Final Environmental Impact Report

City of Manteca Wastewater Quality Control Facility and Collection System Master Plans Update Project

SCH #2006052164

Prepared for:

City of Manteca

Prepared by:

EDAW
2022 J Street
Sacramento, CA 95811

January 2008

EDAW | AECOM

Final Environmental Impact Report

City of Manteca Wastewater Quality Control Facility and Collection System Master Plans Update Project

SCH #2006052164

Prepared for:

City of Manteca
1001 West Center Street
Manteca, CA 95337

Attn: Phil Govea
Deputy Director of Public Works—Engineering
(209) 239-8463

Prepared by:

EDAW
2022 J Street
Sacramento, CA 95811

Contact:

Amanda Olekszulin
Senior Project Manager
(916) 414-5800

In Association with:

Nolte Associates
& Larry Walker Associates

January 2008

EDAW | AECOM

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TABLE OF CONTENTS

1 INTRODUCTION

This Final Environmental Impact Report (EIR) has been prepared to respond to comments received on the Draft EIR (DEIR) for the Manteca Wastewater Quality Control Facility (WQCF) and Collection System Master Plans Project (proposed project). The Final EIR has been prepared on behalf of the City of Manteca (City), the lead agency, in accordance with the requirements of the California Environmental Quality Act (CEQA).

Implementation of the proposed project requires approval by the Manteca City Council as the lead agency. The proposed project would provide additional wastewater treatment and conveyance capacity to accommodate growth planned for in the City's general plan. The WQCF is located on a 210-acre City-owned site north of State Route 120, south of Yosemite Avenue, and west of Airport Way. The proposed project involves construction of treatment facilities, a treated effluent outfall pipeline that would extend from the WQCF to a side-bank outfall structure at the San Joaquin River, and wastewater collection system improvements along the perimeter of the City.

On July 17, 2007, the City released the DEIR for public and agency review and comment. The DEIR evaluated the potential environmental effects of the proposed project and four alternatives: No Project Alternative, Increased Land Disposal Alternative, Advanced Wastewater Treatment Alternative, and Modified Pipeline Alignment Alternative. Seven comment letters were received during the public comment period. In addition, a public hearing to receive public input on the DEIR was held at the City Council Chambers on August 8, 2007. No comments were received at the hearing. The comment period closed on August 30, 2007.

This document and the DEIR together comprise the Final EIR.

1.1 SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

1.1.1 PROJECT LOCATION

The WQCF occupies approximately 22 acres of a 210-acre City-owned site, which is bounded generally by Yosemite Avenue to the north, State Route 120 to the south, Airport Way to the east, and both McKinley Avenue and the Union Pacific Railroad to the west. The proposed WQCF expansion and upgrades would primarily be located within the existing 22-acre WQCF site. A proposed treated effluent outfall pipeline would extend from the WQCF to a side-bank outfall structure at the San Joaquin River.

Proposed wastewater collection system improvements would generally be located along the perimeter of the city. Local roadways in the vicinity of the proposed wastewater collection system trunk sewers include Woodward Avenue, Lathrop Road, and Airport Way. A proposed recycled water distribution system would primarily follow Woodward Avenue, Airport Way, and Center Street.

1.1.2 PROJECT OBJECTIVES

The City of Manteca, as the lead agency, has developed the following primary objectives to satisfy the requirements of the State CEQA Guidelines Section 15124 (b):

- provide sufficient conveyance and treatment capacity to meet projected growth within the City of Manteca's WQCF service area through the year 2023;
- provide for orderly and cost-effective expansion of City WQCF facilities and conveyance systems;
- comply with current water quality standards and provide flexibility to address changes in standards and regulations; and
- be sensitive to community concerns in relation to the planning, design, construction, and operation of City WQCF and collection system facilities and programs.

1.1.3 ELEMENTS OF THE PROPOSED PROJECT

The proposed project would expand WQCF treatment capacity from 9.87 million gallons per day (mgd) to 27 mgd average dry weather flow (ADWF), would construct new trunk sewers to accommodate growth planned for in the City's general Plan (adopted in 2003), and would construct a new recycled water distribution system. The project would result in the construction of treatment facilities to achieve compliance with water quality limitations including rapid mixing and flocculation tanks to address turbidity requirements and a tertiary ultraviolet (UV) light disinfection treatment system to address wastewater reuse requirements. The proposed project would reach buildout via a two-phase, incremental expansion, with capacity increasing from 9.87 to 17.5 mgd ADWF in the first phase, and then from 17.5 to 27 mgd ADWF in the second phase. The proposed increase in capacity would be accommodated using the City's long-term effluent disposal strategy of on-site land application, urban landscape irrigation, and San Joaquin River discharge. The proposed project would also include the incremental construction of three new trunk sewers and improvements to the collection system.

1.1.4 SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT

The EIR evaluates the following alternatives to the project:

- No Project Alternative (9.87 mgd)
- Increased Land Disposal Alternative
- Advanced Wastewater Treatment Alternative
- Modified Pipeline Alignment Alternative

The No Project Alternative and the Modified Pipeline Alternative are environmentally superior to the project. The Advanced Wastewater Treatment Alternative would result in environmental tradeoffs compared to the project. The Increased Land Disposal Alternative would not be environmentally superior to the project.

The No Project Alternative would not attain any of the project's objectives. The Modified Pipeline Alternative would attain all of the project's objectives.

1.2 PURPOSE OF THE FINAL EIR

CEQA 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 Final EIR has been prepared to respond to comments received on the DEIR for the proposed project.

1.3 CEQA REQUIREMENTS FOR RESPONDING TO COMMENTS

The State CEQA Guidelines 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 is at variance with recommendations and objections raised in the comments must be addressed. There must be good faith, reasoned analysis in response.

1.4 REQUIREMENTS FOR EIR CERTIFICATION AND FUTURE STEPS IN PROJECT APPROVAL

The EIR is intended to be used by the 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 July 17, 2007. The comment period closed on August 30, 2007. Comments were received from state and local agencies. A public hearing to receive public input on the DEIR was held during the review period on August 8, 2007. Following completion of the Final EIR, the City of Manteca will hold a public meeting to consider certification of the Final EIR and to decide whether or not to approve the proposed project or an alternative. 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. A Notice of Determination (NOD) will then be filed.

1.5 ORGANIZATION AND FORMAT OF THE FINAL EIR

This document is organized as follows:

- **Chapter 1, "Introduction,"** describes the purpose and content of the Final EIR, provides an overview of the environmental review process, and presents a summary of the proposed project and alternatives.
- **Chapter 2, "Comments and Responses,"** contains a list of all agencies who submitted comments on the DEIR during the public review period, copies of the comment letters received, and individual responses to the comments.
- **Chapter 3, "Revisions to the Draft EIR,"** presents revisions to the DEIR text based on issues raised by comments, clarifications, or corrections. Changes in the text are signified by ~~strikeouts~~ where text is removed and by <u>underline</u> where text is added.
- **Chapter 4, "Report Preparation,"** lists the individuals who assisted in the preparation of this Final EIR.

2 COMMENTS AND RESPONSES

This chapter contains comment letters received during the public review period for the Draft EIR (DEIR). In conformance with State CEQA Guidelines Section 15088(a), written responses to comments on environmental issues received from reviewers of the DEIR were prepared.

Each comment 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.

As noted previously, a public hearing on the DEIR was conducted at the City Council Chambers; however, no public comments were received at this hearing.

2.1 LIST OF COMMENTERS

Table 2-1 provides a list of all agencies and organizations that submitted comments on the DEIR during the public review period.

Table 2-1
List of Commenters

Commenter	Agency	Letter ID	Page Number
State Agencies			
Terry Roberts, Director, State Clearinghouse	Office of Planning and Research State Clearinghouse	SCH	2-2
Chris Huitt, Staff Environmental Scientist, Floodway Protection Section	Department of Water Resources	DWR	2-5
Tom Dumas, Chief, Office of Metropolitan Planning	California Department of Transportation	DOTa	2-7
Tom Dumas, Chief, Office of Metropolitan Planning	California Department of Transportation	DOTb	2-9
Lisa Lee, Regional Programs Unit	State Water Resources Control Board	WRB	2-11
James D. Marshall, P.E., Senior Engineer, NPDES Section	California Regional Water Quality Control Board	RWB	2-14
Local Agencies			
Douglas E. Coty, General Counsel with Bold, Polisner, Maddow, Nelson, & Judson	Oakwood Lake Water District	OWD	2-30

2.2 COMMENTS AND RESPONSES

The written comments received on the DEIR and the responses to those comments are provided in this section. Each comment letter is reproduced in its entirety and is followed by the response(s) to the letter. Where a commenter has provided multiple comments, each comment is indicated by a line bracket and an identifying number in the margin of the comment letter.

Changes to the text of the DEIR that are made in response to the comments are signified by ~~strikeouts~~ where text is removed and by <u>underline</u> where text is added.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

SCH

ARNOLD SCHWARZENEGGER
GOVERNOR

DIRECTOR

August 31, 2007

Phil Govea
City of Manteca
1001 W. Center Street
Manteca, CA 95337

Subject: Manteca Wastewater Quality Control Facility Master Plan and Collection System Master Plan 2005 Update
SCH#: 2006052164

Dear Phil Govea:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on August 30, 2007, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

SCH-1

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2006052164
Project Title Manteca Wastewater Quality Control Facility Master Plan and Collection System Master Plan 2005 Update
Lead Agency Manteca, City of

Type EIR Draft EIR

Description The proposed project would incrementally increase the treatment capacity of the WQCF from 9.87 million gallons per day (mgd) to 27 mgd average dry weather flow (ADWF), increase wastewater effluent discharges to the San Joaquin River, result in discharge of wastewater effluent on urban and agricultural lands, result in minor improvements to existing sewer lines, and result in the construction of three new trunk sewers measuring a total of approximately 21 miles.

Lead Agency Contact

Name Phil Govea
Agency City of Manteca
Phone (209) 239-8463 **Fax**
email
Address 1001 W. Center Street
City Manteca **State** CA **Zip** 95337

Project Location

County San Joaquin
City Manteca
Region
Cross Streets Airport Way and Yosemite Avenue
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways 120, 99
Airports
Railways UPRR
Waterways San Joaquin River
Schools Sierra High School, Yosemite Elementary School
Land Use BIP (Business Industrial Park), GC (General Commercial), HDR (High Density Residential), LDR (Low Density Residential), LI (Light Industrial), MDR (Medium Density Residential), NC (Neighborhood Commercial), P (Park), PQP (Public/Quasi-Public), UR (Urban Reserve)

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Cumulative Effects; Drainage/Absorption; Geologic/Seismic; Growth Inducing; Landuse; Noise; Public Services; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Aesthetic/Visual

Reviewing Agencies Caltrans, District 10; California Highway Patrol; Department of Conservation; Department of Water Resources; Department of Fish and Game, Region 2; Department of Health Services; Office of Historic Preservation; Native American Heritage Commission; Department of Parks and Recreation; Public Utilities Commission; Reclamation Board; Regional Water Quality Control Bd., Region 5 (Sacramento); Resources Agency; State Water Resources Control Board, Clean Water Program; Department of Toxic Substances Control

Date Received 07/17/2007 **Start of Review** 07/17/2007 **End of Review** 08/30/2007

Letter	Office of Planning and Research, State Clearinghouse
SCH	Terry Roberts, Director, State Clearinghouse
Response	August 31, 2007

SCH-1 Responses to comments received from state agencies as attachments to the OPR letter are addressed individually in this document.

STATE OF CALIFORNIA -- THE RESOURCES AGENCY
ARNOLD SCHWARZENEGGER, Governor

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

DWR

July 30, 2007

Phil Govea
City of Manteca
1001 West Center Street
Manteca, California 95337

Manteca Wastewater Quality Control Facility Master Plan and Collection System Master Plan 2005 Update
State Clearinghouse (SCH) Number: 2006052164

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. DWR-1

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,

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

Department of Water Resources
Chris Huitt, Staff Environmental Scientist, Floodway Protection Section
July 30, 2007

DWR-1 As described in Section 4.9, "Hydrology and Water Quality," of the DEIR, the nearest substantial body of water to the project area is the San Joaquin River located west of the City of Manteca. The southwestern part of the proposed project area, including the WQCF site, is located in the 500-year floodplain. Portions of the wastewater collection system, recycled water disposal system, and effluent outfall pipelines are also located in the 500-year floodplain. No project components would be located in the 100-year floodplain. However, it is likely that portions of the wastewater collection system, recycled water disposal system, and effluent outfall pipelines would fall within areas identified on the Board of Reclamation's Designated Floodway maps. Therefore, project components could be subject to an adopted flood control plan.

