some delay. ~~Because the regional sports park has not been designed yet, a traffic analysis related to this facility was not performed. Therefore, it is not possible to fully determine the full project buildout impacts on internal intersection LOS. Thus, this impact is considered **potentially significant**.~~ Because acceptable LOS would be maintained under EPAP plus Full Project Buildout Conditions at all internal study intersections, this impact is considered **less than significant**.

TRANSPORTATION AND CIRCULATION, MITIGATION MEASURE 16-9, PAGE 16-68

The text of Mitigation Measure 16-9 is hereby revised as follows:

~~16-9: After the regional sports park (proposed in development phase 3) has been designed, the project applicant(s) shall complete a transportation impact study to identify traffic impacts related to the regional sports park to the satisfaction of the City's Public Works Department. Impacts shall be identified using methodologies adopted by the City or consistent with those identified in this DEIR. Improvements identified as a result of the transportation impact study shall be implemented by the project applicant(s) for all applicable project phases.~~

Implementation: Project applicant(s) of all phases of development for Mitigation Measures 16-1a, 16-1b, and 16-1c. ~~Project applicant(s) of phase 3 development for mitigation measure 16-9.~~

Monitoring: City of Stockton Public Works Department, Caltrans, and San Joaquin County.

Significance after Mitigation:

Implementation of Mitigation Measures 16-1a, 16-1b, and 16-1c would reduce the significant impact resulting from unacceptable LOS at internal and external study intersections under the proposed project and development Phase 1 to a less-than-significant level by providing intersection improvements to increase capacity at these intersections. Although required intersection improvements at Intersection 27 involve modifications that would affect freeway interchanges, which fall under the jurisdiction of Caltrans, the City and the project applicant(s) have primary control over these improvements and over their timing and implementation. ~~Implementation of Mitigation Measure 16-9 would require a traffic study to identify impacts from development of the regional sports park, and would require implementation of any improvements identified as part of that study. However, because the City does not yet have sufficient information to assess the project specific transportation related impacts of the regional sports park proposed for development phase 3, the City at present lacks information sufficient to determine whether implementation of this mitigation measure would reduce impacts to a less-than-significant level. For this reason, impacts to internal study intersections are considered **potentially significant and unavoidable**.~~

TRANSPORTATION AND CIRCULATION, IMPACT 16-13, PAGE 16-76

The first paragraph of Impact 16-13 is hereby revised as follows:

The proposed project would involve increases in demand for transit service. It is anticipated that SJRTD service would be extended to the SPA as demand warrants, including provision of transportation services for students at the proposed on-site San Joaquin Delta College satellite campus. The proposed project would include development of the Amtrak multimodal station, and proposed neighborhood commercial centers would serve as focal points for passenger collection and distribution. Transfers between local and regional bus service would be accommodated at the multimodal station. Increased demand for transit service is considered **potentially significant** because the provision of service would be facilitated by the provision of transit infrastructure but funding has not been identified for this expansion of service.

The implementation of Mitigation Measures 16-13a and 16-13b is hereby revised as follows:

Implementation: Project applicant(s) of ~~Phase 1~~ all project phases.

TRANSPORTATION AND CIRCULATION, IMPACT 16-14, PAGE 16-76

The first paragraph of Impact 16-14 is hereby revised as follows:

However, because of the intensive localized traffic peak attributable to opening and closing times for schools, school development may involve traffic impacts in the immediate vicinity of the proposed schools. In addition, SUSD typically relies on SJRTD as a primary provider of bus transportation for students attending SUSD high schools, through the use of discounted student passes. **Potentially significant** impacts would be related to conflicts between bus and automobile circulation and pedestrians, student drop-off and pick-up trips, and staff and student parking.

TRANSPORTATION AND CIRCULATION, MITIGATION MEASURE 16-14, PAGE 16-77

The first paragraph of Mitigation Measure 16-14 is hereby revised as follows:

16-14: The project applicant(s) of all project phases shall facilitate coordination between SUSD and the City of Stockton Department of Public Works in the planning and site design of each new school facility to avoid significant traffic conflicts in the vicinity of the planned schools. Such coordination may include adjustments to driveway and/or parking lot design, traffic safety measures such as crosswalks or crossing guards, negotiations regarding funding for student bus passes, and/or other measures identified by SUSD and the City.

TRANSPORTATION AND CIRCULATION, TABLE 16-25, PAGE 16-82

Intersection 12 data are hereby revised as follows:

Int. No.	Intersection	Existing Control	Intersection Control (Mitigated)	A.M. Peak Hour		P.M. Peak Hour		P.M. Peak Hour (Mitigated)			
				Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS		
12	Farmington Road/ Walker Lane	One-Way Stop Two-Way Stop	Signalized	68.6 <u>8.9</u> (>120)	F <u>A</u> (F) <u>E</u>	52.1	D	40.3 <u>10.7</u> (>120)	B <u>(F)</u>	30.9 <u>32.4</u>	C

UTILITIES AND ENERGY, IMPACT 17-1, PAGE 17-11

The first paragraph of Impact 17-1 is hereby revised as follows:

The total water demand of the proposed project is estimated to be 7,535 afy of potable water, plus ~~3,089~~ 2,593 afy of nonpotable water (consumptive demand), for a total consumptive water demand of ~~10,624~~ 10,128 afy. Potable water is expected to be supplied by the City of Stockton and by Cal Water, and would be used for drinking water and initial filling of the proposed artificial lakes. Nonpotable water is expected to be supplied by a combination of site precipitation, surface water runoff, and the purchase of surplus surface water. The surplus surface water would be provided by SEWD and/or CSJWCD. Nonpotable water would be used for groundwater recharge, for maintenance of lake water levels, and for landscape irrigation. Because the potable and nonpotable water would be supplied from different sources and would be used for different purposes, this DEIR discusses potable and nonpotable water in separate impacts. Impacts related to nonpotable water demand are evaluated below in Impact 17-3.

UTILITIES AND ENERGY, MITIGATION MEASURE 17-1, PAGE 17-13

The first paragraph of Mitigation Measure 17-1 is hereby revised as follows:

~~17-1: Before City approval of any tentative small lot subdivision map for a proposed residential project of 500 or fewer units within the SPA, or before City need not comply with Government Code Section 66473.7 or formally consult with the water purveyor that would provide water to a proposed subdivision, but shall make a factual showing or impose conditions similar to those required by Government Code Section 66473.7 to ensure an adequate long term, reliable water supply is available for development authorized by the map. Before approval of any tentative small-lot subdivision map for a proposed residential development project of more than 500 dwelling units within the SPA, the City shall comply with Government Code Section 66473.7. Before approval of any tentative small-lot subdivision map for a proposed residential project of 500 or fewer units within the SPA, the City shall make a finding that sufficient water supplies are, or will be, available prior to completion of the subdivision, which finding shall be made on the record and supported by substantial evidence as required by Government Code Section 66473.7 in the same manner as the findings required by Government Code Section 66473.7 for subdivisions of more than 500 dwelling units. Before recordation of any final small lot subdivision map, or before City approval of any project-specific discretionary approval or entitlement required for nonresidential land uses, the City or the project applicant(s) shall demonstrate, based on substantial evidence, the availability of a long-term reliable water supply from a public water system for the amount of development that would be authorized by the project-specific discretionary nonresidential approval or entitlement. Such a demonstration may rely on a valid urban water management plan or a previously approved water supply assessment, as provided by Government Code Sections 66473.7(c)(1) shall consist of a written verification that existing sources are or will be available and (2), and shall demonstrate that needed physical improvements for treating and delivering water to the non-residential project site will be in place prior to occupancy. This mitigation measure shall be the responsibility of the project applicant(s) of all project phases. It shall be the project applicant(s) responsibility to coordinate with the City to ensure that a long-term, reliable water supply is available and has been confirmed.~~

UTILITIES AND ENERGY, IMPACT 17-3, PAGE 17-16

Impact 17-3 is hereby revised as follows:

Impact 17-3: Increased Demand for Nonpotable Water Supply and Conveyance Facilities.

A draft Integrated Water Management Plan (IWMP) was prepared by Kleinfelder (2006b) that addresses the provision of an adequate nonpotable water supply to meet irrigation supply and lake/canal system maintenance needs. A detailed evaluation of the proposed nonpotable water supply system and associated impacts, including the proposed recharge facility, is contained in Chapter 11, "Hydrology and Water Quality." A brief summary of the proposed system is provided below.

Water supply for the nonpotable water system would be derived from a variety of sources, including precipitation, nuisance flows, and SPA (project site) runoff collected in the proposed lakes/canal systems, and surplus surface water purchased from SEWD or CSJWCD. As stated in a letter from SEWD (Kauffman, pers. comm., 2006), "The latest project design, which I viewed, calls for this non-potable water demand to be met from existing surface water supplies. The primary source of this water [surplus surface water] would come from the Central Valley Project contracts held by Central San Joaquin Water Conservation District and this district [SEWD]. In average to wet years, these contracts should have no difficulty meeting this project's demands. In dry or critically dry years this project will have to rely on up to 100% of their non-potable water demand to be delivered from a combination of the development's water conservation practices and the recovery of stored surface water this development placed into the ground during average to wet years." For a detailed discussion regarding banking of nonpotable water that would be used in dry or critically dry years, see Impact 11-6 in Chapter 11, "Hydrology and Water Quality."

As shown in Table 17-2, the project applicant(s) have concluded that the project's total nonpotable consumptive water demand is 3,089 afy (Stantec 2006, Kleinfelder 2007). It appears that the City and Cal Water WSAs did not include the proposed project's nonpotable water supply needs in their calculations of total project water demand (7,535 afy and 5,054 afy, respectively). However, the City's WSA includes demand and supply projections for the City's buildout through 2035, which is an additional 9 years of data beyond that require by SB 610. As discussed in detail in Chapter 11, "Hydrology and Water Quality," the proposed project may divert surplus surface water in an amount up to 10,000 afy at full project buildout to account for loss of water from aquifer gradient flow and to provide the proposed 3-year banked groundwater reserve. However, the project's nonpotable consumptive water demand at full project buildout is 3,089 afy.

Land Use	Unit Water Demand Factor (AF/ac/yr) ¹	Area (acres) ²	Water Demand (afy)
Neighborhood and community park irrigation	3.0	196	588
Open space irrigation	3.0	329.5	988.5
Lake level maintenance	—		1,565
Total	—	508	3,089

¹ Unit demand factors were extracted from Table 3-3 of the November 2004 City of Stockton South Stockton Water Master Plan Update by West Yost Associates.

² The total acreages and calculated average annual irrigation demand include parks and open space only. Other irrigation demands are accounted for in potable water demand values.

Source: Stantec 2006

Pending negotiations with the City, nonpotable water would be delivered by SEWD and/or CSJWCD. Currently, these entities do not supply nonpotable surface water to urban development. Surface water

~~purchased from SEWD would be delivered through Duck Creek. SEWD deliveries would occur during flood periods, when New Hogan Reservoir spills. Surface water purchased from CSJWCD would be delivered through North Little Johns Creek. It is anticipated that the water from SEWD and CSJWCD would be directed to the proposed Arbini groundwater recharge facility and would also be used for lake level maintenance and landscape irrigation. Concrete diversions in or adjacent to the creeks and a propeller pump of sufficient capacity would be required to withdraw water.~~

~~The surface water purchased from SEWD or CSJWCD that would be diverted to groundwater recharge would be limited to “surplus” water. Surplus water is defined as that which is in excess of existing demands for municipal, industrial, and agricultural uses. This surplus water consists primarily of reservoir spillwater and is only available on a seasonal basis; therefore, because it is not available for potable use, it is considered to be “nonpotable” water. The timing and quantity of nonpotable water delivery from SEWD or CSJWCD to the SPA would initially be based on the needs and capacity of recharge operations, and later by the needs of on-site operations (e.g., lake level maintenance and nonpotable residential irrigation). Water would be purchased on contract and diverted, as appropriate, for recharging monthly, with the quantities purchased dependent on surplus flow. The water delivered from SEWD or CSJWCD would be conveyed to the SPA via either Duck Creek and/or North Little Johns Creek. Recharging is planned to begin immediately with the goal of developing a groundwater reserve that can be used for on-site operations during times when surface water is unavailable. Therefore, the initial quantity of water delivered would be equal to the maximum amount that can be recharged to create a 3-year reserve (i.e., a reserve equal to three times a single year’s nonpotable demand). Once reserve quantities are banked, nonpotable water deliveries would be adjusted to cover annual on-site operations. As the nonpotable water demands for on-site operations increase, annual deliveries would be increased to maintain the 3-year groundwater reserve. (Kleinfelder 2006b.)~~

~~The proposed project would include the development of a system for distribution of nonpotable water obtained from the proposed recharge system, which would function as the storage reservoir for the system. The system would consist of a number of intake structures, pumps, and a “purple pipe” (nonpotable) system located in public streets that would distribute nonpotable water to planned parks, open space areas, streetscapes, and commercial landscaping areas within the SPA. The proposed system would be operated and maintained by an entity with experience in groundwater recharge; the exact entity has yet to be determined (see Impact 11-6 in “Hydrology and Water Quality”). Organization options for the district are being explored by the City and project applicant(s).~~

~~While it appears, based on a letter from SEWD, that SEWD and/or CSJWCD would be able to supply the nonpotable water needs of the proposed project (Kauffman, pers. comm., 2006), because contracts for the purchase of water from SEWD and/or CSJWCD have not yet been secured, this impact is considered **potentially significant**.~~

Nonpotable water needs (landscape irrigation and lake level maintenance) would be met primarily by the purchase of surplus surface water from CSJWCD and/or SEWD, and to a lesser extent by the capture of precipitation, nuisance flows, and on-site stormwater runoff collected in the proposed lakes/canal systems. A detailed evaluation of the proposed nonpotable water supply system and associated impacts, including the proposed recharge facility, is contained in Chapter 11, “Hydrology and Water Quality.”

Kennedy/Jenks has completed a *Non-Potable Water Supply Assessment for the Proposed Mariposa Lakes Development* (2007) (Appendix Y). The WSA evaluates the adequacy of existing and future nonpotable water supplies required to meet the nonpotable water demand created by the proposed project in conjunction with existing and future demands in the CSJWCD and SEWD service areas in 5-year increments over a 20-year time horizon. Table 17-2 shows the project’s nonpotable water demand by phase. The project’s total nonpotable consumptive water demand is 2,593 afy at buildout (Stantec 2007a);

however, the total nonpotable demand of 2,593 afy does not have to be met until full project buildout, at the end of development Phase 5.

The surface water purchased from CSJWCD and/or SEWD would be unappropriated, surplus water that is already flowing down North Little Johns Creek and/or Duck Creek. Surplus water is defined as that which is in excess of existing demands for municipal, industrial, and agricultural uses; therefore, purchased surplus water would not take away from supplies being used for existing customers. The water delivered from CSJWCD and/or SEWD would be conveyed to the project site via either North Little Johns Creek and/or Duck Creek. Concrete diversions in or adjacent to the creeks and a propeller pump of sufficient capacity would be required to withdraw water. Unappropriated surplus water would be diverted to the Arbini recharge facility and allowed to percolate through the ground to recharge the aquifer and create a bank of stored groundwater that can be withdrawn as needed. Recharging is planned to begin immediately with the goal of developing a groundwater reserve that can be used to meet the project’s nonpotable water demand for a 3-year period in the event of a prolonged drought.

Development Phase	Lake Level Maintenance ¹ (afy)	Irrigation ² (afy)	Total Nonpotable Demand (afy)	2:1 Application Rate (afy)
1	400	<u>436-512</u>	<u>848-912</u>	<u>1,696-1,824</u>
2	193	<u>161-162</u>	<u>354-355</u>	<u>708-710</u>
3	338	<u>580-604</u>	<u>958-942</u>	<u>1,916-1,884</u>
4	95	<u>213-189</u>	<u>331-284</u>	<u>662-568</u>
5	0	<u>175-100</u>	100	200
Total	1,026	<u>1,565-1,567</u>	<u>2,591-2,593</u>	<u>5,182-5,186</u>

Notes:
 afy = acre-feet per year
¹ Lake evaporation losses were calculated using the evaporation rate (5.4 feet per year) published for the Stockton Weather Station, located at the Stockton Airport. The total demand for makeup water to the lakes caused by evaporation losses averages 1,025 afy.
² The total acreages and calculated average annual irrigation demand include parks and open space only. Other irrigation demands are accounted for in potable water demand values. A gross application rate of 3 afy was used to estimate the irrigation demand.
 Source: Stantec 2007a

The Arbini site can receive up to 8,500 af of water per year for recharge purposes. The applicants are required to apply 2 af of purchased surface water for every 1 af of water later withdrawn from the groundwater bank. Therefore, with a total project nonpotable water demand of 2,593 afy (see Table 17-2, above), a total of 5,186 afy of purchased surplus water would be banked into the groundwater aquifer at full buildout. The total nonpotable demand of 2,593 afy does not have to be met until full project buildout, at the end of development Phase 5. As such, the Arbini facility size and recharge volume will be adjusted to meet the annual demands and groundwater banking goals for each development phase. The amount of water necessary to meet the 3-year drought condition changes with each phase of the project as a larger area of the project site is developed under each phase (Kleinfelder 2007). For a detailed discussion regarding banking of nonpotable water that would be used in dry or critically dry years, see Impact 11-6 in Chapter 11, “Hydrology and Water Quality.”

Based on the projected nonpotable water demand, the WSA concluded that CSJWCD and, as necessary, SEWD would have sufficient nonpotable water supplies to serve the proposed project’s maximum nonpotable water demands while meeting the current and projected future demands within the CSJWCD and SEWD service areas. In addition, the WSA concluded the project proponent would need to construct and operate groundwater recharge facilities capable of banking 5,000 af of water annually, when available, to avoid additional overdraft on the underlying groundwater basin. As discussed above, the

applicants plan to recharge a minimum of 5,186 afy of nonpotable water, and may recharge up to 8,500 afy of nonpotable water.

The proposed project would include the development of a system for distribution of nonpotable water obtained from the proposed recharge system, which would function as the storage reservoir for the system. The system would consist of a number of intake structures, pumps, and a “purple pipe” (nonpotable) system located in public streets that would distribute nonpotable water to planned parks, open space areas, streetscapes, and commercial landscaping areas within the SPA. The proposed system would be operated and maintained by an entity with experience in groundwater recharge; the exact entity has yet to be determined (see Impact 11-6 in “Hydrology and Water Quality”). Organization options for the district are being explored by the City and project applicant(s).

Because the CSJWCD and/or SEWD would have sufficient nonpotable water supplies to serve the proposed project, and because the project would include a groundwater recharge facility capable of banking more than 5,000 afy of water, the project’s nonpotable water supply impacts would be **less than significant**.

Mitigation Measures: None required.

~~17-3: Prior to recordation of any final small lot subdivision map/improvement plan, or prior to City approval of any project specific discretionary approval or entitlement required for nonresidential land uses, the project applicant(s) of all project phases shall secure a source of water supplies that would meet the required nonpotable water demands and shall demonstrate, based on substantial evidence, the frequency and availability of the proposed nonpotable water supplies. If the project applicant(s) are unable to secure a source of surplus surface water to meet nonpotable water demands, as is currently planned, the project applicant(s) of all project phases shall do one of the following:~~

- ~~▶ purchase the water for nonpotable water needs from a potable water supplier; or~~
- ~~▶ eliminate the proposed lake system.~~

~~Implementation: Project applicant(s) of all project phases.~~

~~Monitoring: City of Stockton Community Development Department, Planning Division; City of Stockton Municipal Utilities Department; California Water Service Company; and the San Joaquin County Maintenance Districts.~~

~~Significance after Mitigation:~~

~~Implementation of Mitigation Measure 17-3 would require the project applicant(s) to secure a source of water supplies to meet the proposed project’s nonpotable water system demands, either from surplus surface water or from a potable water supplier, which would reduce this impact to a less than significant level. However, if water supplies were not available to meet the project’s nonpotable water demands, the project applicant(s) would be required to eliminate the proposed lake system. This would require redesigning the storm drainage system for the proposed project, and/or redesigning the entire proposed project to relocate development or increase/decrease the amount of proposed development. Because it is unknown what form a redesigned project would take, or if the storm drainage system could be redesigned to accommodate the project as proposed, an evaluation of the environmental impacts that could result from elimination of the proposed lake system would be speculative in nature, and impacts resulting from this option must be assumed to be **potentially significant and unavoidable**.~~

UTILITIES AND ENERGY, IMPACT 17-10, PAGE 17-25

Impact 17-10 is hereby revised as follows:

Impact 17-10: Increased Demand for Potable Water Supply.

Potable water for Phase 1 of project development would be supplied by COSMUD and would increase the demand on the existing water supply available to the COSMA service area. A WSA has been prepared at the programmatic level by COSMUD to determine whether the total projected water supplies available for the entire MLSP would meet the water demand associated with the proposed project at buildout, in addition to the existing and planned future uses as identified in the City's adopted and proposed general plans (Appendix Θ R). The WSA did not calculate Phase 1 water demands separately from the water demands for the entire project, nor did the WSA determine if sufficient water supplies are available to serve Phase 1 separately from the entire project. Water demands for Phase 1 were calculated for this DEIR analysis by applying water demand factors provided in the COSMUD WSA to each proposed Phase 1 land use. Based on COSMUD water demand factors, the total Phase 1 potable water demand would be 1,386 afy.

Stantec, Inc. (2007b) performed a review of the water supplies identified in the City's WSA (DEIR Appendix R). Development Phase 1 consists of approximately 1,000 acres of land in the southern portion of the SPA that is currently designated and used for agricultural purposes. Total existing agricultural water use within development Phase 1 is conservatively estimated to be approximately 3,000 afy based on an estimated average agricultural water usage rate of 3 afy. The total potable water demand for development Phase 1 (1,386 afy) would be approximately 1,614 afy less than the current agricultural uses on the project site (3,000 afy agricultural uses – 1,386 afy potable water demand = 1,614 afy.) As a result, the conversion of the Phase 1 project site from agricultural uses to urban uses should ultimately produce a net positive increase in volume of water stored in the groundwater basin of approximately 1,614 afy.

While the City of Stockton WSA does state that, "This WSA determines that the COSMA urban water retailers currently cannot support the Project without the DWSP Phase I project," this determination is based on full buildout of the MLSP (3,080 acres). Development Phase 1, which is evaluated at a project level in this DEIR, consists of approximately 1,000 acres. In its WSA, the City concludes that it has sufficient water supplies to serve all existing and foreseeable development (including the MLSP at full project buildout) through 2035, but that providing such service would require the City to exceed the average sustainable groundwater yield goal by approximately 5,157 afy (DEIR Appendix R, page 36). The difference in water demand between Phase 1 of the proposed project (1,386 afy) and full project buildout (7,535 afy) is 6,129 afy. Thus, because 6,129 afy less water would be needed to serve MLSP Phase 1, the City's safe yield goal would not be exceeded, and in fact, the City would be able to serve its existing and foreseeable development and remain approximately 974 afy below its targeted sustainable groundwater yield goal (6,129 afy water not used for MLSP – 5,157 afy exceedance of groundwater sustainable yield = 974 afy).

Therefore, while the City anticipates that the DWSP will be operational in time to serve all of the proposed MLSP development, should a delay occur, the City would be able serve development Phase 1 of MLSP with its existing water supplies, without having a negative impact on the groundwater basin. Therefore, direct impacts related to Phase 1 potable water supply would be **less than significant**.

~~Because Phase 1 was not specifically evaluated in the WSA, and the programmatic WSA concluded that water supplies are not available to meet the proposed project's demands without the DWSP, it cannot be determined with certainty that sufficient water is available to serve Phase 1 of the proposed project. As stated in the WSA, the permanent long term water supply cannot be delivered to the SPA until the DWSP facilities have been approved and constructed (currently estimated at 2010 or 2011).~~

However, assuming that the DWSP would be operational in time to serve development Phase 1, As identified above in Impact 17-1, the MLSP would contribute to the environmental impacts of the DWSP.

Because there is a relationship between the proposed project and the need for these water facilities, approval of the proposed project may hasten the occurrence of the related impacts. As described in the DWSP EIR, construction of these water facilities would result in several environmental impacts (refer to Impact 17-1 for impacts), most of which would be reduced to a less-than-significant level through mitigation implementation. However, five impacts were identified that would remain significant and unavoidable after implementation of mitigation (refer to Impact 17-1 for a discussion of impacts).

The WSAs prepared by for the proposed project concluded that water supplies would be available to meet the project's demands at complete project buildout assuming the DWSP facilities are constructed (currently estimated at 2010 or 2011). Because the DWSP EIR has been certified and adopted, has received a water rights permit from the SWRCB, has applied for a Department of the Army Section 404 of the Clean Water Act permit from the U.S. Army Corps of Engineers, has obtained the necessary stormwater and wastewater National Pollutant Discharge Elimination System (NPDES) permits, has been designed, and is in the construction bid process, the DWSP is considered by the City to be a reliable source of water. As described above, should a delay in the DWSP occur, the City would be able serve development Phase 1 of MLSP with its existing water supplies, without having a negative impact on the groundwater basin. ~~However, because the exact timing of the completion of DWSP facilities necessary to serve the MLSP cannot be determined at this time, this impact is considered significant.~~

~~Implementation of Mitigation Measure 17-1 would reduce direct significant impacts related to increased demands for water supply under the proposed project to a less-than-significant level. because the City would comply with Government Code Section 66473.7 and written verification would be provided that existing sources are or would be available and that needed physical improvements for treating and delivering water to the project site would be in place prior to occupancy.~~

Regarding indirect impacts related to construction of the DWSP water supply facilities and infrastructure, implementation of mitigation measures to reduce DWSP impacts is the responsibility of the City of Stockton. Such measures would be implemented in accordance with the certified DWSP EIR prepared by the City of Stockton. As described in the discussion of Impact 17-1, impacts on four issue areas would remain **significant and unavoidable** after mitigation implementation, and no further feasible mitigation measures are available to reduce these impacts to a less-than-significant level.

UTILITIES AND ENERGY, IMPACT 17-12, PAGE 17-26

Impact 17-12 is hereby revised as follows:

Impact 17-12: Increased Demand for Nonpotable Water Supply and Conveyance Facilities.

Impacts would be the same under Phase 1 as under the program level (entire SPA) analysis. Refer to Impact 17-3 for further discussion of this impact.

~~Implementation of Mitigation Measure 17-3 would require the applicant(s) to secure a source of surface water supplies to meet the project's nonpotable water system demands, either from surplus surface water or from a potable water supplier, which would reduce this impact to a less-than-significant level. However, if water supplies were not available to meet the proposed project's nonpotable water demands, the project applicant(s) would be required to eliminate the proposed lake system. This would require redesigning the storm drainage system for the proposed project, and/or redesigning the entire proposed project to relocate development or increase/decrease the amount of proposed development. Because it is unknown what form a redesigned project would take, or if the storm drainage system could be redesigned~~

~~to accommodate the project as proposed, an evaluation of the environmental impacts that could result from elimination of the proposed lake system would be speculative in nature, and impacts resulting from this option must be assumed to be **potentially significant and unavoidable**.~~

UTILITIES AND ENERGY, RESIDUAL SIGNIFICANT IMPACTS, PAGE 17-30

The last paragraph on page 17-30 is hereby revised as follows:

With implementation of the mitigation measures listed above, project implementation would not result in any residual significant impacts related to wastewater conveyance and treatment facilities; increased demand for nonpotable water supply and conveyance facilities; or increased demands for electricity, natural-gas, and telecommunications systems. However, regarding water supply, the proposed project would contribute to impacts in four issue areas that were identified in the DWSP EIR, which would remain **significant and unavoidable** after implementation of mitigation measures. ~~Additionally because it is not known if the applicant(s) would be able to secure the necessary nonpotable water supply, this impact would remain **potentially significant and unavoidable**.~~

CUMULATIVE IMPACTS, FIGURE 18-1, PAGE 18-3

The existing Figure 18-1 is hereby replaced with the attached new Figure 18-1, which has been revised to show the location of all the related projects listed in Table 18-1, rather than just those projects south of SR 4.

CUMULATIVE IMPACTS, TABLE 18-1, PAGE 18-4

The following information is hereby added to the bottom of Table 18-1:

Table 18-1 Related Projects				
Map No.	Project Name	TM Acres	Final Map Units	Project Completion (%)
<u>34</u>	<u>Grupe Sanctuary</u>	<u>2,000</u>	<u>6,000</u>	<u>0%</u>
<u>35</u>	<u>Empire Ranch</u>	<u>600</u>	<u>2,200</u>	<u>0%</u>
<u>36</u>	<u>Arnaiz/Tidewater Crossing</u>	<u>800</u>	<u>4,000</u>	<u>0%</u>
<u>37</u>	<u>River Run/Western Pacific</u>	<u>1,850</u>	<u>9,250</u>	<u>0%</u>
Single-Family Total:		<u>3,979</u> <u>9,229</u>	<u>15,695</u> <u>37,145</u>	58
Multifamily Total		83	1502	20

CUMULATIVE IMPACTS, CITY OF STOCKTON GENERAL PLAN UPDATE 2035, PAGE 18-5

The of Section 18.5.3 is hereby revised as follows:

18.5.3 ~~PROPOSED DRAFT~~ CITY OF STOCKTON GENERAL PLAN UPDATE 2035

The City ~~is currently preparing~~ has prepared the Stockton 2035 General Plan Update and Infrastructure Master Plans to update the adopted City General Plan. The DEIR for the General Plan Update was released for public review on December 1, 2006, and includes an assessment of the City’s existing urban service boundary and sphere of influence, and expansions to those boundaries. On December 11, 2007, the Stockton City Council adopted the ~~As currently proposed, the draft 2035 General Plan Update, which would encompass~~ all of the land inside the city limits, the existing sphere of influence area, and additional unincorporated land areas that may influence future planning efforts. These ~~proposed~~

boundaries extend to Armstrong Road and Live Oak Road on the north; portions of SR 99, the Stockton Diverting Canal, and Jack Tone Road to the east; and Roth Road on the south. The western boundary ~~would be~~ is formed by several features including a portion of the San Joaquin River, SR 4, Burns Cutoff, and Bishop Cut. (City of Stockton 2005b.)

The ~~draft~~ 2035 General Plan Update anticipates that buildout of Stockton, including the City's urban service boundary and sphere of influence, would result in a total population of approximately 576,000 persons by 2035. This is approximately 273,100 more persons by 2035 than in 2010 (302,900) as estimated by the 1990 City General Plan. In addition, buildout of the ~~proposed draft~~ 2035 General Plan Update would include an additional 106,488 housing units, of which 17,197 units are currently approved, and an additional 1,002 acres (18,778,688 square feet) of commercial uses, 4,459 acres (78,510,099 square feet) of industrial uses, and 74 acres (904,556 square feet) of commercial/industrial mixed uses (City of Stockton 2006c).

CUMULATIVE IMPACTS, AGRICULTURAL RESOURCES, PAGE 18-8

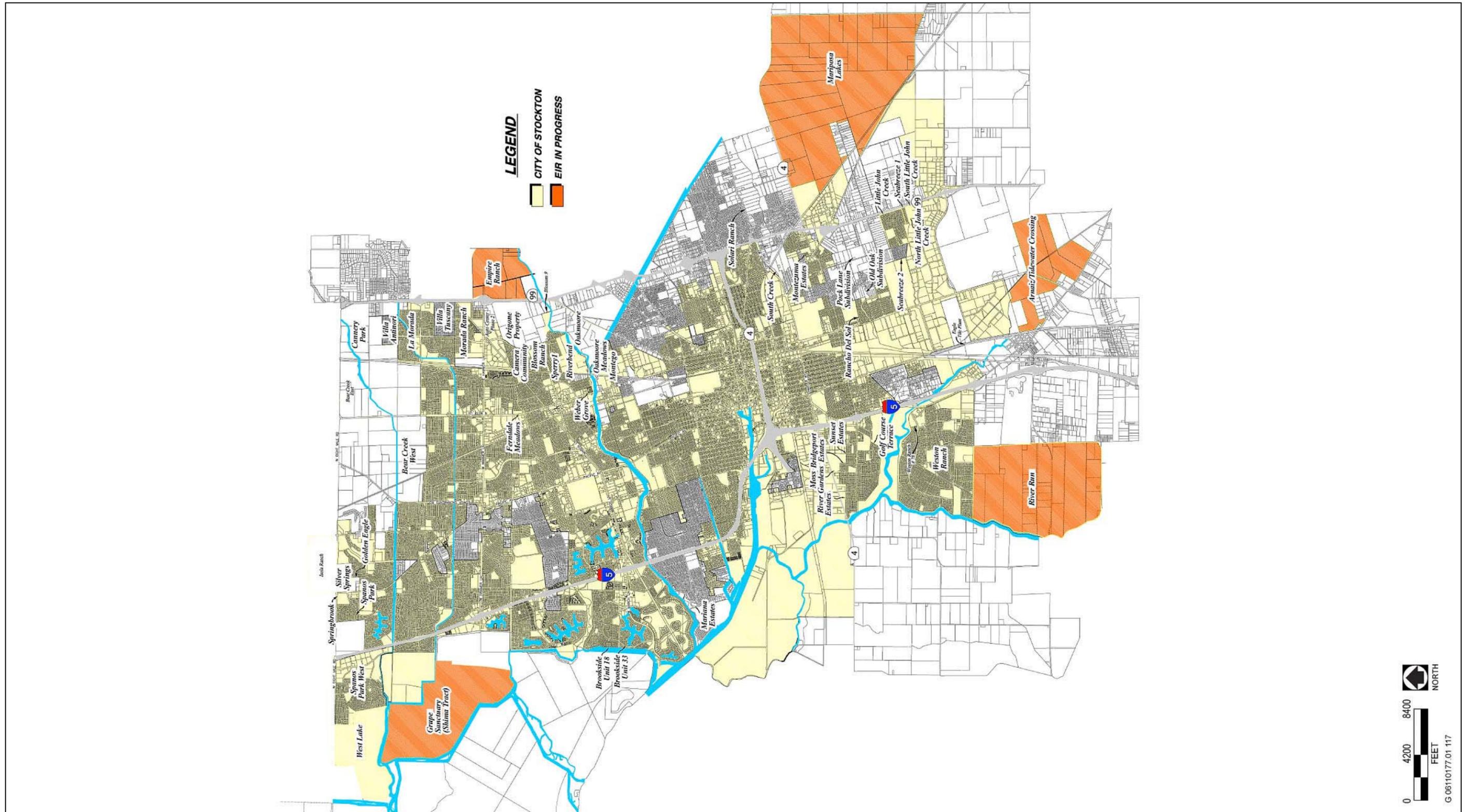
The second paragraph on page 18-8 is hereby revised as follows:

The loss of Important Farmland and cancellation of Williamson Act contracts at the SPA is considered a cumulatively considerable (i.e., significant) impact when considered in connection with the significant cumulative losses that would occur as a result of the proposed project; past farmland conversions; and planned future development proposed in the city, the surrounding cities, and the county as a whole. The project applicant(s) would pay the City's agricultural land conversion mitigation fees and would follow all other provisions of the City's "Agricultural Land Mitigation Program" as adopted by the City of Stockton on February 27, 2007. Payment of the fee would constitute a form of mitigation for the agricultural conversion of the project ~~if such a program is adopted by the City of Stockton.~~ If such a system is not adopted, the project applicant(s) shall pay a fee of \$4,800 per acre subject to development. In addition, the project applicant(s) would participate in the SJMSCP by contributing fees, on a per-acre basis, for agricultural lands that are developed. ...

CUMULATIVE IMPACTS, CARBON MONOXIDE, PAGE 18-10

The last paragraph on page 18-10 is hereby revised as follows:

Cumulative traffic data (proposed project plus foreseeable future development) were used to specifically evaluate local mobile-source CO concentrations for existing-plus-project and future-plus-project conditions. The analysis was conducted for intersections projected to operate at unacceptable level of service (Level of Service [LOS] E or F). According to the traffic analysis prepared for the proposed project, all affected signalized intersections in the SPA and vicinity would operate at acceptable LOS under existing plus project conditions with mitigation implementation. Project-generated, long-term operation-related (local) mobile-source emissions of CO would not violate or contribute substantially to a violation of the California ambient air quality standards or national ambient air quality standards, or expose sensitive receptors to substantial pollutant concentrations. Consequently, the cumulative impact of the proposed project's contribution to traffic volumes on the local roadway network relative to CO concentrations would not add incrementally to cumulatively considerable significant impacts.



Source: Stantec 2007

Location of Related Projects

Figure 18-1

CUMULATIVE IMPACTS, LAND USE, PAGE 18-17

The third full paragraph on page 18-17 is hereby revised as follows:

Development of the proposed project would change the SPA from rural residential and agricultural land uses to urban land uses. With the development of large planned projects (e.g., the North Stockton Projects, Canary Park, Westlake Villages, and Little John Creek), additional open space and agricultural lands within Stockton would be converted to other land uses. In addition, annexation of the proposed project would result in significant and unavoidable impacts related to inconsistencies with San Joaquin Local Agency Formation Commission guidelines as a result of the proposed project's annexation into the City of Stockton, because an creation of an incorporated "island" of land, some of which has been developed, some of which has not, would be created. It is anticipated that the "island" area would continue to be subject to intensive "infill" interest because of its proximity to the incorporated city. As time passes, the area would be expected to gradually be absorbed into the City. As described previously, the San Joaquin LAFCO may still approve an annexation request that creates an island of land where it finds that the annexation would not be detrimental to the orderly development of the community and that a reasonable effort has been made to include the island in the annexation but that inclusion is not feasible at the time the request for annexation is made. While the direct impact from project implementation would be considered less than significant, tThe proposed project would contribute result in an indirect cumulatively contribution to this impact by changing the project site from rural residential and agricultural land uses and by creating an "island" development; therefore, the indirect impact is considered cumulatively considerable (i.e., significant) when considered along with past urban development and planned future development proposed in Stockton, the surrounding communities, and the county as a whole.

CUMULATIVE IMPACTS, NONPOTABLE WATER SUPPLY, PAGE 18-23

The text of the first paragraph on page 18-23 is hereby revised as follows:

The Non-Potable Water Supply Assessment for the Proposed Mariposa Lakes Development (2007) prepared on behalf of CSJWCD and SEWD (Appendix Y) concluded that CSJWCD and, as necessary, SEWD, would have sufficient nonpotable water supplies to serve the proposed project's maximum nonpotable water demands while meeting the current and projected future demands within the CSJWCD and SEWD service areas. In addition, the WSA concluded the project proponent would need to construct and operate groundwater recharge facilities capable of banking 5,000 af of water annually, when available, to avoid additional overdraft on the underlying groundwater basin. The applicants plan to recharge a minimum of 5,186 afy of nonpotable water, and may recharge up to 8,500 afy of nonpotable water. Because the CSJWCD and/or SEWD would have sufficient nonpotable water supplies to serve the proposed project, and because the project would include a groundwater recharge facility capable of banking more than 5,000 afy of water, the project's nonpotable water supply impacts would be less than significant, and Because the timing and quantity of a portion of the necessary supply of surplus surface nonpotable water is unknown at this time, and because contracts for the purchase of this water from SEWD and CSJWCD have not been secured, it is uncertain whether nonpotable water resources necessary to the serve the SPA would be available. Implementation of mitigation would ensure the availability of the proposed nonpotable water supplies before recordation of any final small lot subdivision map, or before City approval of any project specific discretionary approval or entitlement required for nonresidential land uses. Therefore, this cumulative impact is considered less than significant, and the proposed project's contribution to the increased demand for nonpotable water supply would not be cumulatively considerable.

SITE DESIGN ALTERNATIVE, PAGE 19-12

The text of the last paragraph on page 19-12 is hereby revised as follows:

This alternative would involve alternative development designs that would have the potential to avoid or substantially lessen some of the potentially significant effects of the project: impacts on heritage oak trees, the one archaeological site identified within the SPA, or the existing wetland areas located within the SPA. This alternative could also respond to CCG comments on the NOP for the proposed project requesting an enlarged buffer between planned residential uses and agricultural lands to the east. This alternative would involve relatively minor alterations in the location of planned urban uses, ~~and would not involve any known conflict with the overall objectives of the project.~~ For the same reasons, this alternative is considered feasible from an engineering and technical perspective.

SITE DESIGN ALTERNATIVE, PAGE 19-15

The second paragraph on page 19-15 is hereby revised as follows:

This alternative would result in avoidance or substantial reduction of potential environmental effects on the specific biological and cultural resources identified above in the preceding paragraph. However, the proposed project's biological and cultural resources impacts would be less than significant after implementation of the proposed mitigation, and ~~this alternative would not, however,~~ produce any substantial reduction of most of the potential environmental effects of the project, as discussed below.

SITE DESIGN ALTERNATIVE, PAGE 19-15

The fourth paragraph on page 19-15 is hereby revised as follows:

By incorporating increased open space, this alternative would involve additional flexibility to avoid cultural resources and Heritage Oaks; some Heritage Oak groves would be preserved in dedicated open spaces with buffer areas. Additional open space along creek channels would contribute to potential enhancement of these resources, which is proposed by the project. However, these resources, as well as the general biological resources discussed in the previous paragraph, would be mitigated to a less-than-significant level with the mitigation measures included in Chapter 7, "Biological Resources," of this DEIR. The less than significant (after mitigation) hydrologic impacts resulting from the elimination of a portion of Branch Creek with the project would be avoided by this alternative.

IMPACTS OF THE SITE DESIGN ALTERNATIVE, TABLE 19-3, PAGE 19-17

Table 19-3 is hereby revised as follows:

Possible short term avoidance of Same exposure to flooding

REDUCED PROJECT ALTERNATIVE, PAGE 19-19

The text on page 19-19 is hereby revised as follows:

For the purposes of analysis, assumed quantities of industrial, residential, and commercial use to be developed within the SPA would amount to approximately 7.0 million square feet of industrial development, 650,000 square feet of commercial development, and 7,924 residential units. Under Option 1, these quantities would be developed within a 3,810-acre SPA; under Option 2, the same amount of development as Option 1 would occur within a 2,010-acre SPA. Development under either of these

scenarios would involve generally proportional reductions in overall project infrastructure and service demands, including the construction of fewer schools. Under Option 1, however, the extent of utility pipeline system construction would not be reduced proportionally.

The Reduced Project Alternative has the potential to be consistent with the project objectives, depending on the degree of intensity/density or project area size reduction. In general, this alternative would involve development of urban uses in a mix comparable to that of the proposed project. Even with a substantial reduction in the proposed intensity/density or size of the project, the overall magnitude of the project would be considerable and subject to economies of scale. Reductions in intensity/density of up to 45% would be in conflict with some of the objectives that are more related to the proposed project size. ~~One conflict would be with the objective related to provision of a high school; with a 45% reduction, high school student generation from the project would not represent the majority of student population needed to support high school development.~~ Reduced project size may also impair the project's ability to achieve other project objectives such as planned improvements to highways, transportation, and waterways, and other improvements. Option 1 would involve conflicts with an underlying objective of the MLSP—general plan consistency—because reduced densities could be below target densities for urban development in the general plan.

Nonetheless, this alternative is assumed to be generally feasible from an engineering and technical perspective. Principal ownerships within the SPA are controlled by the applicant, and there are no known technical or engineering impediments to development of a reduced project ~~other than the relative costs and benefits of a reduced scale project.~~ ~~Option 1 would be considered generally less feasible than Option 2, in that per unit land and infrastructure costs would be higher under the lower intensity/density land uses of Option 1 than Option 2.~~ Economically, however, these options may be infeasible because the per-unit land and infrastructure costs would be higher due to the reduced number of units, reduced square footage of non-residential development, and the lower densities assumed by these alternatives.

Option 1 would not involve any potential for substantial direct reduction in the effects of the project on land, biological, and water resources. Despite the reduced industrial, commercial, or residential yield of the project, its potential effects on vistas, agricultural land, soils, biological resources, cultural resources, paleontological resources, and water resources would be largely unchanged. Reduced density/intensity would, however, expand general options for the preservation of some resources; such as, heritage oak trees, wetlands, and archaeological sites. These potential reductions would be realized during the design of elements of the project and in response to the mitigation provisions of the MLSP and DEIR. Urban development that would otherwise have been accommodated within the SPA with the higher proposed intensity/density may be displaced to other undeveloped lands within the Stockton area, potentially increasing the indirect physical environmental effects of the project. The potentially significant effects of the project under Option 1 as compared to the proposed project are shown in Table 19-4.

Option 2 would involve the potential for ~~substantial~~ reductions in the direct physical effects of the project on land, biological, and water resources by reducing the overall footprint of the SPA, although it would involve conflict with the project objective of developing the entire project site. The major reduction in the land area of the project (45%) would result in proportional reductions in it's the project's environmental effects on vistas, agricultural land, soils, biological resources, paleontological resources, and cultural resources. Even with this reduction in land area, however, these environmental effects would remain significant. Option 2 would involve essentially the same impacts as Option 1 on traffic, noise, ozone precursor emissions, and utility demands. As with Option 1, urban development that would have been accommodated within the larger SPA may be displaced to other undeveloped lands within the Stockton area, and this displacement could result in indirect physical environmental effects comparable to those of the proposed project. The potential environmental effects of the Reduced Project Alternative under Option 2 as compared to the proposed project are shown in Table 19-5.