The City of Manteca will comply with all applicable regulations and will obtain necessary encroachment or other permits for any activities that would be subject to the State Adopted Plan of Flood Control. The City of Manteca will determine if the proposed project is within the authority of the Reclamation Board, and if necessary, will obtain an encroachment permit from the Reclamation Board prior to initiating any project activities.

DOTa

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNO

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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August 13, 2007

10-SJ-120-PM 3.3
SCH# 2006052164
Manteca Wastewater Quality Cont
Facility

Phil Govea
City of Manteca
Community Development Department
1001 West Center Street
Manteca, CA 95337

Dear Mr. Govea:

The California Department of Transportation (Department) appreciates the opportunity to have reviewed the Draft Environmental Impact Report (EIR) for the proposed Manteca Wastewater Quality Control Facility. This project is to be located at Airport Way and Yosemite Avenue, less than 2 miles from the State Route 120 (SR-120) / Airport Way interchange. The Department has the following comment(s):

1. Please provide the Traffic Impact Study (TIS) and electronic input and output micro-simulation files to support the impact analysis on page 4-11.7 of the Draft EIR.

DOT a-1

If you have any questions or would like to discuss our comments in more detail, please contact Annette Clark at (209) 948-3909 (e-mail: Annette_Clark@dot.ca.gov) or me at (209) 941-1921.

Sincerely,

Tom Dumas, Chief
Office of Metropolitan Planning

c: SMorgan State Clearinghouse

DOTa-1 The DEIR provides a detailed evaluation of the project's construction-related and operational traffic impacts consistent with the requirements of CEQA (see Section 4.11, "Transportation and Circulation," of the DEIR). The proposed project would not generate substantial operational traffic. Construction activities would occur at the WQCF facility and in limited segments of City roadways for limited periods of time. During peak construction activities, 80 construction personnel would commute to the WQCF site on a daily basis resulting in 160 daily one-way trips. An additional 50 construction personnel would commute to the pipeline construction sites on a daily basis resulting in 100 daily one-way trips. It should be noted, however, that pipeline construction would occur in segments, and each segment would be under construction and accessed by employee and constructions vehicles for only one to two months. The DEIR determined that because these construction trips are temporary, are located on City streets where sufficient roadway capacity is available, and the trips would not be substantial in relation to existing daily roadway volumes (1.6-7%), the project's construction-related traffic impacts would be less than significant. Regarding potential impacts to State highway facilities, the proposed construction activities are primarily located on existing City property and roadways. Construction personnel are expected to come from the local construction pool and would not commute from long distances along regional freeway facilities. Therefore, it is not anticipated that the project would result in a substantial impact to the operation of State highway facilities.

Under operational conditions, the proposed project would result in the need for 10 additional employees at the WQCF, resulting in 20 daily one-way trips. Expanded operations at the WQCF would result in an increase of 1-2 trips per month for the hauling of materials to the local landfill. These combined operational trips would not be substantial in relation to existing roadway volumes and would be indistinguishable from existing traffic volumes. Therefore, the DEIR determined that the project would result in less-than-significant operational traffic impacts.

While Caltrans submitted a letter indicating that a detailed traffic impact study (TIS) should be prepared for the project, based on the above evidence, the City concluded that preparation of a detailed TIS would not be required as there is no substantial evidence that the project would result in significant impacts to local or State roadway facilities.

DOTb

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

DEPARTMENT OF TRANSPORTATION
P.O. BOX 2048 STOCKTON, CA 95201
(1976 E. CHARTER WAY/1976 E. DR. MARTIN
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FAX (209) 948-7194

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August 13, 2007

10-SJ-120-PM 3.3
SCH# 2006052164
Manteca Wastewater Quality Control Facility

Phil Govea
City of Manteca
Community Development Department
1001 West Center Street
Manteca, CA 95337

Dear Mr. Govea:

The California Department of Transportation (Department) appreciates the opportunity to have reviewed the Draft Environmental Impact Report (EIR) for the proposed Manteca Wastewater Quality Control Facility. This project is to be located at Airport Way and Yosemite Avenue, less than 2 miles from the State Route 120 (SR-120) / Airport Way interchange. The Department has the following comment(s):

1. Please provide the Traffic Impact Study (TIS) and electronic input and output micro-simulation files to support the impact analysis on page 4-11.7 of the Draft EIR.

DOTb-1

If you have any questions or would like to discuss our comments in more detail, please contact Annette Clark at (209) 948-3909 (e-mail: Annette_Clark@dot.ca.gov) or me at (209) 941-1921.

Sincerely,

Tom Dumas, Chief
Office of Metropolitan Planning

c: SMorgan State Clearinghouse

DOTb-1 Please refer to response to comment DOTa-1.

Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

Division of Financial Assistance
1001 I Street • Sacramento, California 95814 • (916) 341-5700 FAX (916) 341-5707
Mailing Address: P.O. Box 944212 • Sacramento, California • 94244-2120
Internet Address: http://www.waterboards.ca.gov

WRB

AUG 3 0 2007

Mr. Phil Govea
Deputy Director of Public Works
City of Manteca, Public Works Department
1001 W. Center Street
Manteca, CA 95337

Dear Mr. Govea,

DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE CITY OF MANTECA (CITY); MANTECA WASTEWATER QUALITY CONTROL FACILITY MASTER PLAN AND COLLECTION SYSTEM MASTER PLAN 2005 UPDATE (PROJECT); STATE CLEARINGHOUSE NO. 2006052164

Thank you for the opportunity to review the above document. State Water Resources Control Board (State Water Board) staff have reviewed the draft EIR and have several specific comments. As a State agency with jurisdiction by law to preserve, enhance, and restore the quality of California's water resources, the State Water Board is providing the following comments on the environmental document prepared for the Project.

We understand that the City is not presently pursuing a State Revolving Fund (SRF) Loan for this Project. The City may want to consider the SRF Loan Program to provide funding for future construction. The SRF Program offers a low interest loan for building or improving wastewater treatment plants, sewers, water reclamation facilities, and storm water drainage. The State Water Board, Division of Financial Assistance (Division), is currently responsible for administering SRF Loans. Please refer to the State Water Board's SRF website at http://www.waterboards.ca.gov/funding/srf.html for additional information. WRB-1

Following are my specific comments on the draft EIR:

1. Page 2-6 states that the Project would result in project-level significant and unavoidable adverse impacts in the areas of Agricultural Resources and Air Quality, and would contribute to cumulative significant and unavoidable adverse impacts in the areas of Agricultural Resources, Visual Resources, and Air Quality. According to the California Environmental Quality Act (CEQA), when a lead agency approves a project that will result in significant effects that cannot be avoided or substantially lessened, the lead agency must explain its reasons for constructing the project despite the adverse impacts it will cause [CEQA Guidelines Section 15093]. Identify the environmental areas on which the Project will have a significant and unavoidable impact, and explain how the Project's benefits outweigh those impacts. WRB-2

Thank you once again for the opportunity to review the City's draft EIR. If you have any questions or concerns, please feel free to contact me at (916) 327-9401 or by email at LDLEE@waterboards.ca.gov.

Sincerely,

Lisa Lee
Regional Programs Unit

Enclosure

cc: State Clearinghouse
(Re: SCH# 2006052164)
P. O. Box 3044
Sacramento, CA 95812-3044

bcc: Lauma Jurkevics, DFA
Kari Schumaker, DFA
Cookie Hirn, DFA

S:\Databases Web & IT\Regional Programs Unit\SCH Comment Letters\City of Manteca comment letter.doc

State Water Resources Control Board
Lisa Lee, Regional Programs Unit, Division of Financial Assistance
August 30, 2007

WRB-1 The commenter introduces the agency and provides information on the State Revolving Fund (SRF) loan program. This comment is noted. No further response is necessary.

WRB-2 Regarding preparation of Findings of Fact and a Statement of Overriding Considerations, the City acknowledges that the project would result in certain significant and significant and unavoidable environmental impacts for which no additional feasible mitigation is available to reduce these impacts. The City intends to prepare and adopt Findings of Fact and a Statement of Overriding Considerations prior to approval of the project consistent with the requirements of State CEQA Guidelines Section 15093.

Linda S. Adams
Secretary for Environmental Protection

California Regional Water Quality Control Board
Central Valley Region

Karl E. Longley, ScD, P.E., Chair

Sacramento Main Office
11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • FAX (916) 464-4645
http://www.waterboards.ca.gov/centralvalley

RWB

7 September 2007

Phil Govea
Deputy Director of Public Works
City of Manteca
1001 West Center Street
Manteca, CA 95336

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT, MANTECA WASTEWATER QUALITY CONTROL FACILITY, CITY OF MANTECA, SAN JOAQUIN COUNTY, SCH #2006052164

Thank you for providing the opportunity to comment on the draft Environmental Impact Report (DEIR) for the proposed project. The wastewater discharge from the Manteca Wastewater Quality Control Facility (WQCF) is currently permitted by Regional Water Board Order No. R5-2004-0028 (NPDES Permit No. CA0081558) allowing a discharge of 9.87 million gallons per day (mgd) of tertiary treated wastewater to the San Joaquin River. The project alternative selected in the DEIR proposes to expand the WQCF to accommodate future growth in the planning period up to the year 2023 and would expand WQCF treatment capacity from 9.87 mgd to 27 mgd average dry weather flow (ADWF). The increase in capacity in the proposed project would be accommodated using the City's long-term effluent disposal strategy of on-site land application, urban landscape irrigation, and San Joaquin River discharge. The two alternative projects considered in the DEIR are land disposal of the effluent or advanced treatment that includes the addition of reverse osmosis treatment facilities. Following are our comments on the DEIR.

- **Electrical conductivity**

  In the DEIR section on Hydrology and Water Quality (Section 4.9) it states that the assessment of near-field water quality impacts are based on median values from the receiving water monitoring data, which by definition means that half the values in the receiving water data set are above the value used in the assessment. With respect to electrical conductivity, which is a water quality constituent indicative of salinity, expressing impacts in this way can be misleading. For example, the narrative description of the increase in electrical conductivity caused by the proposed project in 4.9-7 does not make it clear that the projected range of EC values are median values. In fact, a more representative assessment of the impact from the proposed project on any given water quality constituent would be more adequately portrayed by providing information on the range of values expected in the receiving water, not just the median values. Although some of this information is provided in Appendix D, providing more accessible information RWB-1 RWB-2

about the projected range of values within the body of DEIR allows the reader to more adequately assess potential impacts from the proposed project. For example, monitoring data from the Department of Water Resources Mossdale station, located approximately 0.6 miles downstream from the outfall, show that electrical conductivity in the San Joaquin River regularly exceeds the site-specific Basin Plan water quality objective of 700 µmhos/cm that applies to the stretch of the San Joaquin River where the discharge outfall is located during the April through August agricultural season (see CDEC data at http://cdec.water.ca.gov/cgi-progs/staMeta?station_id=MSD). The fact that electrical conductivity sometimes exceeds the Basin Plan water quality objectives for the San Joaquin River is not conveyed to the reader by the analysis provided in the DEIR. RWB-2 (Cont)

Furthermore, it is not accurate to state in the Executive Summary, Summary of Impacts and Mitigation Measures (Table 2-2), that effluent concentrations for electrical conductivity would be below established water quality objectives. Clearly the projected EC value of 825 µmhos/cm shown in Table 4.9-12 is above the water quality objective of 700 µmhos/cm. RWB-3

Consequently, because there are periods when there is no assimilative capacity for electrical conductivity (i.e. electrical conductivity in the San Joaquin River is above the water quality objective), the proposed project will likely impact compliance with the Delta Salinity Objectives, therefore, we disagree with the conclusion stated in the DEIR that there is a less than significant impact on water quality from the proposed project. RWB-4