COMPARISON OF SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE ALTERNATIVES, TABLE 19-6, PAGE 19-24

Table 19-6 is hereby revised as follows:

Environmental Issue Area	Site Design Alternative
Hydrology and Water Quality	Possible short term avoidance of <u>Same</u> exposure to flooding

GROWTH INDUCING IMPACTS, UTILITIES, PAGE 20-3

The second paragraph on page 20-3 is hereby revised as follows:

The SPA would be located within the City of Stockton Metropolitan Area (COSMA), and water purveyors within the COSMA include the City of Stockton Municipal Utilities District (COSMUD), California Water Service Company (Cal Water), and the San Joaquin County Maintenance Districts (SJCMDs). The northern portion of the SPA would be served by Cal Water, and the southern portion of the SPA would be served by COSMUD. For purposes of sizing transmission/distribution facilities, the combined COSMUD and Cal Water total average-day demand for the project is estimated to be 7,535 acre feet per year. These water supplies would be available when Phase 1 of the Delta Water Supply Project (DWSP) facilities have been approved and constructed (currently estimated at 2010/2011). Additional connections between the COSMUD and Cal Water would be required to supply water from both the Stockton East Water District (SEWD) WTP and the DWSP WTP to their service areas. Construction of these facilities would also occur without development of the proposed project to serve regional development, and they would be needed whether or not the proposed project is developed. Because there is a relationship between the proposed project and the need for these water facilities, project approval may hasten the occurrence of the related impacts associated with the future construction of water supply facilities needed to serve the proposed project and other regional development. The DWSP would support future planned growth anticipated by the City. Therefore, these water facilities and infrastructure would be growth inducing.

SIGNIFICANT AND UNAVOIDABLE IMPACTS, AGRICULTURAL RESOURCES, PAGE 22-1

The last paragraph on page 22-1 is hereby revised as follows:

Project development would require the cancellation of Williamson Act contracts on approximately 3,219 acres of land at full project buildout. Implementation of Mitigation Measure 5-2 would lessen significant impacts associated with Williamson Act contract cancellations by continuing the existing farming operations on MLSP land as long as practicable

SIGNIFICANT AND UNAVOIDABLE IMPACTS, TABLE 22-1, PAGE 22-2

Table 22-1 is hereby revised as follows:

Table 22-1 Summary of MLSP Project-Related Significant and Unavoidable Impacts			
Chapter Name/ Issue Area	Program-Level (Entire MLSP) Impact Number	Project Level (Phase 1) Impact Number	Impact Title
Aesthetics	4-2	4-7	Degradation of Visual Character
	4-4	4-9	New Light and Glare and Nighttime Skyglow Effects

Table 22-1 Summary of MLSP Project-Related Significant and Unavoidable Impacts			
Chapter Name/ Issue Area	Program-Level (Entire MLSP) Impact Number	Project Level (Phase 1) Impact Number	Impact Title
Agricultural Resources	5-1	5-4	Conversion of Agricultural Land
	5-2	5-5	Conflict with Lands Under Williamson Act Contracts
	5-3	5-6	Conversion of Agricultural Land from Future Phase Off-Site Improvements
Air Quality	6-1	6-8	Generation of Temporary, Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors
	6-2	6-9	Generation of Long-Term Operation-Related (Regional) Emissions of Criteria Air Pollutants
	6-4	6-11	Generation of Long-Term Operation-Related Emissions of Greenhouse Gases
	6-5	6-12	Exposure of Sensitive Receptors to Existing and Project-Generated Emissions of Toxic Air Contaminants
	6-6	6-13	Exposure of Sensitive Receptors to Odors
	6-7	6-14	Generation of Temporary, Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors from Future-Phase Off-Site Improvements
Land Use	12-2	12-8	Creation of "Island" Development that is Inconsistent with San Joaquin LAFCO Guidelines for Annexation into Stockton City Limits
	12-5	12-11	Land Use Effects from Future Phase Off Site Improvements
	NA	12-7	Consistency with California Department of Education School Siting Criteria
Noise	13-2	13-9	Long-Term Project-Generated Increases in Noise Levels from Traffic Sources at Existing Off-Site Noise-Sensitive Receptors
	13-5	13-12	Land Use Compatibility of Sensitive Receptors with Noise Levels from Future Stationary and Area Sources
	13-7	13-14	Noise Effects from Future-Phase Off-Site Improvements
Transportation and Circulation	16-1	16-1	Increases to Peak-Hour and Daily Traffic Volumes, Resulting in Unacceptable Traffic Operations at Study Intersections, Roadways, and Freeway Segments
	16-10	16-4	Unacceptable LOS at Freeway Study Segments
	16-13	16-6	Increased Demand for Transit Service
	16-14	16-7	Traffic Impacts on Streets in the Vicinity of School Development
	16-9	NA	EPAP Plus Full Project Buildout Conditions: Unacceptable LOS at Internal and External Study Intersections
Utilities and Energy	17-1	17-10	Increased Demand for Potable Water Supply (<u>Contribution to Impacts from Implementation of DWSP</u>)
	17-2	17-11	Increased Demand for Water Conveyance Facilities (<u>Contribution to Impacts from Implementation of DWSP</u>)
	17-3	17-12	Increased Demand for Nonpotable Water Supply and Conveyance Facilities
	<u>17-4</u>	<u>17-13</u>	<u>Need for Permanent Wastewater Conveyance Facilities to Serve Project Wastewater Demand</u>

Source: Data compiled by EDAW in 2008

SIGNIFICANT AND UNAVOIDABLE IMPACTS, LAND USE, PAGE 22-4

Section 22.4 is hereby revised as follows:

~~Annexation of the SPA into the City would create an unincorporated island of land west of Mariposa Road, north of Arch Road, east of South Airport Way, and south of Charter Way. Creation of an unincorporated island of land would represent a conflict with the San Joaquin County Local Agency Formation Commission (LAFCO) policies for annexation. No feasible mitigation measures are available to mitigate the creation of an unincorporated island of land; therefore this impact would remain significant and unavoidable.~~

Project implementation would result in indirect significant and unavoidable impacts related to provision of schools because school site plans are not available, and further environmental review must be conducted by the California Department of Education (CDE). Because it is unclear whether further environmental review by CDE would identify potentially significant impacts and mitigation measures, the level of significance of this impact cannot be adequately determined; therefore, until Stockton Unified School District (SUSD) conducts a separate, site-specific CEQA review, the direct impacts would remain potentially significant and unavoidable.

SIGNIFICANT AND UNAVOIDABLE IMPACTS, TRANSPORTATION/CIRCULATION, PAGE 22-5

The text of the last full paragraph on page 22-5 is hereby revised as follows:

~~Under full project buildout, seven study area intersections would operate at an unacceptable LOS. With implementation of Mitigation Measures 16-1a, 16-1b, and 16-1c would reduce the impacts at six of the affected intersections to a less than significant by requiring intersection improvements. However, Intersection 27 falls under the jurisdiction of Caltrans; therefore, neither the City nor the project applicant(s) would control their timing or implementation. Thus, the impact would remain significant and unavoidable. If Caltrans cooperates in allowing the improvements to move forward, the impact to Intersection 27 would be classified as significant in the short term but eventually would be reduced to a less than significant level.~~

SIGNIFICANT AND UNAVOIDABLE IMPACTS, TRANSPORTATION/CIRCULATION, PAGE 22-6

The first paragraph on page 22-6 is hereby revised as follows:

~~During development Phase 3 (considered to be part of the full project buildout traffic scenario), a 30-acre regional sports park would be constructed. Implementation of Mitigation Measure 16-9 would require a traffic study to identify impacts from development of the regional sports park, and would require implementation of any improvements identified as part of that study. However, because the City does not yet have sufficient information to assess the project-specific transportation-related impacts of the regional sports park, the City at present lacks information sufficient to determine whether implementation of this mitigation measure would reduce impacts to a less than significant level. For this reason, impacts to internal study intersections under full project buildout are considered potentially significant and unavoidable.~~

SIGNIFICANT AND UNAVOIDABLE IMPACTS, UTILITIES AND SERVICE SYSTEMS, PAGE 22-6

The fourth paragraph on page 22-6 is hereby revised as follows:

~~Project implementation requires a secured supply of water that is necessary for nonpotable water uses at the SPA, including groundwater recharge operations and landscape irrigation. Some of the necessary nonpotable surface water supplies have not yet been secured. Implementation of Mitigation Measure 17-3 would require the project applicant(s) to secure a source of the remaining nonpotable surface water supplies to meet the proposed project's nonpotable water system demands. However, it is not known at this time when contracts for the purchase of water would be secured or if water supplies would be available to meet the proposed project's nonpotable water demands. Therefore, this impact remains significant and unavoidable.~~

Based on assumptions discussed in the draft sewer study, it appears that System No. 8 is available to approved development projects on a first-come, first-served basis, including MLSP. Before development of Phase 2 begins, the City would evaluate and determine if System No. 8 could adequately serve buildout of the proposed project. If the City determines that there is insufficient capacity in System No. 8 to serve the entire SPA at buildout, then the project applicant(s) would finance and construct a new wastewater collection system, System No. 12, and the SPA's wastewater flows, including Phase 1, would be diverted to this system. The ultimate conveyance capacity of System No. 12 would be determined by the City and would have capacity to convey peak wet-weather flows to the RWCF at project buildout. If the City determines System No. 12 is necessary to serve the proposed project, a separate CEQA review will be required to assess the effects of developing the System No. 12 wastewater collection system. The separate CEQA review will be prepared by the project applicant(s) and will identify environmental impacts associated with construction of System No. 12, some of which may remain significant and unavoidable even with implementation of all feasible mitigation. Construction of System No. 12 in the vicinity of the SPA has the potential to result in many of the same significant environmental impacts as identified in this DEIR for the project, including significant and unavoidable impacts on farmland, construction-related air quality impacts, construction-related noise, and alteration of the visual character of the SPA. Because it is not known at this time what those impacts would be, if any, or if they could be feasibly mitigated to a less-than-significant level, this impact is **potentially significant and unavoidable**.

5.3 SUMMARY OF MLSP WATER SUPPLIES

5.3.1 INTRODUCTION

In conjunction with the City of Stockton's Municipal Utilities District, the master developers of the Mariposa Lakes planned community designed separate water systems to serve the project's potable and nonpotable water needs. The primary reason for developing water separate systems was to minimize the extent to which the project would diminish the supplies of potable water that would be available to the City in the future. To achieve this goal, the project developers have identified separate water supply sources to serve the project's potable and nonpotable water demands, and designed separate conveyance, storage, and delivery facilities to deliver the potable and nonpotable supplies. These systems are described in detail in Chapters 11 and 17 of the DEIR. The following is a simplified summary of these systems that is provided to give general context to readers of the FEIR.

The project's potable water service would be provided by the City of Stockton Municipal Utilities District (COSMUD) and the California Water Service Company (Cal Water). Generally speaking, Cal Water would serve the northern portion of the specific plan area (SPA), and COSMUD would serve the southern portion of the SPA. The service areas for each are shown on Figure 3-31 of the DEIR (see page 5-13 of this FEIR). Cal Water and COSMUD would deliver potable water to the project by extending existing water pipelines on the southern,

western, and northern borders of the SPA. These existing pipelines and extensions are shown on Figure 3-31 (page 5-13 of this FEIR). Potable water supplies available to Cal Water and COSMUD to serve the project are summarized below and described in detail in Chapter 17 of the DEIR and Appendices R (COSMUD Water Supply Assessment for the Mariposa Lakes Specific Plan Project) and S (Cal Water Water Supply Assessment for Mariposa Lakes Specific Plan Project) of the DEIR.

The project's nonpotable water supplies would be provided by Stockton East Water District (SEWD) and/or the Central San Joaquin Water Conservation District (CSJWCD). SEWD and CSJWCD would deliver the project's nonpotable water supplies to a groundwater recharge facility to be built on the Arbini property immediately east of the SPA. SEWD would deliver nonpotable supplies by diverting water from a diversion point on Duck Creek northeast of the project site through a newly installed pipeline south to the Arbini property recharge facility. Two proposed locations for the diversion pipeline are shown on Figure 11-4 of the DEIR. CSJWCD would deliver nonpotable supplies by diverting water from North Little Johns Creek directly to the recharge facility (North Little Johns Creek crosses the Arbini property at the southeast corner of the property). The diversion point for CSJWCD supplies is also shown on Figure 11-4. The nonpotable water supplies available to SEWD and CSJWCD to serve the project are summarized below and described in detail in Chapters 11 and 17 of the DEIR and Appendix Y of this FEIR. Nonpotable water supplies diverted to the Arbini property would be allowed to percolate into the regional groundwater basin, thereby replenishing groundwater supplies in the basin, and also creating a "bank" of stored water in the basin. The project would retrieve nonpotable water supplies from the "bank" as necessary to meet the nonpotable water demands of the project. These demands would be limited to lake maintenance and irrigation of public spaces. To ensure that the project provides a net benefit to the groundwater basin, the project would be required to apply at least 2 acre-feet of water for every 1 acre-foot that it retrieves for the project.

To fully evaluate the specific impacts that would result from these separate systems, this EIR separates the supply of potable and nonpotable water into separate impacts at both the program and project level. The EIR was structured in that manner to make clear to the agencies, decision-makers, and the public that water for the project's potable and nonpotable water needs would come from different sources, require different conveyance systems, and be used for different purposes. In order to provide additional clarification to the reader, the following summary of the project's potable and nonpotable demands, water sources, water conveyance systems, and water uses, is provided below.

5.3.2 AVAILABILITY OF LONG-TERM POTABLE WATER SUPPLIES

The total annual potable water demand of the proposed project at full buildout is estimated to be 7,535 acre-feet per year (afy). The project would be constructed in five phases; thus, the potable water demand would begin with 1,386 afy for development Phase 1, and would gradually increase over a 20-year period as each successive phase is constructed, to the full demand amount. Potable water would be supplied by the City and Cal Water, and would be used to meet the project's annual potable water needs and to provide the initial (one-time-only) filling of the proposed artificial lakes within development Phase 1. The initial, one-time only fill of Phase 1 lakes would require 704 acre-feet of water, which would be supplied by the City. (Initial filling of the other artificial lakes within future development phases would be accomplished using nonpotable water, discussed below in a separate heading.)

The Water Supply Assessment (WSA) prepared by the City (2006) indicates that the City requires water from Phase I of the Delta Water Supply Project (DWSP) before it can meet the water demand of the proposed project in addition to the water demands of its other customers, which includes full buildout of the entire 2035 City General Plan Update area. Phase I of the DWSP is the subject of a certified EIR, and the City has obtained the required water rights permit issued by the State Water Resources Control Board (SWRCB) (Permit 21176). In addition, the City has secured the required stormwater and wastewater National Pollutant Discharge Elimination System (NPDES) permits, and has applied for a Section 404 permit from the U.S. Army Corps of Engineers. The City is

currently in the construction bid process for Phase I, construction of which is anticipated to begin in 2008 and conclude in 2010 or 2011. Under the DWSP, a new water intake/diversion facility will be constructed to divert water from the San Joaquin River. Water will be conveyed into a treatment plant, and then delivered via new large-diameter treated-water conveyance pipelines into the City's distribution system, and ultimately to the retail customer. As mentioned previously, the SWRCB has already issued Permit 21176, which allows the City to divert up to 33,600 afy of water for DWSP Phase I. In addition to the DWSP, the City will also have available to it the following sources of potable water supply.

1. Surface water from SEWD, which obtains water from the following sources:

- ▶ New Hogan Dam under contract with the U.S. Bureau of Reclamation – SEWD entitlement;
- ▶ New Hogan Dam under contract with the U.S. Bureau of Reclamation – Calaveras County Water District (CACWD) unused entitlement;
- ▶ New Melones Interim Water Contract and Section 215 “Spill” Water under contract with the U.S. Bureau of Reclamation;
- ▶ South San Joaquin Irrigation District (SSJID) transfer water from the Stanislaus River; and
- ▶ Oakdale Irrigation District transfer water from the Stanislaus River (includes contract renewal to 2025).

Details regarding the amounts of water from each source identified above are provided in the City's WSA (DEIR Appendix R) in Table 6 on page 20 and in the Cal Water WSA (DEIR Appendix S) on page 17. Revisions to those tables are contained in Section 5.5 of this FEIR.

2. Groundwater. As described in the City's WSA (DEIR Appendix R, pages 22-27), the City employs a “conjunctive use” water management program, whereby surface water is used first, and groundwater is used only in dry years when surface water supplies are insufficient to meet the total demand. During normal and wet hydrologic years, the groundwater basin is allowed to recover through recharge. As described in detail in DEIR Appendix R, and in Master Response 4 (Chapter 3) of this FEIR, the City believes that the local groundwater basin has recovered from its previous state of overdraft, and that implementation of its conjunctive use management program will prevent the groundwater basin from moving into a state of overdraft in the future, while also ensuring that groundwater extraction does not pose any further risk of salinity intrusion in the City of Stockton area. In addition, the project includes the construction of a groundwater recharge facility and implementation of a groundwater recharge program to further preserve and replenish supplies in the regional groundwater basin.

The WSA prepared by Cal Water (DEIR Appendix S), which may also provide potable water to the proposed project, shows that Cal Water also obtains its water from SEWD, with the same SEWD water sources as those listed above, including groundwater. Similar to the City's conjunctive use program, Cal Water “manages groundwater for sustainability;” meaning that Cal Water “is committed to not having its actions contribute to overdrafting of the basin.” (DEIR Appendix S, page 19.) Cal Water employs a program that seeks to balance groundwater extraction during dry hydrologic years with groundwater recharge during normal and wet hydrologic years. “The City of Stockton, Cal Water, SEWD and San Joaquin County, have as a result of the establishment of the use of surface supplies to the east and the SEWD conveyance and treatment facilities voluntarily reduced groundwater withdrawals and thereby improved groundwater basin storage and elevations for areas underlying the COSMA. Groundwater levels have stabilized, i.e., and no significant declines since the end of the drought in the late 1980s and early 1990s.” (DEIR Appendix S, page 21.) Cal Water is also a participant in the DWSP. Cal Water's WSA concluded (DEIR Appendix S, page 43) that based on various factors including existing sources of surface water and groundwater, and participation in the DWSP, that it would have water available to meet the potable water demands of the MLSP project.

Figure 3-31 (page 5-13 of this FEIR) shows: (1) the potable water distribution system that would be constructed within the proposed project site; (2) the locations where that system would connect to the existing City potable water distribution system; (3) the locations of on-site water storage tanks; and (3) the on-site locations of two City of Stockton water wells and one Cal Water water well. Those wells would serve three potential functions: (1) provide water system pressure; (2) serve as a supplement for fire flow requirements (if needed); and (3) provide a source of groundwater supply to meet potable water needs during critically dry years (if needed).

5.3.3 AVAILABILITY OF SHORT TERM POTABLE WATER SUPPLIES

Under the project's currently anticipated construction schedule, there may be short period of time (2-3 years), before the DWSP is completed, when potable water would need to be supplied to the MLSP Phase 1 project site. Development Phase 1 would require 1,386 afy of potable water. Development Phase 1 consists of approximately 1,100 acres of land in the southern portion of the SPA that is currently designated and used for agricultural purposes. Total existing agricultural water use within development Phase 1 is conservatively estimated to be approximately 3,000 afy based on an estimated average agricultural water usage rate of 3 afy. The total potable water demand for development Phase 1 (1,386 afy) would be approximately 1,614 afy less than the current agricultural uses on the project site (3,000 afy agricultural uses – 1,386 afy potable water demand = 1,614 afy). As a result, the conversion of the Phase 1 project site from agricultural uses to urban uses should ultimately produce a net positive increase in volume of water stored in the groundwater basin of approximately 1,614 afy.

While the City of Stockton WSA does state that, "This WSA determines that the COSMA urban water retailers currently cannot support the Project without the DWSP Phase I project," this determination is based on full buildout of the MLSP (3,080 acres). Development Phase 1, which is evaluated a project level in the DEIR, consists of approximately 1,000 acres. In its WSA (DEIR Appendix R), the City concludes that it has sufficient water supplies to serve all existing and foreseeable development (including the MLSP at full project buildout) through 2035, but that providing such service would require the City to exceed the average sustainable groundwater yield goal by approximately 5,157 afy (DEIR Appendix R, page 36). The difference in water demand between Phase 1 of the proposed project (1,386 afy) and full project buildout (7,535 afy) is 6,129 afy. Thus, because 6,129 afy less water would be needed to serve MLSP Phase 1, the City's safe-yield goal would not be exceeded, and the City would be able to serve its existing and foreseeable development and remain approximately 974 afy below its targeted sustainable groundwater yield goal (6,129 afy water not used for MLSP – 5,157 afy exceedance of groundwater sustainable yield = 974 afy).

Therefore, while the City anticipates that the DWSP will be operational in time to serve the entire proposed project, should a delay occur, the City would be able serve development Phase 1 of MLSP with its existing water supplies, without having a negative impact on the groundwater basin.

5.3.4 NONPOTABLE WATER SYSTEM

The total annual nonpotable water demand of the proposed project is estimated to be approximately 2,593 afy at full buildout. The project would be constructed in five phases; thus, the nonpotable water demand would begin with 912 afy for development Phase 1, and would gradually increase over a 20-year period as each successive phase is constructed, to the full demand amount. Nonpotable project water needs consist of commercial and industrial landscape irrigation and lake level maintenance. Nonpotable water needs would be met primarily by the purchase of surplus, untreated surface water from the Central San Joaquin Water Conservation District (CSJWCD) and/or SEWD, and to a lesser extent by the capture of on-site stormwater runoff and precipitation. The purchased untreated surplus surface water would not reduce the volume of supplies available to serve the potable water demands of existing customers; rather, this surplus surface water would consist of unappropriated water in North Little Johns Creek and/or Duck Creek. As shown in Figures 11-4 and 11-7 (Section 5.2 of this FEIR), diversion structures would be constructed in North Little Johns Creek and Duck Creek, and the unappropriated, purchased surplus water would be conveyed via a new pipeline to a groundwater recharge facility

on the adjacent Arbin property. The water would be flooded over the ground surface and allowed to percolate through the ground to recharge the aquifer and create a bank of stored groundwater that can be withdrawn as needed for project use during dry hydrologic years. The City requires that 2 acre-feet of water be applied to the ground surface for every 1 acre-foot of water that is withdrawn from the storage “bank,” thus providing an additional benefit to the aquifer. Because the surplus surface water is already flowing down the creeks, no improvements to channel conveyance capacity would be needed, and no impacts would occur related to flooding or erosion hazards.

As described in detail in Master Response 5 (Chapter 3 of this FEIR), enough extra water would be applied to the aquifer as part of the groundwater banking program to supply the project’s nonpotable water demand for a 3-year period in the event of a prolonged drought. The amount of water necessary to meet the 3-year drought condition changes with each phase of the project as a larger area of the project site is developed under each phase. During critically dry years, when little or no surface water is available from CSJWCD or SEWD, water would be pumped from the banked reserve. As wet years follow, and surface water is again available from CSJWCD or SEWD, water would again be percolated through the ground surface thus returning the banked storage to the desired reserve amount (16,336 acre-feet at full project buildout, smaller amounts for each development phase). To meet the 3-year drought demand for each phase of the project, extra water would be applied during wet years, up to a total of 8,500 afy, as necessary to accumulate the appropriate banked reserve for each development phase.

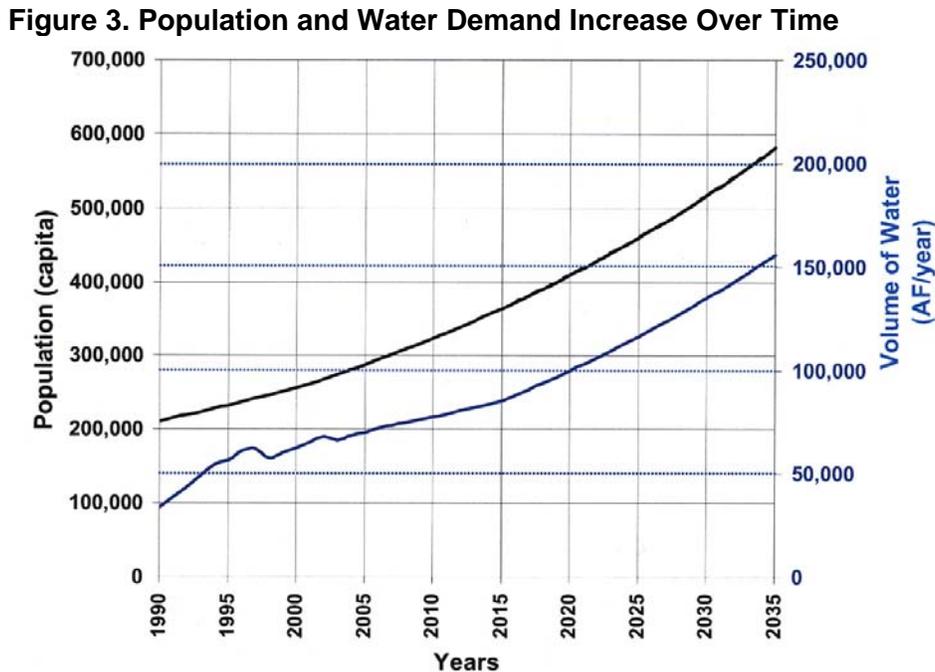
The nonpotable WSA prepared by SEWD, on behalf of itself and CSJWCD (DEIR Appendix Y, page 36), makes the following determination of sufficiency of nonpotable water supply:

This WSA determines that there is sufficient water supply available from CSJWCD and, as necessary, SEWD to supply the project proponent’s groundwater banking and non-potable supply delivery proposal. To avoid additional overdraft on the underlying groundwater basin, the project proponent will need to construct and operate groundwater recharge facilities capable of banking 5,000 AF of water annually when available.

Because the project applicant plans to recharge a minimum of 5,186 afy of nonpotable water, and may recharge up to 8,500 afy of nonpotable water, there is a secured source of nonpotable water available to meet the project’s nonpotable water demand.

5.4 ERRATA TO WATER SUPPLY ASSESSMENT PREPARED BY THE CITY OF STOCKTON (APPENDIX R TO THE DEIR)

Figure 3, Page 16, is hereby replaced with the following:



This revised Figure 3 corrects the population projection curve from ending in 2035 at 500,000 capita to 581,000 capita. The higher population growth now depicted was not known at the time the WSA was developed. There is no corresponding change in water demand as a result of this change in population growth, however, because water demands are based on land use acreages and not on a per capita basis.

Section 2.4.2 (Pages 18–20) of the water supply assessment is hereby replaced with the following revised text:

2.4.2 SEWD SURFACE WATER CONTRACT ENTITLEMENTS

The COSMA currently receives surface water supplies (via SEWD) from five sources as shown in Table 6. Surface water supplies can come from many sources in the eastern Sierra Nevada foothills. Total existing “firm” supplies for municipal and industrial (M&I) uses are approximated to yield 104.17 TAF/year under wet and above average hydrologic conditions. Including interim supplies the COSMA currently has 134.17 TAF/year. Its full entitlements in wet years including interim and future supply sources could yield as much as 180 TAF/year. As required by the State Water Code, the WSA only considers existing “firm” surface water contracts or the 104.17 TAF/year.

Currently, SEWD’s ability to use its available water right amount is constrained by one or more of the following factors in any given year: (1) the hydrologic year type (i.e., dry year curtailment provisions in surface water contracts and reductions in surface water contracted from other agencies), (2) the COSMA M&I water demand, (3) the raw water delivery system to the SEWD wastewater treatment plant, (4) the rated SEWD wastewater treatment plant capacity, and 5) the treated water conveyance capacity from the wastewater treatment plant.

**Table 6
Current and Future SEWD Water Sources and Critical Year Availability**

<u>Source</u>	<u>Annual Contract Amount Thousand Acre-Feet (TAF)</u>	<u>Projected "Critical Year" Annual Availability (Acre-Feet/Year)</u>			
		<u>Planning Year</u>			
		<u>2000</u>	<u>2010</u>	<u>2020</u>	<u>2035</u>
<u>Current and Future "Firm" Sources of Supply</u>					
<u>Reclamation – New Hogan Water Supplies, SEWD entitlement</u>	<u>Total Yield 84.1 TAF¹ SEWD Entitled to M&I or Ag 40.171 TAF</u>	<u>20,000</u>	<u>12,000</u>	<u>12,000</u>	<u>12,000</u>
<u>Reclamation – New Hogan Water Supplies, CACWD unused entitlement²</u>	<u>CACWD Entitled to 30.928 TAF and are currently using approximately 3 TAF with SEWD using slightly over 24.0 TAF of CACWD's unused portion. This amount is projected to decrease to 10 TAF at buildout of the General Plan of both Calaveras County and the City of Stockton</u>	<u>24,000</u>	<u>24,000</u>	<u>10,000</u>	<u>10,000</u>
<u>Reclamation – New Melones Interim Water Contract and Section 215 "Spill" Water</u>	<u>Total Contract 75 TAF (M&I) 40 TAF</u>	<u>Not Available in Dry Years</u>			
<u>SSJID Transfer – Stanislaus Water</u>	<u>(Interim M&I 15 TAF)</u>	<u>4,000</u>	<u>4,000</u>	<u>0</u>	<u>0</u>
<u>OID Transfer – Stanislaus River (includes contact renewal to 2025)</u>	<u>(Interim M&I 15 TAF)</u>	<u>4,000</u>	<u>4,000</u>	<u>4,000</u>	<u>0</u>
<u>TOTAL</u>	<u>(Firm M&I 104.1 TAF initially to 94.1 TAF at build-out) (approximate Max Future M&I 180 TAF)</u>	<u>48,000</u>	<u>30,000</u>	<u>26,000</u>	<u>22,000</u>
<u>Notes:</u>					
¹ SEWD has aright to 56.5% of the yield, and CACWD has rights to the remaining 43.5 percent. The estimated New Hogan yield of 84,100 ac-A is further reduced by 13,000 ac-A annually for prior riparian rights. CACWD currently uses approximately 3,500 ac-A of its allocation.					
² Based on an agreement between CACWD and SEWD, SEWD currently has use of the unused portion of CACWD's appropriative water rights, and this yielded approximately 28 TAF to SEWD in 2005 and is expected to be reduced to 23 TAF by 2025.					

Further clarification on the nature of the Calaveras County Water District (CACWD) and SEWD water contracts came in response to questions posed in comments on the draft EIR of the General Plan Update. A letter from CACWD noted that the Water Supply Evaluation of the General Plan Update wrongly treated as "firm" for water supply planning purposes a certain 10,000 af/year of New Hogan Reservoir water. The letter claimed, more specifically, that the General Plan Update WSE erroneously treated unused CACWD water contract entitlements as a firm source of water within the defined place of use as set forth in a Reclamation contract with SEWD and CACWD for New Hogan Reservoir. The CACWD comments also clarified the type of water right that was being addressed in the WSE and in previous water studies.

COSMUD's prior understanding of the water right entitlements of the CACWD was in error, as COSMUD believed there were two separate contracts: one with Reclamation, and the other a senior appropriative water right on the Calaveras River. COSMUD now understands that there is only one contract, that being the Reclamation contract, and that SEWD has full entitlements to its apportionment of same. The apportionment of the water under the Reclamation contract is based on SEWD getting 56.5 percent and CACWD getting 43.5 percent of the total 71,100 afy of Reclamation contract water (note: this water is not subject to CVP deficiencies in dry hydrologic years and the actual amount of water under the Reclamation contract provides 13,000 afy of water to meet prior riparian rights for agriculture on top of the 71,100 afy). With CACWD's comments, and the written clarification by both CACWD and SEWD regarding the contract and use of any unused water entitlement, the definition and disposition of the CACWD and SEWD contracts and water entitlements has been revised from what was described in previous water studies.

The question of whether the COSMA can claim unused CACWD capacity as a firm water supply is addressed in the following quotation from SEWD's response to CACWD's comment letter on the draft EIR of the General Plan Update:

There is no alternative use for the C[A]CWD New Hogan supply other than future development within the New Hogan Place of Use within C[A]CWD. The contract among the United States [Reclamation], SEWD and C[A]CWD expressly prohibits the use of New Hogan water outside of the boundaries of the two districts. Further, in Article 10 of the SEWD-C[A]CWD [contract], C[A]CWD expressly agreed that no water from the New Hogan Project shall be used by it or through it by a third party beyond the [Place of Use] boundaries.

Consequently, it is a viable conclusion that if projected growth within Calaveras County does not require CACWD's full water entitlements, any unused CACWD water entitlements will be available to SEWD pursuant to the New Hogan agreements. For purposes of this WSA, the assumption is that the 10,000 afy does appear to exist and will be available for transfer at build-out of the Calaveras County General Plan and that currently up to 24,000 afy of excess CACWD water is being used by SEWD that will gradually reduce to 10,000 afy over time as demands for water increase with growth in accordance with the current Calaveras County General Plan. Additional CACWD water demands that may result as a consequence of an updated Calaveras County General Plan could have implications on the amount of available water; however, until an update is adopted by the Calaveras County, the above assumptions will be used.

SEWD is also a Reclamation CVP contractor and has a contract on the Stanislaus River (New Melones Reservoir). Contract documents, agreements, and applications for these surface water supplies are available for review in Exhibit "C" of the WSA. A full description of each contract is provided below.

CALAVERAS RIVER CONTRACTS

The Reclamation contract for water stored in New Hogan Reservoir is a repayment contract that provides a firm supply of water in all hydrologic year types. The amount available for M&I is approximately 40.171 TAF/year. The reliability of the unused portion of the CACWD contract is also firm; however, as development continues in Calaveras County, less of the CACWD water will be available to SEWD and its customers. CACWD's unused allocation currently yields 24 TAF/year but will diminish over time to an amount approximating 10 TAF/year (i.e., the 10 TAF/year is believed to be consistent with the contract and with the best available information on growth in Calaveras County).

5.5 ERRATA TO TRAFFIC STUDY (APPENDIX U TO THE DEIR)

A list of figures and tables from the Traffic Study (attached as Appendix U to the DEIR) that are being revised as a result of comments received on the DEIR is presented below. Each revised figure or table is provided on the pages following this summary.

- ▶ Table II: Intersection Levels of Service – EPAP No Project Conditions. Changes made to Intersection 28, a.m. peak hour delay and p.m. peak hour delay, in response to comment Caltrans-9.
- ▶ Figure 9 – EPAP No Project Lane Geometry. Changes made to eastbound turning movements in Intersection 31, in response to comment Caltrans-11.
- ▶ Figure 22 – 1990 General Plan No project Turning Movement Volumes. Changes made to northbound and southbound turning movements in Intersection 12, in response to comments Caltrans-20, -22, and -23.
- ▶ Table IX: Intersection Levels of Service – 1990 General Plan No Project Conditions. Changes made to Intersection 12 existing control, a.m. peak hour delay and LOS, p.m. peak hour delay and LOS, and p.m. peak hour (mitigated) delay. These changes respond to comments Caltrans-20, -22, and -23.
- ▶ Figure 49 – Intersection Lane Geometry Summary. Changes made to southbound turning movements in Intersection 17 (EPAP No Project). Changes made to eastbound turning movements in Intersection 27 (2035 General Plan No Project and 2035 General Plan Plus Project). Changes made to eastbound turning movements in Intersection 31 (EPAP No Project). These changes respond to comment Caltrans-15 and -30.
- ▶ Figure 52 – Queue Length Summary. Changes made corresponding to the lane geometry changes in Figure 49.
- ▶ Appendix G to Traffic Study – HCM Unsignalized Intersection Capacity Analysis, EPAP PM, Intersection 28. Changes made to control delay of SB 1, average delay, intersection capacity utilization, and ICU level of service. These changes respond to comment Caltrans-9.
- ▶ Appendix G to Traffic Study – HCM Unsignalized Intersection Capacity Analysis, EPAP AM, Intersection 28. Changes made to control delay, lane LOS, and approach delay of NB 1; average delay; and ICU level of service. These changes respond to comment Caltrans-9.
- ▶ Appendix J to Traffic Study – HCM Unsignalized Intersection Capacity Analysis, GP 1990 No Project AM Mitigated and Unmitigated, Intersection 12. Changes made to sign control on northbound lane. This change responds to comment Caltrans-20, -22, and -23.

Appendix J to Traffic Study – HCM Unsignalized Intersection Capacity Analysis, GP 1990 No Project PM Mitigated and Unmitigated, Intersection 12. Changes made to sign control on northbound lane. This change responds to comment Caltrans-20, -22, and -23.

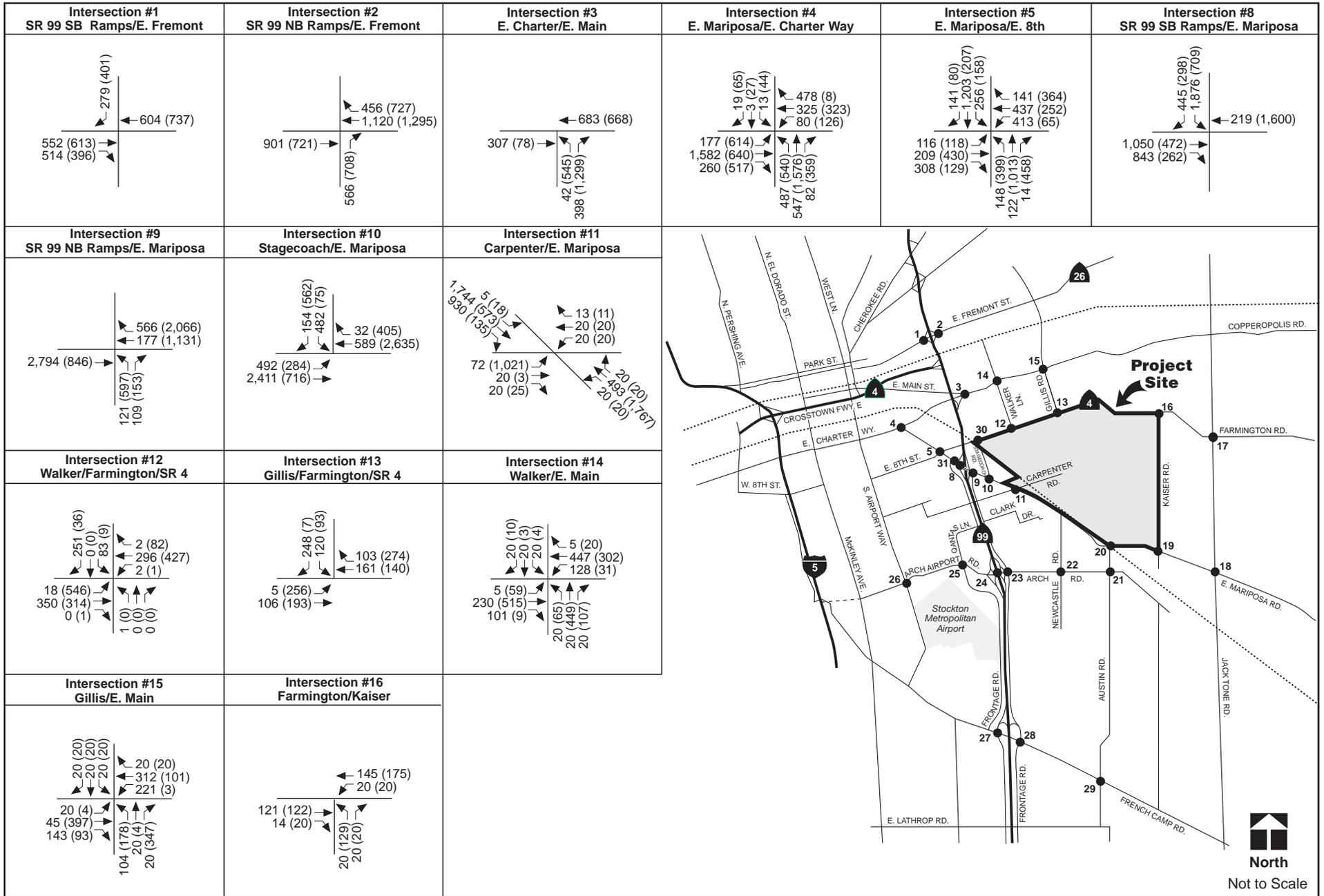
TABLE II: INTERSECTION LEVELS OF SERVICE – EPAP NO PROJECT CONDITIONS

Intersection	Existing Control	EPAP No Project Intersection Control (Mitigated)	A.M. Peak Hour		A.M. Peak Hour (Mitigated)		P.M. Peak Hour		P.M. Peak Hour (Mitigated)		
			Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
1	SR 99 SB Ramps/E. Fremont Street		See Table XVII for Results								
2	SR 99 NB Ramps/E. Fremont Street		See Table XVII for Results								
3	E. Charter Way/E. Main Street	One-Way Stop	Signalized	4.4 (13.2)	A (B)	7.2	A	>120 (>120)	F (F)	14.5	B
4	E. Charter Way/E. Mariposa Road	Signalized	Signalized	9.6	A	-	-	12.9	B	-	-
5	E. Mariposa Road/E. 8 th Street	Signalized	Signalized	25.9	C	-	-	21.2	C	-	-
6	SR 99SB Ramps/Farmington Road	One-Way Stop	Signalized	114.9 (>120)	F (F)	28.7	C	>120 (>120)	F (F)	27.4	C
7	SR 99 NB Ramps/Farmington Road	One-Way Stop	Signalized	81.7 (>120)	F (F)	30.9	C	>120 (>120)	F (F)	51.2	D
8	SR 99 SB Ramps/E. Mariposa Road	Signalized— ²	Signalized	15.1	B	-	-	10.4	B	-	-
9	SR 99 NB Ramps/E. Mariposa Road	Signalized— ²	Signalized	23.4	C	-	-	24.6	C	-	-
10	Stagecoach Road/E. Mariposa Road	One-Way Stop	Signalized	25.9(>120)	D (F)	13.6	B	>120 (>120)	F (F)	23.8	C
11	E. Mariposa Road/Carpenter Road	Two-Way Stop	Signalized	13.8 (>120)	B (F)	9.9	A	>120 (>120)	F (F)	16.0	B
12	Farmington Road/ Walker Lane	Two-Way Stop	Two-Way Stop	7.9 (46.5)	A (E)	-	-	5.0 (17.1)	A (C)	-	-
13	Gillis Road/ Farmington Road	One-Way Stop	One-Way Stop	0.8 (12.4)	A (B)	-	-	0.8 (14.3)	A (B)	-	-
14a	Walker Lane/E. Main Street (South)	One-Way Stop	One-Way Stop	2.9 (16.2)	A (C)	-	-	4.6 (23.3)	A (C)	-	-
14b	Walker Lane/E. Main Street (North)	One-Way Stop	One-Way Stop	1.2 (12.3)	A (B)	-	-	1.8 (12.5)	A (B)	-	-
15	Gillis Road/ E. Main Street	One-Way Stop	One-Way Stop	1.0 (10.8)	A (B)	-	-	0.8 (12.2)	A (B)	-	-
16	Kaiser Road/Farmington Road	One-Way Stop	One-Way Stop	0.3 (13.3)	A (B)	-	-	0.4 (15.0)	A (B)	-	-
17	Jack Tone Road/Farmington Road	All-Way Stop	All-Way Stop	15.7 (20.2)	C (C)	-	-	25.8 (38.1)	D (E)	-	-
18	Jack Tone Road/E. Mariposa Road	All-Way Stop	All-Way Stop	29.0 (47.5)	D (E)	-	-	15.2 (19.2)	C (C)	-	-
19	Kaiser Road/E. Mariposa Road	Two-Way Stop	Two-Way Stop	0.4 (15.5)	A (C)	-	-	0.7 (16.9)	A (C)	-	-
20	Austin Road/E. Mariposa Road	Signalized	Signalized	8.6	A	-	-	7.3	A	-	-
21	Austin Road/Arch Road	Two-Way Stop	Two-Way Stop	7.2 (12.4)	A (B)	-	-	6.5 (13.2)	A (B)	-	-
22	Newcastle Road/Arch Road	Two-Way Stop	Signalized	7.3 (>120)	A (F)	27.0	C	>120 (>120)	F (F)	29.1	C
23	E. Frontage Road/Arch Road	Signalized	Signalized	69.6	E	21.4	C	30.2	C	23.8	C
24	Arch Road/SR 99 Single Point Interchange	Signalized	Signalized	14.0	B	-	-	12.6	B	-	-
25	Qantas Lane/Arch Airport Road	Signalized	Signalized	20.1	C	-	-	17.2	B	-	-
26	S. Airport Way/Arch Airport Road	Signalized	Signalized	23.3	C	-	-	31.4	C	-	-
27	SR 99 SB Ramps/French Camp Road	Two-Way Stop	All-Way Stop	46.7 (>120)	E (F)	15.9 (21.2)	C (C)	>120 (>120)	F (F)	24.7 (29.3)	C (D)
28	SR 99 NB Ramps/French Camp Road	Two-Way Stop	Two-Way Stop	3.0 (18.7)	A (C)	-	-	2.5(17.5)	A (C)	-	-
29	Austin Road/French Camp Road	Two-Way Stop	Two-Way Stop	3.7 (18.2)	A (C)	-	-	4.2 (19.1)	A (C)	-	-
30	Stagecoach Road/Farmington Road	Signalized— ²	Signalized	12.5	B	9.0	A	112.2	F	19.7	B
31	E. Mariposa Road/W. Frontage	Signalized— ²	Signalized	26.2	C	-	-	13.9	B	-	-

Notes: —¹ For the EPAP No Project scenario, due to network changes existing lane geometry cannot be used to analyze forecast volumes.