Additionally, the DEIR states on page 4.9-36 that, "*Although discharge of treated wastewater to the Delta or its tributaries under an NPDES permit can marginally affect EC in the southern Delta, previous State Board decisions and water quality control plans do not mention or consider treated effluent discharges as a source of salinity in the southern Delta (SWRCB 2005).*" The State Board considers treated effluent discharges as a source of salinity in the southern Delta and includes pollutant discharge controls as part of its implementation plan for meeting the southern Delta salinity objectives. The State Board's *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* (13 December 2006) states in part on page 27 that, "*Elevated salinity in the southern Delta is caused by various factors, including low flows; salts imported to the San Joaquin Basin in irrigation water; municipal discharges;…*" It states further that, "*Implementation of these objectives can be accomplished through a combination of the following: dilution flows, regulation of water diversions, **pollutant discharge controls**, best management practices to control the amount of waste produced, and improvements in water circulation.*" (emphasis added) RWB-5

As highlighted above, the potential for impacts of the proposed project on water quality due to high levels of electrical conductivity in the effluent have not been adequately addressed in the DEIR. The DEIR should evaluate how the increased discharge will affect compliance with the southern Delta salinity objectives and discuss mitigation measures to reduce the salinity of the proposed discharge. RWB-6

- **Thermal Impacts**

The current 9.87 mgd facility cannot comply with the Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate and Enclosed Bays and Estuaries of California (Thermal Plan) and the City has sought an exception to the Thermal Plan for RWB-7

water quality objectives 5A(1)a, which prohibits the effluent maximum temperature from exceeding the natural receiving water by more than 20 ºF, and 5A(1)c, which prohibits a temperature rise greater than 4 ºF above the natural temperature of the receiving water at any time or place. The City submitted a study to support its request for such an exception, entitled the *Thermal Plan Exception Analysis Final Report*, which focused exclusively on impacts from the currently permitted 9.87 mgd WQCF discharge. RWB-7 (Cont)

Staff from the National Marine Fisheries Service (NMFS) Protected Resources Division reviewed the study submitted by the City and concluded that it would not be appropriate to grant the City its request for an exception to the Thermal Plan. This conclusion was based, in part, on the general condition of fisheries resources in the San Joaquin River and the presence of threatened fish species in the vicinity of the City of Manteca's outfall. Of particular concern is the location of the City's outfall in a portion of the river through which all migrating fish must pass as they travel to or from upstream rivers such as the Tuolumne, Stanislaus and Merced Rivers. Specific comments made by NMFS staff during a meeting with representatives from the City of Manteca challenge the conclusions contained in the City's Thermal Plan Exception study that the thermal plume would not block or substantially delay the upstream movement of fish. Considering that the assessment by NMFS staff only addressed the thermal plume caused by a discharge of 9.87 mgd, it seems improbable that there would be a less than significant impact on upstream migration of fish from a much greater discharge of 27 mgd, as stated in the DEIR. RWB-8

It is also misleading and incorrect to state in the Executive Summary, Summary of Impacts and Mitigation Measures (Table 2-2) in Impact 4.13-2 that the thermal plume that currently exists due to the 9.87 mgd discharge is "permitted." Relaxation of the provisions of the Thermal Plan has been allowed to the City for a specified time period, as detailed in a Cease and Desist Order that was adopted by the Regional Water Board in 2004 (Order No. R5-2004-0029). This enforcement Order includes a compliance time schedule during which the City is required to either come into compliance with the Thermal Plan or obtain a Thermal Plan exception. Therefore, it is not accurate to state that the thermal plume that results from current plant operations is permitted. Similarly, it is equally misleading to suggest in the Alternatives to the Proposed Project, Increased Land Disposal Alternative (Section 7.3.2) that the land disposal option would lead to greater impacts to fisheries and aquatic resources than the proposed project due to mitigation measures that would be implemented along with the proposed project to achieve compliance with the Thermal Plan. Under the conditions of the above mentioned Cease and Desist Order, in the event that the City is not able to obtain an exception to the Thermal Plan for the current facility, full compliance with the Thermal Plan will be required with or without the implementation of the proposed project. RWB-9 RWB-10

Nevertheless, the DEIR recognizes that thermal impacts may potentially be significant for the downstream movement of fish and the City acknowledges that mitigation measures are necessary to reduce thermal impacts from its discharge. We support the mitigation measures proposed in the DEIR to provide sufficient cooling of the treated effluent to maintain compliance with all provisions of the Thermal Plan by installing and operating cooling towers, or an equivalent technology. However, we question why there is no RWB-11

mention of any type of cooling process in the Project Description Section 3.7.2 Proposed Liquid Stream Treatment Facilities. RWB-11 (Cont)

- **Dissolved Oxygen**

We disagree with the conclusion in Impact 4.9-19 that the impact on DO concentrations in the Stockton Deep Water Ship Channel (DWSC) is less than significant.

The Basin Plan's Control Program for Factors Contributing to the Dissolved Oxygen Impairment in the Stockton Deep Water Ship Channel (DO Control Program) states that wasteload allocations and permit conditions for new or expanded point source discharges in the San Joaquin River upstream of the DWSC will be based on the discharger demonstrating that the discharge will have no reasonable potential to cause or contribute to a negative impact on the dissolved oxygen impairment in the DWSC. The baseline date after which a discharge will be considered new or expanded is 23 August 2006; the date that the DO Control Program was formally adopted into the Basin Plan (after approval by the Office of Administrative Law). In the case of the Manteca WQCF, we understand the 8.11 mgd discharge conditions would have existed on that date, and therefore, would be the basis for comparison with the proposed 27 mgd upgrade. RWB-12

The model results presented in Table 31 suggest a decrease in DWSC DO concentrations of 0.20 mg/l compared to the 9.87 mgd discharge condition when DO concentrations are in the 4 to 5 mg/l range. At 4 mg/l this would represent 20% of the impairment present (when the 5 mg/l objective is in effect) and easily constitutes a significant impact. Furthermore, this impact will be slightly higher when compared to the 8.11 mgd discharge condition, which was not shown in Table 31. This 0.20 mg/l impact is similar in magnitude to that estimated by the U.S. Army Corps of Engineers (USACE) when it deepened the DWSC from 30 to 35 ft. in the late 1980's. At that time, the USACE determined this was a significant impact and installed an aeration device designed to deliver 2500 lbs/day into the DWSC as a mitigation measure.

In order to comply with CEQA, the DO Control Program, and NPDES permitting guidelines, we believe this impact is significant and must be mitigated.

- **Cumulative Impacts**

The analysis of cumulative impacts on surface water quality incorrectly states in Section 5.3.9 that "*effluent concentrations of water quality constituents would either be below existing adopted Basin Plan objectives or would be below levels that have been determined to be protective of water quality*". However, as mentioned earlier, Table 4.9-12, Projected Manteca WQCF Effluent Quality after Phase III Expansion, indicates that the projected effluent concentration for electrical conductivity is 825 µmhos/cm, which is greater than the Basin Plan water quality objective for electrical conductivity in the San Joaquin River during the April through August agricultural season. As stated above, we question whether the discharge of effluent from the proposed project should be considered to have a less than significant impact on water quality in the San Joaquin River with respect to electrical conductivity. Considering that the City of Manteca is not the only entity to discharge into the San Joaquin River, it seems likely that there could be a cumulative RWB-13 RWB-14

impact on water quality due to the discharge of effluent that exceeds the Basin Plan water quality objective for electrical conductivity. RWB-14 (Cont)

- **Anti-degradation Socioeconomic Analysis**

  While the socio-economic analysis included in the Anti-degradation Analysis addresses the incremental increase in sewer rates (and accompanying impacts) over the current condition, it does not allow comparison with a similar incremental increase due to the proposed project. We believe it is important to include in the socio-economic analysis of the project alternatives information about the increase in sewer rates that would accompany implementation of the proposed project. Understanding the relative costs of all three projects is necessary to fully assess and compare the socio-economic impact of the project alternatives in comparison to the proposed project. The information concerning the sewer rate increase due to the proposed project should also include an analysis of the full impact to the community similar to the analysis done for the two alternative projects. RWB-15

- **Whole Effluent Toxicity**

  The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*" (Basin Plan at III-8.00). In addition to water quality criteria and effluent limitations for individual constituents, compliance with the Basin Plan narrative toxicity objective is assessed with Whole Effluent Toxicity (WET) testing. WET testing involves using representative aquatic species in toxicity tests conducted on whole effluent to assess whether the mixture of individual constituents contained in the effluent leads to toxicity. We are concerned that there is no mention in the DEIR of issues related to effluent toxicity since even when all individual constituents are below applicable water quality criteria, effluent toxicity can still occur due to synergistic effects among constituents. In light of the continuing concern surrounding the Pelagic Organism Decline (POD) in the Delta, any possibility that increased discharge from the Manteca Wastewater Quality Control Facility to the San Joaquin River may exacerbate problems related to toxicity in an already stressed ecosystem should be addressed. RWB-16

Should you have any questions, please contact me at (916) 464-4772 or by email at jdmarshall@waterboards.ca.gov.

ORIGINAL SIGNED BY

James D. Marshall, P.E.
Senior Engineer
NPDES Section

RWB-1 Median constituent concentrations calculated from upstream ambient surface water data were selected for use in the analysis as a means to estimate a typical downstream receiving water quality impacts of the proposed project. Use of a central tendency statistic, such as the median, characterizes the most commonly observed water quality conditions that occur under a wide range of environmental and hydrologic conditions. It is acknowledged that variability in ambient surface water concentrations and WQCF loadings for individual pollutants occur over time, but use of a median concentration allows for the modeling of a more representative water quality impact than does the use of a concentration characteristic of a less typical best or worst case water quality condition.

All water quality impacts presented in the DEIR were estimated using median upstream surface water concentrations and projected mean WQCF effluent concentrations. To this end, the changes in downstream concentration and mass loading for a pollutant projected to occur as the result of the proposed project are representative of changes to typical or average water quality conditions observed in the project area. Even though the use of a pollutant concentration characteristic of worst-case conditions would provide insight into the greatest water quality impact that could occur, this worst case condition would not be representative of typical water quality conditions in terms of both magnitude of the impact and its frequency of occurrence.

To address the content of this comment, the EC impact analysis was repeated using the full mean daily EC data set for the San Joaquin River at Vernalis to evaluate EC levels at Mossdale to ensure that findings regarding the magnitude of the impact of the proposed project are representative. This comment is also related to comment RWB-4. The revised EC impact analysis is provided below in response to comment RWB-4.

RWB-2 The commenter asserts that the DEIR does not provide substantial information to draw its conclusions regarding EC concentrations in the San Joaquin River. The City disagrees. The DEIR prepared for the project provides a comprehensive evaluation of the project's water quality impacts based on the review of several project-specific studies and data regarding water quality in the San Joaquin River. Appendix D of the DEIR presents the primary studies and data relied upon in the DEIR in order to draw conclusions regarding the project's impacts. The DEIR starting at page 4.9-6 provides a detailed summary of the project's potential impacts related to EC concentrations as drawn from the data included in Appendix D. Consistent with the requirements of CEQA, the DEIR draws its conclusions based on substantial evidence described in Impact 4.9-7 of the DEIR. As described in that impact, the DEIR presents the range of EC concentration changes that would be expected to occur for each data set evaluated (i.e., April through August and September through March). The impact conclusion was drawn based on the fact that the project's incremental EC concentration increases would not substantially increase the frequency in which EC Basin Plan objectives are currently exceeded (i.e., without the project) in the San Joaquin River. Therefore, a less-than-significant impact conclusion is drawn and this conclusion was based on substantial evidence presented in the DEIR and drawn from data included in Appendix D.

RWB-3 The projected mean effluent EC concentration of 825 µmhos/cm for the proposed project exceeds the seasonal 700 µmhos/cm Basin Plan objective established in the San Joaquin River and southern Delta during April through August. The projected mean EC effluent concentration does not exceed the seasonal 1000 µmhos/cm Basin Plan objective established in the San

Joaquin River and southern Delta during September through March. However, the analysis of incremental receiving water EC impacts performed in the preparation of the DEIR properly accounted for the projected effluent concentration and the historical river concentrations. Nonetheless, to clarify the intent of the impact summary for EC impacts page 2-35 and 4.9-36, Impact 4.9-7 is hereby revised as follows. This change does not alter the conclusions presented in the DEIR.

"IMPACT 4.9-7 Hydrology and Water Quality—Effects of Proposed Project Discharges on Electrical Conductivity Concentrations in Receiving Waters. *Because the project would result in minor increases in EC in the San Joaquin River at full buildout (27 mgd) and effluent concentrations would ~~be below established EC water quality objectives~~ not substantially affect San Joaquin River EC concentrations during agricultural and nonagricultural seasons, the project would not result in significant EC water quality impacts. Therefore, the project's near-field EC impacts would be* ***less than significant****.*

Manteca WQCF NPDES self-monitoring data from the San Joaquin River at monitoring location R-1 (just upstream of the WQCF discharge) corresponding to dry/below normal water years were used to calculate an estimated impact of WQCF effluent electrical conductivity (EC) in the San Joaquin River under critical (600 cfs) and dry/below normal (1,250 cfs) river flows at the existing permitted discharge of 9.87 mgd and at proposed discharges of 17.5 mgd and 27 mgd. Due to the seasonal EC objectives contained in the Sacramento–San Joaquin Delta Basin Plan, available EC data were divided into two groups for the purpose of the present near-field analysis: April through August data set with a seasonal objective of 700 umhos/cm;(micromhos per centimeter – the standard measure of electrical conductivity in freshwater) and September through March data set with a seasonal objective of 1000 umhos/cm. Although discharge of treated wastewater to the Delta or its tributaries under an NPDES permit can marginally affect EC in the southern Delta, previous State Board decisions and water quality control plans do not mention or consider treated effluent discharges as a source of salinity in the southern Delta (SWRCB 2005).

The incremental change in near-field EC (measured at R-3, see Exhibit 4.9-1) in the San Joaquin River resulting from an increase in WQCF effluent discharged from the current permitted rate (9.87 mgd) to the proposed rate (27 mgd) is approximately 5.1 to 10.1 umhos/cm during the months of April through August (agricultural season) and 0.8 to1.5 umhos/cm during the months of September through March (nonagricultural season) during critical and dry/below normal water years, respectively. Total EC measurements would range from 583 to 591.2 umhos/cm from April through August and 787.2 to 788.4 umhos/cm during September through March, which ~~are substantially below established EC water quality objectives~~ would not substantially affect San Joaquin River EC concentrations. Additionally, the City's potable water supply is expected to reduce EC concentrations compared to pre-August 2005 conditions as a result of blending surface water from the South County Water Supply Program (which has low EC values) with the City's groundwater. The blending of surface water with groundwater for the potable water supply has significantly decreased the EC measured in WQCF effluent when comparing pre- and post-August 2005 plant effluent measurements (LWA 2006b).

Because the project would result in minor increases in EC in the San Joaquin River at full buildout (27 mgd) and effluent concentrations would ~~be below established EC water quality objectives~~ not substantially affect San Joaquin River EC concentrations during agricultural and nonagricultural seasons, the project would not result in significant EC water quality impacts. the project's near-field EC impacts would be **less than significant**."

RWB-4 The City of Manteca assessed the incremental impact of its discharge on EC levels in the San Joaquin River through detailed modeling. The results of that analysis form the basis for the determination that the impact of its proposed discharge is less than significant.

The DEIR quantifies incremental water quality changes from the current baseline condition to a future (with proposed project) condition. The analysis includes consideration of salinity inputs occurring in the San Joaquin River from Vernalis to Mossdale determined by considering

measured mean daily flow and EC levels at Vernalis, in the WQCF effluent, and at Mossdale. The simulation period is 8/9/1999–9/20/2007. A time series plot of the 30-day mean EC values is provided in Exhibit 2 (below). There is no discernible difference in the future (with proposed project) EC concentrations compared to the baseline condition as evidenced by the virtually overlapping values presented in the time series plot.

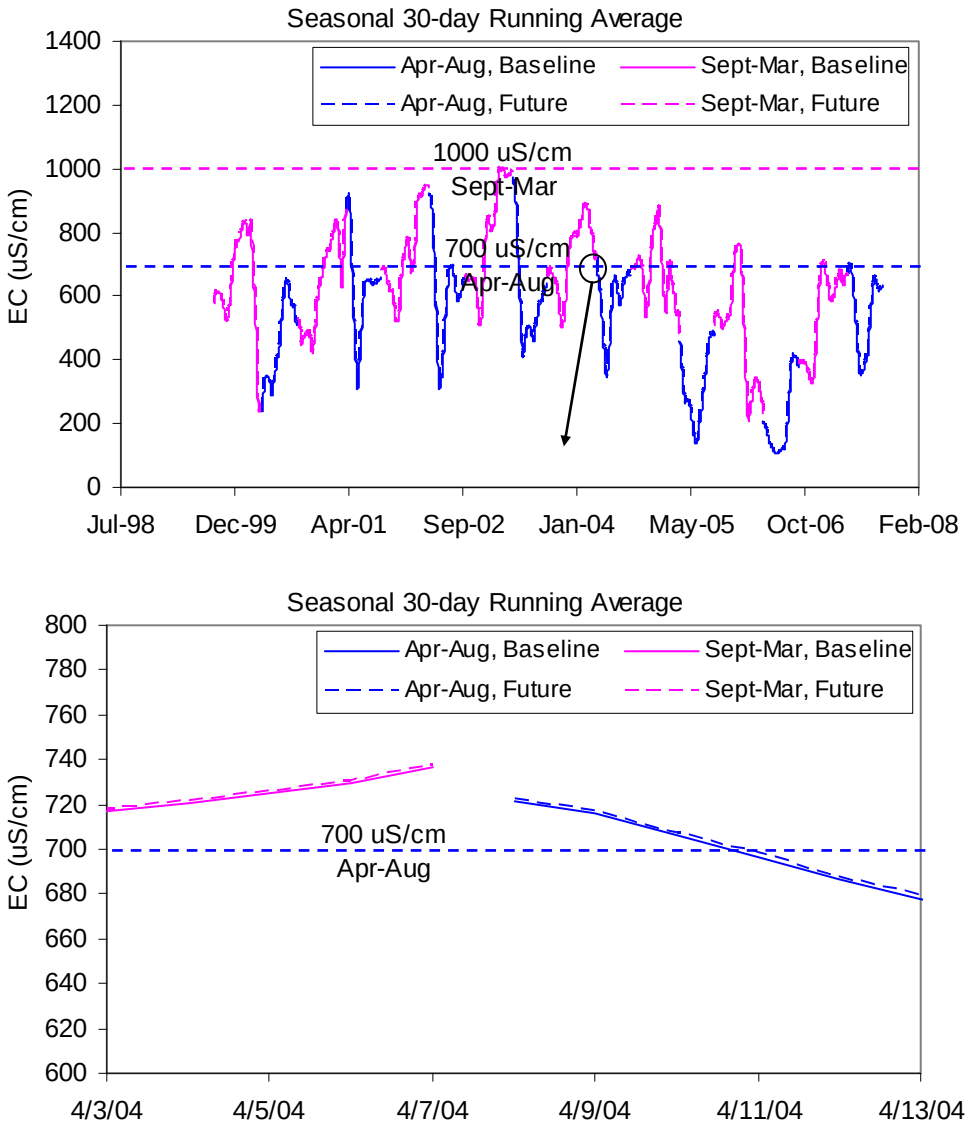

Exhibit 1

Time series plot of modeled 30-day average EC values, 8/9/1999 – 9/20/2007. The bottom figure is a more detailed look at the circled period in the upper graph.

The frequency distributions for these data are shown in Exhibit 3 (below). The percentages of 30-day average values that exceed seasonal Basin Plan EC objectives are presented in Table 1 (below). There is less than half a percentage point difference in the exceedances calculated for the baseline and future conditions under both the April through August and September through March periods.

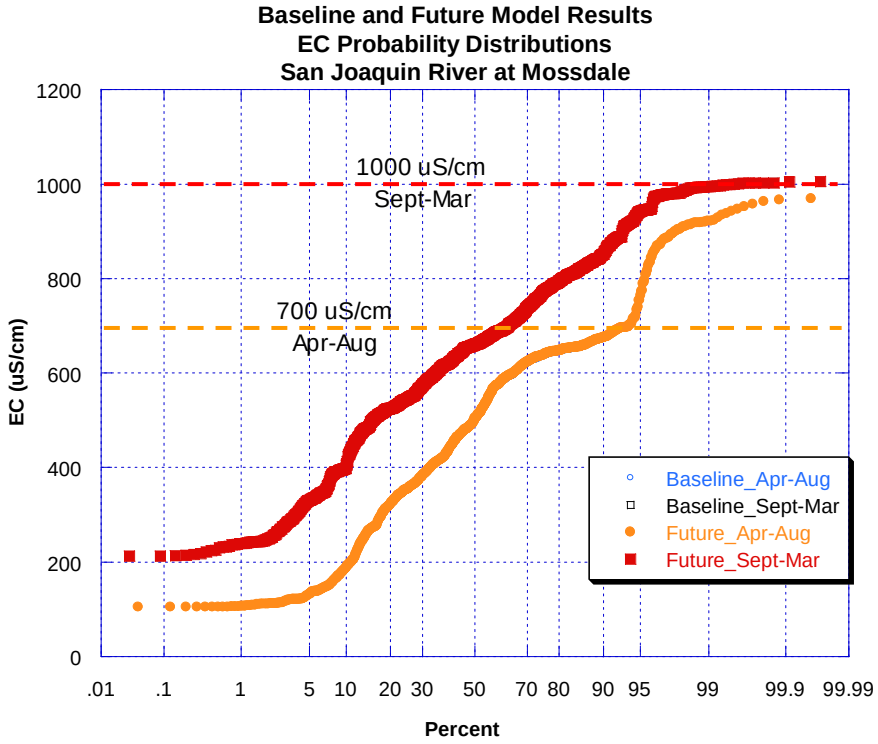

Exhibit 2

Frequency distributions for 30-day averages, wet and dry seasons, separated by baseline and future model results. The baseline values are obscured under the future values.

Table 1
Comparison of Modeled San Joaquin River at Mossdale EC against Seasonal Basin Plan Water Quality Objectives under Current and Proposed Future WQCF Discharge Scenarios

	Modeled Baseline EC at 9.87 MGD (ADWF) WQCF Discharge Capacity		Modeled Future EC at 27 MGD (ADWF) WQCF Discharge Capacity	
Modeled WQCF Effluent EC	**April – August** 700 µmhos/cm	**Sept. – March** 1000 µmhos/cm	**April – August** 700 µmhos/cm	**Sept. – March** 1000 µmhos/cm
825 µmhos/cm	6.0%	0.7%	6.2%	0.5%

The use of all available upstream receiving water EC data in the projection of downstream San Joaquin River water quality impacts due to the proposed project does not provide a materially different estimation of downstream impacts than those presented in the DEIR and associated Antidegradation Analysis Report (see Appendix C of the DEIR). An estimate using all available San Joaquin River at Vernalis flow and EC data shows very similar impacts under both current baseline (9.87 mgd [ADWF]) and future (27 mgd [ADWF]) WQCF discharge flow rates. This estimate is based on available data for the period August 1999 through September 2007 and a projected mean WQCF effluent EC of 825 µmhos/cm. Table 1 shows modeled San Joaquin River at Mossdale EC data under the WQCF's current permitted 9.87 mgd (ADWF) discharge capacity to exceed the 700 µmhos/cm April through August seasonal objective approximately 6% of the time over the modeled 8-year period. A slight increase (0.2% greater than the estimated baseline) in the exceedance of the 700 µmhos/cm April through August

seasonal objective is projected to occur with a WQCF discharge of 27 mgd (ADWF) and an average effluent EC of 825 µmhos/cm. Exceedance of the 1000 µmhos/cm September through March seasonal objective is estimated to occur less than 1% of the time (over the modeled 8-year period) under both baseline and proposed future WQCF discharge flow rates when discharging tertiary treated effluent having a mean EC of 825 µmhos/cm to the San Joaquin River.

Assuming that the daily flow and EC data collected in the San Joaquin River at Vernalis from August 1999 through September 2007 are representative of the range of ambient receiving water conditions that occur in the southern Delta under a variety of hydrologic classifications (i.e., water year types), then the estimated water quality objective exceedance frequencies presented above show that the proposed project would have very little impact on compliance with Delta salinity objectives. The above findings indicate that the proposed project would have a less than significant impact on San Joaquin River water quality with respect to electrical conductivity.

RWB-5 As stated in the State Board's decision (Order WQ 2005-0005) on the City's NPDES permit appeal, the water quality objectives for the South Delta were originally established without consideration of implementation of salinity controls on municipalities.