In this scenario, the intersections 8, 9 and 31 are analyzed as newly designed freeway interchanges.

—²Traffic Signals under construction with geometric improvements as of October 2006. LOS and delay values assume signal in place.



City of Stockton
 Mariposa Lakes Traffic Study
1990 General Plan No Project Turning Movement Volumes

LEGEND

- Study Intersection
- XX AM Peak Hour Volume
- (XX) PM Peak Hour Volume

Figure **22** TJKM

TABLE IX: INTERSECTION LEVELS OF SERVICE – 1990 GENERAL PLAN NO PROJECT CONDITIONS

	Intersection	Existing Control	1990 GP+Prj Intersection Control (Mitigated)	A.M. Peak Hour		A.M. Peak Hour (Mitigated)		P.M. Peak Hour		P.M. Peak Hour (Mitigated)	
				Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1	SR 99 SB Ramps/E. Fremont Street			See Table XVII for Results							
2	SR 99 NB Ramps/E. Fremont Street			See Table XVII for Results							
3	E. Charter Way/E. Main Street	One-Way Stop	Signalized	4.4 (14.3)	A (B)	7.0	A	>120 (>120)	F (F)	31.8	C
4	E. Charter Way/E. Mariposa Road	Signalized	Signalized	58.4	E	31.8	C	>120	F	51.7	D
5	E. Mariposa Road/E. 8 th Street	Signalized	Signalized— ³	>120	F	50.1	D	>120	F	41.7	D
6	SR 99SB Ramps/Farmington Road	One-Way Stop		Not a Study Intersection in this scenario							
7	SR 99 NB Ramps/Farmington Road	One-Way Stop		Not a Study Intersection in this scenario							
8	SR 99 SB Ramps/E. Mariposa Road	Signalized— ⁴	Signalized	— ¹	— ¹	⁵ Significant and unavoidable impact		— ¹	— ¹	18.7	B
9	SR 99 NB Ramps/E. Mariposa Road	Signalized— ⁴	Signalized	— ¹	— ¹	9.6	A	— ¹	— ¹	7.9	A
10	Stagecoach Road/E. Mariposa Road	One-Way Stop	Signalized	>120 (>120)	F (F)	46.1	D	>120 (>120)	F (F)	54.1	D
11	E. Mariposa Road/Carpenter Road	Two-Way Stop	Signalized	>120 (>120)	F (F)	13.1	B	>120 (>120)	F (F)	— ⁵ Significant and unavoidable impact	
12	Farmington Road/ Walker Lane	Two-Way Stop	Signalized	8.9 (35.4)	A (E)	52.1	D	10.7 (87.8)	B (F)	32.4	C
13	Gillis Road/ Farmington Road	One-Way Stop	Signalized	8.2 (16.4)	A (C)	9.9	A	8.2 (49.4)	A (E)	9.4	A
14	Walker Lane/E. Main Street	One-Way Stop	Signalized	— ¹	— ¹	8.1	A	— ¹	— ¹	27.7	C
15	Gillis Road/ E. Main Street	One-Way Stop	Signalized	— ¹	— ¹	12.1	B	— ¹	— ¹	38.8	D
16	Kaiser Road/Farmington Road	One-Way Stop	One-Way Stop	1.7 (10.3)	A (B)	—	—	4.3 (12.8)	A (B)	—	—
17	Jack Tone Road/Farmington Road	All-Way Stop	Signalized	45.0 (76.7)	E (F)	13.3	B	70.7 (>120)	F (F)	13.4	B
18	Jack Tone Road/E. Mariposa Road	All-Way Stop	Signalized	>120 (>120)	F (F)	47.2	D	>120 (>120)	F (F)	17.6	B
19	Kaiser Road/E. Mariposa Road	Two-Way Stop	Signalized	5.0 (55.6)	A (F)	10.2	B	12.0 (>120)	B (F)	8.7	A
20	Austin Road/E. Mariposa Road	Signalized	Signalized	7.8	A	—	—	16.4	B	—	—
21	Austin Road/Arch Road	Two-Way Stop	Signalized	4.1 (14.9)	A (B)	15.7	B	32.8 (45.5)	D (E)	21.2	C
22	Newcastle Road/Arch Road	One-Way Stop	Signalized	— ¹	— ¹	16.0	B	— ¹	— ¹	28.5	C
23	E. Frontage Road/Arch Road	Signalized	Signalized	>120	F	39.8	D	>120	F	— ⁵ Significant and unavoidable impact	
24	Arch Road/SR 99 Single Point Interchange	Signalized	Signalized	>120	F	— ² Significant and unavoidable impact		75.3	E	— ² Significant and unavoidable impact	
25	Qantas Lane/Arch Airport Road	Signalized	Signalized	69.8	E	50.6	D	76.3	E	54.5	D
26	S. Airport Way/Arch Airport Road	Signalized	Signalized— ³	>120	F	52.9	D	>120	F	53.0	D
27	SR 99 SB Ramps/French Camp Road	Two-Way Stop	Signalized	>120 (>120)	F (F)	25.5	C	>120 (>120)	F (F)	31.9	C
28	SR 99 NB Ramps/French Camp Road	Two-Way Stop	Signalized	2.8 (29.0)	A (D)	38.4	D	>120 (>120)	F (F)	22.2	C
29	Austin Road/French Camp Road	Two-Way Stop	Signalized	6.2 (51.0)	A (F)	8.9	A	10.3 (90.6)	B (F)	9.3	A
30	Stagecoach Road/Farmington Road	Signalized— ⁴	Signalized	23.0	C	—	—	39.4	D	—	—
31	E. Mariposa Road/W. Frontage Road	Signalized— ⁴	Signalized	— ¹	— ¹	43.2	D	— ¹	— ¹	25.6	C

Notes: —¹ Existing lane geometry cannot be used to analyze forecast volumes at these locations due to network changes in this scenario. In this scenario, intersections 8 and 9 are analyzed as newly designed freeway interchanges and intersections 13, 14, 15, 20 and 22 are analyzed as four-legged intersections. Similarly, 27 and 28 are analyzed as new diamond interchange intersections.
—² Further widening not feasible due to space constraints.
—³ PHF of 0.97 was used for mitigations (see Westernite publication Nov-Dec, 2002 issue).
—⁴ Traffic Signal under construction with geometric improvements as of October 2006
—⁵ Unwarranted triple left-turn lanes for mitigation per City's arterial-to- arterial (eight lanes each) criteria.

ID	Scenario	Existing	EPAP No Project	EPAP + Phase I	EPAP + Project	1990 General Plan No Project	1990 General Plan + Project	2035 General Plan No Project	2035 General Plan + Project
17	Jack Tone Rd./ Farmington Rd.								
18	Jack Tone Rd./ E. Mariposa Rd.								
19	Kaiser Rd./ E. Mariposa Rd.								
20	Austin Rd./ E. Mariposa Rd.								
21	Austin Rd./ Arch Rd.								
22	Newcastle Rd./ Arch Rd.								
23	E. Frontage Rd./ Arch Rd.								
24	Arch Rd./ SR 99 Single-Point Intersection								
						Significant unavoidable impact	Significant unavoidable impact	Significant unavoidable impact	Significant unavoidable impact
25	Qantas Ln./ Arch Airport Rd.								
									Significant unavoidable impact
26	S. Airport Way/ Arch Airport Rd.								
27	SR 99 SB Ramps/ French Camp Rd.								
28	SR 99 NB Ramps/ French Camp Rd.								
29	Austin Rd./ French Camp Rd.								
30	Farmington Rd./ Stagecoach Rd.								
			Signal Installed as of October 2006	Signal Installed as of October 2006					
31	Mariposa Rd./ W. Frontage Rd.								
			Signal under construction	Signal under construction	Signal under construction				

City of Stockton
Mariposa Lakes Traffic Study
Intersection Lane Geometry Summary

NOTE:
Mitigation measures are shown in bold only when they are initially triggered.

North
Not to Scale

LEGEND	
	Stop Sign
	Mitigated
	Existing Traffic Signal
	Install Traffic Signal

Figure
49
Cont.



ID	Scenario	Existing	EPAP No Project	EPAP + Phase I	EPAP + Project	1990 General Plan No Project	1990 General Plan + Project	2035 General Plan No Project	2035 General Plan + Project
17	Jack Tone Rd./ Farmington Rd.								
18	Jack Tone Rd./ E. Mariposa Rd.								
19	Kaiser Rd./ E. Mariposa Rd.								
20	Austin Rd./ E. Mariposa Rd.								
21	Austin Rd./ Arch Airport Rd.								
22	Newcastle Rd./ Arch Rd.								
23	E. Frontage Rd./ Arch Rd.								
24	Arch Rd./ SR 99 Single-Point Intersection								
25	Qantas Ln./ Arch Airport Rd.								
26	S. Airport Way/ Arch Airport Rd.								
27	SR 99 SB Ramps/ French Camp Rd.								
28	SR 99 NB Ramps/ French Camp Rd.								
29	Austin Rd./ French Camp Rd.								
30	Farmington Rd./ Stagecoach Rd.								
31	Mariposa Rd./ W. Frontage Rd.								

City of Stockton
Mariposa Lakes Traffic Study
Queue Length Summary

NOTE:
NA = Not applicable or cannot be calculated



North
Not to Scale

LEGEND
 Stop Sign
 Traffic Signal

Figure
52
Cont.



HCM Unsignalized Intersection Capacity Analysis
 28: French Camp Rd. & SR 99 NB Ramps

EPAP PM
 6/6/2007



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘		↗	↘			↕			↗	↘
Sign Control	Free		Free				Stop				Stop	
Grade	0%		0%				0%				0%	
Volume (veh/h)	82	279	56	4	74	212	21	21	28	2	4	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	89	303	61	4	80	230	23	23	30	2	4	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None		None			
Median storage (veh)												
vC, conflicting volume	311		364		603		832		334		728	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
tC, single (s)	4.2		4.2		7.2		6.6		6.3		7.2	
tC, 2 stage (s)												
tF (s)	2.3		2.3		3.6		4.1		3.4		3.6	
p0 queue free %	93		100		94		92		96		99	
cM capacity (veh/h)	1200		1146		370		272		688		276	

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	89	364	4	311	76	7	0
Volume Left	89	0	4	0	23	2	0
Volume Right	0	61	0	230	30	0	0
cSH	1200	1700	1146	1700	401	295	1700
Volume to Capacity	0.07	0.21	0.00	0.18	0.19	0.02	0.00
Queue Length (ft)	6	0	0	0	17	2	0
Control Delay (s)	8.2	0.0	8.2	0.0	16.1	17.5	0.0
Lane LOS	A		A		C	C	A
Approach Delay (s)	1.6		0.1		16.1		17.5
Approach LOS					C		C

Intersection Summary

Average Delay	2.5	
Intersection Capacity Utilization	38.3%	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis
 28: French Camp Rd. & SR 99 NB Ramps

EPAP AM
 6/6/2007



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Free		Free		Free		Stop		Stop		Stop	
Grade	0%		0%		0%		0%		0%		0%	
Volume (veh/h)	38	230	15	31	150	233	30	39	20	4	2	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	41	250	16	34	163	253	33	42	22	4	2	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None		None			
Median storage (veh)												
vC, conflicting volume	416		266		572		824		258		733	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
tC, single (s)	4.3		4.3		7.3		6.7		6.4		7.3	
tC, 2 stage (s)												
tF (s)	2.4		2.4		3.7		4.2		3.5		3.7	
p0 queue free %	96		97		92		84		97		98	
cM capacity (veh/h)	1067		1215		384		273		745		259	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2					
Volume Total	41	266	34	416	97	7	5					
Volume Left	41	0	34	0	33	4	0					
Volume Right	0	16	0	253	22	0	5					
cSH	1067	1700	1215	1700	359	276	715					
Volume to Capacity	0.04	0.16	0.03	0.24	0.27	0.02	0.01					
Queue Length (ft)	3	0	2	0	27	2	1					
Control Delay (s)	8.5	0.0	8.0	0.0	18.7	18.3	10.1					
Lane LOS	A		A		C	C	B					
Approach Delay (s)	1.1		0.6		18.7		14.6					
Approach LOS					C		B					
Intersection Summary												
Average Delay			3.0									
Intersection Capacity Utilization			42.8%		ICU Level of Service				A			

HCM Signalized Intersection Capacity Analysis
12: Farmington & Walker

GP_1990_No Project AM_Mitigated

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0				4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00				1.00	
Frt	1.00	1.00		1.00	1.00			1.00				0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.95				0.99	
Satd. Flow (prot)	1543	1624		1543	1622			1543				1441	
Flt Permitted	0.95	1.00		0.95	1.00			0.57				0.91	
Satd. Flow (perm)	1543	1624		1543	1622			928				1334	
Volume (vph)	18	350	0	2	296	2	1	0	0	83	0	251	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	380	0	2	322	2	1	0	0	90	0	273	
Lane Group Flow (vph)	20	380	0	2	324	0	0	1	0	0	363	0	
Turn Type	Prot		Prot				Perm			Perm			
Protected Phases	7	4		3	8			2				6	
Permitted Phases							2			6			
Actuated Green, G (s)	0.4	9.5		0.4	9.5			7.0				7.0	
Effective Green, g (s)	0.4	9.5		0.4	9.5			7.0				7.0	
Actuated g/C Ratio	0.01	0.33		0.01	0.33			0.24				0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0				4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0				3.0	
Lane Grp Cap (vph)	21	534		21	533			225				323	
v/s Ratio Prot	c0.01	c0.23		0.00	0.20								
v/s Ratio Perm								0.00				c0.27	
v/c Ratio	0.95	0.71		0.10	0.61			0.00				1.12	
Uniform Delay, d1	14.2	8.5		14.1	8.1			8.3				11.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	
Incremental Delay, d2	173.4	4.5		2.0	2.0			0.0				87.8	
Delay (s)	187.7	13.0		16.0	10.1			8.3				98.8	
Level of Service	F	B		B	B			A				F	
Approach Delay (s)		21.7			10.1			8.3				98.8	
Approach LOS		C			B			A				F	
Intersection Summary													
HCM Average Control Delay			43.9	HCM Level of Service				D					
HCM Volume to Capacity ratio			0.89										
Actuated Cycle Length (s)			28.9	Sum of lost time (s)				12.0					
Intersection Capacity Utilization			55.2%	ICU Level of Service				A					
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis
 12: Farmington & Walker Ln.

GP_1990_No Project AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	18	350	0	2	296	2	1	0	0	83	0	251
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	20	380	0	2	322	2	1	0	0	90	0	273
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
vC, conflicting volume	324			380			1020	748	380	747	747	323
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
tC, single (s)	4.3			4.3			7.3	6.7	6.4	7.3	6.7	6.4
tC, 2 stage (s)												
tF (s)	2.4			2.4			3.7	4.2	3.5	3.7	4.2	3.5
p0 queue free %	98			100			99	100	100	71	100	60
cM capacity (veh/h)	1156			1100			120	318	635	307	318	685
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	400	326	1	363								
Volume Left	20	2	1	90								
Volume Right	0	2	0	273								
cSH	1156	1100	120	524								
Volume to Capacity	0.02	0.00	0.01	0.69								
Queue Length (ft)	1	0	1	134								
Control Delay (s)	0.6	0.1	35.4	25.9								
Lane LOS	A	A	E	D								
Approach Delay (s)	0.6	0.1	35.4	25.9								
Approach LOS			E	D								
Intersection Summary												
Average Delay			8.9									
Intersection Capacity Utilization			64.9%		ICU Level of Service					B		

HCM Signalized Intersection Capacity Analysis
12: Farmington & Walker

GP_1990_No Project PM_Mitigated

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0						4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00						1.00	
Fr _t	1.00	1.00		1.00	0.98						0.89	
Fl _t Protected	0.95	1.00		0.95	1.00						0.99	
Satd. Flow (prot)	1626	1711		1626	1670						1512	
Fl _t Permitted	0.95	1.00		0.95	1.00						0.94	
Satd. Flow (perm)	1626	1711		1626	1670						1431	
Volume (vph)	546	314	1	1	427	82	0	0	0	9	0	36
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	593	341	1	1	464	89	0	0	0	10	0	39
Lane Group Flow (vph)	593	342	0	1	553	0	0	0	0	0	49	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	32.0	63.5		0.8	32.3						6.7	
Effective Green, g (s)	32.0	63.5		0.8	32.3						6.7	
Actuated g/C Ratio	0.39	0.77		0.01	0.39						0.08	
Clearance Time (s)	4.0	4.0		4.0	4.0						4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)	627	1309		16	650						116	
v/s Ratio Prot	c0.36	0.20		0.00	c0.33							
v/s Ratio Perm											c0.03	
v/c Ratio	0.95	0.26		0.06	0.85						0.42	
Uniform Delay, d ₁	24.7	2.9		40.7	23.1						36.3	
Progression Factor	1.00	1.00		1.00	1.00						1.00	
Incremental Delay, d ₂	23.2	0.1		1.6	10.4						2.5	
Delay (s)	47.9	3.0		42.4	33.5						38.8	
Level of Service	D	A		D	C						D	
Approach Delay (s)		31.4			33.6			0.0			38.8	
Approach LOS		C			C			A			D	
Intersection Summary												
HCM Average Control Delay			32.4			HCM Level of Service					C	
HCM Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			83.0			Sum of lost time (s)				12.0		
Intersection Capacity Utilization			76.1%			ICU Level of Service				C		
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 12: Farmington & Walker Ln.

GP_1990_No Project PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	546	314	0	1	427	82	0	0	0	9	0	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	593	341	0	1	464	89	0	0	0	10	0	39
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
vC, conflicting volume	553			341			2078	2084	341	2039	2039	509
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	39			100			100	100	100	52	100	93
cM capacity (veh/h)	973			1169			18	20	681	20	21	547
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	935	554	0	49								
Volume Left	593	1	0	10								
Volume Right	0	89	0	39								
cSH	973	1169	1700	88								
Volume to Capacity	0.61	0.00	0.00	0.55								
Queue Length (ft)	107	0	0	62								
Control Delay (s)	13.1	0.0	0.0	87.8								
Lane LOS	B	A	A	F								
Approach Delay (s)	13.1	0.0	0.0	87.8								
Approach LOS			A	F								
Intersection Summary												
Average Delay			10.7									
Intersection Capacity Utilization			94.0%		ICU Level of Service				E			

6 NEW CHAPTER 23 OF THE DEIR – IMPACTS OF GLOBAL CLIMATE CHANGE ON THE PROJECT

The text on the following pages contains a new analysis of the potential impacts of global climate change on the proposed project.

As stated at the end of Chapter 23, the characterization of climate change and the analysis of environmental issue areas provided above show that climate change is either too speculative for meaningful evaluation or would not result in:

- ▶ the proposed project having one or more new significant environmental effects not discussed in the previous impact evaluations contained in the DEIR;
- ▶ substantial increases in the severity of adverse environmental effects identified in the previous impact evaluations contained in the DEIR;
- ▶ identification of new mitigation measures that could result in new significant effects not disclosed in the DEIR; or
- ▶ the proposed project, or elements of the proposed project, becoming infeasible since publication of the DEIR.

These conclusions confirm that reasonably foreseeable effects from climate change are either too speculative for meaningful analysis at this time or would not affect previous impact evaluations, conclusions, or mitigation measures for the proposed project already contained in the text of the DEIR.

23 IMPACTS ON THE PROJECT RELATED TO GLOBAL CLIMATE CHANGE

23.1 INTRODUCTION

The primary purpose of this climate change impact evaluation is to assess whether there are reasonably foreseeable consequences of global climate change that would result in substantial adverse environmental effects on the proposed project. There are no formally accepted methodologies nor are there adopted thresholds of significance for measuring effects on a project from global climate change. While a lead agency must use its best efforts to find out and disclose all that it reasonably can about the potential adverse environmental effects of the project or on the project, it need not engage in speculation. Speculation of unspecified and uncertain future effects that cannot reasonably be evaluated serves no purpose and may mislead the decision makers and the public. As indicated in the California Environmental Quality Act (CEQA) Guidelines, “If after a thorough investigation, an agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact.” (State CEQA Guidelines Section 151145.)

The following analysis is based on available information and projections applicable to estimating the types of effects that may occur. While some effects of global climate change are reasonably foreseeable, the extent to which many of these effects would manifest themselves, and the potential of other effects to occur, remains speculative. In the interests of fully informing the decision makers, many of the potential effects that are subject to a high degree of speculation are discussed in the following evaluation though it would be too speculative to draw a conclusion as to their significance.

The proposed Mariposa Lakes Specific Plan (MLSP), like almost all development projects, would result in the release of greenhouse gases (e.g., carbon dioxide, methane, nitrous oxide) into the atmosphere. As discussed in Chapter 6, “Air Quality,” and in Chapter 18, “Cumulative Impacts,” of the DEIR, human-induced increases in greenhouse gas concentrations in the atmosphere may lead to increased global average temperatures (global warming) through the greenhouse effect and associated changes in global climatic conditions. Because the proposed project would result in the release of greenhouse gases, the proposed project has the potential to contribute to future global warming/global climate change impacts on an incremental basis. These potential impacts are evaluated in Chapters 6 and 18 of the DEIR and have been found to be significant and unavoidable in the DEIR because no feasible mitigation exists to fully reduce the impact resulting from the release of greenhouse gases to a less-than-significant level. The following climate change impact evaluation focuses exclusively on the potential for global climate change consequences to affect the proposed project.

Although there is a strong scientific consensus that global warming/global climate change is occurring and has been influenced by human activity, there is less certainty as to the timing, severity, and potential consequences of the climate phenomena. Scientists have identified several ways in which global climate change could alter the physical environment in California (Kiparsky and Gleick 2005, Roos 2005, DWR 2006). These include:

- ▶ increased average temperatures;
- ▶ modifications to the timing, amount, and form (rain versus snow) of precipitation;
- ▶ changes in the timing and amount of runoff;
- ▶ reduced water supply;
- ▶ deterioration of water quality; and
- ▶ elevated sea level.

The changes listed above may translate into a variety of other issues and concerns, such as:

- ▶ reduced agricultural production as a result of changing temperatures and precipitation patterns;
- ▶ changes in the composition, health, and distribution of terrestrial and aquatic ecosystems;
- ▶ reduced hydroelectric energy production caused by changes in the timing and volume of runoff; and
- ▶ reduced availability of energy because of greater demands associated with increased temperatures.

However, this evaluation of the effects of global climate change on the proposed project does not address energy supply for the following reasons:

- ▶ Many of the more wide-ranging direct and indirect effects of global climate change, such as potential reductions in hydroelectric energy production caused by changes in the timing and volume of runoff and potential reduced availability of energy because of greater demands associated with increased temperatures, would have no effect on the proposed project because, for example, they might be geographically distant from the project or would be addressed/corrected by other entities (e.g., energy providers increasing generation capacity to meet increased demand);
- ▶ The proposed project would not influence or be influenced by the measures implemented by others to address these effects because, for example, regional or statewide issues such as electricity supply is not addressed on a project-specific basis; and
- ▶ The specific measures that would be implemented to address more wide-ranging direct and indirect effects of global climate change cannot be reasonably projected at this time.

This is not to infer that the proposed project would see no effect related to energy supply. Rather, any effects would be the same at the project site/specific plan area, hereinafter referred to as the “SPA,” as elsewhere in the city, county, region, state, nation, and world, and would not result in specific unique impacts at the SPA, and the effects would not jeopardize the development or operation of the proposed project.

This analysis focuses on effects of global climate change that would have a direct, reasonably foreseeable effect on physical conditions at the SPA.

Climate-change effects considered in this analysis consist of:

- ▶ temperature;
- ▶ precipitation volume, type, and intensity;
- ▶ runoff volume and timing;
- ▶ water supply;
- ▶ sea level rise;
- ▶ water quality; and
- ▶ agriculture.

The consistency of past trends and future projections for each of these issue areas varies considerably. For example, analysis of precipitation trends in the western United States for the periods 1930–1997 and 1950–1997 shows increasing precipitation for both periods in most of California and the Southwest (Mote et al. 2005). However, a separate analysis of long-term precipitation and runoff records from throughout California showed the long-term historical trend for statewide average annual precipitation to be relatively flat (no increase or decrease) over the entire record (DWR 2006). When these same precipitation data were sorted into three regions—northern, central, and southern California—trends showed that precipitation in the northern portion of the state appeared to have increased slightly from 1890 to 2002, and precipitation in the central and southern portions of the state showed slightly decreasing trends (all in the range of 1–3 inches) (DWR 2006).

Climate model projections for future changes in total annual precipitation in California through the end of 2100 are mixed, and models predicting the greatest amount of warming generally predict moderate decreases in precipitation. Models projecting smaller increases in temperature tend to predict moderate increases in precipitation (Dettinger 2005a).

Trends and projections related to sea level rise show much more consistency. An analysis of worldwide tide-gauge data consistently shows a rise in sea level of approximately 0.4–0.7 foot over the past century (IPCC 2007). Tide gauge stations along the coast of California show a similar increase (DWR 2006). Models addressing future sea level conditions consistently project an increase in worldwide average sea level. Typical results provided by the Intergovernmental Panel on Climate Change (IPCC) in 2001 are in the range of 0.3–2.9 feet by 2100 (IPCC 2001a). Updated model results provided by the IPCC in 2007 put the range at 0.6–1.9 feet by 2099 (IPCC 2007). However, it is acknowledged in the literature cited in this analysis that more drastic changes could result if extreme shifts in global oceanic or climatic patterns occur.

As mentioned previously, this climate change impact evaluation for the proposed project focuses primarily on climate consequences that would have a reasonably foreseeable direct effect on physical conditions at the SPA; therefore, it gives greatest consideration to climate-change factors with more consistency in projections of future conditions and a greater likelihood of occurring within a reasonable time frame (i.e., approximately 100 years). As stated above, the proposed project’s potential influence on global warming/global climate change through emissions of greenhouse gases is already evaluated in the DEIR. The following climate change impact evaluation focuses on the potential for global climate change to affect the proposed project.

23.2 CHARACTERIZATION OF CLIMATE CHANGE

This section briefly describes the current state of the science surrounding climate change and associated effects, including projections that have application to Sacramento–San Joaquin Delta (Delta) waterways and the SPA. Information is provided for each effect of climate change considered in this document, consisting of:

- ▶ increased temperature;
- ▶ precipitation volume, type, and intensity;
- ▶ runoff volume and timing;
- ▶ water supply;
- ▶ sea level rise;
- ▶ water quality changes; and
- ▶ agricultural changes.

For each climate change effect there is a discussion of:

- ▶ status of current scientific information and data about past trends;
- ▶ projected future changes and the accuracy and variability of modeling results, including identification of results presumed too speculative for conclusive analysis; and
- ▶ potential for the environmental effects of climate change to affect the proposed project, based both on the certainty or uncertainty of modeling results and on the physical nature of the effect.

This information is used in Section 23.3, “Evaluation of Environmental Effects Associated with Climate Change,” to consider and evaluate potential environmental effects of future climate change on the proposed project.

23.2.1 INFORMATION SOURCES

Information on the current state of the science surrounding climate change was derived from several research papers, technical memoranda, literature summaries, and studies. Primary sources of information used for this analysis include the following:

- ▶ the United Nations Intergovernmental Panel on Climate Change documents *Climate Change 2001: The Scientific Basis* (IPCC 2001a), *Climate Change 2001: Synthesis Report* (IPCC 2001b); and *Climate Change 2007: The Physical Basis. Summary for Policymakers* (IPCC 2007);
- ▶ the *California Water Plan Update 2005* (Bulletin 160-05) (DWR 2005a) and accompanying papers *Climate Change and California Water Resources: A Survey and Summary of the Literature* (Kiparsky and Gleick 2005) and “Accounting for Climate Change” (Roos 2005);
- ▶ *Progress on Incorporating Climate Change into Planning and Management of California’s Water Resources, Technical Memorandum Report* (DWR 2006); and
- ▶ various published reports on aspects of climate change and associated effects (see Chapter 6 of this FEIR, “References,” for a listing of all information sources cited in this section).

23.2.2 BACKGROUND

Theories concerning climate change and global warming existed as early as the late 1800s. It was not until the late 1900s that understanding of the Earth’s atmosphere had advanced to the point where many atmospheric and climate scientists began to accept that the Earth’s climate is changing (IPCC 2001a, 2001b; DWR 2006).

In recent years, the scientific consensus has broadened to consider increasing concentrations of greenhouse gases, attributable to anthropogenic (human) activities, as a primary cause of global climate change. The United Nations IPCC predicts that changes in the Earth’s climate will continue through the 21st century and that the rate of change may increase significantly in the future because of human activity (IPCC 2001b, 2007).

Today, the issue of global climate change has begun to play an increasing role in scientific and policy debates over multiple issue areas, such as land use planning, transportation planning, energy production, habitat and species conservation, use of ocean resources, and agricultural production. Of particular concern are the existing and potential future effects of global climate change on hydrologic systems and water management (e.g., domestic water supply, agricultural water supplies, flood control, water quality). There is evidence that global climate change has already had an effect on California's hydrologic system; for example, historical data indicate a trend toward declining volumes of spring and summer runoff from the Sierra Nevada.

California water planners and managers have been among the first groups in the nation to seriously consider the implications of statewide and regional climate change (rather than global-scale changes) on the reliability and safety of their systems. Initial research and analysis on climate risks facing California water resources began in the early 1980s; by the end of the decade, state agencies such as the California Energy Commission (CEC) had prepared the first assessments of state greenhouse gas emissions and possible impacts on a wide range of sectors. The California Water Plan (Bulletin 160) first briefly addressed climate change in 1993 (DWR 1993). More recently, the California Department of Water Resources (DWR) and the Public Interest Energy Research program of CEC expanded and refined the analysis of climate change effects in California in the 2005 update of the California Water Plan, which explores a wide range of climate impacts and risks, including risks to water resources (Kiparsky and Gleick 2005, Roos 2005). The 2005 update also describes efforts that should be taken to quantitatively evaluate climate change effects for the next Water Plan update (DWR 2005a). DWR has also followed up on these issues with a technical memorandum report that specifically discusses progress on modeling climate change in the state, characterizes the effects of climate change, and incorporates climate change into planning and management of California's water resources (DWR 2006).

23.2.3 CLIMATE CHANGE AND POTENTIAL EFFECTS ON THE ENVIRONMENT

VARIABILITY IN REGIONAL MODELING OF CLIMATE CHANGE

Much of the available trend data, modeling, and projections related to climate change are on a global scale. Projecting impacts of climate change often relies on general circulation models (GCMs), which develop large-scale scenarios of changing climate parameters, usually comparing scenarios with different concentrations of greenhouse gases in the atmosphere. This information is typically at too coarse a scale to make accurate regional assessments. As a result, more effort has recently been put into reducing the scale and increasing the resolution of climate models through various techniques such as "downscaling" or integrating regional models into the global models (Kiparsky and Gleick 2005, Roos 2005, DWR 2006). However, the level of uncertainty related to regional climate change is generally higher than that related to global projections because downscaling and similar activities add uncertainty.

Variability in the results of climate change modeling is based in large part on which global climate model is used, what inputs are selected for the model (world population increases and greenhouse gas emissions), and how the model is downscaled to provide region-specific data. For example, in DWR's report *Progress on Incorporating Climate Change into Management of California's Water Resources, Technical Memorandum Report* (DWR 2006), four scenarios projecting regional climate change were selected, consisting of combinations of two different global climate models and two different emissions scenarios. These four scenarios provide temperature results ranging from weak warming to relatively strong warming, and precipitation results ranging from modest reductions to weak increases (DWR 2006).

It should be remembered that results of climate change modeling, particularly for regional models, should not be considered as specific quantified predictions. There is a significant amount of uncertainty about the magnitude of climate change that will occur during this century. It is unlikely that this level of uncertainty will diminish significantly in the foreseeable future (Dettinger 2005a). Therefore, effects on the environment anticipated under

various climate change models should be considered as general projections of potential future conditions, with actual environmental effects likely falling within the range of results provided by a variety of model outputs.

TEMPERATURE

Status and Trends

The Earth's climate has had numerous periods of cooling and warming in the past. Significant periods of cooling have been marked by massive accumulations of sea- and land-based ice extending from the Earth's poles to as far as the middle latitudes. Periods of cooling have also been marked by lower sea levels because of the accumulation of water as ice and the cooling and contraction of the Earth's oceans. Periods of warming caused recession of the ice toward the poles, warming and thermal expansion of the Earth's oceans, and rise in sea levels (DWR 2006, IPCC 2007).

The potential for human-induced changes in the Earth's temperature has been tied to increased concentrations of greenhouse gases in the atmosphere, caused primarily by the production and burning of fossil fuels. The primary gases of concern are carbon dioxide, methane, and nitrous oxide (IPCC 2001a, 2001b, 2007). Average temperatures in the Northern Hemisphere appear to have been relatively stable from about the year 1000 to the mid-1800s based on temperature proxy records from tree rings, corals, ice cores, and historical observations (IPCC 2001a). However, there is a significant amount of uncertainty related to proxy temperature records, especially those extending far back into the past.

The IPCC stated that the Earth's climate has warmed since the preindustrial era and that it is very likely that at least some of this change is attributable to the activities of humans (IPCC 2007). Global average near-surface air temperatures and ocean surface temperatures increased by $0.74\text{ }^{\circ}\text{C} \pm 0.18^{\circ}\text{C}$ ($1.33^{\circ}\text{F} \pm 0.32^{\circ}\text{F}$) during the 20th century (IPCC 2007).

Temperature measurements, apparent trends in reduced snowpack and earlier runoff, and other evidence such as changes in the timing of blooming plants indicate that temperatures in California and elsewhere in the western United States have increased during the past century (NOAA 2005, Mote et al. 2005, Cayan et al. 2001).

Projections

Modeling results from GCMs are consistent in predicting increases in temperatures globally with increasing concentrations of atmospheric greenhouse gases resulting from human activity. As discussed above, climate change projections can be developed on a regional basis using techniques to downscale from the results of global models (although increased uncertainty results from the downscaling). One relatively large group of model projections for California that was recently examined provides a temperature rise of about 2.5 to 9°C (4.5 to 16.2°F) for Northern California by 2100. An analysis of the distribution of the projections generally showed a central tendency at about 3°C (5.4°F) of rise for 2050, and about 5°C (9°F) for 2100 (Dettinger 2005b).

Work by Snyder et al. (2002) has produced the finest scale temperature and precipitation estimates to date. Resulting temperature increases for a scenario of doubled carbon dioxide concentrations are 1.4 to 3.8°C (2.5 to 6.8°F) throughout California. This is consistent with the global increases predicted by the IPCC (2001b, 2007). In a regional model of the western United States, Kim et al. (2002) projected a climate warming of around 3 to 4°C (5.4 to 7.2°F). Of note in both studies is the projection of uneven distribution of temperature increases. For example, regional climate models show that the warming effects are greatest in the Sierra Nevada, with implications for snowpack and snowmelt (Kim et al. 2002, Snyder et al. 2002).

Effect on the Proposed Project

Based on the results of a variety of regional climate models, it is reasonably foreseeable that some increase in annual average temperatures will occur in California, and at the project site, during the next 100 years. Although a temperature increase is expected, the amount and timing of the increase is uncertain. In general, predictions put an increase in the range of 3 to 5°C (5.4 to 9°F) over the next 50–100 years (Kim et al. 2002, Snyder et al. 2002, Dettinger 2005b).

Taken alone, an increase in average annual temperatures would have little effect on the proposed project other than adjustments in project operations in response to warmer temperatures, such as increased evapotranspiration rates affecting both lake areas and landscaped areas, resulting in an increased irrigation demand, and potentially greater overall energy consumption to meet air conditioning needs.

Effects related to water supply and energy consumption are discussed separately below. Potential outcomes of increased temperature on a global and regional scale, such as changes in precipitation and runoff, also have a potential to substantially affect physical conditions at the project site. These topic areas are also discussed below.

Therefore, although an increase in annual average temperature is a reasonably foreseeable effect of future climate change, this environmental change alone would have little effect on the proposed project, as explained further below.

PRECIPITATION

Climate change can affect precipitation in a variety of ways, such as by changing the following:

- ▶ overall amount of precipitation,
- ▶ type of precipitation (rain versus snow), and
- ▶ timing and intensity of precipitation events.

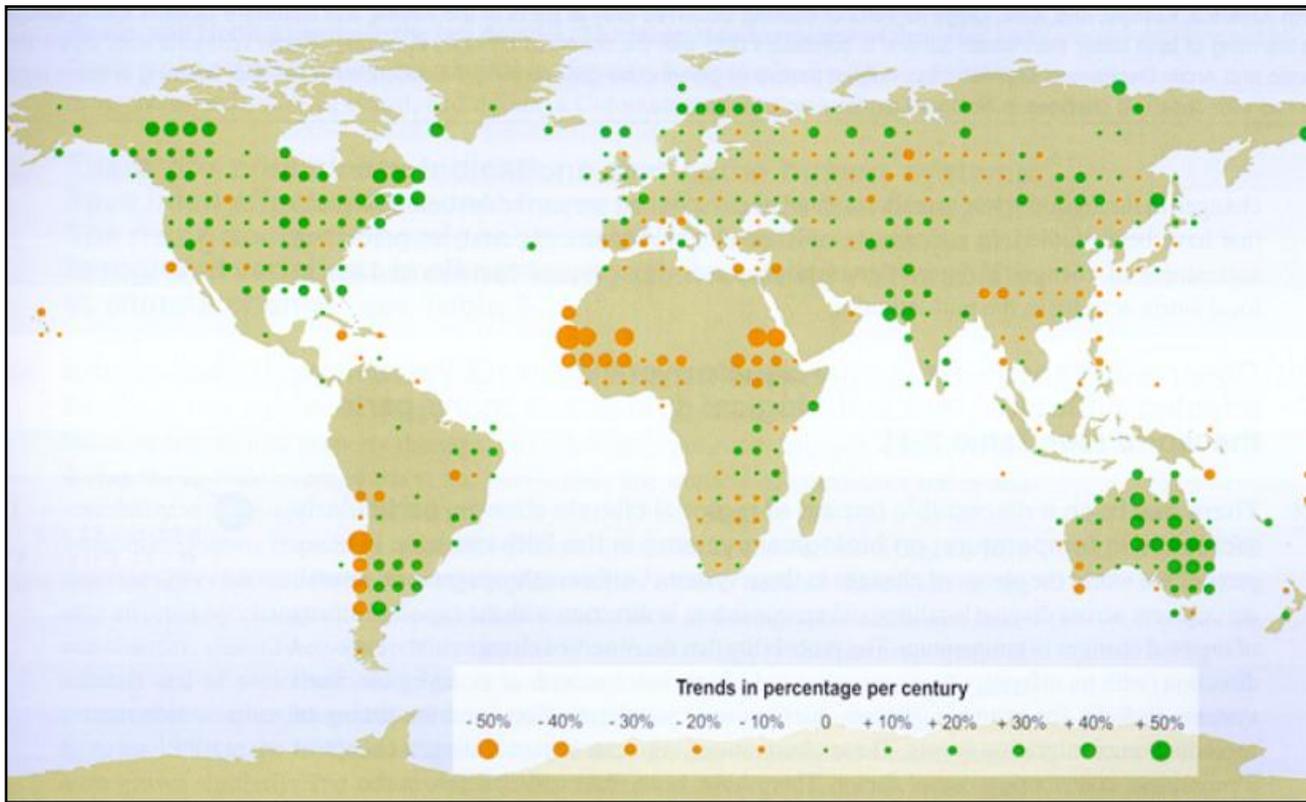
Each of these issue areas is discussed below.

AMOUNT OF PRECIPITATION

Status and Trends

Worldwide precipitation is reported to have increased about 2% since 1900. While global average precipitation has been observed to increase, changes in precipitation over the past century vary in different parts of the world. Some areas have experienced increased precipitation while other areas have experienced a decline (Figure 23-1) (IPCC 2001b, 2007; NOAA 2005). An analysis of trends in total annual precipitation in the western United States by the National Weather Service's Climate Prediction Center provides evidence that annual precipitation has increased in much of California, the Colorado River Basin, and elsewhere in the West since the mid-1960s (DWR 2006). In another study evaluating trends in annual November through March precipitation for the western United States and southwest Canada, the data indicate that for most of California and the Southwest there was increasing precipitation during the periods of 1930–1997 and 1950–1997 (Mote et al. 2005).

Former State Climatologist James Goodridge compiled an extensive collection of longer-term precipitation records from throughout California. These data sets were used to evaluate whether there has been a changing trend in precipitation in the state over the past century (DWR 2006). Long-term runoff records in selected watersheds in the state were also examined. Based on a linear regression of the data, the long-term historical trend for statewide average annual precipitation appears to be relatively flat (no increase or decrease) over the entire record. However, there appears that there might be an upward trend in precipitation toward the latter portion of the record.



Source: IPCC 2001

Global Precipitation Trend for 1900–2000

Figure 23-1

When these same precipitation data are sorted into three regions—northern, central, and southern California—trends show that precipitation in the northern portion of the state appears to have increased slightly from 1890 to 2002, and precipitation in the central and southern portions of the state show slightly decreasing trends. All changes were in the range of 1–3 inches annually (DWR 2006).

Although existing data indicate some level of change in precipitation trends in California, more analysis is likely needed to determine whether changes in California’s regional annual precipitation totals have occurred as the result of climate change or other factors (DWR 2006).

Projections

The IPCC predicts that increasing global surface temperatures are very likely to result in changes in precipitation. Global average precipitation is expected to increase during the 21st century as the result of climate change, based on global climate models for a wide range of greenhouse gas emission scenarios. However, global climate models are generally not well suited for predicting regional changes in precipitation because of their coarse level of outputs compared to the scale of regionally important factors that affect precipitation (e.g., maritime influences, effects of mountain ranges) (IPCC 2001a, 2007).

Therefore, while increasing precipitation on a global scale is generally an expected result of climate change, significant regional differences in precipitation trends can be expected. Some recent regional modeling efforts conducted for the western United States indicate that overall precipitation will increase (Kim et al. 2002, Snyder et al. 2002), but considerable uncertainty remains because of differences among larger-scale GCMs. Where

precipitation is projected to increase in California, the increases are centered in northern California (Kim et al. 2002, Snyder et al. 2002) and in the winter months.

However, various California climate models provide mixed results regarding changes in total annual precipitation in the state through the end of this century. Models predicting the greatest amount of warming generally predict moderate decreases in precipitation; on the other hand, models projecting smaller increases in temperature tend to predict moderate increases in precipitation (Dettinger 2005b). In addition, an IPCC review of multiple global GCMs identifies much of California as an area where less than 66% of the models evaluated agree on whether annual precipitation would increase or decrease, and therefore, no conclusion on an increase or decrease can be provided (IPCC 2007). Considerable uncertainties about the precise effects of climate change on California (and more specifically Bay-Delta) hydrology and water resources will remain until there is more precise and consistent information about how precipitation patterns, timing, and intensity will change (Kiparsky and Gleick 2005, DWR 2006).

Effect on the Proposed Project

Although global climate change models generally predict an increase in overall precipitation on a worldwide scale, there is no such consistency among the results of regional models applied to California. Based on the models used and the input assumptions, both increases and decreases in annual precipitation are projected. There is also variability in the results for different parts of the state. Given the uncertainty associated with projecting the amount of annual precipitation, any conclusion regarding significance of potential effects of climate change on precipitation volumes as they relate to reasonably foreseeable direct effects on physical conditions at the proposed project site would be too speculative to be meaningful.

SNOWPACK

Status and Trends

California's annual snowpack, on average, has the greatest accumulations from November through the end of March. It typically melts from April through July. Snowmelt provides significant quantities of water to streams and reservoirs for several months after the annual storm season has ended. The length and timing of each year's period of snowpack accumulation and melting varies based on temperature and precipitation conditions (DWR 2006). California's snowpack is important to the state's annual water supply because of its volume and the time of year that it typically melts. Average runoff from melting snowpack is usually about 20% of the state's total annual natural runoff and roughly 35% of the state's total usable annual surface water supply. The state's snowpack is estimated to contribute an average of about 15 million acre-feet (maf) of runoff each year, about 14 maf of which is estimated to flow into the Central Valley. In comparison, total reservoir capacity serving the Central Valley is about 24.5 maf in watersheds with significant annual accumulations of snow (DWR 2005b).

California's reservoir managers (including State Water Project [SWP] and Central Valley Project [CVP] facilities) use snowmelt to help fill reservoirs once the threat of large winter and early spring storms and related flooding risks have passed. Water stored in reservoirs is used to help meet downstream water demands when flows from snowmelt begin to recede. Some of the annual runoff collected in California's reservoirs is held from one year to the next. California's annual precipitation and snowpack can vary significantly from year to year. There may also be decade-scale variation in precipitation over the Sierra Nevada (Freeman 2002) and possibly other parts of California. Carryover storage can help meet water demand in years when precipitation and runoff is low.

Because the importance of the Sierra snowpack is tied to both the volume of water it holds and the timing of water releases (spring and early summer), simply assessing the amount of precipitation that falls as snow would not convey the full value of the snowpack and the nature of potential effects of climate change. However, measurements of the amount of Sierra runoff occurring from April to July are a good indicator of the combined interaction between the volume of the snowpack and the time of year that it melts.

An evaluation of runoff trends for the Sacramento, Feather, Yuba, and American Rivers (Sacramento Valley rivers) using data from 1906 to 2005 shows that runoff volume for April–July has declined from approximately 43% of total water-year runoff to approximately 34% of total water year runoff (i.e., has declined about 9% as compared to total year runoff over the last 100 years). During this same period the total water-year runoff has remained about the same (DWR 2006). These values represent “unimpaired” runoff, meaning that the effects of runoff detention in reservoirs are removed. These data indicate that although overall precipitation volumes (represented by runoff amounts) showed no change, more runoff occurred as a result of rain during the winter months, and less runoff could be attributed to the melting of accumulated snowpack during the spring and early summer. This trend points to less overall precipitation falling as snow and/or the snowpack melting earlier in the season.

For San Joaquin Valley rivers (Stanislaus, Tuolumne, Merced, and San Joaquin Rivers), using data from 1901 to 2005 shows that runoff volume for April–July as a percentage of total annual runoff has declined by approximately 7% (71% to 64%). Although total water-year runoff volume decreased slightly in this watershed, the decrease for the April–July time frame has declined at a more rapid rate.

Projections

As early as the mid-1980s and early 1990s, regional hydrologic modeling of global warming impacts has suggested with increasing confidence that higher temperatures will affect the timing and magnitude of snowmelt and runoff in California (Gleick 1986, 1987; Lettenmaier and Gan 1990; Lettenmaier and Sheer 1991; Nash and Gleick 1991a, 1991b; Hamlet and Lettenmaier 1999). Over the past two decades, this has been one of the most persistent and well-established findings on the impacts of climate change for water resources in the United States and elsewhere, and it continues to be the major conclusion of regional water assessments (Knowles and Cayan 2002, Barnett et al. in prep.).

By delaying runoff during the winter months when precipitation is greatest, snow accumulation in the Sierra Nevada acts as a massive natural reservoir for California. Despite uncertainties about how increased concentrations of greenhouse gases may affect precipitation, there is very high confidence that higher temperatures will lead to dramatic changes in the dynamics of snowfall and snowmelt in watersheds with substantial snow (Kiparsky and Gleick 2005, DWR 2006). A rudimentary analysis of the impact of rising temperatures on snowpack conducted by DWR (2006) shows that a 3°C (5.4°F) rise in average annual temperature would likely cause snowlines to rise approximately 1,500 feet. This would result in an annual loss of approximately 5 maf of water storage in snowpack. Simulations conducted by N. Knowles and D. R. Cayan (Knowles and Cayan 2002) project a loss in April snowpack in the Sierra Nevada of approximately 5% with a 0.6°C (1.1°F) increase in average annual temperature, an approximately 33% loss with a 1.6°C (3.4°F) rise, and an approximately 50% loss in April snowpack with a 2.1°C (4.9°F) average annual temperature rise. Loss of snowpack was projected to be greater in the northern Sierra Nevada and the Cascades than in the southern Sierra Nevada because of the greater proportion of land at the low and mid-elevations in the northern ranges. With a temperature increase of 2.1°C, the northern Sierra Nevada and the Cascades were projected to lose 66% of their April snowpack, while the southern Sierra Nevada was projected to lose 43% of its April snowpack (Knowles and Cayan 2002).

Effect on the Proposed Project

Based on the results of a variety of regional climate models, it is reasonably foreseeable that snowpack will be reduced and/or will melt earlier or more rapidly in watersheds that feed the Delta. The project site is on the floor of the San Joaquin Valley and receives snow very rarely. Consequently, changes in snowfall patterns would not directly affect precipitation at the project site. Changes in snowpack could affect the proposed project indirectly, however, by altering the timing and volume of runoff that eventually feeds into the project site. The runoff sources can be divided into two categories: (1) direct rainfall-fed surface runoff accumulating in channels; and (2) released water from upstream reservoirs that is conveyed by the channels and will be utilized for groundwater recharge. The first source, direct surface runoff, will alter with large-scale regional changes in precipitation patterns. Because

naturally occurring runoff originates as rainfall rather than snowfall (the Duck Creek watershed peak elevation is 466 feet above sea level), changes to the timing and magnitude of naturally occurring rainfall patterns will follow regional changes associated with climate change in the central Sierra Nevada. The second source, released and/or purchased waters stored in upstream reservoirs, will largely depend on regional annual average precipitation accumulations. The management of upstream reservoirs may need to be altered to account for seasonal variations in precipitation type and intensity. However, the total water volumes stored in upstream reservoirs is largely tied to regional trends of annual average precipitation amounts. Given the uncertainty associated with projecting the regional trends of changes in precipitation, no conclusions can be drawn regarding potential effects of climate change on snowpack levels as they relate to reasonably foreseeable direct effects on physical conditions at the project site.

VARIABILITY, STORMS, AND EXTREME EVENTS

Status and Trends

Variability and extreme weather events are a natural part of any climatic system. The extent of climatic stability or variability is dependent in large part on the time frame examined. Various climatic conditions may be characterized as relatively stable over periods of hundreds or thousands of years, but within that time frame there may be severe droughts or flood events that are at the extremes of the overall average condition. Paleoclimatic evidence from tree rings, buried stumps, and lakebed sediment cores suggests that in California the past 200 years have been relatively wet and relatively constant when compared with longer records (DWR 2006). These longer records reveal greater variability than the historical record, in particular in the form of severe and prolonged droughts. Most identified climatic averages and extremes for California are based on the historical climate record since 1900, which should not be considered fully representative of past or future conditions (DWR 2006).

Extreme weather events are expected to be one of the more important effects of climate change. Phenomena such as the El Niño/Southern Oscillation, which is the strongest natural interannual climate fluctuation, affect the entire global climate system and the economies and societies of many regions and nations, including California and the United States. It is unclear how increases in global average temperatures associated with global warming might affect the El Niño cycles. However, the strong El Niños of 1982-83 and 1997-98 and associated flood events, along with the more frequent occurrences of El Niños in the past few decades, have forced researchers to try to better understand how human-induced climate change may affect interannual climate variability (Trenberth and Hoar 1996, Timmermann et al. 1999).

In addition to possible long-term changes in precipitation trends, increased variability of annual precipitation is a possible outcome of climate change. Based on a statistical analysis of California precipitation records, there appears to be an upward trend in the variability of precipitation over the 20th century, with variability values at the end of the century about 75% larger than at the beginning of the century. This indicates that there tended to be more extreme wet and dry years at the end of the century than there were at the beginning of the century (DWR 2006). However, as stated above, paleoclimatic evidence suggests that weather patterns in California have been relatively constant over the last 200 years, which changing weather patterns toward the latter part of this period appear more pronounced. As identified previously in the “Amount of Precipitation” discussion, there has been little change in the average amount of annual precipitation in California over the last 100 years. Therefore, the increased variability between wet and dry years in recent decades appears to oscillate around the same annual average established over a longer time frame.

Projections

While variability is not well modeled in large-scale GCMs, some modeling studies suggest that the variability of the hydrologic cycle increases when mean precipitation increases, possibly accompanied by more intense local storms and changes in runoff patterns (DWR 2006). However, the results of another long-standing model point to an increase in incidents of drought, resulting from a combination of increased temperature and evaporation along

with decreased precipitation (DWR 2006). Based on the first model mentioned, this decrease in precipitation would lead to reduced variability in hydrologic cycles.

A study that analyzed 20 GCMs currently in use worldwide suggests that the West Coast may be less affected by extreme droughts than other areas, instead having increased average annual rainfall (Meehl et al. 2000). A separate study that reviewed several GCM scenarios showed increased risk of large storms and flood events for California (Miller et al. 1999). Conflicting conclusions about climatic variability and the nature of extreme weather events (e.g., droughts, severe storms, or both) support the need for additional studies with models featuring higher spatial resolution (Kiparsky and Gleick 2005, DWR 2006).

Effect on the Proposed Project

Although various climate change models predict some increase in variability of weather patterns and an increasing incidence of extreme weather events, there is no consistency among the model results, with some predicting increased incidents of droughts and others predicting increased frequency of severe storm events. Given the uncertainty associated with projecting the type and extent of changes in climatic variability and the speculative nature of predicting incidents of extreme weather events, this potential climate change effect is not considered to have a reasonably foreseeable direct effect on physical conditions at the project site.

RUNOFF

Status and Trends

Runoff is directly affected by changes in precipitation and snowpack (see discussions above). Changes in both the amount of runoff and in seasonality of the hydrologic cycle have the potential to greatly affect the heavily managed water systems of the western United States. As described in the previous discussion of snowpack, although data from 1906–2005 indicate that total annual runoff amounts have not changed for Sacramento Valley rivers, runoff volume for April–July has declined from approximately 43% of total water year runoff to approximately 34% of total water year runoff (roughly a 9% decline) (DWR 2006). These data indicate that although overall precipitation volumes (represented by runoff amounts) showed no change, more runoff occurred as a result of rain during the winter months, and less runoff could be attributed to the melting of accumulated snowpack during the spring and early summer. Data from 1901–2005 for San Joaquin Valley rivers show that runoff volume for April–July as a percentage of total annual runoff has declined approximately 7% (71% to 64%). Although the total volume of water year runoff decreased slightly in this watershed, the decrease for the April–July time frame has declined at a more rapid rate (DWR 2006).

These studies correct for the detention of runoff in reservoirs managed by SWP, CVP, and other agencies. How reservoirs in California are managed often has a greater influence on the timing and volume of runoff entering the Delta than precipitation and snowpack. Melting snowpack that enters the Central Valley is estimated to contribute an average of about 14 maf of runoff each year. In comparison, total reservoir capacity in the Central Valley is about 24.5 maf in watersheds with significant annual accumulations of snow (DWR 2005b). Depending on reservoir release and storage regimes, a significant amount of snowpack runoff could be held in reservoirs for weeks to months before reaching Delta waterways and other streams such as Duck Creek and North Little Johns Creek.

Projections

Detailed estimates of changes in runoff as a result of climate change have been produced for California using regional hydrologic models. By using anticipated, hypothetical, and/or historical changes in temperature and precipitation and models that include realistic small-scale hydrology, modelers have consistently seen substantial changes in the timing and magnitude of runoff resulting from projected changes in climatic variables (Kiparsky and Gleick 2005). Model results indicate that a declining proportion of total precipitation falls as snow as temperatures

rise, more winter runoff occurs, and remaining snow melts sooner and faster in spring (Miller et al. 1999, Knowles and Cayan 2002). In some basins, spring peak runoff may increase; in others, runoff volumes may shift to earlier in the spring and winter months (Kiparsky and Gleick 2005, DWR 2006). If snowpack declines, it is also possible that the incidence or severity of flood events resulting from “rain on snow” conditions could also decline.

As indicated above, hydrology in the Bay-Delta is highly dependent on the interaction between Sierra Nevada snowpack, runoff, and management of reservoirs. Potential changes made to the amount of reservoir space retained for flood storage, retained annual carryover volumes, and other reservoir management factors in response to altered Sierra runoff patterns could substantially alter how those runoff patterns are experienced in the Delta. It is also possible that as climate change continues to progress over the next 50–100 years, new water storage projects (e.g., on-stream or off-stream storage reservoirs, expanding capacity at existing reservoirs) may be put in place to capture additional Sierra runoff. Additional storage capacity could assist in buffering runoff patterns in the Delta from altered flow regimes in higher elevations. Although changed runoff patterns related to decreasing snowpack are reasonably foreseeable, significant uncertainties remain regarding how those changes may affect flow patterns in the Delta. Runoff patterns in the Delta depend not just on how climatic conditions might change, but also on a wide range of human actions and management decisions.

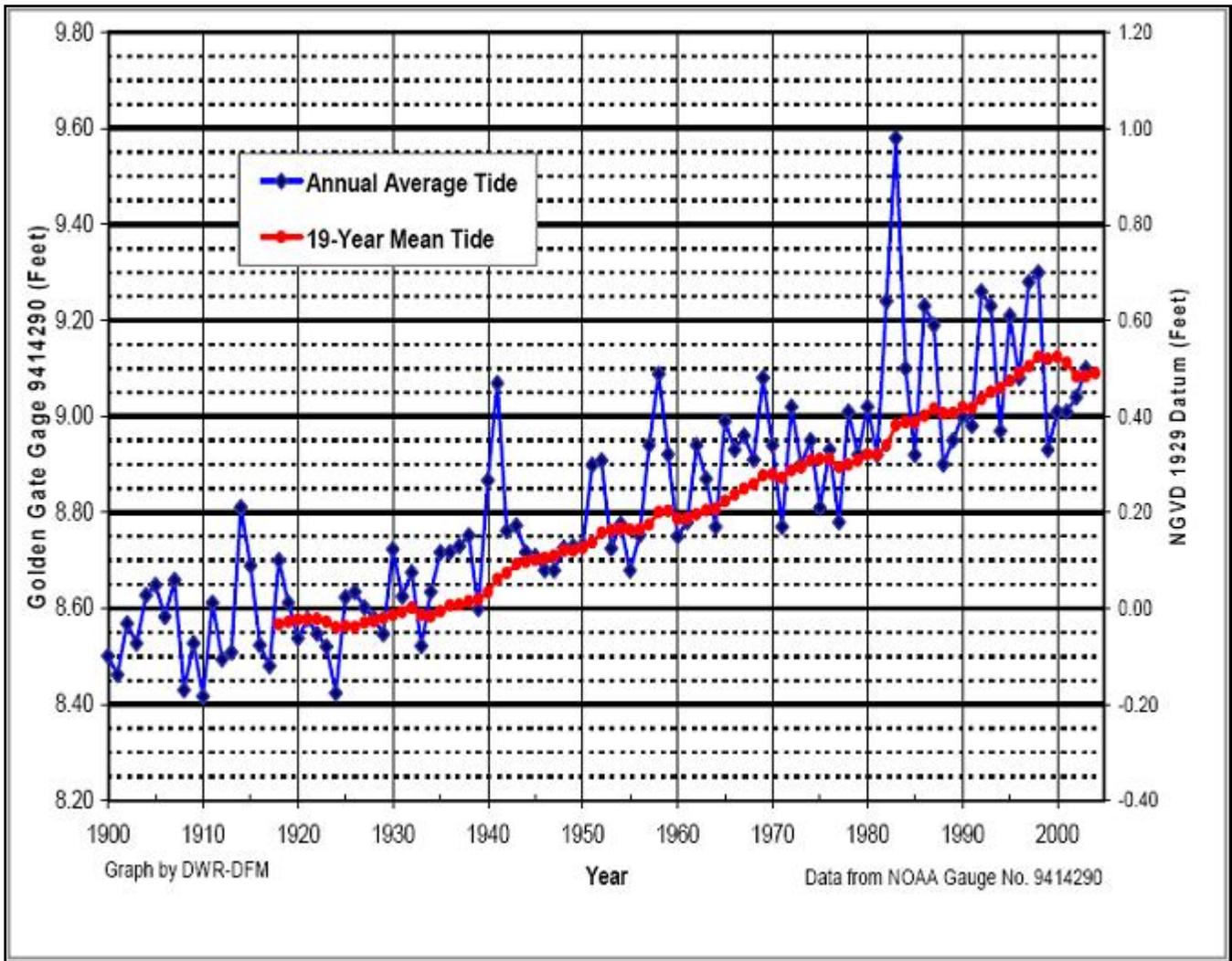
Effect on the Proposed Project

Although various climate change models consistently predict reduced spring/summer runoff in the Sierra Nevada as a result of altered snowpack conditions, there is a great deal of uncertainty regarding how these changes would affect runoff patterns in the Delta. Potential modifications in management regimes of existing reservoirs, such as reducing retained annual carryover volumes to increase space available for flood storage, could buffer the Delta from changes to runoff patterns at higher elevations. The potential for creation of new water storage capacity, such as on- or off-stream storage reservoirs or expanding capacity at existing reservoirs could also reduce the effects of altered runoff patterns. Given the integrated nature of the water system in California, even increased storage capacity in southern California could benefit the Delta by allowing reservoirs in northern California to hold less retained water for domestic or agriculture use and retain more capacity for flood control. Given the uncertainty associated with projecting changes in runoff patterns in water bodies at and upstream of the project site, including Duck Creek, North Little Johns Creek, Mormon Slough, the Stanislaus River, and the Calaveras River, this potential climate change effect is too speculative to reasonably draw a conclusion on regarding the significance of foreseeable direct effects on physical conditions at the project site.

SEA LEVEL

Status and Trends

One of the major areas of concern related to global climate change is rising sea level. Worldwide average sea level appears to have risen about 0.4 to 0.7 foot over the past century based on data collected from tide gauges around the globe, coupled with satellite measurements taken over approximately the last 15 years (IPCC 2007). Various gauge stations along the coast of California show an increase similar to the global trends. Data specific to the San Francisco tide gauge near the Golden Gate Bridge shows that the 19-year mean tide level (the mean tide level based on 19-year data sets) has increased by approximately 0.5 foot over the past 100 years (Figure 23-2). Rising average sea level over the past century has been attributed primarily to warming of the world’s oceans and the related thermal expansion of ocean waters, and the addition of water to the world’s oceans from the melting of land-based polar ice. Some researchers have attributed most of the worldwide rise to thermal expansion of water, although there is some uncertainty about the relative contributions of each cause (Munk 2002).



Source: DWR 2006

Graph of Annual Average Relative Sea Level and the 19-Year Running Average Sea Level at the Golden Gate Tide Gauge, California, 1900–2003

Figure 23-2

Projections

Various global climate change models have projected a rise in worldwide average sea level of 0.3 to 2.9 feet by 2100 (IPCC 2001a). Updated model results provided by the IPCC in 2007 put the range at 0.6–1.9 feet by 2099 (IPCC 2007). The ranges are narrower than in the Third Assessment Report (IPCC 2001a) mainly because of improved information about some uncertainties in the projected contributors to sea level rise (IPCC 2007).

Although these projections are on a global scale, the rate of relative sea level rise experienced at many locations along California’s coast is relatively consistent with the worldwide average rate of rise observed over the past century. Therefore, it is reasonable to expect that changes in worldwide average sea level through this century will also be experienced by California’s coast (DWR 2006).

For California’s water supply, the largest effect of sea level rise would likely be in the Sacramento-San Joaquin Delta (DWR 2005). Increased intrusion of salt water from the ocean to the Delta could degrade the quality of the fresh water that is pumped out of the Delta for municipal, industrial and agricultural purposes. This could lead to

increased releases of water from upstream reservoirs or reduced pumping from the Delta to maintain compliance with Delta water quality standards. Saltwater intrusion could also degrade groundwater aquifers. (DWR 2006.) DWR has prepared a preliminary assessment of potential sea level rise impacts on the Delta. There is no analysis tool currently available to determine changes in system operations required to lessen the effects of increased saltwater intrusion due to sea rise. (DWR 2006.) However, DWR utilized existing tools to quantify potential salt intrusion into the Delta for a 1-foot sea level rise with present system operations. According to DWR, the results do not include any operational changes that may be implemented to try to reduce the effects of saltwater intrusion from sea level rise, and therefore the results by themselves are not sufficient for making management decisions. (DWR 2006.)

The base case and four climate change scenarios were evaluated by DWR using DSM2 (a one dimensional model of flow, water levels, and conservative and nonconservative transport) to quantify effects on Delta water quality and water levels. Tidal water level fluctuations, river inflows, Delta exports, and irrigation withdrawals and return flows are all represented in DSM2. Without adjusting system operations to try and lessen the effects of sea level rise, chloride concentrations at Old River at Rock Slough were below the 250 milligrams per liter threshold about 90% of the time. In real time, operational adjustments will take place so these effects will translate into water supply impacts to the SWP and CVP. According to DWR, these impacts cannot be quantified at this time. (DWR 2006.) Increased salt intrusion for the sea level rise scenarios lead to chloride concentrations that exceed the 150 milligrams per liter standard during some critical and dry years. Chloride mass loadings at all of the urban intakes increased because of higher chloride concentrations. (DWR 2006.)

Effect on the Proposed Project

A consistent rise in sea level has been recorded worldwide over the last 100 years. Recorded rises in sea level along the California coast correlate well with the worldwide data. Based on the results of various global climate change models, sea level rise is expected to continue. Based on the consistency in past trends, the consistency of future projections, and the correlation between data collected globally and data specific to California, it is reasonably foreseeable that some amount of sea level rise will occur along the California coast over the next 100 years. Although sea level rise is expected to occur, the amount and timing of the increase is uncertain. Predictions published by the IPCC in 2007 put an increased in the range at 0.6–1.9 feet by 2099 (IPCC 2007).

Although much of the Delta is well inland of the Pacific Ocean, sea level rise could have a variety of effects on physical conditions in the Delta, including:

- ▶ increased potential for levee failure,
- ▶ increased seawater intrusion into Delta waterways,
- ▶ potential adverse impacts on flow control and diversion facilities, and
- ▶ inundation and critical alteration of aquatic ecosystems in the Delta.

Climate change–related rise in sea level does not have the potential to affect the performance of the flood protection elements of the MLSP project. The minimum elevation on the SPA is 24.41 feet using the National Geodetic Vertical Datum (NGVD) 88, in the North Little Johns Creek channel. Projected seawater rise associated with global climate change is in the range of 0.6–1.9 feet by the year 2099 (IPCC 2007). Even if sea levels rose 1.9 feet and began to back up through the Delta into the channels and sloughs in Stockton, the SPA would still be over 20 feet above any maximum predicted backwater elevation.

Groundwater in San Joaquin County area moves from sources of recharge to areas of discharge. Most recharge to the aquifer system occurs from the Delta and along active stream channels where extensive sand and gravel deposits exist. Consequently, the highest groundwater elevations typically occur near the Delta, the Stanislaus River, and the San Joaquin River. Other sources of recharge in the vicinity of the SPA include subsurface recharge from fractured geologic formations to the east, as well as deep percolation from applied surface water and precipitation. Municipal and agricultural uses of groundwater within San Joaquin County contribute to an

overall average yield of groundwater estimated to be 867,000 acre-feet per year (afy). As discussed in Chapter 11, “Hydrology and Water Quality” of the DEIR and in the City of Stockton’s (City’s) Water Supply Assessment for this project (DEIR Appendix R), historically, groundwater elevations have declined from 40 to 60 feet. As a result, a regional cone of depression has formed in Eastern San Joaquin County creating a gradient that allows saline water underlying the Delta region to migrate northeast within the southern portions of the city. Groundwater underlying the city generally flows to the east due to the regional cone of depression. (City of Stockton Municipal Utilities District 2005.) Therefore, to the extent the chloride levels in the Delta are increased as a result of sea level rise, there may also be an effect on the groundwater basin. However, the assessment tools currently available cannot reflect operational changes that may be implemented by water management agencies to try to reduce the effects of saltwater intrusion from sea level rise, and therefore the results by themselves are not sufficient for making management decisions. (DWR 2006.)

Nonetheless, the SPA consists of over 3,800 acres of irrigated, agricultural land. Approximately 11,000 afy of water, pumped from the groundwater aquifer, has historically been used to irrigate the project site for agricultural uses. This translates to a use factor of approximately 3.0 acre-feet/acre/year (af/ac/yr), annually. The City’s stated goal for safe-yield withdrawals from the groundwater aquifer is 0.60–0.75 af/ac/yr. Therefore, existing agricultural groundwater use is approximately three times more than the safe yield factor. Construction of impervious surfaces on the project site would reduce the amount of surface water and runoff that currently recharges the groundwater aquifer by approximately 2,180 afy. However, because the approximately 11,000 afy of historical groundwater pumping would cease when the proposed project is constructed, the project would result in a net benefit to the groundwater aquifer of approximately 9,000 afy. (Refer to DEIR pages 11-33 and 11-39.) This decrease in groundwater pumping may help to slow movement of the saline front and reduce inflows from the Delta, thus reducing the potential effects of sea level rise on chloride levels in the ground water basin.

Because the project site is sufficiently elevated above sea level, a climate change–related rise in sea level does not have the potential to affect the performance of the flood protection elements of the MLSP project, and therefore there would be no impact. Furthermore, because the proposed project would rely on surface water supplies from the Delta Water Supply Project (DWSP) to meet its potable water needs, as opposed to groundwater, increased chloride levels in the basin caused by sea level rise would have a less than significant impact on project-related water quality. No mitigation measures are therefore required.

WATER SUPPLY

Status and Trends

Several recent studies have shown that existing water supply systems are sensitive to climate change (Wood 1997). Potential impacts of climate change on water supply and availability could directly and indirectly affect a wide range of institutional, economic, and societal factors (Gleick 1997). Much uncertainty remains, however, with respect to the overall impact of global climate change on future water supplies. For example, models that predict drier conditions (i.e., parallel climate model [PCM]) suggest decreased reservoir inflows and storage and decreased river flows, relative to current conditions. By comparison, models that predict wetter conditions (i.e., HadCM2) project increased reservoir inflows and storage, and increased river flows (Brekke et al. 2004). Both projections are equally probable based on which model is chosen for the analyses (Ibid.). Much uncertainty also exists with respect to how climate change will affect future demand on water supply (DWR 2006). Still, changes in water supply are expected to occur and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows (Kiparsky and Gleick 2005; see also Cayan et al. 2006).

Little work has been performed on the effects of climate change on specific groundwater basins or groundwater recharge characteristics (Kiparsky and Gleick 2005). Changes in rainfall and changes in the timing of the groundwater recharge season would result in changes in recharge. Warmer temperatures could increase the period where water is on the ground by reducing soil freeze. Conversely, warmer temperatures could lead to higher

evaporation or shorter rainfall seasons, which could mean that soil deficits would persist for longer time periods, shortening recharge seasons. Warmer, wetter winters would increase the amount of runoff available for groundwater recharge. This additional winter runoff, however, would be occurring at a time when some basins, particularly in Northern California, are being recharged at their maximum capacity. Reductions in spring runoff and higher evapotranspiration, on the other hand, could reduce the amount of water available for recharge. However, the specific extent to which various meteorological conditions will change and the impact of that change on groundwater are both unknown. A reduced snowpack, coupled with increased rainfall, could require a change in the operating procedures for California's existing dams and conveyance facilities (Kiparsky and Gleick 2005).

Projections

DWR's 2006 report focused on climate change impacts on SWP and CVP operations and on the Delta. The results of that analysis suggest several climate change impacts on overall SWP and CVP operations and deliveries. In three of the four climate scenarios simulated, CVP north-of-Delta reservoirs experienced shortages during droughts. DWR (2006) recommends that future studies examine operational changes that could avoid these shortages. At present, DWR concludes, it is not clear whether such operational changes would be insignificant or substantial.

Tanaka et al. (2006) explored the ability of California's water supply system to adapt to long-term climatic and demographic changes using the California Value Integrated Network (CALVIN), a statewide economic-engineering optimization model of water supply management. The results show agricultural water users in the Central Valley are the most sensitive to climate change, particularly under the driest and warmest scenario (i.e., PCM 2100) predicting a 37% reduction of Central Valley agricultural water deliveries and a rise in Central Valley water scarcity costs by \$1.7 billion. Although the results of the study are only preliminary, they suggest that California's water supply system appears "physically capable of adapting to significant changes in climate and population, albeit at a significant cost." Such adaptation would entail changes in California's groundwater storage capacity, water transfers, and adoption of new technology.

VanRheenen et al. (2004) studied the potential effects of climate change on the hydrology and water resources of the Sacramento-San Joaquin River Basin using five PCM scenarios. The study concluded that most mitigation alternatives examined satisfied only 87 to 96% of environmental targets in the Sacramento system, and less than 80% in the San Joaquin system. Therefore, system infrastructure modifications and improvements could be necessary to accommodate the volumetric and temporal shifts in flows predicted to occur with future climates in the Sacramento-San Joaquin River Basin.

Zhu et al. (2005) studied climate warming impacts on water availability derived from modeled climate and warming streamflow estimates for six index California basins and distributed statewide temperature shift and precipitations changes for 12 climate scenarios. The index basins provide broad information for spatial estimates of the overall response of California's water supply and the potential range of impacts. The results identify a statewide trend of increased winter and spring runoff and decreased summer runoff. Approximate changes in water availability are estimated for each scenario, though without operations modeling. Even most scenarios with increased precipitation result in a decrease in available water. This result is due to the inability of current storage systems to catch increased winter streamflow to offset reduced summer runoff.

Medellin et al. (2006) used the CALVIN model under a high emissions "worst case" scenario, called a dry-warming scenario. The study found that climate change would reduce water deliveries by 17% in 2050. The reduction in deliveries was not equally distributed, however, between urban and agricultural areas. Agricultural areas would see their water deliveries drop by 24% while urban areas would only see a reduction of 1%. There was also a geographic difference: urban scarcity was almost absent outside of southern California.

In 2003, CEC's Public Interest Energy Research (PIER) program established the California Climate Change Center (CCCC) to conduct climate change research relevant to the state. Executive Order S-3-05 called for the California Environmental Protection Agency (CalEPA) to prepare biennial science reports on the potential impact of continued climate change on certain sectors of California's economy. CalEPA entrusted PIER and its CCCC to lead this effort. The climate change analysis contained in its first biennial science report concluded that major changes in water management and allocation systems could be required in order to adapt to the change. As less winter precipitation falls as snow, and more as rain, water managers would have to balance the need to construct reservoirs for water supply with the need to maintain reservoir storage for winter flood control. Additional storage could be developed, but at high environmental and economic costs.

Lund et al. (2003) examined the effects of a range of climate warming estimates on the long-term performance and management of California's water system. The study estimated changes in California's water availability, including effects of forecasted changes in 2100 urban and agricultural water demands using a modified version of the CALVIN model. The main conclusions are summarized as follows:

- ▶ Methodologically, it is useful and realistic to include a wide range of hydrologic effects, changes in population and water demands, and changes in system operations in climate change studies.
- ▶ A broad range of climate warming scenarios show significant increase in wet season flows and significant decreases in spring snowmelt. The magnitude of climate change effects on water supplies is comparable to water demand increases from population growth in 21st century.
- ▶ California's water system would be able to adapt to the severe population growth and climate change modeled. This adaptation would be costly, but it would not threaten the fundamental prosperity of the state, although it could have major impacts on the agricultural sector. The water management costs represent only a small proportion of California's current economy.
- ▶ Under the driest climate warming scenarios, Central Valley agricultural users could be quite vulnerable to climate change. Wetter hydrologies could increase water availability for these users. The agricultural community would not be compensated for much of its loss under the dry scenario. The balance of climate change effects on agricultural yield and water use is unclear. While higher temperatures could increase evapotranspiration, longer growing seasons and higher carbon dioxide concentrations could increase crop yield.
- ▶ Population growth is expected to be more problematic than climate change in Southern California. Population growth, conveyance limits on imports, and high economic value of water in Southern California, could lead to high use of wastewater reuse and substantial use of seawater desalination along the coast.
- ▶ Under some wet warming climate scenarios, flooding problems could be substantial. In certain cases, major expansions of downstream floodways and alterations in floodplain land use could become desirable.
- ▶ California's water system could economically adapt to all the climate warming scenarios examined in the study. New technologies for water supply, treatment, and water use efficiency, implementation of water transfers and conjunctive use, coordinated operation of reservoirs, improved flow forecasting, and the cooperation of local regional, state and federal government can help California adapt to population growth and global climate change. Even if these strategies are implemented, however, the costs of water management are expected to be high and there is likely to be less "slack" in the system compared to current operations and expectations.

Effect on the Proposed Project

As described by the projections above, overall, climate change is expected to have a greater effect in Southern California and on agricultural users than urban users in the Central Valley, which includes both the San Joaquin and Sacramento Valleys. For example, for 2020 conditions, where optimization is allowed (i.e., using the CALVIN model), scarcity is essentially zero in the Sacramento Valley for both urban and agricultural users, and generally zero for urban users in the San Joaquin and Tulare Basins. Rather, most water scarcity will be felt by agricultural users in Southern California, though Southern California urban users, especially Coachella urban users, will also experience some scarcity. By the year 2050, urban water scarcity will remain almost entirely absent north of the Tehachapi Mountains, although agricultural water scarcity could increase in the Sacramento Valley to about 2% (Medellin et al. 2006; see also Tanaka et al. 2006 and Lund et al. 2003 for further discussion of global climate change impacts on agricultural uses).

Based on the conclusions of current literature regarding California's ability to adapt to global climate change, it is reasonably expected that, over time, the state's water system will be modified to be able to handle the projected climate changes, even under dry and/or warm climate scenarios (DWR 2006). Although coping with climate change effects on California's water supply could come at a considerable cost, based on a thorough investigation of the issue, it is reasonably expected that statewide implementation of some, if not several, of the wide variety of adaptation measures available to the state, will likely enable California's water system to reliably meet future water demands. For example, traditional water supply reservoir operations may be used, in conjunction with other adaptive actions, to offset the impacts of global warming on water supply (Medellin et al. 2006; see also Tanaka et al. 2006 and Lund et al. 2003). Other adaptive measures include better urban and agricultural water use efficiency practices, conjunctive use of surface and ground waters, desalination, and water markets and portfolios (Medellin et al. 2006; see also Lund et al. 2003, Tanaka et al. 2006). More costly statewide adaptation measures could include construction of new reservoirs and enhancements to the state's levee system (CEC 2003a). As described by Medellin et al. 2006, with adaptation to the climate, the water deliveries to urban centers are expected to decrease by only 1%, with Southern California shouldering the brunt of this decrease.

Although California could potentially experience an increased number of single-dry and multiple-dry years as a result of global climate change, based on current knowledge, it is reasonably expected that such increase would not significantly affect the ability of the water suppliers for the proposed project to reliably meet the project's buildout water demands. As described by the Mariposa Lakes Integrated Water Management Plan (IWMP) (Appendix P to the DEIR), the proposed project's use of an integrated resources approach that includes surface water supply, groundwater recharge, use of recycled water to meet landscape irrigation needs, and water conservation measures, would ensure that there is adequate water supply to reliably meet all the projected project needs.

Although the IWMP does not specifically address the effects of global climate change on the proposed project's water supply, the IWMP, together with the water supply analyses contained in the DEIR (Appendices R and S) and the additional nonpotable water supply analysis attached to this FEIR (new Appendix Y), represent the best available information regarding the effects of single-dry and multiple-dry years on the project's water supply. For that reason, this analysis relies on the IWMP and the DEIR, in addition to the climate change studies described in this report.

In addition, the proposed project's surface water supply entitlements are unlikely to be affected by global climate change because, as indicated by preliminary results from DWR (2006), water supply impacts from climate change would be largely reflected in reduced south-of-Delta exports, while existing Delta water quality requirements would continue to be satisfied. It is therefore reasonable to consider that global climate change may have relatively less effect on the project's water supply because the project's surface water supplies are based on existing water rights and contract entitlements for in-basin use above the Delta.

Preliminary studies indicate that the San Joaquin Valley could experience a moderate to large decline in groundwater levels as a result of global climate change (Vicuña 2006). Although the City of Stockton has indicated that groundwater may be used to supplement surface water supply to meet the needs of all potable water users within the boundaries of its service area during multiple dry years, including the SPA, such future groundwater pumping would not exceed the City's safe yield factor not-to-exceed 0.75 af/ac/yr (see DEIR Appendix R). Moreover, the proposed project would result in replacement of approximately 3,800 acres of agricultural land with an estimated water use of nearly 11,000 afy pumped from the groundwater aquifer, with urban development that would have an estimated nonpotable water use of 2,593 afy supplied by surface water. Furthermore, the recharge component of the proposed project is required to "bank" an extra foot of surface water in the groundwater aquifer for every foot of surface water that is placed into recharge. Therefore, the proposed project is expected to result in a substantial benefit to the groundwater aquifer, thereby further reducing the likelihood of groundwater overdraft in the event of future climate change (DEIR Chapter 11, "Hydrology and Water Quality").

There is a great deal of uncertainty in respect to impacts of climate change on future water availability in California in terms of whether and where effect will occur as well as regarding the timing and severity of any such potential effect, making it impossible to draw a conclusion regarding significance without substantial speculation. However, in view of the reliability of the proposed project's potable surface water supplies from the DWSP and the nonpotable surface water supplies from the Stockton East Water District and/or Central San Joaquin Water Conservation District, the cessation of agricultural groundwater pumping and replacement with potable surface water, the proposed groundwater recharge project, and the wide variety of integrated water management techniques available to the project applicant, the water supplies for the proposed project have a high degree of reliability even considering the potential impacts on California's water supplies that may be caused by global climate change.

WATER QUALITY

Status and Trends

Water quality depends on a wide range of interacting variables, such as water temperatures, flows, runoff rates and timing, waste discharge loads, and the ability of watersheds to assimilate wastes and pollutants. The water quality of the Delta has experienced substantial adverse affects from human activities, including contaminant inputs from urban, industrial, and agricultural sources; saltwater intrusion attributable altered flow patterns; and increased temperature from removal of shading vegetation. Various water bodies in the Delta are considered impaired in their ability to provide beneficial uses (ecological habitat, recreation, irrigation, drinking water) because of the presence of a variety of pollutants and stressors. Existing water quality problems in the Delta may generally be placed in the categories of toxic materials, suspended sediments and turbidity, dissolved oxygen fluctuations and low dissolved oxygen levels, salinity, and bacteria.

Projections

Climate change could alter numerous water quality parameters in a variety of ways. Higher winter flows could reduce pollutant concentrations (through dilution) or increase erosion of land surfaces and stream channels, leading to higher sediment, chemical, and nutrient loads in rivers (DWR 2006). Increases in water flows can also decrease chemical reactions in streams and lakes, reduce the flushing time for contaminants, and increase export of pollutants to coastal areas (Jacoby 1990, Mulholland et al. 1997, Schindler 1997). Decreased flows can exacerbate temperature increases, increase the concentration of pollutants, increase flushing times, and increase salinity (Schindler 1997, Mulholland et al. 1997). Decreased surface-water flows can also reduce nonpoint-source runoff (Mulholland et al. 1997). Increased water temperatures can enhance the toxicity of metals in aquatic ecosystems (Moore et al. 1997). Increases in water temperature alone are often likely to lead to adverse changes in water quality, even in the absence of changes in precipitation (Kiparsky and Gleick 2005).

A review of potential impacts of climate change on water quality concludes that significant changes in water quality are known to occur as a direct result of short-term changes in climate (Murdoch, Baron and Miller 2000). The review notes that water quality in ecological transition zones and areas of natural climate extremes is vulnerable to climate changes that increase temperatures or change the variability of precipitation. However, it is also argued that changes in land and resource use will have comparable or even greater impacts on water quality than changes in temperature and precipitation. A separate study concluded that changes in land use resulting from climatic changes, together with technical and regulatory actions to protect water quality, can be critical to future water conditions (Kiparsky and Gleick 2005). The net effect on water quality for rivers, lakes, and groundwater in the future is dependent not just on how climatic conditions might change, but also on a wide range of other human actions and management decisions.

Effect on the Proposed Project

Although there are various ways in which climate change could affect water quality, effects could be positive or negative depending on a variety of conditions. In addition, current water quality conditions in the Delta depend in large part on human activities, and this would continue into the future. The effects of climate change on water quality could be alleviated by, exacerbated by, or overwhelmed by effects directly related to localized human actions. Given the uncertainty associated with projecting the type and extent of changes in water quality attributable to climate change, including trying to project human activities, this potential climate change effect is too speculative to draw a conclusion regarding the significance of any direct effect on physical conditions at the project site.

AGRICULTURE

Status and Trends

Numerous studies indicate that climate change may have a profound effect on agriculture in California. Many of the climate change forecasting models utilized in the studies predict a variety of direct and indirect effects to the sector's agronomic and economic conditions (Tanaka et al. 2006; Howitt, Tauber, and Pienaar 2003). The degree to which climate change will affect agriculture depends on a variety of factors. While there remains uncertainty about what form of climate change will occur in California, the majority of research on the subject has focused on the likelihood that a climate warming pattern will occur (DWR 2006, Lund et al. 2003). While both dry-warm or wet-warm forms of climate warming would affect Californian agriculture, dry-warm climate scenarios are expected to be the most problematic (Tanaka et al. 2006). Dry-warm climate scenarios are expected to affect agriculture at both statewide and regional scales, with the most pronounced effects occurring in the Central Valley and specifically the San Joaquin Valley (Zhu et al. 2006).

Potential effects include reductions in water supply and water supply reliability, increased evapotranspiration, changes in growing season, and altered crop choices (DWR 2006). As discussed in the previous sections, substantial changes may occur in terms of water supply. As a primary consumer of surface and ground water, the agricultural sector will be faced with significant challenges in the event of supply reductions. Higher levels of evapotranspiration would result from the increased temperatures and decreased humidity of a dry-warm climate scenario (Hidalgo, Cayan, and Dettinger 2005). In turn, evapotranspiration would cause increases in water demand, salt accumulation on plants, soil salinity, and additional water use for reducing saline soils (DWR 2006). Such effects could reduce productivity and create adverse economic repercussions for farmers and ranchers in the state (DWR 2006). Changes to the growing season and altered crop choices may negatively or positively affect productivity, water supply, and profitability depending on the adaptations farmers choose (Tanaka et al. 2006).

Projections

Tanaka et al. (2006) demonstrates that agricultural water supplies in the Central Valley are expected to be affected by climate change. In the driest, warmest climate scenario (PCM2100), Central Valley water users would be

adversely affected and agricultural water deliveries could be expected to decrease by approximately 24% and water scarcity costs would be \$1.7 Billion. (Tanaka et al. 2006)

Water scarcity is expected to increase due to both the effects of global climate change and by the effects of population growth and increased water consumption. In one model (CALVIN) using a dry and warm form of climate change and 2050 population projections, water scarcity north of the Tehachapi Mountains (San Joaquin and Sacramento Valleys) was demonstrated to be predominately driven by climate change effects. (Tanaka et al. 2006, Zhu et al. 2006.) Water scarcity is expected to be 26% in the San Joaquin Basin (Zhu et al. 2006).

A 15% increase in land fallowing is expected to occur under a dry and warm climate scenario. Land fallowing would reduce agricultural productivity and affect the agricultural economy as well as the rural support economies. Financial implications for individual farm owners would depend on whether compensation was provided for land becoming fallow (Howitt, Tauber, and Pienaar 2003; Tanaka et al. 2006).

Most year 2100 models indicate increased market water transfers from agriculture to urban users (Tanaka et al. 2006). Sector productivity could be maintained if water transfers were balanced with irrigation efficiency improvements.

Though a dry-warm climate scenario would reduce agricultural water deliveries (24% statewide and 26% in the San Joaquin Valley), models demonstrate that agricultural income will only be reduced by 6% and irrigated lands will only be reduced by 15%. It is expected that farmers will adopt changes in crop mix, cropping systems, and irrigation technology. These adaptations are likely to reduce the effect of reduced water deliveries on agriculture (Tanaka et al. 2006).

Increased evapotranspiration rates could have a considerable effect on agricultural water demand in the state (DWR 2006). The International Panel on Climate Change expects a 3°C increase in temperature over the next century (IPCC 2007). Research demonstrates that such an increase in temperature will likely result in a 5% increase in plant transpiration assuming no change in solar radiation (cloudiness) levels and other related variables including wind, humidity, and minimum temperature (Hidalgo, Cayan, and Dettinger 2005). Therefore, evapotranspiration alone could create a 5% increase in agricultural water consumption over the next 100 years or a 0.5% increase per decade. Projected increases in carbon dioxide concentrations are expected to increase plant growth by up to 20% and in turn lead to increased evapotranspiration (Long et al. 2004). A caveat to this is that increased atmospheric carbon dioxide concentrations may work to decrease plant stomatal transpiration rates and thus reduce overall evapotranspiration rates (Ibid). More research is needed to understand this relationship.