"…the lengthy record of prior State Board decisions and water quality control plans for the Delta establishes that the salinity problems in the southern Delta are the result of many inter-related conditions, including water diversions upstream of the Delta, water diversions within the Delta for export and local use, high levels of salinity in irrigation return flows discharged to Delta waterways and tributaries, groundwater inflow, seasonal flow variations, and tidal conditions."

and,

"…previous actions indicate that the State Board intended for permit limitations to play a limited role with respect to achieving compliance with the EC water quality objectives in the southern Delta."

Order WQ 2005-0005 confirmed that the primary approach to salinity control in the south Delta is through management of flows to the Delta and agricultural runoff controls.

"…the State Board's 1991 and 1995 Delta Plans, Revised Water Right Decision 1641, and State Board Resolution No. 2004-0062 all establish that the intended implementation program for meeting the 700 µmho/cm EC objective was based primarily upon providing increased flows, possible construction of salinity barriers, and reducing salt load entering the San Joaquin River from irrigation return flows and groundwater."

Regarding municipal wastewater discharges, the order stated:

"…although discharge of treated wastewater to the delta or its tributaries under an NPDES permit can affect EC in the Delta, previous State Board decisions and water quality control plans do not discuss treated effluent discharges as a source of salinity in the southern Delta…previously adopted implementation programs for complying with the EC objectives in the southern Delta have focused primarily on providing increased flows and reducing the quantity of salts delivered to the Delta and its tributaries by irrigation return flows and groundwater."

The order confirmed the impact assessment that was made in the City's DEIR as follows:

"…requiring the City to comply with an effluent limitation of 700 µmhos/cm EC would not significantly change the EC of water in the southern Delta area."

This finding was more recently evidenced in the modeling effort performed by the Department of Water Resources for the City of Tracy discharge, in which the impact of the City of Tracy's discharge on EC levels in Old River was determined to be insignificant.

Finally, the order confirmed the finding in the City's Antidegradation Analysis that implementation of treatment alternatives to address the small incremental water quality change created by the City would not be prudent.

"Construction and operation of reverse osmosis facilities to treat dischargers from the City's WQCF, prior to implementation of other measures to reduce the salt load in the southern Delta, would not be a reasonable approach."

It should be noted that the City has taken a number of significant steps to reduce the electrical conductivity concentration in its treated effluent. These steps include:

- Obtaining new surface water supply to replace existing high EC groundwater supplies, and
- Salinity source control activities within its service area.

Improvement in the City's potable water supply through the blending of low salinity surface water from the South County Water Supply Program with the City's groundwater has already yielded positive results. The blending of surface water with groundwater for the potable water supply has significantly decreased the EC measured in WQCF effluent when comparing pre- and post-August 2005 plant effluent measurements.

Additional salinity control measures beyond the City's current efforts (such as reverse osmosis treatment or implementation of salinity "offset" projects) are either unreasonably expensive or are not within the direct control of the City to implement. The alternative of providing reverse osmosis to eliminate the City's salinity mass increment in going from 9.87 to 27 mgd has been evaluated in the Antidegradation Analysis and is not deemed to be feasible.

Finally, the water quality impact analysis of the City's proposed discharge as included in the DEIR and described more completely above indicates that the incremental water quality impacts of the proposed project are less than significant. As shown in the response to comment RWB-4, the small incremental changes in water quality impacts are not measurable, and are less than significant under CEQA and no mitigation would be required.

RWB-6 Please refer to response to comment RWB-4 above.

RWB-7 It appears that there is some confusion regarding the Thermal Plan exception request. As discussed during an August 13, 2007 meeting with NMFS staff, only an informal consultation was performed. In an informal consultation, the NMFS staff is prevented from approving a project that may have non-negligible impacts. Without Regional Board action, the NMFS is prevented from performing a formal consultation where the full nature and extent of thermal impacts are evaluated based on the technical information provided in the exception request. It is therefore more accurate to state that NMFS has not adequately reviewed the City's exception request to be able to recommend an exception to the Thermal Plan at this time. The City will continue to work with Regional Board and NMFS staff regarding the existing Thermal Plan exception request. Regardless, with implementation of the project and recommended mitigation

(i.e., cooling technology [see Mitigation Measure 4.13-2 in the DEIR]), limited Thermal Plan exceptions would be required.

RWB-8 As discussed in response to comment RWB-7, the NMFS analysis of the proposed discharge is not yet complete. Adult Salmonids generally migrate upstream along the thalweg and low current sections of the river. The thermal plume floats near the surface of the water column due to greater buoyancy and the discharge is on the outside (eastern) bend of the river where currents are generally greater than the inside (western) bend. As described in Impact 4.13-1 (see page 4.13-21 of the DEIR), migrating adult fish will generally be in the deeper sections of the cross-section several feet below the bottom of the thermal plume or on the opposite side of the river from the thermal plume, and in either case the migrating adults will largely be unaffected by the thermal plume. Further, Mitigation Measure 4.13-2 in the DEIR would require that the City implement cooling technology at the WQCF to reduce the temperature of the effluent by up to 15 °F and would eliminate the creation of a lethal zone for migrating fish.

RWB-9 The commenter is correct that the 9.87 mgd discharge is not yet permitted with respect to thermal requirements. At the time the DEIR was prepared, the Thermal Exception Report had been submitted to the Regional Board and this report concluded there were no significant impacts to aquatic organisms due to the thermal plume from discharging under the 9.87 mgd (ADWF) conditions. To accurately reflect existing regulatory conditions, Impact 4.13-1 is hereby revised as follows. These changes do not alter the conclusions of the DEIR.

"IMPACT 4.13-2 Fisheries and Aquatic Resources — Thermal Effects on Fish and Benthic Macroinvertebrates Exposed to the Plume While Moving Downstream Past the Discharge Outfall. *At full build-out, the proposed project would result in a thermal plume of increased temperatures, relative to the ambient temperatures, across portions of the water column, under all conditions, that is larger than the thermal plume that currently exists ~~(and permitted)~~ downstream of the discharge outfall. The project-specific changes to the size and characteristics of this plume would be considerable, as would project-specific effects on the frequency with which specific plume characteristics occur. A zone of passage would remain along the west bank river margin of the water column where river temperatures are unaffected by discharges. When achievable, actively swimming young-of-the-year fishes emigrating from upstream rearing areas would select migration routes past the discharge outfall that avoid elevated temperatures and excessive temperature differentials. The macroinvertebrate communities inhabiting the sediments and drifting through the plume are generally tolerant of the absolute temperature regime and differences created by the proposed project, particularly for the relatively short period of time they would be drifting through the plume. However, passively drifting fish are typically transported past the discharge in the near-shore habitats and along the upper portion of the water column, both of which are noticeably affected by the effluent plume. Based on the findings for passively drifting fish being noticeably affected by the thermal plume, the proposed project would have a* ***potentially significant*** *impact on the populations and communities of fish moving downstream in the lower San Joaquin River and Delta."*

RWB-10 The City anticipates entering into discussions with the Regional Board regarding its Thermal Plan exception request and the thermal conditions that ultimately will be included in the City's NPDES permit. However, recognizing that the City must address Thermal Plan objectives under all project alternatives, the text on page 7-9 of the DEIR has been revised as follows. This change does not alter the conclusions of the DEIR.

"Fisheries and Aquatic Resources

The Increased Land Disposal Alternative would result in ~~greater~~ <u>similar</u> impacts to fisheries and aquatic resources compared to the project. The existing WQCF does not comply with one objective of the Thermal Plan. <u>Although the City has prepared a Thermal Exception Report and requested an exception to the Thermal Plan, an exception</u>

to the Thermal Plan has not been granted as of the date of publication of this document. For purposes of this analysis it is assumed that the City will sufficiently address Thermal Plan objectives to protect fisheries and aquatic resources. While the project would increase the effluent discharge rate to 27 mgd, which would result in the exceedance of all three thermal plan objectives (see Section 4.13, "Fisheries and Aquatic Resources"), mitigation is recommend that would require the construction of cooling towers at the WQCF. The cooling towers would ~~bring the WQCF's effluent into compliance with all three objectives of the Thermal Plan~~ reduce the temperature of the WQCF's effluent and protect fisheries and aquatic resources. ~~and would eliminate the WQCF's existing exceedance of one Thermal Plan objective.~~ Because the City would comply with Thermal Plan objectives under the Increased Land Disposal Alternative and under the project, thermal impacts would be similar under this alternative. ~~This alternative would not eliminate this exceedance; therefore, thermal impacts would be greater under this alternative.~~ ***[Similar ~~Greater~~]"***

Table 7-1 on page 7-14 and the paragraph that follows the table are hereby revised as follows:

"Table 7-1
Comparison of the Impacts of the Alternatives with Those of the Proposed Project

Environmental Issues	Alternative			
	No Project (9.87 mgd)	Increased Land Disposal	Advanced Wastewater Treatment	Modified Pipeline Alignment
Land Use and Agricultural Resources	Less	Similar or Greater	Similar	Similar
Visual Resources	Less	Similar	Similar	Similar
Air Quality	Less	Similar	Similar	Similar
Noise	Less	Similar	Similar	Similar
Terrestrial Biological Resources	Less	Greater	Similar	Less
Hazards and Hazardous Materials	Similar	Similar	Similar or Greater	Similar
Geology, Soils, and Seismicity	Similar	Similar	Similar	Similar
Paleontological Resources	Less	Similar	Similar	Similar
Hydrology and Water Quality	Similar	Similar	Less	Similar
Public Services and Utilities	Similar	Similar	Similar	Similar
Transportation and Circulation	Less	Greater	Similar	Similar
Cultural Resources	Less	Similar	Similar	Similar
Fisheries and Aquatic Resources	Similar	Similar ~~Greater~~	Less*	Similar*

* Assumes construction of a treated effluent cooling tower to reduce thermal impacts.
Source: EDAW 2007"

"The Increased Land Disposal Alternative would not be environmentally superior to the project because it would not avoid any of the project significant and unavoidable impacts related to Important Farmland and generation of odors and it would result in greater environmental impacts in **4** three resource areas including greater impacts to Important Farmland, sensitive habitats and species, and construction-related traffic impacts ~~and fishery impacts~~. While this alternative may achieve most project objectives, because of the substantial expense involved with securing additional land for effluent disposal, it may not be able to meet the project objective of providing for the "cost-effective" expansion of City WQCF facilities."

RWB-11 Regarding identification of cooling technology in the project description, the WQCF Master Plan does not identify cooling technology because the need for cooling technology was only

identified as result of the DEIR impact analysis. Therefore, the cooling technology was recommended to reduce the project's significant impacts consistent with the requirements of CEQA.

RWB-12 The proposed project is designed to limit dissolved oxygen impacts in downstream waters to the maximum extent practicable. The proposed treatment facility includes nitrification, denitrification, and filtration which will remove carbonaceous and nitrogenous oxygen demand to low levels.

In determining if the proposed discharge will have a reasonable potential to cause or contribute to a significant impact with regard to DO, the total ultimate biochemical oxygen demand (TUBOD) incorporating both organic and nitrogenous oxygen demand must be considered. At the 6 mgd discharge condition which existed during the data collection and evaluation phase of the TMDL development, the City's WQCF consisted of secondary level of treatment. At the 8.11 mgd discharge condition, the City's WQCF included nitrification facilities, reducing effluent ammonia from over 20 mg/L as N to approximately 2 mg/L as N and reducing by half the TUBOD load in the effluent from the 6 mgd secondary condition. In moving from the 8.11 mgd condition to the 9.87 mgd condition, the City added filtration, reducing the 5-day BOD from approximately 20 mg/L to less than 10 mg/L. The 9.87 mgd fully nitrified, denitrified, and filtered condition was used as a baseline in the DEIR analysis as this is the currently permitted discharge condition. The TUBOD loads corresponding to different WQCF discharge conditions are presented graphically in Exhibit 4 (below). As shown in Exhibit 4, the TUBOD load in the WQCF effluent to the San Joaquin River at the DWSC baseline condition is greater than the TUBOD load corresponding to the 27 mgd discharge condition. The change in DO in the DWSC caused by the City's discharge is a function of the TUBOD load (i.e. a lower TUBOD load will result in higher DO levels), with the exact change in DO being a fairly complicated function of total flow rate, temperature, initial DO, and other factors. While the incremental change between the 9.87 mgd and the 27 mgd condition shows a moderate increase in TUBOD and corresponding decrease in DO in the DWSC, the final conclusion of the DEIR is that the TUBOD load to the river at 27 mgd is less than the load corresponding to the 6 mgd condition. Lower TUBOD loadings in the future expanded discharge will result in higher DWSC DO and thus no reasonable potential to cause or contribute to a negative impact on the dissolved oxygen impairment in the DWSC as compared to the TMDL baseline.