Effect on the Proposed Project

The proposed project would not contain any agricultural uses. For this reason it could be assumed that future climate change impacts to agriculture would not be relevant to the proposed project. However, because the City of Stockton has an agricultural mitigation program that requires the direct acquisition of agricultural easements for an area equal to the amount of farmland eliminated by the project, the impacts of climate change on agriculture remain relevant. Project participation in the City's agricultural fee mitigation program would safeguard agricultural productivity in an area of equivalent farmland, where it would be protected as a public good in perpetuity. How climate change affects the agricultural operations on the protected land is therefore a matter of public concern.

The proposed project would convert approximately 3,654 acres of agricultural land, classified by the California Department of Conservation as either Farmland of Statewide Importance or Prime Farmland. An equal amount of farmland would be protected in the greater Stockton area through project applicant participation in the City's agricultural fee mitigation program. It is important to note that the DEIR concludes that the conversion of agricultural land to urban uses is a significant and unavoidable impact and that although the project applicant would participate in the City's agricultural fee mitigation program, new agricultural land would not be created,

only protected, and therefore the impacts from agricultural land conversion would not be reduced to a less-than-significant level. As stated above, effects to agriculture in the Central Valley can be expected if a dry-warm climate scenario emerges in the future. Models indicate that these effects will be most pronounced in the San Joaquin Valley. Therefore, there is a potential that the farmland protected by project mitigation may be affected by climate change.

While effects may occur, adaptation is also expected that will allow farmers and ranchers to minimize any potential negative effect on agricultural incomes. Adoption of new cropping systems and improved irrigation techniques are expected to allow agriculture to continue in the region. Because the potential effects of global climate change on agricultural production are highly speculative at this time, it is not possible to reach a conclusion regarding significance.

CONCLUSION

Seven general categories of potential effects of climate change were evaluated in this section:

- ▶ increased temperature;
- ▶ precipitation volume, type, and intensity;
- ▶ runoff volume and timing;
- ▶ water supply;
- ▶ sea level rise;
- ▶ water quality; and
- ▶ agriculture.

This analysis concludes that (1) either the climate change effect would not have the potential to substantially affect the project site, or (2) because of significant uncertainty in projecting future conditions related to the climate change effect, it would be too speculative to reach a conclusion regarding the significance of any reasonably foreseeable direct effect on physical conditions at the proposed project site. In an effort to perform the appropriate due diligence with regards to potential climate change effects on the proposed project, Section 20.3 that follows contains an analysis of climate change factors with respect to each of the 14 issue areas evaluated in the DEIR.

23.3 EVALUATION OF ENVIRONMENTAL EFFECTS ASSOCIATED WITH CLIMATE CHANGE

23.3.1 INTRODUCTION

Potential effects of the climate change factors discussed above are evaluated relative to the full range of environmental issue areas contained in the DEIR, which consist of the following:

- ▶ aesthetics,
- ▶ agricultural resources,
- ▶ air quality,
- ▶ biological resources,
- ▶ cultural resources,
- ▶ geology, soils, and paleontological resources,
- ▶ health and safety,
- ▶ hydrology and water quality,
- ▶ land use,
- ▶ noise,
- ▶ population, housing, and employment,

- ▶ public services,
- ▶ transportation and circulation, and
- ▶ utilities and energy.

The intent of the following climate change impact analysis is to determine whether climate change effects would result in any of the following:

- ▶ the proposed project having one or more new significant environmental effects not discussed in the previous impact evaluations contained in the DEIR;
- ▶ substantial increases in the severity of adverse environmental effects identified in the previous impact evaluations contained in the DEIR;
- ▶ identification of new mitigation measures that could result in new significant effects not disclosed in the DEIR;
- ▶ the proposed project, or elements of the proposed project, becoming infeasible since publication of the DEIR.

When assessing effects associated with climate change, it is assumed that all project elements and mitigation measures described in the DEIR, as well as changes to DEIR mitigation measures contained in Chapter 5 of this FEIR, would be implemented as conditions of approval.

23.3.2 IMPACT EVALUATION

AESTHETIC RESOURCES

Potential aesthetic resource impacts from the proposed project are related to views of the project site from surrounding lands, views from State Route 4 and Kaiser Road, as well as nighttime lighting and skyglow effects. All of these types of impacts are directly related to the type and extent of land uses on and adjacent to the project site. As stated previously, reasonably foreseeable effects from climate change would not affect land uses developed under the proposed project. Therefore, climate change would not affect impact evaluations or conclusions for the proposed project related to aesthetic resources. Given these conditions, reasonably foreseeable effects from climate change would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects from the Mariposa Lakes project related to aesthetic resources. No new mitigation measures would be required beyond those required in the DEIR. Climate change also would not affect the feasibility of any activities intended to respond to aesthetic resource concerns, such as guidelines regarding the height and appearance of buildings or use of outdoor lighting fixtures that help preserve nighttime views.

AGRICULTURAL RESOURCES

Potential agricultural resources impacts from the proposed project are related to conversion of important farmland to urban uses and adjacent landowner/user conflicts during project construction. These impacts are directly related to the type and extent of land uses on and adjacent to the project site. As stated previously, reasonably foreseeable effects from climate change would not affect land uses developed under the proposed project. Therefore, reasonably foreseeable effects from climate change would not affect impact evaluations or conclusions for the proposed project related to agricultural resources.

It should be noted that direct impacts related to agricultural resources would occur as the project is being developed, and not as part of project operations. Once project buildout is complete, estimated for approximately 2025, the impact would reach its full extent (i.e., all project-related conversion of agricultural land to urban uses would have occurred) and would not proceed further. Therefore, by the time climate change effects are expected

to be more pronounced, in the latter part of the century, direct project-related impacts to agricultural resources would have already reached their full extent and could not be influenced further by climate change.

However, as discussed above, because the project applicants would participate in the City's agricultural fee mitigation program that requires the acquisition of agricultural easements for an area equal to the amount of farmland eliminated by the project, the indirect impacts of climate change on agriculture remain relevant. The applicant's participation in the City's agricultural fee mitigation program ensures that an equivalent amount of agricultural land would be protected as a public good in perpetuity. The proposed project would convert approximately 3,654 acres of agricultural land, classified by the California Department of Conservation as either Farmland of Statewide Importance or Prime Farmland to urban uses. An equal amount of farmland would be protected in the greater Stockton area under the fee mitigation program. As stated in the previous section, effects to agriculture in the Central Valley may occur if a dry-warm climate scenario emerges in the future. Models indicate that these effects will be most pronounced in the San Joaquin Valley. Therefore, there is a potential that the farmland protected by project mitigation may be affected by climate change. While such effects may occur, adaptation is also expected to allow farmers and ranchers to minimize the potential negative effect on agricultural incomes. Adoption of new cropping systems and improved irrigation techniques are expected to allow agriculture to continue in the region. Because there currently is no regulatory guidance relating to how to address potential effects of global climate change on agriculture and the potential effects are highly speculative at this time, as discussed above, it is not possible to reach a conclusion regarding significance at this time.

AIR QUALITY

As stated in DEIR Chapter 6, "Air Quality," potential air quality impacts from the proposed project are related to emissions of regional criteria pollutants during construction, potential conflicts associated with on- or off-site odorous emissions, exposure to on- and off-site emissions of stationary-source toxic air contaminants, and mobile source emissions that would result from project operation. All of these types of impacts are directly related to either project construction and operation or the type and extent of land uses on and adjacent to the project site. As stated previously, reasonably foreseeable effects from climate change would not affect land uses developed under the proposed project. Therefore, climate change would not affect the amount or type of emissions generated by the proposed project or the potential for conflicts related to odorous emissions.

As stated in DEIR Chapter 6, emissions of greenhouse gases from the proposed project have the potential to influence global warming/global climate change. This issue is evaluated separately in Chapter 6, "Air Quality," of the DEIR, where it concluded that the impact would be significant and unavoidable and that no feasible mitigation measures are available to reduce the impact from greenhouse gas emissions to a less-than-significant impact. However, the climate change impact evaluation provided throughout this chapter focuses exclusively on the potential for global climate change to affect the proposed project.

Two pollutants for which regulatory agencies have emissions criteria (criteria pollutants) are reactive organic gases (ROG) and oxides of nitrogen (NO_x). Chemical reactions in the atmosphere involving ROG and NO_x , catalyzed primarily by sunlight, create ozone. Ozone is a key component of smog and is associated with poor air quality. It is not uncommon for correlations to be made between increased temperatures, such as from global warming, and increased ozone production (CCCC 2006, Climate.org 2006). If true, this could mean a project like MLSP could have greater air quality impacts in the future than under current conditions, because increases in atmospheric temperatures that are induced by global warming could result in greater ozone formation, even if project-related emissions do not change. However, contrary to what is commonly stated in the popular media, the chemical reaction producing ozone in the lower atmosphere is dependant primarily on ultraviolet (UV) radiation, with increased temperature alone only having a small influence (Finlayson-Pitts and Pitts 1999; Seinfeld and Pandis 1998). Poor air quality related to increased ozone levels in the lower atmosphere is more pronounced in the summer months in California because of the longer days and limited cloud cover, which allows more solar UV radiation to reach the lower atmosphere. It so happens that these conditions also result in higher atmospheric temperatures, but the increased temperatures have little direct effect on ozone formation. To predict localized

changes in ozone formation attributable to climate change, a variety of interacting factors would need to be considered, including any modifications to concentrations of ozone precursors, sources of ozone precursors, humidity (influences ozone production), cloud cover (influences amount of UV radiation), and temperature. At this time, predicting changes in ozone levels from global climate change would be highly speculative (Stockwell 2004).

Therefore, the potential effects of climate change would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects from the proposed project related to air quality. No new mitigation measures would be required beyond those required in the DEIR. Climate change, as it relates to air quality, also would not affect the feasibility of the Mariposa Lakes project.

TERRESTRIAL BIOLOGICAL RESOURCES

Similar to the discussion above for agricultural resources, impacts on biological resources associated with the proposed project are primarily associated with the conversion of wildlife habitat to development as the project is being constructed. Once project buildout is complete, most impacts on terrestrial biological resources would reach their full extent (i.e., all project-related conversion of wildlife habitat would have occurred) and would not proceed further. Therefore, by the time climate change effects are expected to be more pronounced, in the latter part of the century, most project-related impacts to terrestrial biological resources would have already reached their full extent and could not be influenced further by climate change.

As stated in DEIR Chapter 3, “Biological Resources,” the DEIR includes several elements that are designed to mitigate effects of the proposed project on terrestrial biological resources and to compensate for habitat loss. The mitigation and compensation program consists of activities to: (1) create and restore natural habitats (e.g., riparian habitat in on-site creeks), (2) improve or enhance habitat quality, and (3) protect and preserve in perpetuity habitat and open space through participation in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

The success of these mitigation activities is dependant on the long term presence and health of the created, restored, and preserved habitats. The health and persistence of ecosystems are fundamentally dependent on a wide range of climate-sensitive factors, including the amount of water available, timing of water availability, overall water quantity and quality, and temperature (air and water). All of these factors may be altered in a changed climate resulting in subsequent shifts in plant and animal communities (Kiparsky and Gleick 2005). Therefore, possible effects of climate change have the potential to undermine the feasibility of habitat mitigation included as part of the proposed project, and increase the severity of impacts on biological resources by reducing the effectiveness of mitigation measures designed to compensate for these impacts.

The direct effects of climate change on aquatic and terrestrial ecosystems will be complex. Aquatic ecosystems are included in this discussion because giant garter snake, a species listed as threatened under the California and federal Endangered Species Acts, requires both terrestrial and aquatic habitats for survival. Previous assessments of climate change effects on ecosystems have established a wide range of possible direct effects, including changes in availability of surface water and groundwater, surface water temperatures, water residence times, water clarity, productivity of various trophic levels, plant and wildlife species composition, invasions of exotic species, fire frequency, altered nutrient exchanges, food web structure, and more (Kiparsky and Gleick 2005).

The ecological response to a modification in natural regimes resulting from climate change depends on how the regime is altered relative to the current and historical conditions (Meyer et al. 1999). For example, a system that has historically experienced predictable, seasonal flooding, such as snowmelt-dominated streams and rivers, may show dramatic changes in community composition and ecosystem function if the seasonal cycles are substantially altered or eliminated (Kiparsky and Gleick 2005). Ecosystems currently experiencing near optimal climatic conditions may persist even if conditions change somewhat because precipitation, temperature, and other factors may still remain within the system’s tolerance levels. However, ecosystems that are already near important

thresholds, such as where severe competition for water is occurring, or where temperatures are approaching the vegetation's tolerance limits, may not persist where climatic conditions shift further outside the ecosystem's preferred parameters. It is expected that altered climatic conditions will benefit some species while adversely affecting others. For example, ecologists believe that climatic warming will result in a range expansion for some warm and cool climate species into higher latitudes, while some temperate or cold climate species will experience extirpations or extinctions (Murdoch et al. 2000, Kiparsky and Gleick 2005).

While potential climate change-related shifts in temperature and precipitation patterns (and potential resulting changes in ecosystems) could affect habitat creation, restoration, and enhancement proposed for the proposed project, these potential affects cannot be accurately predicted at a reasonably foreseeable level. It is currently unknown what types of shifts in precipitation will actually occur at the project site and the extent of increases in temperature. Compounding these uncertainties are additional unknowns regarding the response of terrestrial biological resources to these shifts. It is possible that by restoring, enhancing, and protecting habitat, the project would actually increase ecosystem resiliency and robustness in the areas that are being restored. Increasing ecosystem resiliency and robustness could potentially decrease potential adverse affects that could result from future climate change; however, predicting this type of beneficial affect is also uncertain. The increased presence of riparian vegetation and aquatic habitats could also reduce average temperatures in the immediate project vicinity relative to existing conditions, buffering potential temperature increases associated with global warming. Because climate change-related shifts in temperature and precipitation patterns are not reasonably foreseeable, they cannot be evaluated in this analysis.

Topographic variation associated with proposed habitat restoration, creation, enhancement, and preservation areas (e.g., gradual gradations of depths in shallow water habitat areas) would allow aquatic habitat to expand and shift into newly inundated areas if water levels were to rise, while still providing necessary upland habitat areas above potential future water levels.

Climate change would not affect the feasibility or effectiveness of habitat restoration, creation, enhancement, and preservation areas included as part of the project in the short term. Given the conditions described above, reasonably foreseeable effects from climate change are too speculative to draw a conclusion regarding the significance of any impacts or substantial increases in the severity of any previously identified adverse environmental effects from the proposed project related to terrestrial biological resources. In addition, any potential long-term effects are too speculative to assess using the tools currently available.

AQUATIC BIOLOGICAL RESOURCES

As discussed under Impact 7-6 in the DEIR, the proposed project would not have any direct impact on special-status fish species because existing waterways within the SPA do not provide suitable habitat.

As discussed in Section 23.2 above, significant changes in water quality are known to occur as a direct result of short-term changes in climate (Murdoch, Baron, and Miller 2000). Water quality in ecological transition zones and areas of natural climate extremes is vulnerable to climate changes that increase temperatures or change the variability of precipitation. However, it is also argued that changes in land and resource use will have comparable or even greater impacts on water quality than changes in temperature and precipitation. A separate study concluded that changes in land use resulting from climatic changes, together with technical and regulatory actions to protect water quality, can be critical to future water conditions (Kiparsky and Gleick 2005). The net effect on water quality for rivers, lakes, and groundwater in the future is dependent not just on how climatic conditions might change, but also on a wide range of other human actions and management decisions which are too speculative to assess at this time.

Regardless of global climate change effects to water quality conditions, because the project site does not contain suitable habitat for special-status fish species, global climate effects would not result in new significant impacts or

substantial increases in the severity of any previously identified adverse environmental effects from the proposed project related to fisheries within the SPA.

CULTURAL RESOURCES

Potential cultural resource impacts from the proposed project are related to disturbance or damage of known and potentially newly discovered significant historic and archeological resources, including human remains, during project construction. These types of impacts are directly related to the type and extent of land uses on the project site and the excavations required to construct these land uses. As stated previously, reasonably foreseeable effects from climate change would not affect land uses developed under the proposed project. Therefore, reasonably foreseeable effects from climate change would not affect impact evaluations or conclusions for the proposed project related to cultural resources. In addition, impacts related to cultural resources would occur as the project is being developed, and not as part of project operation. Once project buildout is complete, estimated for approximately 2025, potential impacts on cultural resources would reach their full extent (i.e., all potential damage or disturbance of historic and archeological resources would have occurred) and implementation of appropriate mitigation measures would be completed. Therefore, by the time climate change effects are expected to be more pronounced, in the latter part of the century, impacts on cultural resources would have already reached their full extent and could not be influenced further by climate change.

Given the conditions described above, reasonably foreseeable effects from climate change would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects from the proposed project related to cultural resources. No new mitigation measures would be required beyond those required in the DEIR. Climate change also would not affect the feasibility of the proposed project with respect to any interactions between the project and cultural resources, such as potential long-term preservation of resources that might be found on site.

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

Potential impacts related to geology, soils, and paleontological resources consist of:

- ▶ risks associated with seismic hazards, which would consist of ground shaking, liquefaction, soil settlement, lateral spreading, and/or landslides;
- ▶ potential for project activities to adversely affect soil conditions (i.e., generate erosion);
- ▶ potential for soil conditions to adversely affect project facilities, such as soils with severe corrosive or shrink/swell characteristics; and
- ▶ disturbance or damage of potentially newly discovered unique paleontological resources during project construction.

Reasonably foreseeable effects from climate change would not increase the frequency or severity of seismic events that might affect the project site, or alter soil conditions on the project site in a manner that would affect the interaction between soils and project facilities and activities (i.e., increase shrink/swell potential or any corrosive characteristics sufficiently to damage project facilities). Future climate change could alter soil moisture content, with conditions either being wetter or dryer depending on the climate change model used. However, specific changes within a particular area cannot be predicted. For a location like the MLSP, factors such as extent of impermeable surface and levels of landscaping irrigation would have a greater effect on soil moisture content than climate change. Potential impacts to paleontological resources are directly related to the type and extent of land uses on the project site and the excavations required to construct these land uses. As stated previously, reasonably foreseeable effects from climate change would not affect land uses developed under the proposed project. Therefore, reasonably foreseeable effects from climate change would not affect impact evaluations or

conclusions for the proposed project related to paleontological resources. In addition, impacts related to paleontological resources would occur as the project is being developed, and not as part of project operations. Once project buildout is complete, estimated for approximately 2025, potential impacts on paleontological resources would reach their full extent (i.e., all potential damage or disturbance of historic and archeological resources would have occurred) and implementation of appropriate mitigation measures would be completed. Therefore, by the time climate change effects are expected to be more pronounced, in the latter part of the century, impacts on paleontological resources would have already reached their full extent and could not be influenced further by climate change.

Reasonably foreseeable effects from climate change would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects from the proposed project related to geology, soils, or paleontological resources. No new mitigation measures would be required beyond those required in the DEIR. Climate change, as it relates to potential effects on geology, soils, and paleontological resources, also would not affect the feasibility of the proposed project.

HEALTH AND SAFETY

Potential mechanisms by which the proposed project might be affected by hazardous materials and public health are associated with the transport of hazardous materials during project construction and operation; potential exposure of construction workers, residents, and others to hazardous materials that may currently be on the project site and during construction of off-site future phase infrastructure and roadway improvements; use of recycled water to irrigate public areas at the project site; potential exposure of construction workers, residents, and others to hazardous materials that may currently be on the project site; or exposure of workers, residents, and others to electrical and magnetic fields. Reasonably foreseeable effects from climate change would not result in a change to any of these potential effects. Therefore, climate change would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects from the proposed project related to hazardous materials and public health. No new mitigation measures would be required beyond those required in the DEIR. Climate change, as it relates to hazardous materials and public health, also would not affect the feasibility of the proposed project.

HYDROLOGY

Flood Protection and Stormwater Management

Climate change–related rise in sea level does not have the potential to affect the performance of the flood protection elements of the proposed project. The minimum elevation on the MLSP is 24.41 feet, NGVD 88, in the North Little Johns Creek channel. Projected seawater rise associated with global climate change is in the range of 0.6–1.9 feet by the year 2099 (IPCC 2007). Even if sea levels rose 1.9 feet and began to back up through the Delta into the channels and sloughs in Stockton, MLSP would still be over 20 feet above any maximum predicted backwater elevation.

Climate change–related shifts in precipitation patterns could affect project-related stormwater and/or surface runoff management. However, as discussed above under “Precipitation,” there is a high level of uncertainty regarding potential effects of global warming/global climate change on precipitation patterns in California. Some modeling results predict increased average annual rainfall; some predict decreased annual average rainfall. Some models predict increased incidents of severe weather events expressed as intense storms, others as severe droughts. Because stormwater management for the proposed project is a highly localized issue, with stormwater generation directly related to the amount and timing of precipitation specifically at the project site, it is even more difficult to project potential future precipitation patterns at such a limited geographic scale. Therefore, the consequence of potential climate change effects on the Mariposa Lakes stormwater management system cannot be predicted because of high levels of uncertainty.

Water Quality

The proposed project includes several elements that are either specifically designed to mitigate potential project-related adverse effects on water quality, or that provide improved water quality conditions, although this is not the project elements' primary intent. The elements include the following and are described in the DEIR:

- ▶ treatment of stormwater runoff through implementation of best management practices (BMPs);
- ▶ treatment of stormwater runoff through wet-pond BMP detention basins;
- ▶ treatment of stormwater runoff through an artificial lake network, which includes water treatment through pretreatment wetland filters, circulation through lake networks, biofiltration and aeration; and
- ▶ the collection, treatment and reuse of dry-weather nuisance flows within lake networks or wet-pond BMP basins.

As discussed above under “Water Quality,” water quality depends on a wide range of interacting variables, including water temperatures, flows, runoff rates and timing, waste discharge loads, and the ability of watersheds to assimilate wastes and pollutants. Climate change effects could alter numerous water quality parameters through a variety of mechanisms, which could have a positive or negative affect on water quality. For example, higher winter flows could reduce pollutant concentrations (through dilution) or increase erosion of land surfaces and stream channels, leading to higher sediment, chemical, and nutrient loads in rivers (DWR 2006). Increases in water flows can also decrease chemical reactions in streams and lakes and reduce the flushing time for contaminants, which could result in positive water quality effects, but greater water flows can also increase the export of pollutants to coastal areas (Jacoby 1990, Mulholland et al. 1997, Schindler 1997).

Although timing and volume of precipitation and runoff are key elements to determining water quality, as described previously, the effects of global climate change on these parameters is uncertain (see “Precipitation” and “Runoff,” above). In addition, the net effect on water quality for rivers, lakes, and groundwater in the future is dependant not just on how climatic conditions might change, but also on a wide range of other human actions and management decisions. Alterations in land use, water quality regulations, water management, and other human activities could have an effect on water quality equal to or greater than global climate change (Murdoch, Baron, and Miller 2000; Kiparsky and Gleick 2005). The effects of climate change on water quality could be alleviated, exacerbated, or overwhelmed by effects directly related to localized human actions.

Given the multiple areas of uncertainty associated with projecting the type and extent of changes in water quality attributable to climate change, this potential climate change effect is not considered to have a reasonably foreseeable direct effect on physical conditions at the project site. However, conclusions regarding the potential for climate change to result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects from the proposed project related to water quality can still be made. Because the proposed project includes several elements that mitigate potential project-related adverse effects on water quality and/or improve water quality relative to existing conditions, implementation of the proposed project is anticipated to have a neutral to beneficial affect on water quality. Even if global climate change were to contribute to adverse water quality conditions, the proposed project would not result in a significant adverse effect on water quality. Given these conditions, reasonably foreseeable effects from climate change would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects from the Mariposa Lakes project related to water quality, nor affect the feasibility of the project. No new mitigation measures would be required beyond those required in the DEIR.

LAND USE

As stated in DEIR Chapter 3 “Project Description,” the proposed project is intended to provide a comprehensive land use, policy, and regulatory document (i.e., specific plan) to govern all future development in the approximately 3,810-acre site that would be annexed by the City of Stockton. Reasonably foreseeable effects from climate change would not affect the land use plan for the proposed project. Therefore, climate change would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects related to land use consistency and compatibility. As with impacts to other issue areas discussed above, reasonably foreseeable effects of climate change would not affect the feasibility of land uses proposed as part of the Mariposa Lakes project, and therefore, would not result in the need to implement new or different land uses that might be inconsistent with adopted local land use plans. No new mitigation measures to reduce indirect land use effects would be required beyond those required in the DEIR.

NOISE

Potential noise impacts from the Mariposa Lakes project are related to noise generated during construction, potential conflicts between project land uses and on- or off-site noise generation, noise from project-generated traffic, impacts from vibration related to the Burlington Northern Santa Fe railroad tracks, and noise generation from future phase off-site infrastructure and roadway improvements. All of these impact mechanisms are directly related to the type and extent of land uses on and adjacent to the project site. As stated previously, reasonably foreseeable effects from climate change would not affect land uses developed under the proposed project. Therefore, potential effects of climate change would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects from the proposed project related to noise. No new mitigation measures would be required beyond those required in the DEIR. Climate change, as it relates to potential noise impacts, also would not affect the feasibility of the proposed project.

POPULATION, EMPLOYMENT, AND HOUSING

As stated in DEIR Chapter 3 “Project Description,” the proposed project includes approximately 10,566 residential units; 1 million square feet of commercial uses; 750,000 square feet of business/professional uses; 10.7 million square feet of industrial uses; and, a new high school and six new K–8 schools, together with a variety of other community facilities and associated supporting on- and off-site infrastructure and roadway improvements. As identified in Impact 14-1 in the Chapter 14, “Population, Employment, and Housing” of the DEIR, temporary increases in employment during project construction would not have an adverse affect on the local community (e.g., generate demand for housing beyond local capacity). Job generation and provision of housing associated with project implementation would not create a local or regional imbalance between these two factors (i.e., increased housing creating a demand for jobs that could not be met in the region, or increased employment creating a demand for housing that could not be met in the region). Increased population associated with the proposed project does not exceed what the City of Stockton has already planned to accommodate.

The reasonably foreseeable effects of climate change would not affect the feasibility of land uses proposed as part of the proposed project, and therefore would not result in the need to implement land uses different from those currently proposed. Therefore, climate change would not affect the number of housing units, amount of job generating land uses, or estimated project population included in the proposed project. Consequently, the reasonably foreseeable effects of climate change would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects indirectly related to population, employment, and housing. No new mitigation measures would be required beyond those required in the DEIR for the indirect effects of population, employment, and housing generation.

PUBLIC SERVICES

Potential effects of the proposed project related to public services include project-related emergency-vehicle access, demand for fire protection facilities and services, demand for water flows for fire suppression (fire flow), demand for police protection facilities and services, demand for school facilities and services, demand for increased recreational facilities, and generation of solid waste and an associated increase in demand for landfill capacity that would result from construction and operation of the proposed project.

As stated below, reasonably foreseeable effects from climate change would not affect transportation infrastructure and, therefore, would not affect emergency-vehicle access developed as part of the proposed project. All other public services issues are related to increased demand for services generated by project population and employment and the capability of service providers to meet the increased demand. Both service demand and provision of service are tied to project land uses (e.g., numbers of housing units, types of businesses, provision of schools, inclusion of fire stations). As discussed above, reasonably foreseeable effects of climate change would not affect the feasibility of land uses proposed as part of the proposed project, and therefore, would not result in the need to implement land uses different from those currently proposed. Therefore, climate change would not alter the demand for and provision of public services already planned as part of the proposed project.

Potential recreation impacts from the proposed project are related to development of parks and open space, and demand for neighborhood and community parks that would result from construction and operation of the proposed project. The demand for and provision of recreational facilities is directly related to land uses in an area (e.g., number of homes, number, size, and type of parks). As discussed in various sections above, reasonably foreseeable effects of climate change would not affect the feasibility of land uses proposed as part of the proposed project, and therefore would not result in the need to implement land uses different from those currently proposed. Therefore, climate change would not alter the demand for and provision of recreational facilities planned as part of the proposed project.

Given the conditions described above, reasonably foreseeable effects from climate change would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects from the proposed project related to public services. No new mitigation measures would be required beyond those required in the DEIR. Climate change also would not affect the feasibility of the public services proposed as part of the proposed project.

TRANSPORTATION AND CIRCULATION

The only meaningful mechanism for global climate change to affect traffic conditions associated with the proposed project is for potential increases in flood frequency and/or severity to damage existing and proposed transportation infrastructure, as described in the DEIR. The planned Viceroy Avenue grade separation would involve the relocation of a portion of Branch Creek to either a flume over or a siphon under, the planned underpass. Widening of the existing two-lane sections of Gillis Road and Walker Road to four lanes between Farmington Road and Main Street is planned as part of the project, as is construction of several short bridges within the project site to span portions of Branch, Duck, and North Little Johns creeks. Bridge construction or road widening in areas that cross water conveyance channels raises the issue of potential global climate change-induced flood effects on the roads. Regarding the potential impacts of the proposed project, they are mitigated under Mitigation Measures 11-1a and 11-8 in Chapter 11, “Transportation and Circulation” of the DEIR, which provide for design features that would prevent and minimize potential flood effects. These include the use of drainage swales, ditches and earth dikes to control erosion and runoff by conveying surface runoff down sloping land, intercepting and diverting runoff to a watercourse or channel, preventing sheet flow over sloped surfaces, preventing runoff accumulation at the base of the grade, and avoiding flood damage along roadways and facility infrastructure. In addition, proposed bridges, diversion modifications, or other structures would be designed to

avoid any functional interference with the floodway, in accordance with adopted engineering standards of the applicable regulatory agencies.

As discussed previously, the minimum elevation on the MLSP is 24.41 feet, NGVD 88, in the North Little Johns Creek channel; therefore, the project site is not susceptible to flood risk from sea level rise induced by global climate change. As discussed above in Section 23.2, under “Precipitation,” there is a high level of uncertainty regarding potential effects of global warming/global climate change on precipitation patterns in California. Some modeling results predict increased average annual rainfall; some predict decreased annual average rainfall. Some models predict increased incidents of severe weather events expressed as intense storms, others as severe droughts. Therefore, any potential effects of climate change regarding timing, location, or quantification of precipitation are too speculative at this time for meaningful evaluation. However, it appears unlikely that potential effects of climate change would result in any new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects related to traffic. Therefore, no new mitigation measures would be required beyond those required in the DEIR.

The transportation network outside the project site is beyond the scope of this analysis. Mariposa Lakes has no control over how local, state, and federal agencies will maintain and operate transportation facilities in the future when changes in precipitation, runoff, extreme weather events, sea level rise, and other potential effects of global climate change considered in this analysis might occur. However, given that the transportation network included in the MLSP traffic analysis consists of major interstate highways and surface streets in developed, or soon to be developed, urbanized areas, it is highly unlikely that these significant infrastructure elements would be altered or removed by effects related to global climate change.

UTILITIES AND ENERGY

Potential effects of the proposed project related to public utilities focus on providing sufficient potable and nonpotable water and infrastructure conveyance, wastewater treatment capacity and conveyance, electricity, natural gas, and communications services to meet project demands.

As discussed previously in Section 23.1, issues and concerns related to effects of global climate change on broad topic areas such as energy supply and communications services pertain to regional, statewide, and larger scales, and is not directly related to or affected by the proposed project. For example, if reductions in hydroelectric power production were to occur, this issue would be addressed by numerous utility companies, energy producers, and water managers connected via the western United States power grid. These entities could implement a variety of measures to compensate for losses in power production and maintain sufficient supplies to meet demand. The proposed project would have little to no influence on how such an issue would be addressed, and likely would not be directly affected by the outcome. In addition, any specific measures that would be implemented to address power supply, and the effects of their implementation, cannot be accurately projected at this time. Therefore, public utilities issues related to communications and to the supply of and demand for electricity and natural gas are too speculative to reach a conclusion at this time.

Demand for wastewater treatment capacity is directly related to land uses in an area (e.g., number of homes, size and type of commercial and industrial uses). The City of Stockton’s Regional Wastewater Control Facility would treat wastewater generated by the proposed project to secondary and tertiary treatment levels and discharge the effluent into the San Joaquin River in accordance with its National Pollutant Discharge Elimination System permit. The existing System No. 8 sewer line has capacity that could be used to accommodate the proposed project; alternatively, a new System No. 12 force main could be constructed in the future following a separate CEQA review, as described in the DEIR. As discussed in various sections above, reasonably foreseeable effects of climate change not affect the feasibility of land uses proposed as part of the proposed project, and therefore would not result in the need to implement land uses different from those currently proposed. Therefore, climate change would not alter the demand for, and provision of wastewater treatment capacity and conveyance already planned as part of the proposed project. Given the conditions described above, reasonably foreseeable effects

from climate change would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects from the proposed project related to wastewater treatment capacity and conveyance. No new mitigation measures would be required beyond those required in the DEIR. Climate change also would not affect the feasibility of the wastewater systems proposed as part of the proposed project.

As described in detail above in Section 23.2 under “Water Supply,” based on the conclusions of current literature regarding California’s ability to adapt to global climate change, it is reasonably expected that, over time, the state’s water system will be modified to be able to handle the projected climate changes, even under dry and/or warm climate scenarios (DWR 2006). Although coping with climate change effects on California’s water supply could come at a considerable cost, based on a thorough investigation of the issue, it is reasonably expected that statewide implementation of some, if not several, of the wide variety of adaptation measures available to the state, will likely enable California’s water system to reliably meet future water demands.

Although California could potentially experience an increased number of single-dry and multiple-dry years as a result of global climate change, based on current knowledge, it is reasonably expected that such increase would not significantly affect the ability of the water suppliers for the proposed project to reliably meet the proposed project’s buildout water demands.

In addition, the project’s surface water supply entitlements (regardless of whether they are used to meet potable water needs or are used for groundwater recharge) are unlikely to be affected by global climate change because, as indicated by preliminary results from DWR (2006), water supply impacts from climate change would be largely reflected in reduced south-of-Delta exports, while existing Delta water quality requirements would continue to be satisfied. It is therefore reasonable to consider that global climate change may have relatively less effect on the project’s water supply (and therefore on groundwater recharge as well) because the proposed project’s surface water supplies are based on existing water rights and contract entitlements for in-basin use above the Delta.

There is a great deal of uncertainty in respect to impacts of climate change on future water availability in California in terms of whether and where effect will occur as well as regarding the timing and severity of any such potential effect, making it impossible to draw a conclusion regarding significance without substantial speculation.

23.3.3 CONCLUSION

The characterization of climate change and the analysis of environmental issue areas provided above show that climate change is either too speculative for meaningful evaluation or would not result in:

- ▶ the proposed project having one or more new significant environmental effects not discussed in the previous impact evaluations contained in the DEIR;
- ▶ substantial increases in the severity of adverse environmental effects identified in the previous impact evaluations contained in the DEIR;
- ▶ identification of new mitigation measures that could result in new significant effects not disclosed in the DEIR; or
- ▶ the proposed project, or elements of the proposed project, becoming infeasible since publication of the DEIR.

These conclusions confirm that reasonably foreseeable effects from climate change are either too speculative for meaningful analysis at this time or would not affect previous impact evaluations, conclusions, or mitigation measures for the proposed project already contained in the text of the DEIR.

7 REVISED SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES

The following table provides a revised summary of impacts and mitigation measures.

Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
4 AESTHETICS			
Program Level Impacts			
4-1: Damage to Scenic Resources within a State Scenic Highway	NI	No mitigation measures are required.	NI
4-2: Degradation of Visual Character	S	4-2: The project applicant(s) for all project phases containing water storage tanks shall do the following to reduce visual impacts associated with water storage tanks: <ul style="list-style-type: none"> ▶ To the extent possible, construct water storage tanks in locations away from sensitive receptors. ▶ Use fencing and/or vegetation to screen water storage tanks up to 30 feet tall. ▶ For water storage tanks that would be taller than 30 feet, ensure that said tanks are painted a color designed to blend with the surroundings. ▶ Prohibit advertising slogans (other than the name of the water supplier) or brightly colored paints on any water storage tank. 	SU
4-3: Effects on Scenic Resources	LTS	No mitigation measures are required.	LTS
4-4: New Light and Glare and Nighttime Skyglow Effects	S	4-4: In addition to implementing the lighting guidelines contained in MLSP Policy 12.8, to reduce impacts associated with lighting, the project applicant(s) for all project phases shall conform to the following guidelines: <ul style="list-style-type: none"> ▶ Place and direct flood or area lighting needed for construction activities or for nighttime sporting activities so as not to disturb adjacent residential areas and passing motorists. ▶ Prohibit the use of mercury vapor lighting for public lighting in residential neighborhoods. ▶ Use appropriate building materials, lighting, and signage in the office/commercial areas to prevent light and glare from adversely affecting motorists on nearby roadways. 	SU

* NI = no impact, B = beneficial impact, LTS = less-than-significant impact, PS = potentially significant impact, S = significant impact, SU = significant and unavoidable impact, PSU = potentially significant and unavoidable impact

**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Include design features such as directional shielding for street lighting, parking lot lighting, and other substantial light sources, that will reduce effects of nighttime lighting. In addition, automatic shutoffs or motion sensors for lighting features shall be used to further reduce excess nighttime light. All nighttime lighting shall be shielded to prevent the light from shining off of the surface intended to be illuminated. 	
4-5: Aesthetic Effects of Future-Phase Off-Site Improvements	LTS	No mitigation measures are required.	LTS
Project Level (Phase 1) Impacts			
4-6: Damage to Scenic Resources within a State Scenic Highway	NI	No mitigation measures are required.	NI
4-7: Degradation of Visual Character	S	Implement Mitigation Measure 4-2.	SU
4-8: Effects on Scenic Resources	LTS	No mitigation measures are required.	LTS
4-9: New Light and Glare and Nighttime Skyglow Effects	S	Implement Mitigation Measure 4-4.	SU
4-10: Aesthetic Effects of Phase 1 Off-Site Improvements	LTS	No mitigation measures are required.	LTS
5 AGRICULTURAL RESOURCES			
Program Level Impacts			
5-1: Conversion of Agricultural Land	S	<p>5-1: The project applicant(s) of all project phases shall pay the City's agricultural land conversion mitigation fees if such a program is of \$9,600 per acre and shall follow all other provisions of the City's "Agricultural Land Mitigation Program" as adopted by the City of Stockton on February 27, 2007. If such a system is not adopted, the project applicant(s) shall pay a fee of \$4,800 per acre subject to development. Said fee shall be paid to the City or to an entity designated by the City that is qualified to accept such fees, and used to purchase agricultural land at another location off the project site that would be placed in a conservation easement.</p>	SU

* NI = no impact, B = beneficial impact, LTS = less-than-significant impact, PS = potentially significant impact, S = significant impact, SU = significant and unavoidable impact, PSU = potentially significant and unavoidable impact

Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		Implement Mitigation Measure 7-3 (contained in Chapter 7, “Biological Resources”), which requires participation in the SJMSCP and payment of fees by the applicant as required under that program, on a per-acre basis for lost agricultural land during development of the proposed MLSP and associated on- and off-site road and infrastructure improvements. SJCOG will use these funds to purchase conservation easements on agricultural and habitat lands in the project vicinity. The preservation in perpetuity of agricultural lands through the SJMSCP, a portion of which consists of Important Farmland, would ensure the continued protection of farmland in the project vicinity, partially offsetting project impacts.	
5-2: Conflict with Lands under Williamson Act Contracts	S	5-2: The project applicant(s) of all project phases shall coordinate with landowners and agricultural operators to sustain existing agricultural operations, at their discretion, within the SPA until the individual agricultural parcels are needed for urban development.	SU
5-3: Conversion of Agricultural Land from Future-Phase Off-Site Infrastructure Improvements	S	Implement Mitigation Measures 5-1 and 7-3 (see Chapter 7, “Biological Resources”).	SU
Project Level (Phase 1) Impacts			
5-4: Conversion of Agricultural Land	S	Implement Mitigation Measure 5-1.	SU
5-5: Conflict with Lands under Williamson Act Contracts	S	Implement Mitigation Measure 5-2.	SU
5-6: Conversion of Agricultural Land from Phase 1 Off-Site Infrastructure Improvements	S	Implement Mitigation Measures 5-1 and 7-3.	SU

* NI = no impact, B = beneficial impact, LTS = less-than-significant impact, PS = potentially significant impact, S = significant impact, SU = significant and unavoidable impact, PSU = potentially significant and unavoidable impact

Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
6 AIR QUALITY			
Program Level Impacts			
6-1: Generation of Temporary, Short-term Construction-Related Emissions of Criteria Air Pollutants and Precursors	S	<p>6-1a: All proposed development projects within the SPA shall comply with SJVAPCD’s ISR rule, as required by law. This rule shall apply to any applicant that seeks to gain a final discretionary approval for a development project, or any portion thereof, which upon full buildout would include 50 residential units, 2,000 square feet of commercial space, or 25,000 square feet of light industrial space, as well as similar minima for other land use types. Thus, all projects that would comprise the Program would be subject to requirements set forth in the ISR rule. Any applicant subject to this rule shall submit an Air Impact Assessment (AIA) application no later than applying for a final discretionary approval with the public agency. The AIA application shall be submitted on a form provided by SJVAPCD and contain, but not limited to, the applicant’s name and address, detailed project description, on-site emission reduction checklist, monitoring and reporting schedule, and an AIA. The AIA shall quantify construction NO_x and PM₁₀ emissions associated with the project. This shall include the estimated construction baseline emissions, and the mitigated emissions for each applicable pollutant for the development project, or each phase thereof, and shall quantify the off-site fee, if applicable. General mitigation requirements for construction emissions, as contained in the ISR rule, include the following:</p> <ul style="list-style-type: none"> ▶ Exhaust emissions for construction equipment greater than 50 horsepower used or associated with the development project shall be reduced by 20% of the total NO_x and by 45% of the total PM₁₀ exhaust emissions from the statewide average as estimated by ARB. ▶ An applicant may reduce construction emissions on-site by using less polluting construction equipment, which can be achieved by utilizing add-on controls, cleaner fuels, or newer lower emitting equipment. ▶ Additional strategies for reducing construction emissions may include, but are not limited to: 	SU

* NI = no impact, B = beneficial impact, LTS = less-than-significant impact, PS = potentially significant impact, S = significant impact, SU = significant and unavoidable impact, PSU = potentially significant and unavoidable impact

**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> • Providing commercial electric power to the project site in adequate capacity to avoid or minimize the use of portable electric generators and the equipment; • Substitution of electric-powered equipment for diesel engine driven equipment; and • Limiting the hours of operation of heavy duty equipment and/or the amount of equipment in use at any one time. <p>▶ The requirements listed above can be met through any combination of on-site emission reduction measures or off-site fees. The ISR rule provides a method of calculating fees to be paid to offset any NO_x and PM₁₀ emission reductions that would not be achieved by selection of construction equipment and fuels.</p> <p>6-1b: All proposed development projects within the SPA shall comply with SJVAPCD’s Regulation VIII, “Fugitive Dust Prohibitions,” and implement all applicable control measures, as required by law. Regulation VIII contains, but not limited to, the following required control measures.</p> <ul style="list-style-type: none"> ▶ Pre-water site sufficient to limit visible dust emissions (VDE) to 20% opacity. ▶ Phase work to reduce the amount of disturbed surface area at any one time. ▶ During active operations, apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity. ▶ During active operations, construct and maintain wind barriers sufficient to limit VDE to 20% opacity. ▶ During active operations, apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20% opacity and meet the conditions of a stabilized unpaved road surface. 	

* NI = no impact, B = beneficial impact, LTS = less-than-significant impact, PS = potentially significant impact, S = significant impact, SU = significant and unavoidable impact, PSU = potentially significant and unavoidable impact

**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ An owner/operator shall limit the speed of vehicles traveling on uncontrolled unpaved access/haul roads within construction sites to a maximum of 15 miles per hour. ▶ An owner/operator shall post speed limit signs that meet State and Federal Department of Transportation standards at each construction site's uncontrolled unpaved access/haul road entrance. At a minimum, speed limit signs shall also be posted at least every 500 feet and shall be readable in both directions of travel along uncontrolled unpaved access/haul roads. ▶ When handling bulk materials, apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity. ▶ When handling bulk material, construct and maintain wind barriers sufficient to limit VDE to 20% opacity and with less than 50% porosity. ▶ When storing bulk materials, comply with the conditions for a stabilized surface as listed above. ▶ When storing bulk materials, cover bulk materials stored outdoors with tarps, plastic, or other suitable material and anchor in such a manner that prevents the cover from being removed by wind action. ▶ When storing bulk materials construct and maintain wind barriers sufficient to limit VDE to 20% opacity and with less than 50% porosity. If utilizing fences or wind barriers, apply water or chemical/organic stabilizers/suppressants to limit VDE to 20% opacity or utilize a three-sided structure with a height at least equal to the height of the storage pile and with less than 50% porosity. ▶ Limit vehicular speed while traveling on the work site sufficient to limit VDE to 20% opacity. ▶ Load all haul trucks such that the freeboard is not less than 6 inches when material is transported across any paved public access road sufficient to limit VDE to 20% opacity. ▶ Apply water to the top of the load sufficient to limit VDE to 20% opacity. 	

* NI = no impact, B = beneficial impact, LTS = less-than-significant impact, PS = potentially significant impact, S = significant impact, SU = significant and unavoidable impact, PSU = potentially significant and unavoidable impact

**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Cover haul trucks with a tarp or other suitable cover. ▶ Clean the interior of the cargo compartment or cover the cargo compartment before the empty truck leaves the site; and prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate; and load all haul trucks such that the freeboard is not less than 6 inches when material is transported on any paved public access road, and apply water to the top of the load sufficient to limit VDE to 20% opacity; or cover haul trucks with a tarp or other suitable cover. ▶ Owners/operators shall remove all visible carryout and trackout at the end of each workday. ▶ An owner/operator of any site with 150 or more vehicle trips per day, or 20 or more vehicle trips per day by vehicles with three or more axles shall take the actions for the prevention and mitigation of carryout and trackout. ▶ Within urban areas, an owner/operator shall prevent carryout and trackout, or immediately remove carryout and trackout when it extends 50 feet or more from the nearest unpaved surface exit point of a site. ▶ Within rural areas, construction projects 10 acres or more in size, an owner/operator shall prevent carryout and trackout, or immediately remove carryout and trackout when it extends 50 feet or more from the nearest unpaved surface exit point of a site. ▶ For sites with paved interior roads, an owner/operator shall prevent and mitigate carryout and trackout. 	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Cleanup of carryout and trackout shall be accomplished by manually sweeping and picking-up; or operating a rotary brush or broom accompanied or preceded by sufficient wetting to limit VDE to 20% opacity; or operating a PM₁₀-efficient street sweeper that has a pick-up efficiency of at least 80%; or flushing with water, if curbs or gutters are not present and where the use of water would not result as a source of trackout material or result in adverse impacts on storm water drainage systems or violate any National Pollutant Discharge Elimination System permit program. ▶ An owner/operator shall submit a Dust Control Plan to the Air Pollution Control Officer (APCO) prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. Construction activities shall not commence until the APCO has approved or conditionally approved the Dust Control Plan. An owner/operator shall provide written notification to the APCO within 10 days prior to the commencement of earthmoving activities via fax or mail. The requirement to submit a dust control plan shall apply to all such activities conducted for residential and nonresidential (e.g., commercial, industrial, or institutional) purposes or conducted by any governmental entity. <p>6-1c: The following SJVAPCD-recommended enhanced and additional control measures shall be implemented by each project applicant to further reduce fugitive PM₁₀ dust emissions.</p> <ul style="list-style-type: none"> ▶ Install sandbags or other erosion control measures to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1%. ▶ Suspend excavation and grading activity when winds exceed 20 mph. ▶ Limit area subject to excavation, grading, and other construction activity at any one time. 	

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>6-1d: The following SJVAPCD-recommended additional control measures shall be implemented by each project applicant to further reduce exhaust emissions.</p> <ul style="list-style-type: none"> ▶ Minimize idling time (e.g., 10-minute maximum). ▶ Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). ▶ Staging areas for heavy-duty construction equipment shall be located as far as possible from sensitive receptors. 	
<p>6-2: Generation of Long-term Operation-Related (Regional) Emissions of Criteria Air Pollutants and Precursors</p>	S	<p>6-2a: Each applicant subject to this rule shall submit an AIA application no later than applying for a final discretionary approval with the public agency, as described in Mitigation Measure 6-1a. The AIA shall quantify operational NO_x and PM₁₀ emissions associated with the project. The AIA shall include the estimated operational baseline emissions, and the mitigated emissions for each applicable pollutant for the development project, or each phase thereof, and shall quantify the off-site fee, if applicable. General mitigation requirements for operations emissions, as contained in the ISR rule, include the following:</p> <ul style="list-style-type: none"> ▶ Applicants shall reduce 33.3% of the project’s operational baseline NO_x emissions over a period of 10 years as quantified in the approved AIA. ▶ Applicants shall reduce 50% of the project’s operational baseline PM₁₀ emissions over a period of 10 years as quantified in the approved AIA. <p>The requirements listed above can be met through any combination of on-site emission reduction measures or off-site fees. The ISR rule provides a method of calculating fees to be paid to offset any NO_x and PM₁₀ emission reductions that would not be achieved by selection of construction equipment and fuels.</p>	SU

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>6-2b: At the program level, mitigation of potential impacts, especially ozone precursor and PM₁₀ emissions, is best achieved in the project design stage, and by setting standards for each of the projects that would be developed over the next 30 years. The following SJVAPCD-recommended mitigation measures shall be implemented by each project applicant, as appropriate to each development, to further reduce mobile source operational emissions. Measures to be implemented include, but shall not be limited to, the following:</p> <ul style="list-style-type: none"> ▶ Transit Infrastructure: Provide transit enhancing infrastructure that includes transit shelters, benches, street lighting, route signs and displays, and/or bus turnouts/bulbs. ▶ VMT [Vehicle Miles Traveled] 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, and others. ▶ 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. ▶ Shuttle Operational: Establish midday shuttle service from worksite to food service establishments/commercial uses and provide shuttle to transit stations/multimodal centers. 	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Parking Operational: Provide preferential parking for carpool and vanpool vehicles, implement parking fees for single occupancy vehicle commuters, implement parking cash-out program for employees. ▶ Transit Operational: Provide transit incentives (e.g., transit use incentives for employees, transit route maps and schedules posted at worksite, and design and locate buildings to facilitate transit access). ▶ Other Operational: Implement compressed work schedule and home-based telecommuting program. ▶ Nonresidential land uses shall provide bicycle lockers and/or racks for patrons, employees, students in a covered secured area. ▶ Bicycle storage shall be provided at apartment complexes or condos without garages. ▶ Commercial and industrial land uses with more than 15 employees shall provide personal showers and lockers for employees. ▶ Provide for pedestrian facilities and improvements such as overpasses and wider sidewalks (e.g., 5-foot). ▶ Parking lot design shall include clearly marked and shaded pedestrian pathways between transit facilities and building entrances. ▶ Exits to adjoining streets shall be designed to reduce time to reenter traffic from project site. ▶ The project shall implement measures to reduce the amount of vehicle traffic to and from the project area (e.g., provide information center for residents to coordinate carpooling). ▶ The project shall include as many clean alternative energy features as possible to promote energy self-sufficiency (e.g., photovoltaic cells, solar thermal electricity systems, small wind turbines). 	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>6-2c: Similar to Mitigation Measure 6-2b, the following SJVAPCD-recommended mitigation measures shall be implemented by each project applicant, as appropriate to each development, to further reduce area source operational emissions. Measures to be implemented include, but shall not be limited to, the following:</p> <ul style="list-style-type: none"> ▶ Provide electrical outlets at building exterior areas and electric powered landscape 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). ▶ Orient buildings to take advantage of solar heating and natural cooling and use passive solar designs (residential, commercial, and industrial). ▶ Eliminate or limit the amount of traditional fireplaces installed (e.g., natural gas fireplaces/inserts or at least EPA certified wood stoves or inserts instead of open hearth fireplaces). ▶ Provide energy efficient windows (double pane and/or Low-E) and awnings or other shading mechanisms for windows, porch, patio, and walkway overhangs. ▶ Provide highly reflective roofing materials and radiant heat barriers. ▶ In the design of heating and cooling systems, consider passive solar cooling and heating designs, ceiling and whole house fans, and programmable thermostats. Utilize day lighting systems such as skylights, light shelves, and interior transom windows. 	
6-3: Generation of Long-term Operation-Related (Local) Mobile-Source Emissions of Carbon Monoxide	LTS	No mitigation measures are required.	LTS
6-4: Generation of Long-Term Operation-Related Emissions of Greenhouse Gases	S	Implement Mitigation Measures 6-2a, 6-2b, and 6-2c.	SU

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
6-5: Exposure of Sensitive Receptors to Existing and Project-Generated Emissions of Toxic Air Contaminants	S	<p>6-5: With respect to project-generated, operation-related emissions of TACs from mobile sources associated with the proposed industrial and commercial uses, the following mitigation measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ Proposed facilities that would require the long-term use of diesel equipment and heavy-duty trucks shall develop and implement a plan to reduce emissions, which may include such measures as scheduling such activities when the residential uses are the least occupied, and requiring such equipment to be shut off when not in use and prohibiting heavy trucks from idling. The plan shall be submitted to and approved by the City before loading dock activities begin. Copies of the plan shall be provided to all residential dwellings located within 1,000 feet of loading dock areas. ▶ Proposed commercial/convenience land uses (e.g., loading docks) that have the potential to emit TAC emissions shall be located as far away as feasibly possible from existing and proposed sensitive receptors and oriented where possible to place buildings or other obstructions between the trucking areas and normally downwind receptors. 	PSU
6-6: Exposure of Sensitive Receptors to Odors	S	<p>6-6: The project applicant(s) for all project phases shall ensure that the following measures are implemented:</p> <ul style="list-style-type: none"> ▶ The deeds to all MLSP properties located within 1 mile of the existing California Dry Spray and dairies shall include a disclosure clause, prepared by an attorney with expertise in the field, and approved by the City, advising owners and tenants of potential adverse odor impacts from related activities. The disclosure clause shall also include a discussion of San Joaquin County’s right-to-farm ordinance. ▶ Proposed sensitive receptors (any land uses other than industrial or commercial) shall be located at least one mile from the existing California Spray Dry facility. 	SU

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Proposed industrial/commercial/convenience land uses (e.g., fast food restaurants, painting operations) that have the potential to emit objectionable odors shall be located as far away as feasibly possible from existing and proposed sensitive receptors and oriented where possible to place buildings or other obstructions between the odor source and downwind receptors. ▶ If an odor-emitting facility is to occupy space in the industrial/commercial/convenience area, the City shall require odor control devices (e.g., wet chemical scrubbers, activated carbon scrubbers, biologically active filters, enclosures) to be installed to reduce objectionable odors. 	
6-7: Generation of Temporary, Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors from Future-Phase Off-Site Improvements	S	Implement Mitigation Measures 6-1a, 6-1b, 6-1c, and 6-1d.	SU (ROG and NO _x); LTS (PM ₁₀)
Project Level (Phase 1) Impacts			
6-8: Generation of Temporary, Short-term Construction-Related Emissions of Criteria Air Pollutants and Precursors	S	Implementation of Mitigation Measures 6-1a and 6-1d.	SU (ROG and NO _x); LTS (PM ₁₀)
6-9: Generation of Long-term Operation-Related (Regional) Emissions of Criteria Air Pollutants and Precursors.	S	Implementation of Mitigation Measures 6-2a, 6-2b, and 6-2c.	SU
6-10: Generation of Long-term Operation-Related (Local) Mobile-Source Emissions of Carbon Monoxide.	LTS	No mitigation measures are required.	LTS
6-11: Generation of Long-term Operation-Related Emissions of Greenhouse Gases.	S	Implementation of Mitigation Measures 6-2a, 6-2b, and 6-2c.	SU
6-12: Exposure of Sensitive Receptors to Emissions of Toxic Air Contaminants.	S	Implementation of Mitigation Measure 6-5.	PSU
6-13: Exposure of Sensitive Receptors to Odors	S	Implementation of Mitigation Measure 6-6.	SU
6-14: Generation of Temporary, Short-Term Construction-Related Air Quality Effects from Phase 1 Off-Site Improvements.	S	Implementation of Mitigation Measures 6-1a, 6-1b, 6-1c, and 6-1d.	SU (ROG and NO _x); LTS (PM ₁₀)

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
7 BIOLOGICAL RESOURCES			
Program Level Impacts			
7-1: Loss of Special-Status Plants	PS	<p>7-1: The project applicant(s) of all project phases shall adhere to the following procedures to minimize the potential loss of special-status plant species as a result of habitat conversion and future phase development:</p> <ul style="list-style-type: none"> ▶ Before the start of grading activities for each phase of development, a protocol-level preconstruction survey for Delta tule pea, rose-mallow, slough thistle, and Sanford’s arrowhead shall be conducted in all areas of each project phase that provides suitable habitat for these species to determine whether populations of these plants are present. The survey shall be conducted by a qualified botanist following DFG-approved guidelines at a time when the target species are in flower and clearly identifiable. If no special-status plants are found, the results shall be documented in a letter report and no further mitigation shall be required. ▶ If special-status plants are found during the preconstruction survey, the following measures shall be implemented: <ul style="list-style-type: none"> • Sanford’s arrowhead and slough thistle: The SJMSCP requires complete avoidance for these species; therefore, potential impacts on these species cannot be mitigated through participation in the SJMSCP. If these species are present in the project site and cannot be avoided, a mitigation plan shall be developed, with review and input from DFG. The mitigation plan shall identify specific measures for any populations affected by the proposed 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 loss of on-site habitat. All mitigation measures that the City determines through this consultation to be necessary shall be implemented by the project applicant(s) of each project phase before the start of construction activities. 	LTS

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Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> • Rose-mallow and Delta tule pea: These species are considered widely distributed by the SJMSCP, and dedication of conservation easements is the preferred option for mitigation. If these species are found during preconstruction surveys, the possibility of establishing a conservation easement shall be evaluated with the SJMSCP. If dedication of a conservation easement is not a feasible option, payment of SJMSCP development fees may be used to reduce significant impacts on these species. <u>If these species are found in project areas not covered by the SJMSCP, then a mitigation plan shall be developed by the botanist, with review and input from DFG. The mitigation plan shall identify specific measures for any populations affected by the proposed 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 loss of on-site habitat. All mitigation measures that the City determines through this consultation to be necessary shall be implemented by the project applicant(s) of each project phase before the start of construction activities.</u> 	
7-2: Loss or Damage to Protected Oak Trees	S	<p>7-2: The project applicant(s) of all project phases shall implement the following measures to minimize project effects on protected oak trees:</p> <ul style="list-style-type: none"> ▶ Tentative subdivision maps for residential areas and commercial/ industrial site plans shall identify the species, location, and diameter of existing individual oak trees meeting the heritage tree definition (trunk diameter of 16 inches or greater as measured at 24 inches above actual grade). A certified arborist’s report that identifies the retention value of all native oak trees shall be submitted to the City of Stockton with the plans before building permits are issued. ▶ Impacts on heritage trees shall be avoided wherever possible. A permit shall be obtained for any necessary removal of a heritage tree, pursuant to the Stockton Heritage Tree Ordinance. If heritage tree removal is unavoidable, mitigation in the form of replacement plantings for trees lost shall be provided, consistent with the Stockton Heritage Tree Ordinance. 	LTS

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Grading of development sites that include heritage trees to be preserved shall be designed to preserve existing grade to the dripline surrounding the heritage tree, to enhance tree survivability wherever feasible. ▶ Any oak tree within 200 feet of proposed grading activity shall be protectively fenced 5 feet beyond the dripline and root zone of each oak tree (as determined by a certified arborist). This fence shall be maintained until all construction activities are completed. No grading, trenching, or movement of construction equipment shall be allowed within the fenced area. ▶ For existing heritage trees that would be retained on-site, all remedial pruning or other recommendations set forth in the certified arborist's report shall be implemented. ▶ Where feasible, replacement oak trees shall be planted on the same site as the removed trees if at all possible; otherwise, an alternate site shall be selected and submitted to the City Parks and Recreation Department for approval. The size of replacement trees shall be based on the original tree's retention value in accordance with current City standards. ▶ The project applicant(s) of all project phases shall provide the resources including any necessary replacement of damaged or unhealthy trees, necessary to ensure that the newly planted replacement trees become established in their new location in accordance with current City standards. 	
7-3: Loss of Special-Status Wildlife Species and/or Loss of Habitat for Areas of the SPA Covered under the SJMSCP.	S	7-3: The project applicant(s) for all project phases that are located within the SJMSCP area shall participate in the SJMSCP. SJMSCP participation shall include payment of the required fee, compliance with the measures contained in the SJMSCP, and taking any other actions required by SJCOG in implementing the adopted SJMSCP. The requirements of the SJMSCP for species that have either been observed or have potential to inhabit portions of the SPA located within the SJMSCP area are described below.	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>(a) Swainson's Hawk and Other Raptors: To minimize potential project effects on nesting Swainson's hawk and other common raptors, and on foraging habitat for Swainson's hawk, the project applicant(s) for all project phases that are located within the SJMSCP area shall comply with the following SJMSCP measures:</p> <ul style="list-style-type: none"> ▶ Retain a qualified biologist before the start of project construction that occurs during the raptor nesting season (March 1–September 15) to conduct a focused preconstruction survey to identify active Swainson's hawk and other nesting raptor nests. Surveys shall include all areas of suitable nesting habitat within 0.25 mile of project construction sites. If no active nests are found, no further mitigation shall be required. If a nest tree is occupied during construction activities, then all construction activities must remain at a distance of two times the dripline of the tree, measured from the nest. If a nest tree is to be removed, removal must occur between September 1 and February 15, when the nests are unoccupied. ▶ Pay land conversion fees to the SJMSCP to secure 1 acre of preserve, to be enhanced and managed in perpetuity, for each acre of habitat converted. The current compensation fee for conversion of agricultural habitat lands is \$13,022 per acre. <p>(b) White-Tailed Kite: To minimize potential project effects on nesting white-tailed kite, the project applicant(s) for all project phases that are located within the SJMSCP area shall comply with the following SJMSCP measure:</p>	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Retain a qualified biologist to conduct a focused preconstruction survey to identify active white-tailed kite nests before project construction commences. Preconstruction surveys for white-tailed kite shall investigate all potential nesting trees on the project site (e.g., oak, willow, eucalyptus, and cottonwood trees 15 feet tall or greater) during the nesting season (February 15–September 15). If nesting white-tailed kites are found, a setback of 100 feet from nesting areas shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave the nest, as determined by a qualified biologist. This setback applies when construction or other ground-disturbing activities must begin during nesting season and occupied nests are known to be present. Setbacks shall be marked by brightly colored temporary fencing. <p>(c) Burrowing Owl: To minimize potential project effects on burrowing owl, the project applicant(s) for all project phases that are located within the SJMSCP area shall comply with following SJMSCP measure:</p> <ul style="list-style-type: none"> ▶ Retain a qualified biologist to conduct a preconstruction survey within 30 days before the start of construction activities in all project phases to investigate the presence of burrowing owls. If an active burrow is found during the nonbreeding season (September 1–January 31) it cannot be avoided, then burrowing owls may be evicted from occupied burrows by a qualified biologist using passive relocation as described in DFG’s Staff Report on Burrowing Owl Mitigation (DFG1995). If an active burrow is found during the breeding season (February 1–August 31), occupied burrows shall not be disturbed and shall be provided with a 250-foot protective buffer unless a qualified biologist verifies through noninvasive means that either (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed while the birds are away from the burrow. 	

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Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>(d) Giant Garter Snake: To minimize potential project effects on the loss of giant garter snakes or habitat, the project applicant(s) for all project phases that are located within the SJMSCP area shall comply with the following SJMSCP measure (Section 5.2.4.8 of the SJMSCP):</p> <ul style="list-style-type: none"> ▶ Retain a qualified biologist to conduct a preconstruction survey for giant garter snake after completion of environmental reviews and within 24 hours before ground disturbance within potential giant garter snake habitat. ▶ Initiate construction activities and vegetation removal within 200 feet of the banks of potential giant garter snake aquatic habitat during the active period for giant garter snake (May 1–October 1). Between October 2 and April 30, the SJMSCP Joint Powers Authority, with concurrence of the permitting agency’s representatives on the Technical Advisory Committee, shall determine whether additional measures are necessary to minimize and avoid take. ▶ Dewater suitable aquatic habitat that will be permanently removed as part of the proposed project (i.e., irrigation ditches and Branch Creek) at least 2 weeks before any ground disturbance. ▶ Prohibit dewatering of aquatic habitat between October 1 and April 15. Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and before the excavation or filling of the dewatered habitat. ▶ Remove all vegetation from the banks and channels of the irrigation ditches and segments of Branch Creek that will be permanently filled, rendering it unsuitable for giant garter snake after the aquatic habitat has been dewatered and remained dry for 15 consecutive days. ▶ Initiate construction, including fill of the aquatic habitat beyond the active season for giant garter snake once the SPA has been rendered unsuitable under the supervision of a qualified biologist. 	

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Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Limit vegetation clearing and construction disturbance within 200 feet of the banks of potential giant garter snake aquatic habitat that will be retained on-site (i.e., Duck Creek and North Little Johns Creek) to the minimum area necessary. ▶ Provide construction worker training to all on-site construction personnel before the start of ground-disturbing activities. The training shall be given by a qualified biologist retained by the project applicant(s) regarding the presence of species included in the SJMSCP and the importance of avoiding impacts on these species and their habitats. ▶ Conduct all restoration work on Duck Creek and North Little Johns Creek during the active season for giant garter snake (May 1–October 1). All restoration work during the active season shall be monitored by a qualified biologist to minimize incidental take of this species. ▶ Install temporary fencing at the edge of the construction area and the adjacent aquatic habitat in areas where wetlands, irrigation ditches, marsh habitat, or other potential giant garter snake habitat will be retained on-site. Work areas, spoils and equipment storage, and other project activities shall be restricted to areas outside of aquatic habitats, except for restoration activities within Duck Creek and North Little Johns Creek. Water quality shall be maintained and construction runoff shall be limited in aquatic habitats by using hay bales, filter fences, vegetative buffer strips, or other accepted equivalents. ▶ Implement other provisions of the USFWS Standard Avoidance and Minimization Measures during Construction Activities in Giant Garter Snake Habitat (excluding programmatic mitigation ratios, which are superseded by SJMSCP mitigation ratios). 	

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Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
7-4: Loss of Special-Status Wildlife Species and/or Loss of Habitat for Areas of the SPA that are Outside the covered SJMSCP Area.	S	<p>7-4: The project applicant(s) for all project phases that are located outside the covered SJMSCP area shall implement the following species/resource-specific measures:</p> <p>(a) Swainson’s Hawk and Other Raptors: To minimize potential adverse effects on nesting Swainson’s hawk and other common raptors, and on foraging habitat for Swainson’s hawk, the project applicant(s) of all project phases outside the covered SJMSCP area shall implement the following measures:</p> <ul style="list-style-type: none"> ▶ Conduct preconstruction surveys to identify active nests within areas that are not covered by the SJMSCP, if project construction activity occurs during the breeding season of Swainson’s hawk and other common raptors (March 1–September 15). The preconstruction survey shall be conducted by a qualified biologist. Surveys shall be conducted no less than 14 days and no more than 30 days before construction activities commence. To the extent feasible, guidelines provided in the <i>Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley</i> (Swainson’s Hawk TAC 2000) shall be followed. ▶ Establish an appropriate buffer if an active nest is found. The buffer shall be established by a qualified biologist. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. DFG guidelines recommend 0.25-mile or 0.5-mile buffers for Swainson’s hawk, but the size of the buffer may be adjusted if a qualified biologist and DFG determine that project activity would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist may be required if the activity could adversely affect the nest. ▶ Compensate for loss of Swainson’s hawk foraging habitat. The amount of mitigation habitat shall be based on the amount to be lost and the distance between the project site and active nest trees. The City shall determine appropriate mitigation ratios after consultation with DFG. Typical mitigation ratios have ranged from 0.5:1 to 1:1 of mitigation lands to lost foraging habitat. 	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>(b) White-Tailed Kite: To minimize potential project effects on nesting white-tailed kite, the project applicant(s) for all project phases located outside the covered SJMSCP area shall implement measure (b) in Mitigation Measure 7-3.</p> <p>(c) Burrowing Owl: To minimize potential project effects on burrowing owls, the project applicant(s) for all project phases located outside the covered SJMSCP area shall implement the following measures:</p> <ul style="list-style-type: none"> ▶ Retain a qualified biologist to conduct focused surveys for burrowing owls before the start of construction activity in the 800-acre portion of the SPA outside the SJMSCP area. Surveys shall be conducted no less than 14 days and no more than 30 days before commencement of construction activity, and surveys shall be conducted in accordance with DFG protocol (DFG 1995). ▶ Submit a letter report documenting survey methods and findings to DFG. The letter report shall be prepared by a qualified biologist. If no occupied burrows are found in the survey area, no further action shall be necessary. ▶ Establish appropriate buffers if occupied burrows are found. To avoid adverse effects on the burrows, buffers shall be established by a qualified biologist. A buffer of 165 feet shall be established as required during the nonbreeding season (September 1–January 31), and a buffer of 250 feet shall be established as required during the breeding season (February 1–August 31). To the extent feasible, project activity shall be excluded from within the buffer areas. In addition, a minimum of 6.5 acres of foraging habitat shall be preserved contiguous with each occupied burrow during the nesting season. 	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Use on-site passive relocation techniques approved by DFG to encourage owls to move to alternative burrows outside the construction area, if construction activity must occur within the established buffer zones. However, no occupied burrows shall be disturbed during the nesting season unless a qualified biologist verifies through noninvasive methods that the burrow is no longer occupied. Foraging habitat for relocated pairs shall be provided in accordance with guidelines described by the California Burrowing Owl Consortium (1993), which provide for 6.5–19.5 acres of habitat per pair. <p>(d) Giant Garter Snake: To minimize potential project effects on giant garter snakes, the project applicant(s) of all project phases outside the covered SJMSCP area shall implement measure (d) in Mitigation Measure 7-3 <u>and these additional measures:</u></p> <ul style="list-style-type: none"> ▶ <u>If it is not possible to complete in-water and bankside construction by October 1, such activities may continue beyond that date, provided a qualified biological monitor is present on the project site and USFWS provides concurrence that such activities are not likely to adversely affect giant garter snake.</u> ▶ <u>If a live giant garter snake is encountered during construction activities, the project’s biological monitor and USFWS shall be immediately notified. The biological monitor shall stop construction activity in the vicinity of the giant garter snake. The monitor shall remain in the area for the remainder of the workday to make sure the snake is not harmed or if it leaves the site, that it does not return. If the giant garter snake does not leave on its own within one working day, further consultation with USFWS shall be conducted.</u> 	
7-5: Loss of Migratory Birds and/or Destruction of Nests.	PS	7-5a: If vegetation removal is proposed during the migratory bird breeding season (March 1–August 31), the project applicant(s) of all project phases within the SPA (including those areas of the SPA outside of the covered SJMSCP area) shall hire a qualified biologist to conduct a focused survey of migratory bird nests. The survey shall be conducted no more than 14 days before vegetation removal.	LTS

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		7-5b: If nesting migratory birds are found during the focused survey, vegetation in which any nest is located shall not be removed until the young have fledged (i.e., left the nest), as determined by a qualified biologist.	
7-6: Effects on Special-Status Fish Species	PS	Implement Mitigation Measure 11-1a and 11-1b described in Chapter 11, "Hydrology and Water Quality."	LTS
7-7: Loss and Degradation of Jurisdictional Wetlands and Other Waters of the United States, and Possibly Waters of the State.	S	<p>7-7a: Before the approval of grading and improvement plans and before any groundbreaking activity associated with each distinct project phase, the project applicant(s) for each project phase requiring work affecting the bed or bank of Duck Creek, Branch Creek, or North Little Johns Creek shall obtain a Section 1602 Streambed Alteration Agreement from DFG, and all conditions of the agreement shall be implemented.</p> <p>7-7b: Before the approval of grading and improvement plans and before any groundbreaking activity associated with each project phase that requires the fill of wetlands or other waters of the United States or waters of the state, the project applicant(s) shall obtain all necessary permits and implement all permit conditions under Sections 401 and 404 of the CWA or, under the state's Porter-Cologne Act (if applicable) for the respective phase. The project applicant(s) shall commit to replace, restore, or enhance on a "no net loss" basis (in accordance with USACE and the Central Valley RWQCB) the acreage of all wetlands and other waters of the United States subject to USACE jurisdiction and waters of the state subject to RWQCB jurisdiction that would be removed, lost, and/or degraded with implementation of project plans for that phase. Wetland habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods agreeable to USACE, the Central Valley RWQCB, and the City, as appropriate depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes.</p>	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>7-7c: As part of the Section 404 permitting process, a wetland mitigation and monitoring plan covering all phases of development shall be developed and implemented for the proposed project. The wetland mitigation and monitoring plan shall aim to ensure no net loss in wetland functions and values in the SPA as well as any affected off-site improvements and shall also address the temporal loss of habitat during project construction. An adequate margin of safety to reflect anticipated success shall also be included in the plan. The wetland mitigation and monitoring plan for jurisdictional wetland features shall be consistent with USACE's December 30, 2004, Habitat Mitigation and Monitoring Proposal Guidelines. The wetland creation section of the habitat mitigation and monitoring plan shall include the following:</p> <ul style="list-style-type: none"> ▶ target areas for creation; ▶ a complete biological assessment of the existing resources in the target areas; ▶ specific creation and restoration plans for each target area; ▶ performance standards for success that will illustrate that the compensation ratios are met; and ▶ a monitoring plan, including schedule and annual-report format. <p>The project applicant(s) of all project phases shall submit the draft wetland mitigation and monitoring plan to USACE and the Central Valley RWQCB for review and approval before the start of any ground-disturbing activities that would adversely affect wetlands, and before engaging in mitigation activities associated with each phase of development affecting wetlands.</p> <p>7-7d: If any waters of the state subject to the Porter-Cologne Act would be affected by project implementation, the project applicant(s) of the affected project phase shall develop and implement a mitigation and monitoring plan to ensure no net loss of wetland functions and values, and shall submit the plan to the Central Valley RWQCB for review and approval. Alternatively, the wetland mitigation and monitoring plan developed to comply with Mitigation Measure 7-7c above could be developed to address loss of waters of the state in addition to loss of waters of the United States.</p>	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>7-7e: For each phase of project development, the project applicant(s) shall secure the permits and regulatory approvals described above and shall implement all permit conditions. For each respective phase, all permits, regulatory approvals, and permit conditions for effects on wetland habitats shall be secured before implementation of any grading activities within 250 feet of waters of the United States, waters of the state, or wetland habitats that potentially support federally listed species. The setback may be reduced to a distance approved by the City and USFWS if a wetland avoidance plan is developed and implemented by a qualified biologist. The wetland avoidance plan must be approved by USFWS and the City and shall demonstrate that all direct and indirect impacts on wetlands would be avoided. Project phases in upland areas with no wetlands or waters of the United States within 250 feet, and no overland hydrologic flow patterns, the disturbance of which may affect such waters, may begin construction before these particular permits are obtained. Buffers around wetlands that do not support federally listed species shall be a minimum of 50 feet from the edge of these features in accordance with conditions of the City’s National Pollutant Discharge Elimination System permit and associated best management practices.</p>	
<p>7-8: Alteration of Wildlife Movement Corridors and Nursery Sites</p>	<p>LTS</p>	<p>No mitigation measures are required.</p>	<p>LTS</p>
<p>7-9: Consistency with the SJMSCP.</p>	<p>NI</p>	<p>No mitigation measures are required.</p>	<p>NI</p>
<p>7-10: Effects on Biological Resources from Future-Phase Off-Site Improvements.</p>	<p>PS</p>	<p>7-10a: To minimize effects on special-status species, the project applicant(s) of all future phases (development Phases 2–5) shall implement the following measures before issuance of a grading permit for any off-site improvement in these development phases:</p> <ul style="list-style-type: none"> ▶ Retain qualified biologist(s) and/or botanist(s) to conduct appropriate biological surveys and habitat assessments in accordance with established survey protocols and guidelines. 	<p>LTS</p>

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ If the biologist/botanist determines that there is no potential for occurrence of any special-status plant or wildlife species, special-status species may be presumed absent and no further mitigation shall be necessary. ▶ If special-status species are present <u>within areas covered by the SJMSCP</u>, the project applicant(s) shall consult with a SJCOG biologist to make sure that all applicable measures contained in the SJMSCP are implemented. ▶ <u>If special-status species are present in areas that are not covered by the SJMSCP, then the project applicant(s) shall consult with DFG or USFWS, as appropriate depending on the species' listing status, and implement the species-specific measures outlined in Mitigation Measure 7-4.</u> <p>7-10b: To minimize effects on wetlands and riparian habitat, the project applicant(s) of all future phases (development phases 2–5) shall implement the following measures before issuance of a grading permit for any off-site improvement in these development phases:</p> <ul style="list-style-type: none"> ▶ Determine through the formal Section 404 wetland delineation process whether potential jurisdictional waters of the United States, including wetlands, are present within any of the potential off-site improvement areas. ▶ If wetlands are determined to be jurisdictional and can be avoided, no further mitigation shall be required. ▶ If potential jurisdictional waters of the United States, including wetlands, are present and would be filled as a result of the proposed off-site improvements, authorization of a Section 404 permit shall be secured from USACE, and a Section 1602 Streambed Alteration Agreement shall be secured by DFG, as appropriate. 	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ As part of the permitting process, mitigation of impacts on jurisdictional waters of the United States, including wetlands, shall be identified and implemented. The acreage shall be replaced or rehabilitated on a “no-net-loss” basis in accordance with USACE regulations. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods agreeable to USACE. ▶ All grading and trenching plans shall include adequate setbacks for preserved seasonal and perennial drainages. Measures to minimize erosion and runoff into seasonal and perennial drainages that are preserved shall also be included in all grading and trenching plans. <p>7-10c: To minimize effects on oak trees, the project applicant(s) of all future phases (development Phases 2–5) shall implement the following measures before issuance of a grading permit for any off-site improvement in these development phases:</p> <ul style="list-style-type: none"> ▶ Submit a tree survey to the City of Stockton Community Development Department, Planning Division, and/or to San Joaquin County, depending on jurisdiction, for review and approval. A map of all trees to be removed or disturbed during project construction and a preservation and placement plan shall be included with the survey. ▶ Obtain a permit for any necessary removal of a heritage tree, pursuant to the Stockton Heritage Tree Ordinance, or the San Joaquin County Development Code, depending on jurisdiction. If heritage tree removal is unavoidable, mitigation in the form of replacement plantings for trees lost shall be provided, consistent with the Stockton Heritage Tree Ordinance and/or San Joaquin County Development Code, depending on jurisdiction. ▶ If improvements would occur in areas under the County’s jurisdiction, the removal of oak trees greater than 6 inches in diameter shall be avoided where feasible. If avoidance is not feasible, replacement trees shall be planted at a ratio of 3:1, as required by the San Joaquin County Development Code. 	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Protectively fence oaks that would not be removed and that are within 200 feet of any grading activity. The protective fencing shall be erected 5 feet beyond the dripline and root zone of each oak tree (as determined by a certified arborist). This fence shall be maintained until all construction activities are completed. No grading, trenching, or movement of construction equipment shall be allowed within the fenced area. Protection for oak trees on any slope shall include installation of a silt fence. A silt fence shall be installed at the upslope base of the protective fence to prevent any soil from drifting down over the root zone. ▶ Provide the resources including any necessary replacement of damaged or unhealthy trees, necessary to ensure that the newly planted replacement oak trees become established in their new location in accordance with current City and/or County standards, depending on jurisdiction. <p>Implement Mitigation Measure 11-1a and 11-1b described in Chapter 11, “Hydrology and Water Quality.”</p>	
Project Level (Phase 1) Impacts			
7-11: Loss of Special-Status Plants	PS	Implement Mitigation Measure 7-1.	LTS
7-12: Loss of or Damage to Protected Oak Trees.	PS	Implement Mitigation Measure 7-2.	LTS
7-13: Loss of Special-Status Wildlife Species and/or Loss of Habitat for Phase 1 Areas within the SJMSCP Area.	S	Implement Mitigation Measure 7-3.	LTS
7-14: Loss of Special-Status Wildlife Species and/or Loss of Habitat for Phase 1 Areas Outside the SJMSCP Area.	NI	No mitigation measures are required.	NI
7-15: Loss of Migratory Birds and/or Destruction of Nests.	PS	Implement Mitigation Measures 7-5a and 7-5b.	LTS
7-16: Effects on Special-Status Fish Species	PS	Implement Mitigation Measure 11-1 described in Chapter 11, “Hydrology and Water Quality.”	LTS
7-17: Loss and Degradation of Jurisdictional Wetlands and Other Waters of the United States, and Possibly Waters of the State.	S	Implementation of Mitigation Measures 7-7a, 7-7b, 7-7c, 7-7d, and 7-7e.	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
7-18: Alteration of Wildlife Movement Corridors and Nursery Sites	LTS	No mitigation measures are required.	LTS
7-19: Consistency with the SJMSCP.	NI	No mitigation measures are required.	NI
7-20: Effects on Biological Resources from Phase 1 Off-Site Improvements.	PS	<p>7-20: The project applicant(s) of all proposed Phase 1 off-site improvements shall implement the measures listed below to protect biological resources from impacts that would result from construction of off-site improvements during development Phase 1.</p> <ul style="list-style-type: none"> (a) Special-Status Fish: Implement Mitigation Measure 11-1a and 11-1b. (b) Special Status Plants: Implement Mitigation Measure 7-1. (c) Swainson’s Hawk and Common Raptors: Implement measure (a) under Mitigation Measure 7-3 for all Phase 1 off-site improvements in areas that support suitable nest sites (i.e., large trees) for Swainson’s hawk. In addition, implement this measure before the start of project activities at the Arbini groundwater recharge site. (d) White-Tailed Kite: Implement measure (b) under Mitigation Measure 7-3. (e) Burrowing Owl: Implement measure (c) under Mitigation Measure 7-3 for all Phase 1 off-site improvement areas that provide suitable habitat for burrowing owls (i.e., Arbini groundwater Recharge site, domestic water supply routes, sanitary sewer pipeline routes, and Mariposa Road/Austin Road intersection reconfiguration area and railroad grade separation area). (f) Giant Garter Snake: Implement measure (d) under Mitigation Measure 7-3 for all Phase 1 off-site improvements in areas that support aquatic habitat (i.e., bridge widening at Arch Road and Austin Road bridges over Weber Slough, widening the Mariposa Road bridge over North Little Johns Creek, widening Austin Road adjacent to Weber Slough, widening Arch Road adjacent to Weber Slough, and domestic and sanitary sewer pipelines that cross North Little Johns Creek and irrigation ditches). 	LTS

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Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> (g) Migratory Birds: Implement Mitigation Measures 7-5a and 7-5b for all Phase 1 off-site improvement areas where marsh or riparian vegetation would be removed. (h) Wetlands and Waters of the United States: Implement Mitigation Measure 7-10b before fill of any potential waters of the United States (i.e., Duck Creek, North Little Johns Creek, Weber Slough, or irrigation ditches). (i) Heritage Oak Trees: Implement Mitigation Measure 7-10. 	
8 CULTURAL RESOURCES			
Program Level Impacts			
8-1: Potential Loss of or Damage to Recorded Prehistoric Cultural Resources	PS	<p>8-1: Before future development within or in the vicinity of prehistoric site P-39-4509, the project applicant(s) of that future development shall pursue and implement one of the following means to reduce or avoid impacts on site P-39-4509:</p> <ul style="list-style-type: none"> (a) preserve the site in a parks or open space land use that would include a preserve, which would completely avoid adverse impacts on the site; or (b) hire a qualified archaeologist to determine the significance (per CEQA) of the site through subsurface archaeological testing and data collection. Archaeological testing shall include recovery of a sample of cultural material sufficient to evaluate site depth, age, cultural associations, and areal extent. The archaeologist shall determine whether the site is considered significant per the State CEQA Guidelines. The testing program shall culminate in a report that contains explicit recommendations for any data recovery work that is warranted on the basis of the specific testing results. Only if the site were determined to be eligible or potentially eligible for CRHR listing would further excavation and data recovery be necessary. 	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
<p>8-2: Potential Damage to As-Yet-Undiscovered Prehistoric Cultural Resource Sites or Native American Burials.</p>	<p>PS</p>	<p>8-2a: Before approval of tentative subdivision maps or other improvement plans, and before the start of any grading activities at the project site (for all project phases), the project applicant(s) of all project phases that own or control the unsurveyed parcels as shown in Figure 8-1 shall retain the services of a qualified archaeologist to perform a field survey for cultural resources of those parcels. Any resources that are encountered shall be appropriately documented according to state standards. If the archaeologist determines that such resources represent “historical resources” or “unique archaeological resources” as defined by CEQA, the archaeologist shall recommend specific treatment measures deemed necessary for the protection or recovery of those resources. The project applicant(s) shall implement, to the satisfaction of the City, all feasible recommendations made by the archaeologist before the start of grading activities for any project phase with unsurveyed areas.</p> <p>8-2b: Before the start of construction activities, the project applicant(s) of all project phases shall retain a qualified archaeologist to conduct training for construction workers, to educate them about the possibility of encountering buried cultural resources and inform them of the proper procedures should resources be encountered.</p> <p>8-2c: If artifacts or unusual amounts of stone, bone, or shell are uncovered during construction activities, work within 50 feet of the specific construction site at which the suspected resources have been uncovered shall be suspended, and the City shall be contacted immediately. At that time, the project applicant(s) shall retain a qualified archaeologist who shall conduct a field investigation of the specific site and recommend specific treatment measures deemed necessary for the protection or recovery of any cultural resources concluded by the archaeologist to represent significant or potentially significant resources as defined by CEQA. The applicant(s) shall implement, to the satisfaction of the City, all feasible recommendations made by the archaeologist before construction resumes in the area where cultural materials were discovered.</p>	<p>LTS</p>

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Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>8-2d: In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, the contractor and/or the project applicant(s) of all project phases shall immediately halt potentially damaging excavation in the area of the burial and notify the San Joaquin County Coroner and a professional archaeologist to determine the nature of the remains. 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 NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). Following the coroner's findings, the archaeologist and the NAHC-designated Most Likely Descendant (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.9.</p> <p>Implementation of Assembly Bill (AB) 2641 requires that if the discovery of human remains is made after January 1, 2007, the following procedures shall be implemented:</p>	

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Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Upon the discovery of Native American remains, the procedures above regarding involvement of the county coroner, notification of the NAHC, and identification of an MLD shall be followed. The landowner shall ensure that the immediate vicinity (according to generally accepted cultural or archaeological standards or practices) is not damaged or disturbed by further development activity until consultation with the MLD has taken place. The MLD shall have 48 hours to complete a site inspection and make recommendations after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment, may be discussed. AB 2641 suggests that the concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. AB 2641(e) includes a list of site protection measures and states that the landowner shall do one or more of the following: (1) Record the site with the NAHC or the appropriate Information Center. (2) Utilize an open space or conservation zoning designation or easement. (3) Record a document with the county in which the property is located. ▶ If the NAHC is unable to identify an MLD or the MLD fails to make a recommendation within 48 hours after being granted access to the site, the landowner or the landowner’s authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. The landowner or authorized representative may also reinter the remains in a location not subject to further disturbance if they reject the recommendation of the MLD and mediation by the NAHC fails to provide measures acceptable to the landowner. 	
8-3: Potential Loss or Damage to Documented Historic-Era Resources	LTS	No mitigation measures are required.	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
8-4: Potential Damage to As-Yet-Undiscovered Historic-Era Resources.	PS	<p>Implement Mitigation Measures 8-2a and 8-2b.</p> <p>8-4: Before approval of tentative subdivision maps or other improvement plans, and before demolition of buildings and structures more than 45 years old at the time of construction, any structure not previously documented and evaluated for significance shall be recorded and research shall be conducted by a qualified architectural historian retained by the project applicant(s) to determine whether it is potentially eligible for listing in the CRHR. If eligibility is confirmed, then the architectural historian shall make recommendations for the recordation, reuse, or preservation of the structure. The building or structure shall not be demolished without approval from the City indicating that the CRHR-eligible resource has been either recorded, adaptively reused, or preserved.</p>	LTS
8-5: Cultural Resources Effects from Future-Phase Off-Site Improvements.	PS	<p>8-5a: Before the start of earthmoving activities and before approval of grading permits by the City for any off-site improvement during a future project phase (development phases 2–5), the project applicant(s) shall retain the services of a qualified archaeologist to perform a records search at the appropriate institution and conduct a pedestrian-level field survey of the proposed alignment or location of the proposed structure. If any cultural resources sites are discovered by the archaeologist, he or she shall conduct a CRHR eligibility investigation of the site(s). This investigation shall include, but shall not necessarily be limited to, archival research, subsurface testing, artifact assemblage analyses, and documentation of findings. If the site is found to be eligible for the CRHR, data recovery may need to be conducted that could include excavation of contiguous block units, specialized artifact analyses, documentation of findings, and concurrence on findings by the State Office of Historic Preservation. Construction at and within 100 feet of the location of any cultural resources site determined to be CRHR-eligible shall not proceed until the City has determined that the applicant(s) have implemented all feasible data recovery procedures recommended by the archaeologist.</p>	LTS