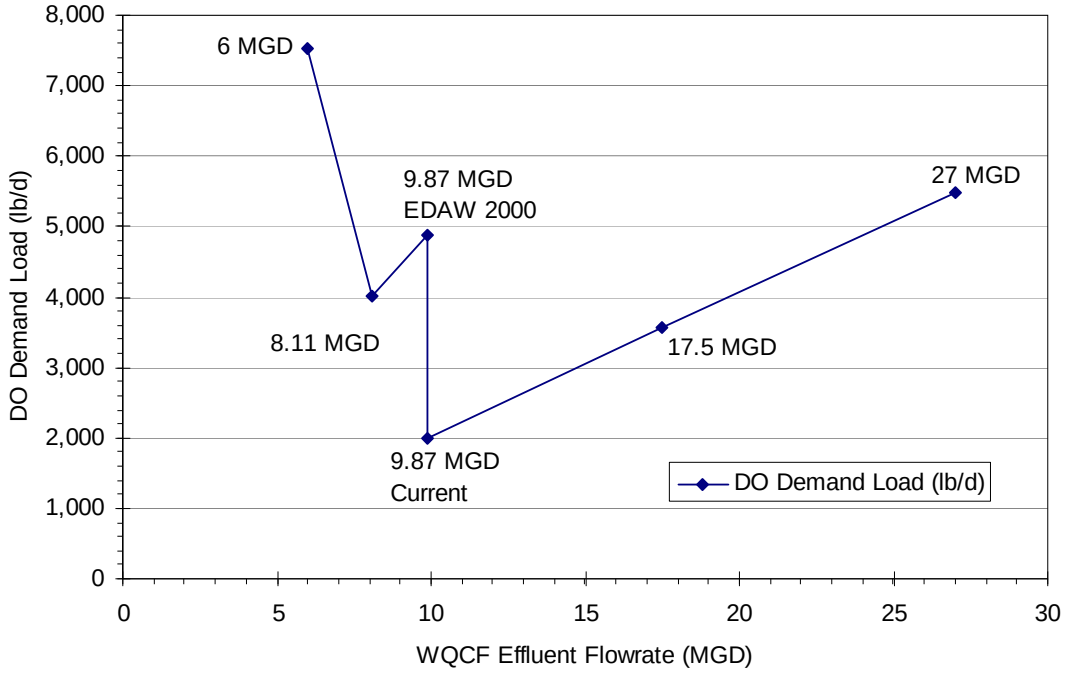

Exhibit 3

Total Ultimate Biochemical Oxygen Demand Load in WQCF Effluent for Historic and Project Discharge Levels

Regarding the date after which a discharge will be considered new or expanded (i.e., August 23, 2006, corresponding to an 8.11 mgd discharge condition), this comment is noted. On August 23, 2006, the City's treatment facility included secondary treatment with nitrification and denitrification. As shown in Exhibit 4, the baseline ultimate oxygen demand of the City's effluent (at 8.11 mgd) was approximately 4,000 pounds per day. The proposed future facility will include complete nitrification, denitrification, and filtration. With the proposed treatment facilities in place, the August 2006 baseline oxygen demand will be reached at a future effluent flow rate of 20 mgd, as shown in Exhibit 4.

RWB-13 Please refer to response to comments RWB-2, RWB-3, and RWB-4.

RWB-14 The City's proposed discharge of 27 mgd at a mean EC concentration of 825 µmhos/cm will not result in a measurable impact on existing EC levels in the San Joaquin River (see response to comment RWB-4). The Central Valley Regional Water Quality Control Board has issued a memorandum dated April 26, 2007 titled "Management Guidance for Salinity in Waste Discharge Permits." This policy document establishes a consistent approach to NPDES permitting which will require other communities to implement actions similar to those taken by the City of Manteca to reduce salt inputs through water supply changes and salinity management activities within their service areas. As a result, cumulative future municipal inputs are anticipated to result in similar negligible impacts to EC levels. Enforcement actions taken by the SWRCB in the water rights arena are anticipated to result in changes in flow management by DWR and the Bureau of Reclamation that will improve compliance with the South Delta salinity objectives. Implementation of the salt and boron TMDL in the San Joaquin

River basin is also projected to improve EC levels in the South Delta. Therefore, no significant cumulative impacts related to electrical conductivity are anticipated.

RWB-15 This comment is acknowledged. While not required under CEQA, the City will provide the requested analysis in the Antidegradation Analysis submitted to the Regional Board with the NPDES permit application.

RWB-16 The City is required to test its effluent on a regular basis to determine acute and chronic toxicity. Acute testing results for the period January 2003 through July 2007 indicate consistent compliance with acute toxicity effluent limitations in the City's NPDES permit. Chronic testing performed in 2007 (January through July) indicates that the City's existing effluent never exceeded 1 toxicity unit for Ceriodaphnia and fathead minnow tests. Chronic testing performed monthly in 2007 using Selanastrum (algae) indicated that NOEC never exceeded 4 toxicity units and IC25 never exceeded 2.7 toxicity units (see Table 2 below).

Table 2
City of Manteca WQCF Chronic Toxicity Test Results (2007)

	Selanastrum		Ceriodaphnia Survival		Ceriodaphnia Reproduction		Fathead Minnow Survival		Fathead Minnow Growth	
Month	NOEC	IC25	NOEC	IC25	NOEC	IC25	NOEC	IC25	NOEC	IC25
Jan	2	1.6	1	<1	1	<1	1	<1	1	<1
Feb	1	<1								
Mar	2	1.5								
Apr	4	2.3	1	<1	1	<1	1	<1	1	<1
May	4	2.7								
Jun	1	<1								
Jul	1	<1	1	<1	1	<1	1	<1	1	<1

The City's current NPDES permit states that the City's effluent achieves a chronic dilution of 4 to 1 in the San Joaquin River. Therefore, testing in 2007 indicates that the City's effluent had no adverse impact on the receiving water.

Furthermore, the City has just completed construction and startup of its new filtration facilities in September 2007. As a result, no operating data are available for toxicity for the proposed effluent. However, based on the absence of toxicity for the existing effluent, it is projected that the proposed nitrified, denitrified, and filtered effluent with ultraviolet disinfection will produce no adverse toxic effects in the receiving waters.

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OWD

August 30, 2007

Mr. Phil Govea
City of Manteca
1001 W. Center Street
Manteca, CA 95337

Subject: Manteca Wastewater Control Facility Master Plan and Collection System Master Plan 2005 Update - Draft Environmental Impact Report SCH#2006052164

Dear Mr. Govea:

I represent the Oakwood Lake Water District ("OLWD" or "District") in the capacity of General Counsel. OLWD is a California Water District formed to provide water and wastewater services within its jurisdictional boundaries. The District is situated immediately adjacent and contiguous to the western most portion of the Primary Urban Service Boundary of the City of Manteca ("City" or "Manteca"). OLWD serves existing residential, commercial and industrial uses, as well as planned future development. The purpose of this letter is to address the significant inadequacies and inconsistencies affecting the interests of OLWD found in the Draft Environmental Impact Report ("DEIR") prepared for the Manteca Wastewater Control Facility Master Plan and Collection System Master Plan 2005 Update ("Master Plan"). OWD-1

Procedurally, the District reserves all rights and remedies under the California Environmental Quality Act ("CEQA") and other applicable state and federal law for the impacts addressed below or others that may be revealed as the proposed Master Plan is further studied. Inadequate notice was provided under both CEQA (see, CEQA Guidelines Section 15086(a)(3)) and constitutional requirements (see, *Horn v. County of Ventura* (1979) 24 Cal.3d 605, CEQA notice alone is insufficient where a land use decision may have a "substantial affect" on property rights) based on the impact, as discussed below, on the District's wastewater treatment facilities. The City failed to provide the District with the Notice of Preparation, Notice of Completion, or a copy of the DEIR, nor was the District consulted in any way prior to the July distribution of the DEIR. District staff first became aware of the DEIR by chance on August 9, 2007. In addition to the above, in March 2007 the District sought by letter to open discussion on various subjects, including the possible impacts of any new outfall, that might be proposed by the City as part of any expansion of the existing Manteca treatment facility. OWD-2

Considering the subject matter of that letter and its timing, the City clearly had ample notice of the interest of OLWD in the City's preparation and distribution of the Master Plan DEIR. OWD-2 (Cont)

Substantively, and as discussed in more detail below, the District believes the DEIR fails to adequately analyze the impacts of the proposed Master Plan on current and planned land uses, in particular those within the jurisdiction of OLWD. The DEIR fails to adequately analyze and provide mitigation measures for potential impacts to terrestrial and plant species within and outside of the jurisdiction of OLWD. The DEIR's coverage of impacts to surface and groundwater resources through increased land and river discharge fails to adequately address the immediate and cumulative effects the increases will have on OLWD's utilization of groundwater to serve customers within its jurisdiction. The DEIR fails to analyze the cumulative effect of any projects, including those within OLWD jurisdiction, outside the City service boundaries. The DEIR also fails to adequately analyze project alternatives, including regional alternatives. OWD-3

Impact on Current and Planned Land Uses

The proposed pipeline route for the new effluent outfall includes lands within the jurisdiction of OLWD. In fact, the DEIR indicates that outfall pipeline construction activities, as well as operations and future maintenance, would significantly interfere with the operation of the planned treated effluent spray fields which are an integral part of the ongoing expansion of the OLWD wastewater treatment facilities. The expanded facilities will serve a development of 484 single-family homes (currently under construction), an existing mobile home park, as well as possible future commercial and industrial development. OWD-4

The DEIR inaccurately describes the land impacted by the proposed additional outfall only as "roadways" or lands "cleared for development." In fact, the land in question includes property that will be fully developed and will comprise facilities essential to the provision of wastewater treatment services to OLWD customers. At this time, without consultation between the District and Manteca, there are no foreseeable mitigation measures that can be implemented to reduce or eliminate this substantial impact to District facilities.

Impacts to Common and Special Status Terrestrial and Plant Species

The proposed additional outfall will have the potential, according to the DEIR, to impact various common and special status species within the lands of OLWD. However, the true impact of activities associated with the proposed outfall are hard to determine as the reconnaissance surveys conducted and used to prepare Section 4.5 of the DEIR were conducted in such a manner that many areas were inaccessible or were otherwise conducted at such times that it would not be possible to verify the existence of various protected and common species that only appear seasonally. OWD-5

Although, the DEIR assumes potential for these species to be present, the mitigation measures proposed are inadequate under CEQA. The mitigation measures are proposed only in reference to the San Joaquin Multi-Species Conservation Plan ("SJMSCP"). Because the potential impacted species and their locations relative to areas requiring streambed alteration permits and to areas under federal jurisdiction are not yet known, coverage under the SJMSCP is not and cannot be assured. OWD-6

In relation to the mitigation strategies themselves, the DEIR fails to obligate the City to any particular mitigation measures, but instead relies heavily on coordination, review and input from various regulatory agencies. Without specific proposed measures, the conclusion of the DEIR that the impacts will be reduced to a less-than-significant-level is speculative at best.

OWD-6 (Cont)

Impacts to Surface and Groundwater Resources

The proposed expansion of discharges to land and the San Joaquin River (up to an average of 0.73 and 22.99 million gallons per day, respectively) and the potential impacts of these increases on the provision of services to OLWD customers are not adequately analyzed or mitigated in the DEIR. OLWD is dependent on groundwater resources for the provision of drinking water, and the District must meet various regulatory conditions on the use of its facilities, both drinking water and wastewater treatment, relative to groundwater quality. The DEIR's conclusions that the proposed project would have no impact on the groundwater basin or surface water bodies (other than the impacts to the San Joaquin River analyzed in the near and far-field analyses) overlooks the potential immediate and future cumulative impacts to the shallow groundwater, which will impact OLWD's land based effluent discharge, as well as the potential immediate and future cumulative impacts to two natural groundwater-fed lakes totaling 170 acres within the District.

OWD-7

The potential impacts to OLWD's activities and its ability to meet the conditions for use of its facilities, as described above, must be disclosed and analyzed in the DEIR and appropriate mitigation measures must be analyzed and adopted to ensure the continued viability of OLWD's groundwater supplies and wastewater treatment facilities, and the water quality of the two recreational activity lakes within the jurisdiction of the District.