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		8-5b: If construction of any off-site improvement during a future project phase (development phases 2–5) would require the demolition of a an existing building, the project applicant(s) shall retain a qualified archaeological historian to perform an inventory of the structure(s) to be demolished and shall conduct research to determine whether the structure(s) is potentially eligible for listing in the CRHR. If eligibility is confirmed, then the architectural historian shall make recommendations for the recordation, reuse, or preservation of the structure. The building or structure shall not be demolished without approval from the City indicating that the CRHR-eligible resource has been either recorded, adaptively reused, or preserved.	
Project Level (Phase 1) Impacts			
8-6: Potential Loss of or Damage to Documented Prehistoric Cultural Resources.	NI	No mitigation measures are required.	NI
8-7: Potential Damage to As-Yet-Undiscovered Prehistoric Cultural Resources.	PS	Implement Mitigation Measures 8-2a, 8-2b, 8-2c, and 8-2d.	LTS
8-8: Potential Loss of or Damage to Documented Historic-Era Cultural Resources.	LTS	No mitigation measures are required.	LTS
8-9: Potential Damage to As-Yet-Undiscovered Historic-Era Resources.	PS	Implement Mitigation Measures 8-2a, 8-2b, and 8-4.	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
8-10: Cultural Resources Effects from Phase 1 Off-Site Improvements.	PS	<p>Implement Mitigation Measures 8-2a, 8-2b, 8-2c, and 8-2d.</p> <p>8-10a: Before project-related ground-disturbing activities related to the off-site improvement in the vicinity of the intersection of Austin Road and Arch Road, the project applicant(s) shall retain a qualified archaeologist to conduct a CRHR eligibility study of site CA-Sjo-202. This investigation shall include, but shall not necessarily be limited to, archival research, subsurface testing, artifact assemblage analyses, and documentation of findings. If the site is found to be eligible for the CRHR, data recovery may need to be conducted that could include excavation of contiguous block units, specialized artifact analyses, documentation of findings, and concurrence on findings from the State Office of Historic Preservation. Construction at and within 100 feet of the location of cultural resources site CA-Sjo-202 shall not proceed until the City has determined that the applicant(s) have implemented all feasible data recovery procedures recommended by the archaeologist.</p> <p>8-10b: Whether CA-Sjo-202 is recommended CRHR-eligible or not, all project-related ground disturbances below approximately 12 inches from the present surface and within 100 feet of the defined boundaries of site CA-Sjo-202 shall be monitored by a qualified professional archaeologist hired by the project applicant(s). Prehistoric sites, irrespective of the CRHR status, may contain human interments, and monitoring of ground-disturbing activities would minimize the chances that such remains are adversely affected.</p>	LTS
9 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES			
Program Level Impacts			
9-1: Potential Damage to People and Structures from Seismic Activity	LTS	No mitigation measures are required.	LTS
9-2: Exposure to Other Geologic Hazards	LTS	No mitigation measures are required.	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
9-3: Potential Damage to Structures from Construction on Expansive Soils	S	<p>9-3a: The project applicant(s) for all project phases shall obtain the services of a licensed geotechnical or soils engineer to prepare a soils report for each area of proposed development. The report shall identify the site-specific engineering limitations of soils and provide engineering recommendations to reduce potential damage to planned improvements from shrink-swell potential. Recommendations may include, but would not be limited to, actions such as structural enforcement, soil treatment, or replacement of existing soil with engineered fill. The project applicant(s) of all project phases shall implement all feasible engineering and design recommendations contained in the report, to the satisfaction of the City.</p> <p>9-3b: The project applicant(s) of all project phases that include subdivision improvements and future industrial, commercial, and residential development, including construction of roadways, shall comply with applicable recommendations of the soils report.</p> <p>9-3c: All earthwork in each phase of project development shall be monitored by a geotechnical engineer retained by the project applicant(s) for all project phases. The geotechnical engineer shall provide oversight during all excavation, placement of fill, and disposal of materials removed from and deposited on the subject site.</p>	LTS
9-4: Potential Temporary, Short-Term, Construction-Related Erosion and Loss of Topsoil	PS	<p>9-4: A grading and erosion control plan shall be prepared by a California Registered Civil Engineer retained by the project applicant(s) for all project phases. The grading and erosion control plan shall be submitted to the City Public Works Department before issuance of grading permits for all new development within the project site. The plan shall be consistent with the City's Land Grading and Erosion Control Ordinance as well as the City's Stormwater Quality Control Criteria Plan developed as part of its NPDES permit, and shall include the site-specific grading associated with development of all project phases. The plan shall include all elements required by the City Engineer, which may include:</p> <ul style="list-style-type: none"> ▶ the location, implementation schedule, and maintenance schedule of all erosion and sediment control measures; ▶ a description of measures designed to control dust and stabilize the construction-site road and entrance; and 	LTS

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ a description of the location and methods of storage and disposal of construction materials. <p>Erosion and sediment control measures could include the use of detention basins, berms, swales, wattles, and silt fencing. Stabilization of construction entrances to minimize trackout (control dust) is commonly achieved by installing filter fabric and crushed rock to a depth of approximately 1 foot. The project applicant(s) shall ensure that the construction contractor is responsible for securing a source of transportation and deposition of excavated materials. All feasible recommendations contained in the plan shall be implemented by the project applicant(s) of all project phases, to the satisfaction of the City.</p> <p>Implement Mitigation Measure 11-1, as discussed in Chapter 11, "Hydrology and Water Quality."</p>	
9-5: Possible Damage to Unknown Potentially Unique Paleontological Resources during Earthmoving Activities.	PS	<p>9-5: To minimize potential adverse impacts on unique, scientifically important paleontological resources, the project applicant(s) of all project phases shall do the following:</p> <ul style="list-style-type: none"> ▶ Before the start of grading, excavation activities, or demolition activities, the project applicant(s) shall retain a qualified paleontologist to train all construction personnel involved with earthmoving activities, including the site superintendent, regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered. ▶ If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work in the vicinity of the find. The project applicant(s) shall retain a qualified paleontologist to evaluate the resource and prepare a proposed mitigation plan in accordance with SVP guidelines (1996). 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 of Stockton to be necessary and feasible shall be implemented before construction or demolition activities can resume at the site where the paleontological resources were discovered. 	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
<p>9-6: Potential Geology, Soils, and Paleontological Resources Effects from Future-Phase Off-Site Improvements.</p>	<p>PS</p>	<p>9-6: Before the start of any off-site construction activities, the project applicant(s) of all project phases shall hire a qualified, licensed geotechnical engineer to prepare a final geotechnical subsurface investigation report. The final geotechnical engineering report shall address and make recommendations on the following:</p> <ul style="list-style-type: none"> ▶ site preparation; ▶ appropriate sources and types of fill; ▶ potential need for soil amendments; ▶ structural foundations, including retaining-wall design; ▶ grading practices; ▶ erosion/winterization; ▶ special problems discovered on-site (e.g., groundwater and expansive/unstable soils); and ▶ slope stability. <p>The geotechnical investigation shall include subsurface testing of soil and groundwater conditions and determine appropriate foundation design criteria that are consistent with the CBC. If the soils report indicates the presence of critically expansive soils or other soil problems that would lead to structural defect if not corrected, additional investigations may be required for subdivisions before building permits are issued. This shall be so noted on the project grading plans. Recommendations contained in the geotechnical engineering report shall be noted on the grading plans and implemented as appropriate before the issuance of building permits. Design and construction of all off-site improvements in all phases of the project shall be in accordance with the CBC and the City Land Grading and Erosion Control Ordinance. It is the responsibility of the project applicant(s) of each project phase to ensure that an engineering inspection of off-site improvements is conducted and provide certification that earthwork has been performed in conformity with recommendations contained in the report.</p>	<p>LTS</p>

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		Implement Mitigation Measures 9-4 and 11-1 to reduce potential erosion impacts. Implement Mitigation Measure 9-5 to reduce potential paleontological resources impacts.	
Project Level (Phase 1) Impacts			
9-7: Potential Damage to People and Structures from Seismic Activity.	LTS	No mitigation measures are required.	LTS
9-8: Exposure to Other Geologic Hazards.	LTS	No mitigation measures are required.	LTS
9-9: Potential Damage to Structures from Construction on Expansive Soils.	S	Implement Mitigation Measures 9-3a, 9-3b, and 9-3c.	LTS
9-10: Potential Temporary, Short-Term, Construction-Related Erosion and Loss of Topsoil.	PS	Implement Mitigation Measures 9-4 and 11-1.	LTS
9-11: Possible Damage to Unknown, Potentially Unique Paleontological Resources During Earthmoving Activities.	PS	Implement Mitigation Measure 9-5.	LTS
9-12: Potential Geology, Soils, and Paleontological Resources Effects from Phase 1 Off-Site Improvements.	S	Implement Mitigation Measures 9-3a, 9-3b, and 9-3c; Mitigation Measures 9-4 and 11-1; and Mitigation Measure 9-5.	LTS
10 HEALTH AND SAFETY			
Program Level Impacts			
10-1: Safety of Project Residents and Workers Proximate to SR 4 and Burlington Northern Santa Fe Rail Line	LTS	No mitigation measures are required.	LTS
10-2: Use of Hazardous Materials On-Site during Construction, Demolition, and Operation	LTS	No mitigation measures are required.	LTS
10-3: Exposure of Project Residents to Electrical and Magnetic Fields	PS	10-3: The project applicant(s) of all project phases shall increase the size of the linear park located along the southern side of the easement for the 115-kV and 230-kV transmission line such that residential housing would be located a minimum of 200 feet from the transmission lines.	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
10-4: Exposure of Construction Workers, Project Workers, and Residents to Existing Hazardous Materials	PS	<p>10-4: To reduce health hazards associated with potential exposure to hazardous substances, the project applicant(s) for all project phases shall implement the following measures before the start of ground-disturbing or demolition activities within each phase of project development:</p> <ul style="list-style-type: none"> (a) Prepare a site plan for each development phase 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 contractor shall be required to comply with the plan and applicable local, state, and federal laws and the requirements of the City of Stockton 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. (b) Retain a licensed contractor to remove all USTs, leaking USTs, and ASTs within the SPA. Additionally, any stained soils associated with the debris piles, USTs, and/or ASTs shall also be removed by the licensed contractor, in accordance with applicable local, state, and federal regulations. (c) Retain a licensed contractor to remove and dispose of all transite pipe found within the SPA in accordance with applicable local, state, and federal regulations. (d) Retain a licensed contractor to remove all septic systems in accordance with applicable local, state, and federal regulations. 	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>(e) Retain a Cal-OSHA certified Asbestos Consultant before demolition of any on-site buildings to investigate whether any asbestos-containing materials or lead-based paints are present. If any materials containing asbestos or lead are found, they shall be removed by an accredited contractor 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 materials containing asbestos and lead shall be disposed of properly at an appropriate off-site disposal facility.</p> <p>(f) Provide to the City of Stockton, before issuance of grading permits, an assessment conducted by PG&E pertaining to the contents of the existing pole-mounted transformers located on the SPA. The assessment shall determine whether existing electrical transformers on-site contain PCBs and whether there are any records of spills from such equipment. If equipment containing PCB is identified, the maintenance and/or disposal of the transformer shall be subject to the regulations of the Toxic Substances Control Act under the authority of the SJCDEH.</p> <p>(g) Notify the SJCDEH if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during construction activities. Any contaminated areas shall be cleaned up in accordance with recommendations made by SJCDEH, Central Valley RWQCB, DTSC, or other appropriate federal, state, or local regulatory agencies as generally described above.</p> <p>(h) Refrain from developing existing on-site agriculture or domestic water wells for further use. Such wells shall be closed in accordance with SJCDEH guidelines.</p>	
10-5: Exposure of Residents and Workers to Human Health Hazards Associated with Mosquito-Borne Diseases	LTS	No mitigation measures are required.	LTS
10-6: Potential Public Health Impacts Associated with Recycled Water	LTS	No mitigation measures are required.	LTS

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
10-7: Exposure of Construction Workers to Possible Hazardous Materials during Construction of Future-Phase Off-Site Improvements	PS	10-7: To determine if any contamination is present that could pose a health hazard to construction workers, the project applicant(s) of all project phases shall conduct a Phase I and/or II ESA before the start of any ground-disturbing activities in the vicinity of off-site improvement areas. Any recommendations in the Phase I or II ESA shall be implemented before the start of construction activities in these off-site improvement areas.	LTS
Project Level (Phase 1) Impacts			
10-8: Safety of Project Residents and Workers near the SR 4 and Burlington Northern Santa Fe Rail Line	LTS	No mitigation measures are required.	LTS
10-9: Use of Hazardous Materials On-Site during Construction, Demolition, and Operation	LTS	No mitigation measures are required.	LTS
10-10: Exposure of Project Residents to Electric and Magnetic Fields	PS	Implement Mitigation Measure 10-3.	LTS
10-11: Exposure of Construction Workers, Project Workers, and Residents to Existing Hazardous Materials	PS	Implement Mitigation Measures 10-4a through 10-4h.	LTS
10-12: Exposure of Residents and Workers to Human Health Hazards Associated with Mosquito-Borne Diseases	LTS	No mitigation measures are required.	LTS
10-13: Potential Public Health Impacts Associated with Recycled Water	LTS	No mitigation measures are required.	LTS
10-14: Exposure of Construction Workers to Possible Hazardous Materials during Construction of Future-Phase Off-Site Improvements	PS	Implement Mitigation Measure 10-7.	LTS

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
11 HYDROLOGY AND WATER QUALITY			
Program Level Impacts			
11-1: Temporary, Short-Term Degradation of Water Quality from Project-Related Construction Activities	PS	<p>11-1a: Before the approval of grading permits and improvement plans, the project applicant(s) of all project phases shall consult with the City, the SWRCB, and the Central Valley RWQCB to acquire the appropriate regulatory approvals that may be necessary to obtain Section 401 water quality certification, a SWRCB statewide NPDES stormwater permit for general construction activity, and any other necessary site-specific WDRs or waivers under the Porter-Cologne Act. The project applicant(s) 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:</p> <ul style="list-style-type: none"> ▶ the use of erosion and sediment-control BMPs, including construction techniques that will reduce the potential for runoff as well as other measures to be implemented during construction; ▶ the means of waste disposal; ▶ the implementation of approved local plans, nonstormwater-management controls, permanent postconstruction BMPs, and inspection and maintenance responsibilities; ▶ the pollutants that are likely to be used during construction that could be present in stormwater drainage and nonstormwater discharges, and other types of materials used for equipment operation; ▶ spill prevention and contingency measures, including measures to prevent or clean up spills of hazardous waste and of hazardous materials used for equipment operation, and emergency procedures for responding to spills; ▶ personnel training requirements and procedures that will be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP; and 	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP. <p>Where applicable, BMPs identified in the SWPPP shall be in place throughout all site work and construction/ demolition and shall be used in all subsequent site development activities. BMPs may include such measures as the following:</p> <ul style="list-style-type: none"> ▶ Implementing temporary erosion-control measures in disturbed areas to minimize discharge of sediment into nearby drainage conveyances. These measures may include silt fences, staked straw bales or wattles, sediment/silt basins and traps, geofabric, sandbag dikes, and temporary vegetation. ▶ Establishing permanent vegetative cover to reduce erosion in areas disturbed by construction by slowing runoff velocities, trapping sediment, and enhancing filtration and transpiration. ▶ Using drainage swales, ditches, and earth dikes to control erosion and runoff by conveying surface runoff down sloping land, intercepting and diverting runoff to a watercourse or channel, preventing sheet flow over sloped surfaces, preventing runoff accumulation at the base of a grade, and avoiding flood damage along roadways and facility infrastructure. <p>All construction contractors shall retain a copy of the approved SWPPP on the construction site.</p> <p>11-1b: As required by the City’s Storm Water Quality Control Plan, the project applicant(s) of all project phases shall establish a maintenance entity acceptable to the City, prior to recordation of any final maps or improvement plans, to provide funding for the operation, maintenance, and replacement costs of the stormwater BMPs. The maintenance entity shall be in operation during all construction phases of the proposed project.</p>	
11-2: Long-Term Degradation of Surface Water Quality from Urban Runoff	LTS	No mitigation measures are required.	LTS
11-3: Exposure of People or Structures to Significant Risk of Flooding as a Result of Dam Failure	LTS	No mitigation measures are required.	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
11-4: On- and Off-Site Flooding Hazards from Increased Stormwater Runoff	PS	<p>11-4a: Prior to the approval of subdivision maps or improvement plans for nonresidential uses that would expose people or structures to flood risk, the project applicant(s) of all project phases shall submit final drainage plans demonstrating to the satisfaction of the City that 100-year flood flows would be appropriately contained, such that the risk to people or damage to structures MLSP residences placed in the FEMA 100-year flood hazard zone would not occur. Those drainage plans shall include the following design criteria, shall be approved by the City, and implemented accordingly:</p> <p>Peak Flow Design Storm</p> <ul style="list-style-type: none"> ▶ Lakes, detention basins, creek channels, canals, and connections between lakes shall be designed for the 100-year, 48-hour storm event, based on the San Joaquin County Hydrology Manual (1997) and standards approved by the City of Stockton. ▶ All flood control facilities shall be designed to safely contain, detain, and convey the 100-year, 48-hour storm event developed in the off-site regional hydrologic investigation prepared by PACE Engineering (2006a). ▶ All habitable structures within the SPA shall be designed with sufficient freeboard above the peak 100-year flood level to meet FEMA standards. <p>100-Year, 48-hour Flood Conveyance and Discharge</p> <ul style="list-style-type: none"> ▶ The proposed project shall be designed to limit post-development discharge rates in Duck Creek, Branch Creek, and North Little Johns Creek to be equal to or less than predevelopment (existing conditions) peak discharge rates. <p>11-4b: Prior to the construction of structures in the any floodplain area in the SPA, the project applicant(s) of all project phases shall prepare and submit to FEMA an application for Conditional Letter of Map Revision, construct required channel and other improvements, and obtain a final Letter of Map Revision from FEMA.</p>	LTS
11-5: Permanent Alteration of On-Site Drainage Patterns Resulting in Substantial Erosion or Siltation	PS	Implement Mitigation Measure 11-4a.	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
11-6: Depletion of Groundwater Supplies or Substantial Interference with Groundwater Recharge	PS	<p>11-6a: Prior to final subdivision map approval, or improvement plan approval for nonresidential uses, the project applicant(s) of all project phases shall prepare an operational level IWMP that details, to the satisfaction of the City, how the proposed groundwater recharge facility would be operated in conformance with applicable state and local regulations relating to groundwater. The operational-level IWMP shall be submitted to and approved by the City and all elements of the IWMP shall be implemented by the project applicant(s) of all project phases. The operational level IWMP shall be based on the existing planning level IWMP, and shall contain the following elements:</p> <ul style="list-style-type: none"> ▶ <i>Potable Water Distribution System Plan:</i> This plan shall contain finalized estimates of individual water demand scenarios, domestic irrigation demands, projected piping and storage plans, and other planning-level data needs. ▶ <i>Irrigation System Plan:</i> This plan shall include, at minimum: <ul style="list-style-type: none"> • final irrigation demand values, described by quantity and need on a monthly basis; • source for the demand, on a month-by-month basis; • description of irrigation system design and lay-out; and • description of the legal and managerial operation of the irrigation system. ▶ <i>Site-Specific Water Conservation Plan:</i> Pursuant to the City of Stockton Water Conservation Plan, a site-specific plan shall be developed for the project to address and further refine the means and methods for conserving potable and nonpotable water on-site. The plan shall address measures including water-conserving restroom facilities, residential landscaping and irrigation practices, and public irrigation practices. The objective of this plan shall be to describe specific means and methods of reducing on-site consumption of potable and nonpotable water. 	LTS

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Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ <i>Storm Water Quality Control Criteria Plan:</i> This plan shall describe how storm and flood flows would be handled on Little Johns Creek as they pass the Arbini recharge facility and move across the Mariposa Lakes development, along with a similar description for Duck Creek. A site-specific plan detailing how stormwater will be monitored and managed on-site shall be prepared. The objective of this plan shall be a description of stormwater sampling and reporting, along with a description of the methods and means of moving storm water on-site to the lake/canal system for ultimate reuse. ▶ <i>Operationally Specific Lake Water Management Plan:</i> This plan shall document basic lake management operations, provide detailed information on actual water storage and movement criteria and controls, and provide designs of irrigation system integration (e.g., locations of pumps and piping for irrigation systems). The objective of this plan shall be to describe the lake management methods that will be used to balance and control lake levels, water quality, and circulation. ▶ <i>Legal Plan:</i> The issue of annexation into a specific water district shall be assessed, along with issues such as water rights to surface water for irrigation and recharging operations, and long-term responsibility for on-site management and monitoring/reporting requirements. The objective of the legal plan shall be to describe the legal framework for the site relative to the amount and source for which water rights are held, and to describe the legal status of the SPA relative to reporting of water-related issues. ▶ <i>Nonpotable Water Storage Feasibility Assessment:</i> The assessment objective shall be a description, based upon anticipated land use planning and on-site water management, of the feasibility of either on- or off-site nonpotable water storage, or a combination of both. This assessment shall examine available land for storage of nuisance and stormwater, along with purchased surface water, and the distribution requirements for moving this water from storage into use on the SPA. 	

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Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>11-6b: Prior to final subdivision map approval, or improvement plan approval for nonresidential uses, the project applicant(s) shall prepare a groundwater monitoring plan covering all project phases, which shall be used to direct, assess, and report routine observations regarding groundwater conditions at the Mariposa Lakes development and the Arbini recharge site. If the results of the monitoring plan indicate that the recharge project is having a negative effect on groundwater recharge <u>recharge operations are not functioning at the level necessary to serve project development (for example, in an extended drought situation longer than 3 years where there is not enough banked water to meet project needs)</u>, the recharge program shall be halted until appropriate actions, approved by the City and the appropriate regulatory agencies, are implemented. <u>Furthermore, groundwater shall not be withdrawn at a ratio greater than 1:2 (i.e., no more than 1 acre-foot of banked water withdrawn for every 2 acre-feet of surface water applied)</u>. These actions would include one or more of the following:</p> <ul style="list-style-type: none"> ▶ expansion of the Arbini recharge facility <u>onto additional land</u> (to allow for increased recharge and/or storage); ▶ purchase of surface water supplies from a water supplier to supply all of the project's water needs without the use of groundwater recharge; or ▶ decreasing project water demands through reductions in the surface area of the proposed on-site lakes (and associated evaporation loss make-up water requirements) and/or landscaped areas (and associated irrigation requirements); <u>if this option is selected, the applicants shall plant drought-tolerant vegetation around the margins of the on-site lakes to reduce potential adverse visual impacts.</u> <p>Implementation of any or all of these actions could result in potentially significant impacts to biological resources, cultural resources, and/or hydrology and water quality; impacts in all other issue areas would be less than significant. Implementation of Mitigation Measures 7-10a, 7-10b, 7-10c, 8-5a, 8-5b, 11-1a, 11-1b, 11-4a, 11-4b, and 11-8 would reduce these subsequent potentially significant impacts to less-than-significant levels.</p>	

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Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>11-6c: Prior to final subdivision map approval, or improvement plan approval for nonresidential uses, the project applicant(s) shall prepare a nonpotable off-site water source feasibility assessment covering all project phases. This assessment shall describe the location and availability of off-site sources of surplus surface water that could be delivered to the SPA for use in irrigation and groundwater recharging operations. This assessment shall examine such issues as availability and quantity of off-site surface water supplies, delivery mechanisms from the source to the SPA, and a cost-benefit analysis for each identified off-site source. The assessment shall include:</p> <ul style="list-style-type: none"> ▶ water supply from SEWD and potentially CSJWCD, via Duck and North Little Johns Creeks; ▶ issues related to SEWD and CSJWCD coordination; ▶ final water availability calculations; <u>and</u> ▶ final water delivery schedule; and ▶ channel conveyance capacity of Duck Creek and North Little Johns Creek for expanded use of this facility for delivery of additional water. <p>If it is determined that Duck Creek and/or North Little Johns Creek do not have the additional capacity to safely convey additional delivery water, delivery of water shall not occur until appropriate actions, approved by the City and the appropriate regulatory agencies, are implemented. These actions may include one or more of the following:</p> <ul style="list-style-type: none"> ▶ construction of a berm or engineered levee; ▶ channel widening; or ▶ channel maintenance such as vegetation removal. 	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>Implementation of any or all of these potential actions could result in subsequent potentially significant impacts to biological resources, cultural resources, and/or hydrology and water quality; impacts on all other issue areas would be less than significant. Implementation of Mitigation Measures 7-10a, 7-10b, 7-10c, 8-5a, 8-5b, 11-1a, 11-1b, and 11-8 would reduce these subsequent potentially significant impacts to a less than significant level.</p> <p>11-6d: Prior to issuance of the final Phase 1 building permits, the City shall ensure that a suitable entity with experience in groundwater recharge operations is established to operate and maintain the recharge program. In addition, the project applicant(s) of Phase 1 shall secure a source of funding for program operations and maintenance, to the satisfaction of the City. Preliminary groundwater recharge operations may begin before this entity is established.</p> <p><u>11-6e: If the results of the groundwater monitoring plan required in Mitigation Measure 11-6b show that recharge operations are not functioning at the level necessary to serve proposed development, the City shall not issue building permits for any additional phases of project development until the applicant(s) has demonstrated to the satisfaction of the City that appropriate corrective actions (as contemplated in Mitigation Measure 11-6b) have been implemented.</u></p>	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
11-7: Project Effects on Groundwater Quality	PS	<p>11-7a: The project applicant(s) of all project phases, shall be develop and implement a groundwater monitoring program that conforms to the Central Valley RWQCB Order No. R5-2002-0181, NPDES NO. CAS083470 Waste Discharge Requirements, City of Stockton and County of San Joaquin Storm Water Discharges from Municipal Separate Storm Sewer System, San Joaquin County (City Stormwater Permit). The operational-level IWMP required in Mitigation Measure 11-6a shall include a program for ongoing water quality monitoring and for correction of any potential adverse effects associated with the groundwater recharge program. Groundwater depths and chemistry shall be monitored at least quarterly, or more frequently if required by the City, before preconstruction grading begins in order to establish seasonal patterns. Monitoring shall continue during and post construction on a schedule to be determined by the City based on existing monitoring results and the estimated potential for site activities to adversely affect groundwater quantity and quality.</p> <p>Regular, routine groundwater monitoring reports shall be prepared and submitted to the appropriate regulatory agencies. To determine the project’s impacts on the contaminated groundwater plume from Forward Landfill, VOCs shall be included among the monitored contaminants as a conservative measure, even though they are not considered a threat to the project’s water supply. Monitoring prior to and during construction activities shall be conducted and reported by the project applicant(s) of all project phases or its designated representative to the City. Long-term monitoring responsibility would be assigned to the same entity that would operate the recharge facility as required in Mitigation Measure 11-6b. Ongoing groundwater monitoring shall also serve the purpose of detecting initial indications of atypical changes (i.e., those not of a seasonal nature detected during initial monitoring).</p> <p>The groundwater monitoring program shall include design criteria conforming to Monitoring and Reporting Program No. R5-2002-0181 of the City’s Stormwater Permit. These criteria are outlined below.</p>	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ <i>Monitoring Well Installation:</i> New groundwater monitoring wells shall be installed in areas of suspect contamination, in addition to continued monitoring of those wells already installed. Boring activities shall be carried out pursuant to San Joaquin County Environmental Health Department requirements. ▶ <i>Data Gathering:</i> Data loggers shall be inspected and downloaded on a quarterly basis (every 3 months) as agreed upon by the City and/or Central Valley RWQCB. A groundwater sampling plan shall be implemented and samples sent to a DHS-certified laboratory to be analyzed for the list of constituents required by the City’s Stormwater Permit, which is contained in Table 11-6. The samples shall also be analyzed for VOCs and TDS. ▶ <i>Reporting:</i> Water depth data shall be provided on a quarterly basis. An annual groundwater monitoring report shall be prepared which shall meet the requirements of Section 1-B of the City’s Stormwater Permit. Contents may include, but would not be limited to, a description of field activities; recommendations for revisions, if any, to the analyte list; a discussion of recharge operations and results to-date; tabulated laboratory and groundwater elevation data; a groundwater gradient map; and certified laboratory reports. The annual report shall be submitted to the City for review and approval. <p>Pursuant to the City’s Stormwater Permit, if a constituent is not detected at the minimum level listed in Table 11-6 in more than 75% of the first 12 sampling events, it need not be further analyzed unless the observed occurrences show concentrations greater than receiving water quality standards. Annual confirmation sampling for nondetected constituents (including VOCs and TDS) shall be conducted during the first storm of the wet season every year at each station. If confirmation sampling shows nondetect for a constituent for two successive years, the City may propose to the Central Valley RWQCB staff that monitoring requirements for the constituent be discontinued. If the constituent is detected, it shall continue to be monitored.</p>	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>If project-specific groundwater monitoring samples show that groundwater quality is deteriorating, prompt actions to remedy problems shall be initiated, as specified by the City and/or Central Valley RWQCB. These actions could include, but would not be limited to, reductions in recharge application rates or leasing of additional properties to spread recharge over a larger area, the use of injection wells or other recharge methods, or other water treatment alternatives such as construction of an on- or off-site water treatment plant. Implementation of any of these actions would require a separate environmental analysis.</p> <p>11-7b: To assess the quality of surface water entering and leaving the SPA and the Arbini recharge facility, the project applicant(s) of all project phases shall take grab samples from Duck Creek, North Little Johns Creek, and Branch Creek upstream and downstream from the proposed diversion points, and from within the SPA. On an annual basis, samples shall be collected during two storm events and during two monitoring events during the dry season. Samples shall be sent to a California DHS-certified laboratory to be analyzed for the list of constituents required by the City’s Stormwater Permit. Surface water monitoring procedures shall conform to the Monitoring and Reporting Program (No. R5-2002-0181) of the City’s Stormwater Permit. Pursuant to these requirements, all surface water monitoring data shall be compared to applicable water quality standards in the Basin Plan, the California Toxics Rule (CTR), and California Title 22 (Title 22). The lowest applicable standards, all of which are listed in Table 11-6, shall be used. Table 11-6 shows the required constituents to be monitored, their associated minimum reporting levels as defined in the City’s Stormwater Permit, and associated water quality objectives. The source water monitoring program shall include the following elements:</p> <ul style="list-style-type: none"> ▶ An annual surface water monitoring report shall be prepared which shall meet the requirements of Section 1-B of the City’s Stormwater Permit. This may be combined with the groundwater monitoring report in Mitigation Measure 11-7a. 	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>Pursuant to Monitoring and Reporting Program (No. R5-2002-0181) of the City’s Stormwater Permit, if a constituent is not detected at the Minimum Level listed in Table 11-6 in more than 75% of the first 12 sampling events, it need not be further analyzed unless the observed occurrences show concentrations greater than receiving water quality standards. Annual confirmation sampling for nondetected constituents shall be conducted during the first storm of the wet season every year at each station. If confirmation sampling shows nondetect for a constituent for 2 successive years, the City may propose to the Central Valley RWQCB staff that monitoring requirements for the constituent be discontinued. If the constituent is detected, it must continue to be monitored.</p> <ul style="list-style-type: none"> ▶ If monitoring results show that concentrations of source water constituents exceed water quality objective values as shown on Table 11-6, surface water shall not be diverted to the recharge facility until (a) subsequent monitoring shows that concentrations are below water quality objective values, or (b) water is treated prior to diversion to the recharge facility, either by the on-site lake-based water quality treatment system proposed as part of the IWMP, or by a water treatment facility constructed and funded by the applicants, such that concentrations are below water quality objective values. Construction of a water treatment plant, or substantial redesign of the proposed on-site lake/detention pond system, would require a separate environmental review process. 	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
11-8: Temporary, Short-Term Construction-Related Water Quality and Project-Related Hydrologic Effects of Future Phase Off-site Roadway and Infrastructure Improvements	PS	<p>Implement Mitigation Measure 11-1a.</p> <p>11-8: Proposed bridges, diversion modifications, or other structures shall be designed by the project applicant(s) of all project phases to avoid any functional interference with the floodway, in accordance with adopted engineering standards of the applicable regulatory agencies. Engineering drawings for drainage, bridge, diversions, or other structures that encroach on waterways shall incorporate any required hydraulic analysis, shall be submitted in conjunction with subdivision improvement plans for the phase of development including the bridge, and shall be subject to the approval of the City Engineer, the State Reclamation Board, and other agencies with jurisdiction. The following peak flow design storm performance criteria shall apply:</p> <ul style="list-style-type: none"> ▶ Proposed bridges, diversion modifications, or other floodway structures shall be designed for the 100-year, 48-hour storm event, based on the <i>San Joaquin County Hydrology Manual</i> (1997) and standards approved by the City of Stockton. ▶ Proposed bridges, diversion modifications, or other floodway structures shall be designed to safely contain, detain, and convey the 100-year, 48-hour storm event developed in the off-site regional hydrologic investigation (PACE Engineering 2006a). ▶ Proposed bridges, diversion modifications, or other floodway structures shall be designed with sufficient freeboard above the peak 100-year flood level to meet FEMA standards. 	LTS
Project Level (Phase 1) Impacts			
11-9: Temporary, Short-Term Degradation of Water Quality From Project-Related Construction Activities	PS	Implement Mitigation Measures 11-1a and 11-1b.	LTS
11-10: Long-Term Degradation of Surface Water Quality from Urban Runoff	LTS	No mitigation measures are required.	LTS
11-11: Exposure of People or Structures to Significant Risk of Flooding as a Result of Dam Failure	LTS	No mitigation measures are required.	LTS

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Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
<p>11-12: On- and Off-Site Flooding Hazards from Increased Stormwater Runoff</p>	<p>PS</p>	<p>11-12a: Prior to the approval of tentative subdivision maps or improvement plans for nonresidential uses, the Phase 1 project applicant(s) shall submit final drainage plans demonstrating to the satisfaction of the City that 100-year flood flows would be appropriately contained, such that damage to residences or other structures that attract people that are located in the FEMA 100-year flood hazard zone would not occur. Final drainage plans may include one or more of the following components:</p> <ul style="list-style-type: none"> ▶ Construction of a drainage swale along the eastern Phase 1 project boundary adjacent to Kaiser Road, approximately 2–3 feet deep and 5–7 feet wide, which would convey overland stormwater flows into proposed Lake No. 2. The stormwater shall flow directly into a pretreatment wetland filter consisting of plants that would filter sediment out of the water and microorganisms that would break down pollutants. ▶ Construction of a drainage swale along the northern Phase 1 project boundary, north of proposed Lake No. 2, approximately 2–3 feet deep and 5–7 feet wide, which would convey overland stormwater flows into proposed Canal No. 3 and then into proposed Lake No. 3. The on-site water shall flow directly into a pretreatment wetland filter consisting of plants that would filter sediment out of the water and microorganisms that would break down pollutants. ▶ Widening of the Branch Creek and North Little Johns Creek drainage ways and construction of a levee along both creeks, by increasing the existing bank heights, which would appropriate contain the 100-year flood flows. ▶ Construction of a berm or a levee, approximately 1,000 to 1,200 feet long, along the southern portion of the Phase 1 development area, immediately adjacent to and east of the BNSF railroad tracks that would appropriate contain flood flows. 	<p>LTS</p>

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		11-12b: Prior to the approval of tentative subdivision maps, the Phase 1 project applicant(s) shall submit plans and design specifications demonstrating to the satisfaction of the City that Phase 1 improvements would be constructed not to cause flooding on the property immediately abutting the southern Phase 1 project boundary. The project applicant(s) of Phase 1 shall implement all design specifications approved by the City.	
11-13: Permanent Alteration of On-Site Drainage Patterns Resulting in Substantial Erosion or Siltation	PS	Implement Mitigation Measure 11-4a.	LTS
11-14: Depletion of Groundwater Supplies or Substantial Interference with Groundwater Recharge	PS	Implement Mitigation Measures 11-6a and 11-6d.	LTS
11-15: Project Effects on Groundwater Quality	PS	<p>11-15: Based on Kleinfelder’s Groundwater Recharge Feasibility Assessment (2007), the Arbini site appears to be suitable for groundwater recharge. However, further impacts to groundwater cannot be assessed until (1) the existing surface water supplies have been sampled for water quality; (2) the future surplus water supplies, when they are secured, are sampled for water quality; (3) water has begun flowing through the soil so that active groundwater quality and groundwater recharge monitoring can begin, which are required under Mitigation Measures 11-6a, 11-7a, and 11-7b.</p> <p>Therefore, the project applicant(s) of Phase 1 shall work with City staff to determine which of the studies required in Mitigation Measures 11-6a and 11-7a are required prior to the start of groundwater recharge operations. At a minimum, recharge shall not occur until the following have taken place:</p>	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>Existing surplus surface water supply samples shall be collected and analyzed by a California DHS-certified laboratory and reported to the City, to confirm that existing surplus surface water supplies do not contain constituents of concern that would degrade groundwater quality. Soil treatment, as a result of water percolating through the ground, would be effective in reducing levels of certain naturally occurring pollutants such as Coliform bacteria and nitrate. However, if levels of other constituents (such as atrazine and diuron) that are required to be monitored as part of the City's Stormwater Permit (Table 11-6) are found to exceed levels allowed under the City's Stormwater Permit (Table 11-6), then the project applicant(s), at the discretion of the City, shall implement one or both of the following options:</p> <ul style="list-style-type: none"> (a) Conduct additional sampling, as directed by the City, to determine whether unacceptable levels of constituents of concern are related to seasonal fluctuations or are the result of a one-time occurrence. At the discretion of the City, groundwater recharge may proceed when the City is satisfied that further surface water quality sampling demonstrates that levels of constituents of concern would not exceed the requirements of the City's Stormwater Permit; or (b) Treat the surplus surface water to levels specified in the City's Stormwater Permit before the surplus surface water is used for groundwater recharge at the project applicant(s) expense. Activities undertaken to treat the surplus water would be subject to separate review under CEQA. <p>If the City determines, based on the additional sampling described in option (a) above, that the existing surplus surface water supplies do not contain constituents of concern in excess of the thresholds contained in the City's Stormwater Permit, then groundwater recharge operations may begin. If, after additional sampling has been performed in option (a) above, the City determines that the existing surplus water supplies do contain constituents of concern in excess of the thresholds contained in the City's Stormwater Permit, groundwater recharge shall not occur unless the applicant(s) implement option (b) above.</p>	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>Future surplus water supplies, when they are secured, shall be sampled and analyzed by a California DHS-certified laboratory and reported to the City, to confirm that the future surplus surface water supplies do not contain constituents of concern that would degrade groundwater quality. Soil treatment, as a result of water percolating through the ground, may be effective in reducing levels of certain naturally occurring pollutants such as Coliform bacteria and nitrate. However, if levels of other constituents (such as atrazine and diuron) that are required to be monitored as part of the City’s Stormwater Permit (Table 11-6) are found to exceed levels allowed under the City’s Stormwater Permit (Table 11-6), then the project applicant(s) shall implement one or both of option (a) or option (b) above, at the discretion of the City.</p> <p>If the City determines based on the additional sampling described in option (a) above, that the future surplus surface water supplies do not contain constituents of concern in excess of the thresholds contained in the City’s Stormwater Permit, then groundwater recharge operations may proceed. If, after additional sampling has been performed in option (a) above, the City determines that the future surplus water supplies do contain constituents of concern in excess of the thresholds contained in the City’s Stormwater Permit, groundwater recharge shall not occur unless the applicant(s) implement option (b) above.</p> <p>Once groundwater operations have begun, implementation of Mitigation Measures 11-6a, 11-6b, 11-7a, and 11-7b would determine ongoing effects to groundwater via the required groundwater monitoring and other studies, and would require that recharge operations be halted in the event that water supplies used for recharge resulted in a degradation of the groundwater quality, and would establish an entity to appropriately operate and maintain the recharge facility.</p>	
11-16: Temporary, Short-Term Construction-Related and Project-Related Hydrologic Effects of Phase 1 Off-site Roadway and Infrastructure Improvements	PS	Implement Mitigation Measures 11-1a, 11-1b, and 11-8.	LTS

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
12 LAND USE			
Program Level Impacts			
12-1: Potential for Division of an Established Community	LTS	No mitigation measures are required.	LTS
12-2: Creation of “Island” Development that is Inconsistent with San Joaquin LAFCO Guidelines for Annexation into Stockton City Limits	PS <u>LTS</u>	No feasible mitigation measures are available at this time. <u>No mitigation measures are required.</u>	SU <u>LTS</u>
12-3: Consistency with San Joaquin LAFCO Guidelines for Annexation into the City of Stockton Urban Service Boundary and Sphere of Influence	LTS	No mitigation measures are required.	LTS
12-4: Potential Inconsistency with the SJCOG Airport Land Use Plan	PS	12-4: The project applicant(s) of all project phases that include development west of the BNSF railroad tracks shall: <ul style="list-style-type: none"> ▶ establish an aviation easement in favor of the Stockton Metropolitan Airport between business owners within the SPA and the airport before inhabitation of the structure; ▶ design all structures to effectively reduce interior noise to 45 dB, regardless of noise levels outside of the building; ▶ not use reflective materials on the exterior of any buildings constructed in the area; ▶ not site transmission lines that could potentially interfere with airport communication or navigation; and ▶ locate any necessary transmission lines that may interfere with airport communication or navigation underground. 	LTS
12-5: Land Use Effects from Future-Phase Off-Site Improvements	PS	Implement Mitigation Measure 12-4 to reduce impacts associated with potential conflicts with the stipulations of the SJCOG Airport Land Use Plan. No feasible mitigation measures are available to mitigate the creation of an unincorporated island of land.	SU
Project Level (Phase 1) Impacts			
12-6: Potential for Division of an Established Community	LTS	No mitigation measures are required.	LTS

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Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
12-7: Consistency with California Department of Education School Siting Criteria	PS	No feasible mitigation measures are available at this time because further review is required by DTSC and CDE.	PSU
12-8: Creation of "Island" Development that is Inconsistent with San Joaquin LAFCO Guidelines for Annexation	PS <u>LTS</u>	No feasible mitigation measures are available at this time. <u>No mitigation measures are required.</u>	SU <u>LTS</u>
12-9: Consistency with San Joaquin LAFCO Guidelines for Annexation into the City of Stockton Urban Services Boundary	LTS	No mitigation measures are required.	LTS
12-10: Potential Inconsistency with the SJCOG Airport Land Use Plan	PS	Implement Mitigation Measure 12-4.	LTS
12-11: Land Use Effects of Off-Site Phase 1 Improvements	PS	Implement Mitigation Measure 12-4 to reduce impacts associated with potential conflicts with the stipulations of the SJCOG Airport Land Use Plan. No feasible mitigation measures are available to mitigate the creation of an unincorporated island of land.	SU
13 NOISE			
Program Level Impacts			
13-1: Exposure to Temporary, Short-Term Project-Generated Noise from Construction Sources	S	<p>13-1: To reduce impacts associated with noise generated during construction/demolition activities, the project applicant(s) for all project phases shall conform to the following requirements:</p> <ul style="list-style-type: none"> ▶ Limit all construction activities within the City to the hours from 7 a.m. to 10 p.m. to ensure compliance with the City of Stockton Municipal Code 16-340.030(A). ▶ Limit all construction activities within the County, or affected by the County, to the hours from 6 a.m. to 9 p.m. to ensure compliance with the San Joaquin County Development Code (9-1029.9(C)(3). ▶ Properly maintain and equip all construction equipment with noise control, such as mufflers, in accordance with manufacturers' specifications. 	LTS

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Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<ul style="list-style-type: none"> ▶ Place noisy stationary equipment (e.g., compressors, generators) away from existing off-site noise-sensitive receptors and/or provide acoustical shielding. 	
<p>13-2: Long-Term Project-Generated Increases in Noise Levels from Traffic Sources at Existing Off-site Noise-Sensitive Receptors</p>	<p>S</p>	<p>13-2: Prior to approval of each tentative subdivision map for residential development, or each building permit for non-residential development, the project applicant(s) of all project phases shall fund a noise study by a qualified noise consultant approved by the City to determine whether transportation noise levels expected to result from the residential or non-residential improvements will exceed the applicable exterior noise exposure standards for transportation noise sources at single-family homes along affected arterial roadway segments, as then set forth in the City’s Municipal Code. If the noise study establishes that the improvements will result in transportation noise levels at single-family homes along affected arterials that exceed the then-applicable City standards, then the City shall evaluate potential measures to minimize exterior noise levels on the properties to the extent feasible. The City shall require, as a condition of the tentative map or building permit, that the project applicant(s) pay their fair share(s) of the costs.</p>	<p>SU</p>
<p>13-3: Land Use Compatibility of On-site Sensitive Receptors with Noise Levels from Future Vehicle Traffic</p>	<p>S</p>	<p>13-3: The City shall require, as a condition of approval of each tentative subdivision map for residential development, and each building permit for non-residential development, that the applicant(s) construct sound walls at the locations shown in Figure 13-3. The data in Table 13-5 shall be consulted to determine the appropriate heights for the sound walls. If the assumptions shown in Table 13-15 vary considerably, the applicant(s) shall pay for a noise analysis, prepared by a qualified acoustical engineer approved by the City, to analyze the effectiveness of the proposed soundwalls and other possible mitigation measures before approval of the tentative map or building permit.</p>	<p>LTS</p>

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Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
13-4: Land Use Compatibility of On-site Sensitive Receptors with Noise Levels from Future BNSF Railroad Traffic	S	<p>13-4: The project applicant(s) of all project phases shall effectively reduce interior and exterior noise of affected MLSP residential areas (N-2, N-3, N-4, N-19, N-21, and N-33) to the City's Conditionally Acceptable noise standards. If implementation of the measures outlined below do not adequately reduce noise levels to City standards, the project applicant(s) of the affected areas shall conduct an analysis of projected future railroad noise levels at the exterior and interior spaces of future noise-sensitive developments proposed within the SPA that would be located within the 60-dBA L_{dn} railroad noise contour. These analyses shall be conducted before tentative maps are submitted so that practical and feasible noise mitigation measures can be incorporated into the project design to achieve compliance with the applicable noise standards.</p> <p>► Area N-21 Village High Density Residential</p> <p>The project applicant(s) of MLSP Area N-21 shall implement one or more of the following conditions:</p> <ul style="list-style-type: none"> • Implement site design measures such as orienting the outdoor areas so that they receive shielding from the proposed residential buildings. • Construct sound walls to mitigate exterior noise levels. However, because the BNSF railroad tracks are elevated significantly relative to the SPA, sound wall construction may not be feasible. Based on the existing site grade, preliminary calculations indicate that a 13-foot-high noise barrier would be required to mitigate exterior noise levels to 70 dBA L_{dn} at a distance of 80 feet from the centerline of the BNSF railroad tracks. Changes to the site grading, such as raising the site grade and relative base-of-wall elevation, may increase the effectiveness of noise barriers for this site area. • Implement other site design measures, as described above in the “Environmental Setting” under “Fundamental Noise Control Options,” such as use of setbacks, use of barriers, modifications to site design, noise reduction by building facades, and use of vegetation. 	LTS

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Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>A typical residential building façade provides an exterior-to-interior noise level reduction of 25–30 dB. Considering an exterior noise level approaching 80 dB L_{dn}, an exterior-to-interior noise level reduction of 35 dB would be required to achieve an interior noise level of 45 dB L_{dn}. A 35-dB exterior-to-interior noise level reduction shall result in window upgrades and improvements to the building façade. Therefore, a detailed acoustical analysis of interior noise levels shall be conducted before tentative maps are approved by the City.</p> <ul style="list-style-type: none"> ▶ Areas N-2, N-3, N-4, N-19, and N-33 Village Medium and Low Density Residential <p>Based on the existing site grade, preliminary calculations, the project applicant(s) of MLSP Areas N-2, N-3, N-4, N-19, and N-33 shall construct a 10-foot-high noise barrier to reduce and mitigate exterior noise levels to the City’s “Conditionally Acceptable” level of 65 dB L_{dn} at the residential uses closest to the BNSF railroad tracks at Parcel N-3. Changes to the site grading, such as raising the site grade and relative base-of-wall elevation, may increase the effectiveness of noise barriers for this site area. Residential uses with greater setbacks shall comply with the City’s 60-dBA L exterior noise level standard with much shorter sound barriers. This analysis does not take into account shielding effects from the existing site grading for the elevated East Mariposa Road or noise barriers that may be built to mitigate traffic noise levels.</p>	
<p>13-5: Land Use Compatibility of Sensitive Receptors with Noise Levels from <u>Existing and</u> Future Stationary and Area Sources.</p>	<p>PS</p>	<p>13-5: The project applicant(s) of all project phases shall implement measures described below to reduce exposure of sensitive receptors to excessive noise levels from <u>existing and</u> future stationary and area sources.</p> <p>(a) Industrial and Commercial/Office Land Uses. Where these land uses adjoin common residential property lines, mitigation measures shall be incorporated into the project design that reduce exposure of sensitive receptors to noise from future stationary and area sources, as described below.</p>	<p>PSU</p>

* NI = no impact, B = beneficial impact, LTS = less-than-significant impact, PS = potentially significant impact, S = significant impact, SU = significant and unavoidable impact, PSU = potentially significant and unavoidable impact

**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>(1) The project applicant(s) of all project phases involving the development of retail or commercial uses shall comply with the requirements of Chapter 16 of the City of Stockton Development Code, specifically Sections 16-340.030(A), 16-340.030(B), 16-340.030(F), and 16-340.040(B)(2)(c).</p> <p>(2) During project review of industrial, commercial, or office plans, the City Zoning Administrator shall determine whether the proposed use would likely generate noise levels that could adversely affect the adjacent residential areas. If it is determined from this review that proposed uses could generate excessive noise levels (e.g., noise levels in excess of standards established in the City of Stockton General Plan) (specifically, exterior and interior noise levels of 60–65 dBA L_{dn} and 45 dBA L_{dn}, respectively, for residential uses exposed to transportation noise sources and the Table 13-10 standards for residential uses exposed to nontransportation noise sources) or result in a substantial (3 dBA or greater) permanent increase in ambient noise levels in the project vicinity above levels existing without the proposed project at noise-sensitive uses, the project applicant(s) of all project phases involving industrial, commercial, or office uses shall prepare a site-specific acoustical analysis to identify appropriate mitigation to achieve the City of Stockton exterior and interior noise standards and ensure that all appropriate noise control measures are incorporated into the project design to mitigate any noise impacts. Noise control measures shall include, but are not limited to, use of noise barriers, site redesign, silencers, and partial or complete enclosures of critical equipment. As a condition of approval, the acoustical shall be conducted to verify the effectiveness of measures proposed to comply with the City of Stockton noise standards.</p>	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>(3) The project applicant(s) of all project phases involving business professional uses shall construct an 8-foot-high sound wall, as required by the City Development Code, to provide adequate isolation of parking lot and delivery truck activities, which along with HVAC equipment constitute the primary sources of noise. HVAC equipment shall be located at ground level or, when located on rooftops, the building facades shall include parapets for shielding.</p> <p>(4) The project applicant(s) of all project phases involving commercial or industrial uses abutting residential property lines, or where loading docks or large truck circulation routes face the residential areas, shall include the following measures in the project design:</p> <ul style="list-style-type: none"> ▶ Maintain a minimum distance of 100 feet from residential property lines for loading docks. ▶ Comply with the City of Stockton Development Code, which requires property-line barriers to be a minimum of 8 feet high. ▶ Locate circulation routes for large trucks a minimum of 25 feet from the residential property lines. ▶ Locate all large HVAC equipment within mechanical rooms where possible. ▶ Shield from view with solid barriers all large HVAC equipment. ▶ Comply with the local noise criteria for use of emergency generators. ▶ Comply with the City of Stockton Municipal Code, which restricts loading and unloading operations to the hours of 7 a.m.–10 p.m. <p>(5) Where commercial and office land uses are separated from residential areas by local streets, all loading activities shall be limited to the opposite sides of the buildings from residential uses.</p>	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p><u>(6) Based on existing site grade and preliminary calculations, the project applicant(s) shall construct, at a minimum, a 6-foot-high sound wall to reduce nighttime noise levels at the nearest proposed residences (N-3) from the existing Danamark nut processing facility to levels below 45 dBA Leq. The higher sound wall that is already required under Mitigation Measure 13-4 will serve to reduce noise generated by the Danamark facility to acceptable levels as set forth in the Stockton Municipal Code.</u></p> <p>(b) Parks/School Playgrounds and High School Athletic Fields. The project applicant(s) of all project phases shall coordinate with the Stockton Unified School District (SUSD) and the City of Stockton to verify that each agency will limit outdoor school playground and sporting activities to the hours of 7 a.m.–10 p.m.</p> <p>(c) High School Football Stadium. The project applicant(s) of project phases involving the high school shall coordinate with SUSD and the City of Stockton to facilitate implementation of the following measures to comply with the City’s standards for exterior noise levels at the nearest residential uses to the high school football stadium:</p> <ul style="list-style-type: none"> ▶ Locate the football stadium in a bowl or depression to reduce the amount of noise transmission to adjacent residential areas. ▶ Construct an earthen berm along the rim of the bowl/depression, if needed. ▶ Construct all bleachers or seating to have solid backs to prevent sound from flanking to the west. ▶ Schedule all contests to end by 10 p.m. ▶ Before the stadium is constructed, design the stadium PA system to comply with the applicable City noise standards. ▶ Before building permits are issued, retain an acoustical consultant to review the proposed stadium design. 	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>Careful implementation of these mitigation measures would achieve compliance with the applicable City noise standards. However, because sounds consisting of speech have been shown to be more annoying than broadband noise, the potential for annoyance associated with these uses cannot be eliminated practically. Therefore, the project applicant(s) of all project phases in the vicinity of the high school football stadium shall:</p> <ul style="list-style-type: none"> ▶ Notify home buyers/renters of noise impacts from the stadium. <p>(d) Regional Sports Park. The project applicant(s) of project phases involving the regional sports park shall coordinate with the City of Stockton to facilitate implementation of the following measures to comply with the City's standards for exterior noise levels at the nearest residential and religious/institutional uses to the regional sports park high:</p> <ul style="list-style-type: none"> ▶ Before building permits are issued, retain an acoustical consultant to review the proposed park design and implement any recommended improvements to reduce exterior noise levels. ▶ Construct an earthen berm along the perimeter of the play fields, if recommended by the acoustical engineer. ▶ Construct all bleachers or seating to have solid backs to prevent sound from flanking to the south and east. ▶ Schedule all contests to end by 10 p.m. ▶ Before the park is constructed, design the stadium PA system to comply with the applicable City noise standards. <p>Careful implementation of these mitigation measures would achieve compliance with the applicable City noise standards. However, because sounds consisting of speech have been shown to be more annoying than broadband noise, the potential for annoyance associated with these uses cannot be eliminated practically. Therefore, the project applicant(s) of all project phases in the vicinity of the regional sports park shall:</p>	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>► Notify home buyers/renters in Residential Community N 63 and the tenants/owners of Religious/Institutional N 78 of potential noise impacts from the park.</p> <p>(e) Amtrak Rail/Multimodal Station. The project applicant(s) of project phases involving the implementation of noise-sensitive receptors near the Amtrak rail/multimodal station shall conduct a site-specific acoustical analysis of on-site noise generation from the station before approval of any tentative maps in the vicinity. The acoustical analysis shall be coordinated with Caltrans and identify appropriate mitigation to achieve the City of Stockton exterior and interior noise standards and ensure that all appropriate noise control measures are incorporated into the project design to mitigate any noise impacts. As a condition of approval, the acoustical shall be conducted to verify the effectiveness of measures proposed to comply with the City of Stockton noise standards.</p> <p>(f) San Joaquin Delta College Campus. The project applicant(s) of the project phases involving the implementation of noise-sensitive receptors in the vicinity of the college campus shall conduct a site-specific acoustical analysis of on-site noise generation from the college before approval of any tentative maps in the vicinity. The acoustical analysis shall identify appropriate mitigation to achieve the City of Stockton exterior and interior noise standards and ensure that all appropriate noise control measures are incorporated into the project design to mitigate any noise impacts. As a condition of approval, the acoustical shall be conducted to verify the effectiveness of measures proposed to comply with the City of Stockton noise standards.</p> <p>(g) Other. The project applicant(s) of all project phases involving other noise sources (e.g., pumps, generators) associated with supporting infrastructure, specifically the water distribution system, shall include the following measures in the project design:</p> <ul style="list-style-type: none"> ► Properly maintain and equip all equipment with noise control, such as mufflers, in accordance with manufacturers' specifications. <p>Noisy stationary equipment (e.g., pumps, generators) shall be placed away from noise-sensitive receptors and enclosed.</p>	

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
13-6: Short-Term Exposure of Sensitive Receptors to Vibration from the BNSF Railroad and Construction and Demolition Activities	S	13-6: The project applicant(s) of all project phases shall not operate heavy-duty construction equipment (e.g., bulldozer, trucks) within 60 feet of an inhabited residence between the hours of 10 p.m. and 7 a.m. or within 15 feet of uninhabited structures.	LTS
13-7: Noise Effects from Future-Phase Off-Site Improvements	S	Implement Mitigation Measure 13-1. Implement Mitigation Measure 13-2. Implement Mitigation Measure 13-6.	SU (project-related traffic noise); LTS (construction noise and vibration)
Project Level (Phase 1) Impacts			
13-8: Exposure to Temporary, Short-Term Project-Generated Noise from Construction Sources	S	Implement Mitigation Measure 13-1.	LTS
13-9: Long-Term Project-Generated Increases in Noise Levels from Traffic Sources at Existing Off-Site Noise-Sensitive Receptors	S	No feasible mitigation measures are available at this time.	SU
13-10: Land Use Compatibility of On-Site Sensitive Receptors with Noise Levels from Future Vehicle Traffic	S	Implement Mitigation Measure 13-3.	LTS
13-11: Land Use Compatibility of On-Site Sensitive Receptors with Noise Levels from Future BNSF Railroad Traffic	S	Implement Mitigation Measure 13-4.	LTS
13-12: Land Use Compatibility of Sensitive Receptors with Noise Levels from <u>Existing and</u> Future Stationary and Area Sources	PS	Implement Mitigation Measure 13-5.	PSU
13-13: Short-Term Exposure of Sensitive Receptors to Vibration from the BNSF Railroad and Construction and Demolition Activities	S	Implement Mitigation Measure 13-6.	LTS

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
13-14: Potential Noise Effects from Phase 1 Off-Site Improvements	S	Implement Mitigation Measures 13-1, 13-6, and 13-7.	SU (project-related traffic noise); LTS (construction noise and vibration)
14 POPULATION, HOUSING, AND EMPLOYMENT			
Program Level Impacts			
14-1: Temporary Increase in Population and Housing Demand during Construction	LTS	No mitigation measures are required.	LTS
14-2: Increased Population Growth	LTS	No mitigation measures are required.	LTS
14-3: Housing Displacement Resulting from Development of the Proposed Project	LTS	No mitigation measures are required.	LTS
14-4: Temporary Population and Housing Effects from Development of Later-Phase Off-Site Infrastructure Improvements	LTS	No mitigation measures are required.	LTS
Project Level (Phase 1) Impacts			
14-5: Temporary Increase in Population and Housing Demand during Construction of Development Phase 1	LTS	No mitigation measures are required.	LTS
14-6: Increased Population Growth	LTS	No mitigation measures are required.	LTS
14-7: Housing Displacement Resulting from Development of Phase 1	NI	No mitigation measures are required.	NI
14-8: Temporary Population and Housing Effects from Development of Phase 1 Off-Site Infrastructure Improvements	LTS	No mitigation measures are required.	LTS

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
15 PUBLIC SERVICES			
Program Level Impacts			
15-1: Temporary Obstruction of Roadways during Construction	S	15-1: The project applicant(s) of all project phases shall prepare and implement traffic control plans for construction activities that may affect road rights-of-way. The traffic control plans shall follow standards of the agency responsible for the affected roadway and shall be signed by a professional engineer. Measures typically used in traffic control plans include advertising of planned lane closures, warning signage, a flagperson to direct traffic flows when needed, and methods to ensure continued access by emergency vehicles. During project construction of all project phases, access to existing land uses shall be maintained at all times, with detours used as necessary during road closures. Traffic control plans shall be submitted to the City Public Works Department for review and approval before the approval of all project plans or grading permits for all project phases where implementation may cause adverse impacts on existing traffic flow.	LTS
15-2: Increased Demand for Fire Protection Facilities, Systems, Equipment, and Services	LTS	No mitigation measures are required.	LTS
15-3: Increased Demand for Fire Flow	LTS	No mitigation measures are required.	LTS
15-4: Increased Demand for Police Protection Facilities, Services, and Equipment	LTS	No mitigation measures are required.	LTS
15-5: Increased Demand for Public Elementary School and High School Facilities and Services	LTS	No mitigation measures are required.	LTS
15-6: Increased Demand for Parks and Recreation Facilities	LTS	No mitigation measures are required.	LTS
15-7: Increased Demand for Public Libraries	LTS	No mitigation measures are required.	LTS
15-8: Increased Generation of Solid Waste	LTS	No mitigation measures are required.	LTS
15-9: Potential Public Services Effects from Future-Phase Off-Site Improvements	S	Implement Mitigation Measure 15-1.	LTS

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
Project Level (Phase 1) Impacts			
15-10: Temporary Obstruction of Roadways during Construction	S	Implement Mitigation Measure 15-1.	LTS
15-11: Increased Demand for Fire Protection Facilities, Systems, Equipment, and Services	LTS	No mitigation measures are required.	LTS
15-12: Increased Demand for Fire Flow	LTS	No mitigation measures are required.	LTS
15-13: Increased Demand for Police Protection Facilities, Services, and Equipment	LTS	No mitigation measures are required.	LTS
15-14: Increased Demand for Public K-8 and High School Facilities and Services	LTS	No mitigation measures are required.	LTS
15-15: Increased Demand for Parks and Recreation Facilities	LTS	No mitigation measures are required.	LTS
15-16: Increased Demand for Public Libraries	LTS	No mitigation measures are required.	LTS
15-17: Increased Generation of Solid Waste	LTS	No mitigation measures are required.	LTS
15-18: Potential Public Services Effects from Phase 1 Off-Site Improvements	S	Implement Mitigation Measure 15-1.	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
16 TRANSPORTATION AND CIRCULATION			
Impacts Common to All Development Scenarios			
<p>16-1: Increases to Peak-Hour and Daily Traffic Volumes, Resulting in Unacceptable Traffic Operations at Study Intersections and Roadways</p>	<p>S</p>	<p>16-1a: The City of Stockton has adopted the Public Facilities Street Improvement fees to finance certain street and intersection improvements required to mitigate the impacts of new development. If off-site intersections identified in this chapter are currently included in the calculations for a Public Facilities Street Improvement fee, the payment by the project applicant(s) of the current fee constitutes a proportionate share of participation for those improvements. For improvements not included in the calculation of public facilities fees (including interim street improvements), the project applicant(s) of all project phases shall be responsible for the proportionate share, based on traffic loadings, for these improvements. The project applicant(s) are required to install required improvements along the project frontage as well as off-site improvements if the development triggers the need for the improvement. In this latter case, the project applicant(s) shall be responsible for the design and construction of the identified improvements and may be eligible for credit or reimbursement in accordance with the City of Stockton Public Facilities Fee Administrative Guidelines. This mitigation is applicable to improvements at intersections and arterial roadway segments, as discussed in this and the following sections.</p> <p>The project applicant(s) for all project phases shall participate in the necessary improvements identified in all of the following mitigation measures. The participation of the project applicant(s) and the associated timing of the improvements shall be identified in the project conditions of approval and in the mitigation monitoring and reporting program for the project, or in conjunction with and as an appendix to the MLSP. Proportionate share shall be determined and paid before the final map is recorded. If improvements are required within the project boundaries, the project applicant(s) shall be responsible for the costs associated with the design, construction, and implementation of those required improvements.</p>	<p>LTS <u>SU short term</u> <u>LTS long term</u></p>

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>16-1b: The project applicant(s) and the City have identified needed regional traffic improvements that would be triggered by the proposed project. Major improvements to the regional road system would be required to handle traffic from previously approved developments, including the proposed project and growth anticipated by the adopted 1990 City General Plan or the proposed 2035 City General Plan Update, if approved. To ensure that needed improvements are implemented, the project applicant(s) of all project phases shall implement or contribute a proportionate share of funding for implementation of the identified improvements.</p> <p>Many of the required off-site improvements are not necessary for the initial portion of Phase 1 development but would need to accommodate later development; these improvements shall be staged to coincide with estimated dwelling-unit targets, which may be subject to refinement. Table 16-10 identifies the required improvements and triggers for implementation. The trigger points have been identified on the basis of estimated traffic conditions at various stages in development of the proposed project. Actual trigger points would be based on annual traffic monitoring studies that would determine existing traffic counts and would include interviews with the project applicant(s) and City staff. The purpose of the interviews is to determine the amount of development expected in the next 2-, 4-, and 6-year periods. From this information, calculations would be made in a traffic study to determine the date when the transportation improvements are required to maintain adequate levels of service and circulation within the SPA and vicinity. Shaded improvements in Table 16-10 indicate those improvements that would be required during Phase 1 (up to 4,700 dwelling units).</p> <p>Precise timing, such as specific dates, for these intersection improvements cannot be established at this time. At the time that the tentative maps are approved, the phasing for necessary infrastructure improvements shall be established to ensure that transportation mitigation is implemented before impacts occur.</p> <p>These transportation improvements shall be coordinated with Caltrans, the City, the County, and other potentially affected oversight agencies for intersections and roadway improvements under their jurisdiction.</p>	

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
<p>16-1c: To ensure that intersections and roadways in the project study area and the surrounding region operate acceptably, the project applicant(s) of all project phases shall implement improvements as required under each condition of “with project” traffic conditions, as identified in Table 16-11. The project applicant(s) would not be responsible for contributing or financing improvements required under “without project” conditions; however, in some cases, improvements that are initially identified as being required under “without project” conditions become “with project” mitigation for traffic increases because the proposed project would be the first development project to be constructed on the affected roadway. In these instances, the project applicant(s) shall construct the identified improvements but shall be reimbursed by future applicants, the City, and/or the County for some of the costs. The project applicant(s) shall only be responsible ultimately for their proportionate share of improvements based on traffic loading. Improvements to the study intersections shall be coordinated with the appropriate oversight agencies (i.e., Caltrans, the County, the City, and other potentially affected agencies for intersections or other roadways under their jurisdiction).</p>			
<p>Existing plus Approved Projects plus Phase 1 Project Conditions</p>			
<p>16-2: EPAP plus Phase 1 Project Conditions— Unacceptable LOS at Internal and External Study Intersections</p>	<p>S</p>	<p>Implement Mitigation Measures 16-1a, 16-1b, and 16-1c, including the traffic improvements for intersections indicated in the “EPAP plus Phase 1” column of Table 16-17<u>16-14</u>.</p>	<p>LTS</p>
<p>16-3: EPAP plus Phase 1 Project Conditions— Unacceptable Roadway Arterial Operations</p>	<p>S</p>	<p>Implement Mitigation Measures 16-1a, 16-1b, and 16-1c, including the traffic improvements for arterial roadways indicated in the “EPAP plus Phase 1” column of Table 16-17<u>16-14</u>.</p>	<p>LTS</p>
<p>16-4: EPAP plus Phase 1 Project Conditions— Unacceptable LOS at Freeway Study Segments</p>	<p>S</p>	<p>16-4: The project applicant(s) of all project phases, including Phase 1, shall pay a proportionate share of the costs required for improvements to SR 99 between Arch Road and the Crosstown Freeway. The project’s participation and the associated timing of the improvements shall be identified in the project conditions of approval and in the mitigation monitoring and reporting program for the project, or in conjunction with and as an appendix to the MLSP.</p>	<p>SU</p>

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
16-5: EPAP plus Phase 1 Project Conditions—Creation of New Bicycle and Pedestrian Ways	B	No mitigation measures are required.	B
16-6: EPAP plus Phase 1 Project Conditions—Increased Demand for Transit Service	PS	<p>16-6a: The project applicant(s) of Phase 1 shall coordinate the development of the Amtrak rail/multimodal station with SJRTD, the Altamont Commuter Express, Caltrans, and other applicable transportation agencies to ensure that provision of service is adequately provided.</p> <p>16-6b: The project applicant(s) of Phase 1 shall coordinate with SJRTD during the preparation and processing of tentative subdivision maps and major commercial and industrial site development plans. Maps and plans shall reflect SJRTD recommendations regarding necessary future transit facilities.</p>	SU
16-7: EPAP plus Phase 1 Project Conditions—Traffic Impact on Streets in the Vicinity of School Development	PS	16-7: The project applicant(s) of Phase 1 shall facilitate coordination between the Stockton Unified School District (SUSD) and the City of Stockton Department of Public Works in the planning and site design of each new school facility to avoid or mitigate for significant traffic conflicts in the vicinity of the planned schools. Such coordination may include adjustments to driveway and/or parking lot design, traffic safety measures such as crosswalks or crossing guards, and/or other measures identified by SUSD and the City.	SU
16-8: EPAP plus Phase 1 Project Conditions—Impacts of Off-Site Street, Utility, and Groundwater Recharge on Transportation	S	Implement Mitigation Measure 15-1.	LTS
Existing plus Approved Projects plus Full Project Buildout Conditions			
16-9: EPAP plus Full Project Buildout Conditions—Unacceptable LOS at Internal and External Study Intersections	S	Implement Mitigation Measures 16-1a, 16-1b, and 16-1c, including the traffic improvements for intersections indicated in the “EPAP plus Full Project Buildout” column of Table 16-17 <u>16-14</u> .	PSU (related to regional sports park); LTS (all other intersection LOS impacts)

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>16-9: After the regional sports park (proposed in development phase 3) has been designed, the project applicant(s) shall complete a transportation impact study to identify traffic impacts related to the regional sports park to the satisfaction of the City's Public Works Department. Impacts shall be identified using methodologies adopted by the City or consistent with those identified in this DEIR. Improvements identified as a result of the transportation impact study shall be implemented by the project applicant(s) for all applicable project phases.</p>	
<p>16-10: EPAP plus Full Project Buildout Conditions— Unacceptable LOS at Freeway Study Segments</p>	<p>S</p>	<p>Implement Mitigation Measure 16-4.</p>	<p>SU</p>
<p>16-11: EPAP plus Full Project Buildout Conditions— Realignment of SR 4</p>	<p>See technical chapters of the DEIR</p>	<p>See technical chapters of the DEIR for mitigation measures required from development of the entire MLSP. Many of the identified mitigation measures would apply to the realignment of SR 4 within the SPA.</p>	<p>See technical chapters of the DEIR</p>
<p>16-12: EPAP plus Full Project Buildout Conditions— Creation of New Bicycle and Pedestrian Ways</p>	<p>B</p>	<p>No mitigation measures are required.</p>	<p>B</p>
<p>16-13: EPAP plus Full Project Buildout Conditions— Increased Demand for Transit Service</p>	<p>PS</p>	<p>16-13a: The project applicant(s) of all project phases shall coordinate the development of the Amtrak rail/multimodal Station with SJRTD, the Altamont Commuter Express, Caltrans, and other applicable transportation agencies to ensure that service is adequately provided.</p> <p>16-13b: The project applicant(s) of all project phases shall coordinate with SJRTD during the preparation and processing of tentative subdivision maps and major commercial and industrial site development plans. Maps and plans shall reflect SJRTD recommendations regarding necessary future transit facilities.</p>	<p>SU</p>

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
16-14: EPAP plus Full Project Buildout Conditions—Traffic Impacts on Streets in the Vicinity of School Development	PS	16-14: The project applicant(s) of all project phases shall facilitate coordination between SUSD and the City of Stockton Department of Public Works in the planning and site design of each new school facility to avoid significant traffic conflicts in the vicinity of the planned schools. Such coordination may include adjustments to driveway and/or parking lot design, traffic safety measures such as crosswalks or crossing guards, <u>negotiations regarding funding for student bus passes</u> , and/or other measures identified by SUSD and the City.	SU
16-15: EPAP plus Full Project Buildout Conditions—Impacts of Off-Site Street, Utility, and Groundwater Recharge on Transportation	S	Implement Mitigation Measure 15-1 (discussed in chapter 15, Health and Safety”).	LTS
Cumulative Traffic Impacts—1990 General Plan Buildout plus Project Conditions			
16-16: 1990 General Plan Buildout plus Project Conditions—Unacceptable LOS at Internal and External Study Intersections	S	<p>Implement Mitigation Measures 16-1a, 16-1b, and 16-1c and the project-related intersection and arterial roadway improvements indicated in the “1990 GP” (i.e., 1990 General Plan Buildout plus Project Conditions) column of Table 16-1716-14. With mitigation implementation, all but one of the study intersections would function at acceptable LOS. The Arch Road/SR 99 Single Point Interchange cannot be widened due to physical restrictions. At this location, the proposed project’s contribution to this significant traffic impact would remain significant and unavoidable.</p> <p>Programs and procedures for mitigation of the proposed project’s traffic impacts are described for Mitigation Measures 16-1a, 16-1b, and 16-1c. In summary, the project applicant(s) shall make required on-site and frontage improvements, any improvements to off-site arterial roadways, when the need for improvements is triggered by the proposed project (as indicated in Table 16-10 and through monitoring described in Chapter 3, “Project Description”), and proportional-share contributions to other required intersection and highway improvements as indicated in Table 16-1716-14. These improvements and contributions constitute appropriate mitigation for the proposed project’s contribution to the significant cumulative traffic impact. Funding for major improvements such as SR 99 expansion shall remain uncertain, and certain SR 99 segments may not function at acceptable levels in the future.</p>	SU

* NI = no impact, B = beneficial impact, LTS = less-than-significant impact, PS = potentially significant impact, S = significant impact, SU = significant and unavoidable impact, PSU = potentially significant and unavoidable impact

**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
16-17: 1990 General Plan Buildout plus Project Conditions—Unacceptable Traffic Operations on Freeway Segments	S	<p>Implement Mitigation Measures 16-1a, 16-1b, and 16-1c and the project-related intersection and arterial roadway improvements indicated in the “1990 GP” (i.e., 1990 General Plan Buildout plus Project Conditions) column of Table 16-17.14. With mitigation implementation, the segment of SR 99 north of Arch Road would operate at acceptable LOS but the segment north of Mariposa Road would remain at LOS E. The proposed project’s contribution to this significant traffic impact would remain significant and unavoidable.</p> <p>Programs and procedures for mitigation of the proposed project’s traffic impacts are described for Mitigation Measures 16-1a, 16-1b, and 16-1c. In summary, the project applicant(s) shall make proportional-share contributions to the required freeway improvements as indicated in Table 16-17.14. These improvements and contributions constitute appropriate mitigation for the proposed project’s contribution to the significant cumulative traffic impact. Full funding for major improvements such as SR 99 expansion shall remain uncertain, and certain SR 99 segments may not function at acceptable levels in the future.</p>	SU
16-18: 1990 General Plan Buildout plus Project Conditions—Creation of New Bicycle and Pedestrian Ways	LTS	No mitigation measures are required.	LTS
16-19: 1990 General Plan Buildout plus Project Conditions—Increased Demand for Transit Service	PS	Implement Mitigation Measures 16-6a, 16-6b, 16-13a, and 16-13b.	SU
16-20: 1990 General Plan Buildout plus Project Conditions—Traffic Impacts on Streets in the Vicinity of School Development	S	Implement Mitigation Measures 16-7 and 16-14.	SU
16-21: 1990 General Plan Buildout plus Project Conditions—Impacts of Off-Site Street, Utility, and Groundwater Recharge on Transportation	LTS	No mitigation measures are required.	LTS

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
Cumulative Traffic Impacts—2035 General Plan Buildout plus Project Conditions			
16-22: 2035 General Plan Buildout plus Project Conditions—Unacceptable LOS at Internal and External Study Intersections	S	<p>Implement Mitigation Measures 16-1a, 16-1b, and 16-1c and the project-related intersection and arterial roadway improvements indicated in the “2035 GP” (i.e., 2035 General Plan Buildout plus Project Conditions) column of Table 16-4714. With mitigation implementation, six study intersections would fail to function at acceptable LOS due to physical restrictions or other design restrictions under 2035 General Plan plus Project conditions. These intersections are SR 99 SB Ramps/East Mariposa Road, Austin Road/Arch Road, East Frontage Road/Arch Road, Arch Road/SR 99 Single Point Interchange, South Airport Way/Arch-Airport Road, and SR 99 SB Ramps/French Camp Road. At these locations, the proposed project’s contribution to this significant traffic impact would remain significant and unavoidable.</p> <p>Programs and procedures for mitigation of the proposed project’s traffic impacts are described for Mitigation Measures 16-1a, 16-1b, and 16-1c. In summary, the project applicant(s) shall make required on-site and frontage improvements, any improvements to off-site arterial roadways, when the need for improvements is triggered by the proposed project (as indicated in Table 16-10 and through monitoring described in Chapter 3, “Project Description”), and proportional-share contributions to other required intersection and freeway improvements as indicated in Table 16-4714. These improvements and contributions constitute appropriate mitigation for the proposed project’s contribution to the significant cumulative traffic impact. Funding for major improvements such as SR 99 expansion shall remain uncertain, and certain SR 99 segments may not function at acceptable levels in the future.</p>	SU
16-23: 2035 General Plan Buildout plus Project Conditions—Unacceptable LOS on Arterial Roadways	S	<p>Implement Mitigation Measures 16-1a, 16-1b, and 16-1c and the project-related intersection and arterial roadway improvements indicated in the “2035 GP” (i.e., 2035 General Plan Buildout plus Project Conditions) column of Table 16-4714. With recommended lane improvements as indicated in Tables 16-4435 and 16-3436, all of these roadways would function at acceptable LOS.</p>	LTS

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>Programs and procedures for mitigation of the proposed project’s traffic impacts are described for Mitigation Measures 16-1a, 16-1b, and 16-1c. In summary, the project applicant(s) shall make required on-site and frontage improvements, any improvements to off-site arterial roadways, when the need for improvements is triggered by the proposed project (as indicated in Table 16-10 and through monitoring described in Chapter 3, “Project Description”), and proportional-share contributions to other required intersection and freeway improvements as indicated in Table 16-14. These improvements and contributions constitute appropriate mitigation for the proposed project’s contribution to the significant cumulative traffic impact. Funding for major improvements such as SR 99 expansion shall remain uncertain, and certain SR 99 segments may not function at acceptable levels in the future.</p>	
<p>16-24: 2035 General Plan Buildout plus Project Conditions—Unacceptable Traffic Operations on Freeway Segments</p>	<p>S</p>	<p>Implement Mitigation Measures 16-1a, 16-1b, and 16-1c and the project-related intersection and arterial roadway improvements indicated in the “2035 GP” (i.e., 2035 General Plan Buildout plus Project Conditions) column of Table 16-14. With the analyzed 10-lane configuration, the segment south of Arch Road would operate at acceptable levels, but the segments north of Mariposa Road would operate at LOS F in the southbound direction during the a.m. peak hour and the northbound direction during the p.m. peak hour. No expansion beyond 10 lanes or mitigation has been identified. At this location, the proposed project’s contribution to this significant traffic impact would remain significant and unavoidable.</p> <p>Programs and procedures for mitigation of the proposed project’s traffic impacts are described for Mitigation Measures 16-1a, 16-1b, and 16-1c. In summary, the project applicant(s) shall make proportional-share contributions to the required freeway improvements as indicated in Table 16-14. These improvements and contributions constitute appropriate mitigation for the proposed project’s contribution to the significant cumulative traffic impact. Full funding for major improvements such as SR 99 expansion shall remain uncertain, and certain SR 99 segments may not function at acceptable levels in the future.</p>	<p>SU</p>

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
16-25: 2035 General Plan Buildout plus Project Conditions—Creation of New Bicycle and Pedestrian Ways	LTS	No mitigation measures are required.	LTS
16-26: 2035 General Plan Buildout plus Project Conditions—Increased Demand for Transit Service	PS	Implement Mitigation Measures 16-6a, 16-6b, 16-13a, and 16-13b.	SU
16-27: 2035 General Plan Buildout plus Project Conditions—Traffic Impacts on Streets in the Vicinity of School Development	S	Implement Mitigation Measures 16-7 and 16-14.	SU
16-28: 2035 General Plan Buildout plus Project Conditions—Impacts of Off-Site Street, Utility, and Groundwater Recharge on Transportation	LTS	No mitigation measures are required.	LTS
17 UTILITIES AND ENERGY			
Program Level Impacts			
17-1: Increased Demand for Potable Water Supply	S	17-1: Before City approval of any tentative small lot subdivision map for a proposed residential project of 500 or fewer units within the SPA, or before City need not comply with Government Code Section 66473.7 or formally consult with the water purveyor that would provide water to a proposed subdivision, but shall make a factual showing or impose conditions similar to those required by Government Code Section 66473.7 to ensure an adequate long term, reliable water supply is available for development authorized by the map. Before approval of any tentative small-lot subdivision map for a proposed residential development project of more than 500 dwelling units within the SPA, the City shall comply with Government Code Section 66473.7. Before approval of any tentative small-lot subdivision map for a proposed residential project of 500 or fewer units within the SPA, the City shall make a finding that sufficient water supplies are, or will be, available prior to completion of the subdivision, which finding shall be made on the record and supported by substantial evidence as required by Government Code Section 66473.7 in the same manner as the findings required by Government Code Section 66473.7 for subdivisions of more than 500 dwelling units. Before recordation of any final small lot subdivision map, or before City approval of any project-specific	LTS (SU for Delta Water Supply Project)

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>discretionary approval or entitlement required for nonresidential land uses, the City or the project applicant(s) shall demonstrate, based on substantial evidence, the availability of a long-term reliable water supply from a public water system for the amount of development that would be authorized by the project-specific discretionary nonresidential approval or entitlement. Such a demonstration may rely on a valid urban water management plan or a previously approved water supply assessment, as provided by Government Code Sections 66473.7(c)(1) shall consist of a written verification that existing sources are or will be available and (2), and shall demonstrate that needed physical improvements for treating and delivering water to the non-residential project site will be in place prior to occupancy. This mitigation measure shall be the responsibility of the project applicant(s) of all project phases. It shall be the project applicant(s) responsibility to coordinate with the City to ensure that a long-term, reliable water supply is available and has been confirmed.</p>	
<p>17-2: Increased Demand for Water Conveyance Facilities</p>	<p>PS</p>	<p>17-2a: In the event that the City has not adopted a Water Master Plan to serve the General Plan Update 2035, the project applicant(s) shall fund and prepare for the City Council adoption a water master plan addendum that addresses service to Mariposa Lakes.</p> <p>17-2b: Before the approval of building permits for all project phases, the project applicant(s) shall submit proof to the City that an adequate delivery system either has been constructed or is assured through the use of bonds or other sureties to the City’s satisfaction. Both on- and off-site water infrastructure sufficient to provide adequate water to MLSP subdivisions or non-residential uses shall be in place before the approval of the final map/ improvement plan, or their financing shall be assured to the satisfaction of the City.</p>	<p>LTS</p>

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
17-3: Increased Demand for Nonpotable Water Supply and Conveyance Facilities	PS <u>LTS</u>	<p>17-3: Prior to recordation of any final small lot subdivision map/improvement plan, or prior to City approval of any project specific discretionary approval or entitlement required for nonresidential land uses, the project applicant(s) of all project phases shall secure a source of water supplies that would meet the required nonpotable water demands and shall demonstrate, based on substantial evidence, the frequency and availability of the proposed nonpotable water supplies. If the project applicant(s) are unable to secure a source of surplus surface water to meet nonpotable water demands, as is currently planned, the project applicant(s) of all project phases shall do one of the following:</p> <ul style="list-style-type: none"> ▶ purchase the water for nonpotable water needs from a potable water supplier; or ▶ eliminate the proposed lake system. <p><u>No mitigation measures are required.</u></p>	PSU <u>LTS</u>
17-4: Need for Permanent Wastewater Conveyance Facilities to Serve Project Wastewater Demand	S	17-4a: In the event that the City has not adopted a Sewer Master Plan to serve the General Plan Update 2035 area, the project applicant (s) shall fund and prepare for City Council adoption a sewer master plan addendum that addresses service to Mariposa Lakes.	PSU

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
		<p>17-4b: Before approval of any tentative subdivision map for residential development or improvement plans for nonresidential development, the project applicant(s) of all project phases shall formally request that the City initiate formal consultation with the wastewater system provider that would serve the proposed subdivision. The City shall make a factual showing or impose conditions to ensure that an adequate wastewater removal system necessary for the proposed development is available. The City or the project applicant(s) of all project phases shall demonstrate, based on substantial evidence, that a long-term, reliable wastewater collection system is available for the amount of development that would be authorized by the final subdivision map or other project-specific discretionary nonresidential permit or entitlement. The project applicant(s) shall make such a demonstration before any final small-lot subdivision map is recorded or before approval of any project-specific discretionary permit or entitlement required for any nonresidential land uses. The demonstration, which shall be verified by the City, shall consist of a written verification that existing collection system capacity is or will be available and that needed physical improvements for treating wastewater from the SPA will be in place before occupancy. These requirements shall apply through all project phases.</p> <p>17-4c: Before the initiation of development Phase 2, the City or the project applicant(s) shall demonstrate, based on substantial evidence, that a long-term, reliable wastewater collection system is available for buildout of the proposed project. If the City determines a reliable wastewater collection system is not available to serve buildout of the project, the project applicant(s) shall fund and construct System No. 12, and shall prepare a separate CEQA analysis to evaluate potential impacts associated with development of System No. 12. The project applicant(s) shall implement all mitigation measures identified as a result of this City-required analysis. These requirements shall apply through all project phases.</p>	

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Table 7-1 Revised Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
17-5: Increased Demand for Wastewater Treatment Plant Capacity to Serve Project Wastewater Demand	PS	17-5: Before approval of any tentative subdivision map for residential development or improvement plans for nonresidential development, the project applicant(s) of all project phases shall formally request that the City initiate formal consultation with the wastewater system provider that would serve the proposed subdivision. The City shall make a factual showing or impose conditions to ensure an adequate wastewater treatment system necessary for the proposed development is available. The City or the project applicant(s) of all project phases shall demonstrate, based on substantial evidence, that a long-term, reliable wastewater treatment system is available for the amount of development that would be authorized by the final subdivision map or other project-specific discretionary nonresidential permit or entitlement. The project applicant(s) shall make such a demonstration before any final small-lot subdivision map is recorded or before approval of any project-specific discretionary permit or entitlement required for any nonresidential land uses. The demonstration, which shall be verified by the City, shall consist of a written verification that existing treatment capacity is or will be available and that needed physical improvements for treating wastewater from the SPA will be in place before occupancy.	LTS
17-6: Increased Demand for Electricity and Associated Infrastructure	LTS	No mitigation measures are required.	LTS
17-7: Increased Demand for Natural Gas and Associated Infrastructure	LTS	No mitigation measures are required.	LTS
17-8: Increased Demand for Communications Service and Associated Infrastructure	LTS	No mitigation measures are required.	LTS
17-9: Demand for Off-Site Utilities and Associated Infrastructure Related to Later-Phase Development	LTS	No mitigation measures are required.	LTS
Project Level (Phase 1) Impacts			
17-10: Increased Demand for Potable Water Supply	S <u>LTS</u>	Implement Mitigation Measure 17-1. <u>No mitigation measures are required.</u>	LTS (SU for <u>Delta water supply project</u>)

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**Table 7-1
Revised Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation*	Mitigation Measures	Significance After Mitigation*
17-11: Increased Demand for Water Conveyance Facilities	PS	Implement Mitigation Measure 17-2.	LTS
17-12: Increased Demand for Nonpotable Water Supply and Conveyance Facilities	S LTS	Implement Mitigation Measure 17-3. No mitigation measures are required.	PSU LTS
17-13: Need for Interim Wastewater Conveyance Facilities to Serve Project Wastewater Demand	S	Implement Mitigation Measures 17-4a and 17-4b.	PSU
17-14: Need for Increased Wastewater Treatment Plant Capacity to Serve Project Wastewater Demand	PS	Implement Mitigation Measure 17-5.	LTS
17-15: Increased Demand for Electricity and Associated Infrastructure	LTS	No mitigation measures are required.	LTS
17-16: Increased Demand for Natural Gas and Associated Infrastructure	LTS	No mitigation measures are required.	LTS
17-17: Increased Demand for Communications Service and Associated Infrastructure	LTS	No mitigation measures are required.	LTS
17-18: Demand for Phase 1 Off-Site Utility and Associated Infrastructure	LTS	No mitigation measures are required.	LTS
18 CUMULATIVE IMPACTS			
<p>In addition to the significant cumulative impacts described above for Chapter 16, “Transportation and Circulation,” the proposed project would contribute to significant cumulative impacts related to changes of views in the project region to urban land uses and the associated increase in nighttime light and glare; loss of Important Farmland and cancellation of Williamson Act contracts at the SPA; air quality impacts associated with ozone precursors and PM₁₀ during construction, and with ROG and NO_x during long-term operation of the proposed project; contribution to long-term emissions of atmospheric greenhouse gases; contribution to emissions of toxic air contaminants; carbon monoxide, and odors; creation of an unincorporated “island” of land, some of which has been developed, some of which has not; impacts associated with future stationary-source noise and increases in vehicle traffic noise levels from implementation of the proposed project; impacts associated with increased demand for water supply; impacts associated with the future construction of water facilities that would be needed to serve the SPA and other regional development; impacts associated with development of System No. 12 for wastewater collection, as well as wastewater treatment plant capacity.</p>			

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