Cumulative Impacts

The DEIR fails to adequately analyze cumulative impacts by limiting the review to projects proposed, approved or under construction within the city limits of Manteca. As noted, the lands of OLWD lie immediately adjacent to and contiguous with the Primary Urban Service Boundary of Manteca. Much of the land within the District is proposed for, has existing, or is currently undergoing construction of residential, commercial and industrial uses. The combined list and regional approach used to develop the cumulative impact analysis has the affect of eliminating consideration of projects, other than water quality projects, outside the City. As previously stated, the development within the jurisdiction of OLWD and in other areas outside the City must be considered in any adequate analysis of cumulative impacts in the proposed project area.

OWD-8

Project Alternatives

The project alternatives fail to consider the potential for a regional wastewater treatment facility. The Central Valley Regional Water Quality Control Board has expressed, through orders and other methods, the need for and desirability of a regional wastewater treatment facility. Consideration of such an alternative would constitute a feasible approach to resolving the wastewater treatment requirements of the City and would lessen the local and regional cumulative impacts resulting from the current and planned future river discharges of Manteca and other regional wastewater treatment providers.

OWD-9

Please feel free to contact me at (925) 933-7777 if you have any questions. Mike Gilton, District Engineer, will also be made available to address specific details of the substantial impacts on District facilities in the absence of adequate mitigation measures and coordination of City activities with the operation of District treatment facilities.

Sincerely,

Douglas E. Coty
General Counsel
Oakwood Lake Water District

Of Counsel
For BOLD, POLISNER, MADDOW, NELSON, & JUDSON

cc: Larry French, President, Oakwood Lake Water District
Mike Gilton, District Engineer, Oakwood Lake Water District
James Ferguson, General Counsel, Beck Properties, Inc.

Sent via facsimile August 30, 2007 and postal mail

OWD-1 The commenter introduces the Oakwood Lake Water District (OLWD) and explains the purpose of the letter. This comment is noted. No further response is necessary.

OWD-2 As described in Section 1.5, "Public Review Process," of the DEIR (see page 1-3), consistent with the requirements of CEQA, a good faith effort was made during the preparation of the DEIR to contact affected agencies, organizations, and individuals who may have an interest in the project. This effort included the circulation of the Notice of Preparation on May 25, 2006, and a public scoping meeting at the City of Manteca on June 14, 2006. The City of Manteca filed a Notice of Completion with the Governor's Office of Planning and Research, State Clearinghouse, indicating that the DEIR has been completed and is available for review and comment by the public. The DEIR was circulated for a 45-day public review period, and copies were made available for public review with the Manteca City Clerk, the Manteca Public Works Department, and the Manteca Public Library. In addition, a public hearing on the DEIR was held at the Manteca City Council Chambers at 3 p.m. on August 8, 2007, to receive oral comments on the document. A public Notice of Availability of the DEIR, which also included the date, time, and specific location for the public hearing, was published in the *Manteca Bulletin* newspaper. The City sent a letter (and copies of the DEIR, Notice of Preparation, Notice of Completion, and Notice of Availability) to the OLWD extending the opportunity for the District to submit written comments on the DEIR to October 31, 2007. As of October 31, 2007, no additional comments were received from the District.

The City of Manteca acknowledges that OLWD could be considered a local agency with jurisdiction by law with respect to the project or which exercises authority over resources which may be affected by the project (see State CEQA Guidelines Section 15086[a][3]). As discussed in the DEIR, the City of Manteca proposes to construct an approximately 14,000-foot-long effluent outfall pipeline parallel to and south of the existing outfall pipeline to accommodate increased wastewater flows. An approximately 6,700-foot-long section of the existing outfall pipeline extending from State Route 120 to the San Joaquin River is located on land owned by OLWD (see Draft EIR Exhibit 3-3). The City of Manteca currently holds a utility easement on OLWD lands for the City's existing effluent outfall pipeline. To accommodate a second outfall pipeline, the existing easement may need to be altered. During the project's planning and design phase, the City would coordinate with local utility providers and other organizations (including OLWD) to identify the necessary access easements for proposed wastewater master plan infrastructure. In general, access easements would not be considered an environmental issue that would require evaluation under CEQA. Notwithstanding, the potential environmental impacts associated with construction of a second outfall pipeline alongside the existing outfall pipeline were thoroughly analyzed in the DEIR.

OWD-3 The commenter summarizes several DEIR environmental issues. Each of the issues raised in this comment are addressed in responses OWD-4 to OWD-9 below.

OWD-4 The City acknowledges that the proposed effluent outfall pipeline route would traverse OLWD lands (see OWD-2). The proposed outfall pipeline would be parallel to and south of the existing outfall pipeline. The City of Manteca currently holds a utility easement on OLWD lands for the City's existing effluent outfall pipeline. To accommodate a second outfall pipeline, the existing easement may need to be altered to allow room for the second pipeline.

Section 4.10 of the DEIR, "Public Services and Utilities," considered project impacts on utility facilities in the project area. As described in Impact 4.10-5, "Impacts on Existing Utility Corridors," implementation of the proposed project could potentially disrupt existing utility facilities in the project area. During the project's design phase, the City would consult with local utility companies to avoid potential disturbances to utility facilities in the project area, where possible. Construction and installation of wastewater collection system pipelines, recycled-water distribution pipelines, and the parallel treated-effluent outfall pipeline, could potentially disrupt existing utility facilities in the project area. In accordance with City policies, the City would consult during the design phase with utility companies that operate underground or aboveground utilities in the project area to determine the exact location of these facilities. Typically, the City would avoid existing utilities where possible. If these utilities cannot be avoided, the City would coordinate with the utility companies to determine the best method of minimizing potential disturbances.

Because the proposed project could potentially disrupt existing utility facilities in the project area, this impact was determined to be potentially significant. To reduce impacts to a less-than-significant level, the City will adopt Mitigation Measure 4.10-5, "Impacts on Existing Utility Corridors" (see page 4.10-9 of the DEIR). This mitigation measure requires the City to coordinate with PG&E early in the development of project plans, prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities, consult with PG&E as early in the planning stages as possible, and consult with PG&E for additional information and assistance in the development of its project schedule to reduce effects on utility service associated with project development. Because Impact 4.10-5 and Mitigation Measure 4.10-5 do not specifically refer to OLWD facilities, the text of the DEIR has been modified as shown below. These changes do not alter the conclusions of the DEIR.

Page 4.10-8, last paragraph is hereby modified as follows:

"Implementation of the proposed project could potentially disrupt existing aboveground and underground utility and wastewater treatment facilities in the project area, including a PG&E high-voltage electrical transmission line crossing the WQCF property 400 feet south of existing developed areas at the WQCF; ~~, and~~ overhead electrical transmission lines along the proposed alignment of the treated-effluent outfall pipeline; and Oakwood Lake Water District's (OLWD's) planned treated effluent spray fields along the proposed alignment of the treated-effluent outfall pipeline. Implementation of the proposed project may require that high-voltage electrical transmission towers and other electrical transmission facilities be moved to accommodate additional WQCF facilities and pipelines. During the project's design phase, the City would consult with the local utility companies (including OLWD) to avoid potential disturbances to utility and wastewater facilities in the project area, where possible. Existing utilities are installed within roadways throughout the project area. Construction and installation of wastewater collection system pipelines, recycled-water distribution pipelines, the parallel treated-effluent outfall pipeline, and wastewater pumping stations could potentially disrupt existing utility facilities in the project area. In accordance with City policies, the City would consult during the design phase with utility companies that operate underground or aboveground utilities and wastewater treatment facilities in the project area to determine the exact location of these facilities. Typically, the City would avoid existing utilities where possible. If these utilities cannot be avoided, the City would coordinate with the utility companies to determine the best method of minimizing potential disturbances. Nonetheless, implementation of the proposed project could potentially disrupt existing aboveground and underground utility and wastewater treatment facilities in the project area, and this impact would be **potentially significant**."

Page 4.10-9, Mitigation Measure 4.10-5 is hereby revised as follows:

"Mitigation Measure 4.10-5: Impacts on Existing Utility Corridors.

PG&E owns and operates gas and electric facilities that are located within and adjacent to the proposed project area. 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, the City of Manteca will coordinate with PG&E early in the development of project plans. Any proposed development plans will provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities. In addition, the OLWD owns and operates wastewater treatment facilities in the project area, and has plans to implement a treated effluent spray field system. The City of Manteca will coordinate with OLWD early in the development of project plans. Any proposed development plans will provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of OLWD's wastewater facilities.

The requesting party will be responsible for the costs associated with the relocation of existing PG&E facilities to accommodate the development of the proposed project. Because facilities relocations require long lead times and are not always feasible, the City will consult with PG&E as early in the 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 CPUC. If required, this approval process could take up to 2 years to complete. The City will consult with PG&E and OLWD for additional information and assistance in the development of its project schedule to reduce effects on utility and wastewater service associated with project development."

OWD-5 The DEIR contains a thorough evaluation of the project's terrestrial biological resources impacts consistent with the requirements of CEQA in Section 4.5, "Terrestrial Biological Resources." The City acknowledges that the proposed effluent outfall pipeline could potentially disturb or otherwise affect terrestrial biological resources outside of the City of Manteca on OLWD lands. Therefore, EDAW biologists reviewed existing relevant biological resources documents, conducted database searches, and conducted field surveys along the proposed treated effluent outfall pipeline alignment. The purpose of the survey was to characterize the general biological resources present, determine the potential for sensitive biological resources to be present, and assess the potential for such resources to be affected by the proposed project. Project area vegetation and habitat types were assessed and, as shown on Exhibits 4.5-2 and 4.5-2c of the DEIR, the proposed effluent outfall pipeline alignment on OLWD land from State Route 120 to the San Joaquin River was classified as developed/roadway. These areas include previously disturbed roadways and land cleared for the construction of new housing. The proposed side-bank outfall structure area for the outfall pipeline on the east bank of the San Joaquin River was classified as riparian forest habitat (see Exhibit 4.5-2). A relatively small number of riparian trees are present at this location.

Information obtained from biological studies previously conducted in the vicinity of the project area, field and reconnaissance-level surveys conducted for the project area, reviews of aerial photographs, habitat designations, CNDDB records, and CNPS database records were used to assess potential impacts on biological resources that could result from implementation of the proposed project. Potentially significant impacts associated with the proposed effluent outfall pipeline and outfall structure are discussed in Impact 4.5-6, "Impacts on Raptors," Impact 4.5-9, "Impacts on Protected Heritage Trees," and Impact 4.5-10, "Impacts on Sensitive Habitats, Including Jurisdictional Waters of the United States." Construction of the effluent outfall pipeline and outfall structure could disturb nearby nesting raptors (Impact 4.5-6), result in the potential loss or disturbance of native oaks or other protected tree species (Impact 4.5-9), and the effluent outfall structure would disturb the east bank of the San Joaquin River (Impact 4.5-

10). The analysis provided in the DEIR complies with the requirements of CEQA and appropriately documents the potential biological impacts of the project.

OWD-6 As described in OWD-5, construction of the effluent outfall pipeline and outfall structure could disturb nearby nesting raptors (Impact 4.5-6), result in the potential loss or disturbance of native oaks or other protected tree species (Impact 4.5-9), and the effluent outfall structure would disturb the east bank of the San Joaquin River (Impact 4.5-10). Mitigation measures are proposed in the DEIR to reduce potentially significant effluent outfall pipeline and outfall structure biological resources impacts to a less-than-significant level consistent with the requirements of CEQA.

To reduce impacts on raptors, the City would implement Mitigation Measure 4.5-6, "Impacts on Raptors," and incorporate and implement the mitigation measures specified in the SJMSCP. The City of Manteca adopted the SJMSCP on February 5, 2001, and has signed the implementation agreement. Therefore, a Section 10(a)(1)(B) permit was issued by USFWS to the City. This Section 10 permit also makes up a special-purpose permit for species covered by the federal Migratory Bird Treaty Act (MBTA). A Section 2081 permit was also issued by the California Department of Fish and Game (DFG) to the City of Manteca. The City is committed to obtaining coverage under the SJMSCP to mitigate project impacts and obtain incidental take authorization for SJMSCP-covered species under the City's Section 10(a) and Section 2081 permits. The Section 10(a) permit also serves as a special-purpose permit for the incidental take of those species that are also covered under the MBTA. Coverage under the SJMSCP would fully mitigate all impacts on special-status wildlife species addressed in the DEIR. Therefore, incorporation and implementation of Mitigation Measure 4.5-6 would reduce potentially significant raptor impacts to a less-than-significant level. Although a portion of the effluent outfall pipeline and the outfall structure would be located outside of Manteca city limits, because the City has adopted the SJMSCP and signed the implementation agreement, the City can request coverage under the SJMSCP and coordinate with SJCOG during the application and review process for the project for all project impacts. Although the City can adopt SJMSCP mitigation for projects outside of Manteca city limits for impacts on raptors, impacts on sensitive habitats (e.g., waters of the United States) and protected trees are not covered by the SJMCSP.

To reduce impacts associated with the effluent outfall structure on the east bank of the San Joaquin River, the City would implement Mitigation Measure 4.5-10, "Impacts on Sensitive Habitats, Including Jurisdictional Waters of the United States." Potential impacts to sensitive habitat are not covered by the SJMSCP. However, the City of Manteca is committed to compliance with all applicable laws and regulations, and would obtain a Section 404 permit, any other applicable permits, and will coordinate with applicable regulatory agencies (including the U.S. Army Corps of Engineers, the California DFG, the U.S. Environmental Protection Agency, and the State Reclamation Board) as required. To reduce impacts on native oaks or other protected tree species, the City will implement Mitigation Measure 4.5-9, "Impacts on Protected and Heritage Trees," which requires the project to survey and replace any trees that would be removed as result of the project and are subject to protection under the City's Tree Ordinance. The mitigation recommended in the DEIR complies with the requirements of CEQA and the CEQA Guidelines in that the mitigation is specific, identifies performance standards that must be achieved, and are fully enforceable through the City SJMSCP permit or other agency permit conditions.

OWD-7 As described in Chapter 3, "Project Description," of the DEIR, the City of Manteca currently disposes of treated wastewater effluent via land application to City-owned property surrounding the WQCF or discharge to the San Joaquin River. At buildout, the City proposes to discharge

treated effluent through a combination of on-site land application, urban landscape irrigation, and discharge to the San Joaquin River. On-site land application would involve the disposal of approximately 0.73 mgd of wastewater on 190 acres of City-owned land. Urban landscape irrigation would involve the discharge of approximately 3.28 mgd of wastewater to 817 acres of irrigable City-owned urban land, including parks, schools, cemeteries, and golf courses. All other treated effluent (23 mgd) would flow by gravity or be pumped through the existing outfall pipe and a newly constructed outfall pipe to the San Joaquin River.

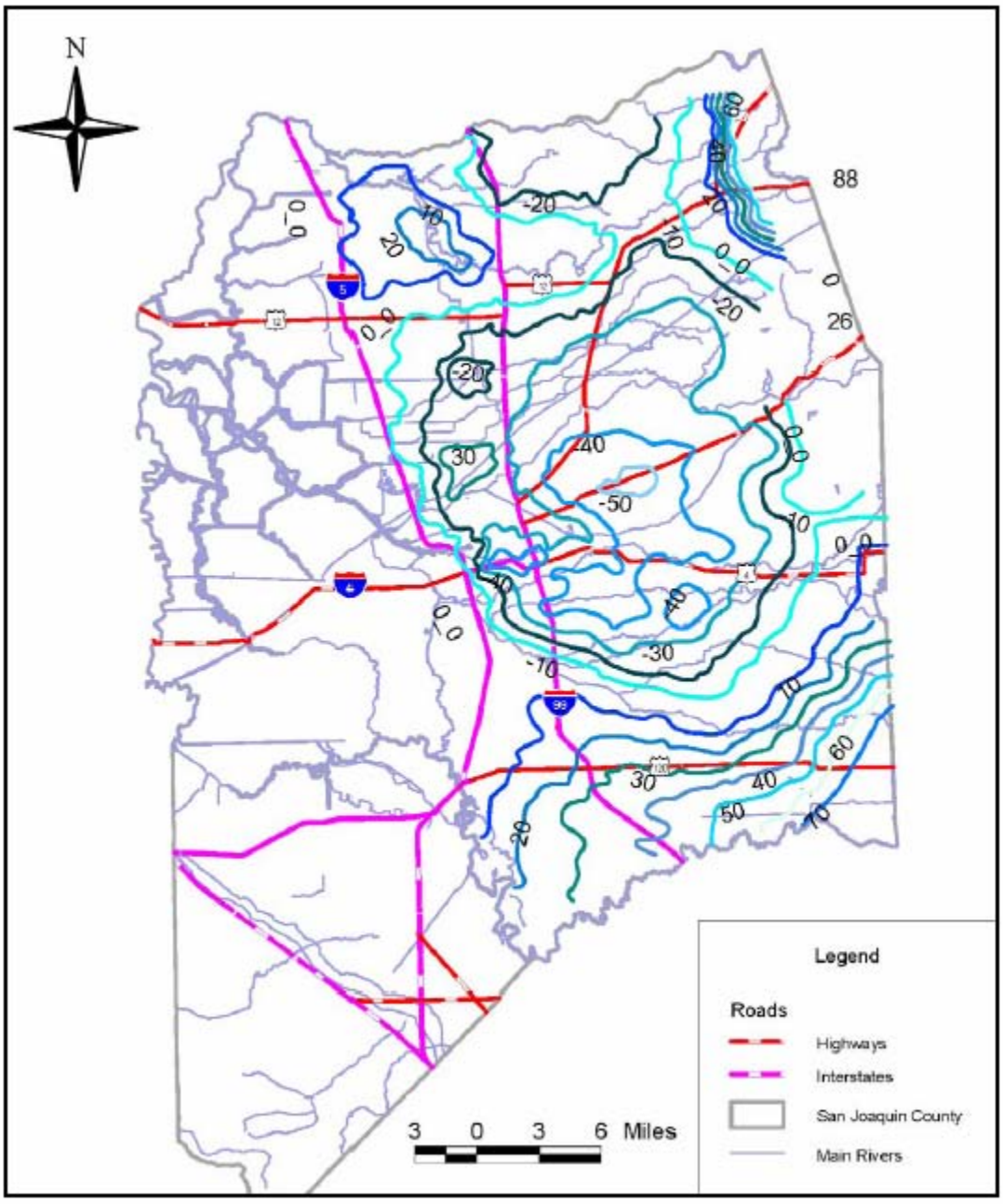
Implementation of the proposed project would not adversely impact groundwater quality in the project area because the application of reclaimed wastewater on 190 acres of City-owned land and the discharge of treated effluent for urban landscape irrigation purposes would comply with all applicable federal and state regulations and permits, requirements and limitations of which are set to be protective of groundwater quality. The Manteca WQCF operates and discharges treated effluent under the requirements of an NPDES permit issued by the Central Valley RWQCB in Order No. R5-2004-0028 (and as amended by Order No. R5-2005-0110 and Order No. R5-2006-0101) and Title 22 California Code of Regulations requirements.

Wastewater reclamation in California is regulated under Title 22, Division 4, of the California Code of Regulations. The Title 22 regulatory program is administered by the California Department of Public Health (formerly the state Department of Health Services [DHS]). The intent of these regulations is to ensure protection of public health associated with the use of reclaimed water. The regulations establish acceptable levels of constituents in reclaimed water for a range of uses and prescribe means for assurance of reliability in the production of reclaimed water. The Department of Public Health has jurisdiction over the distribution of reclaimed wastewater and the enforcement of Title 22 regulations. The RWQCBs are responsible for issuing waste discharge requirements (including discharge prohibitions, monitoring, and reporting programs).

The RWQCB requires the installation of monitoring wells both before and after the application of reclaimed water. Groundwater data are typically collected quarterly and compared to background data to identify any indications of groundwater degradation. In addition, application rates are limited at “agronomic rates” determined for particular crops or other rates approved by the RWQCB to avoid excessive percolation into underlying groundwater aquifers. The agronomic rate is the rate of application of water for a particular crop, in a given soil type, under prevailing climate conditions, that will avoid ponding or runoff by matching the water needs of the crop with the volume of water applied. Under this type of irrigation regime, there should be little or no infiltration of treated water beyond the plant root zone because application rates are designed to closely match the needs of the crop being irrigated. Any tailwater that may run off is required to be contained on the irrigation site by a system of return ditches, piping, and pump stations. Violations of water quality criteria or permit conditions are enforced by the RWQCB with requirements to repair faulty equipment, adjust application rates, or cease operations. In addition, the treated effluent for urban landscape irrigation is required to meet stringent Department of Public Health Title 22 tertiary treatment and disinfection requirements. Therefore, the project would not have any significant impacts on the underlying groundwater basin and would not interfere with OLWD’s effluent sprayfield operations.

Regarding impacts to groundwater from increased discharges to the San Joaquin River, implementation of the proposed project would not adversely impact groundwater quality in the project area (through recharge from the San Joaquin River) because WQCF discharge into the San Joaquin River has been shown to have a minimal effect on San Joaquin River quality. Further, near the WQCF discharge to the San Joaquin River and OLWD service area, groundwater contours developed in Spring 1998 (see exhibit below) show groundwater

movement within the groundwater basin occurring downgradient west-northwest to the San Joaquin River and northwest toward the City of Stockton. San Joaquin River water would not be expected to move upgradient into the groundwater basin in the area of interest to impact groundwater; in fact, the opposite occurs where local groundwater adds to the river's flow. Therefore, while recharge of the local groundwater basin does occur along stretches of the San Joaquin River, in the area of interest, groundwater flows to the river and would not receive recharge (see *Antidegradation Analysis for Proposed Wastewater Quality Control Facility Discharge Modification*, prepared for the City of Manteca by Larry Walker Associates, June 2007).



Spring 1998 Groundwater Contours in the Eastern San Joaquin Groundwater Sub-Basin

OWD-8 The commenter states that the DEIR's cumulative impact analysis does not consider certain development projects outside of Manteca city limits. The City will add the OLWD's Oakwood Lake residential development project to Section 5.2, "Projects Contributing to Potential Cumulative Impacts." These changes do not alter the conclusions of the DEIR.

Section 5.2 of the DEIR is hereby revised as follows:

"5.2 PROJECTS CONTRIBUTING TO POTENTIAL CUMULATIVE IMPACTS

The State CEQA Guidelines identify two methods for establishing the cumulative environment in which the project is to be considered: the use of a list of past, present, and probable future projects or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. For this DEIR, both the list and the plan approach have been combined to generate the most reliable future projections possible. A list approach is used to define the local project environment and includes projects within the City of Manteca and certain projects outside of Manteca city limits. In addition, a list approach is used to define regional water quality projects that could affect San Joaquin River water quality. Because the project directly influences and is influenced by regional development activities, the plan approach is also used to allow a cumulative analysis on a regional scale. The plan approach encompasses large-scale water programs that could affect the water quality of the San Joaquin River and the Sacramento-San Joaquin Delta. Projects and plans included in these two approaches are described below."

The following text has been added before Section 5.3 on page 5-11 of the DEIR:

"5.2.6 OTHER LOCAL RELATED PROJECTS

The list of past, present, and probable future local projects used for this cumulative analysis also includes certain projects that have occurred or are planned to occur outside of Manteca city limits. For the purposes of this discussion, the projects that may have a cumulative effect on the resources in the project area will also be referred to as "related projects." The related Oakwood Lake Water District (OLWD) project is described below.

The OLWD and Beck Properties, Inc. are currently developing a residential development immediately adjacent to and contiguous with the Manteca Primary Urban Service Boundary. The development is currently under construction. The approximately 360-acre parcel is located south of SR 120, east of the San Joaquin River, and south of the Union Pacific Railroad. The residential subdivision at Oakwood Lake will include approximately 484 single family residential units and commercial development."

OWD-9 As described in Section 7.4, "Alternatives Eliminated from Detailed Consideration," an off-site location for the wastewater treatment plant is not feasible, and the off-site alternative was rejected from further consideration given the impracticality, high costs, and likely additional environmental impacts.

Alternatives are used to determine whether or not a variation of the project would reduce or eliminate significant project impacts within the basic framework of the project objectives, and the choice of alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of implementing the proposed project (see Section 7 of the DEIR). A regional wastewater treatment facility is not within the basic framework of the project objectives, and the commenter does not provide any specific information concerning how a regional wastewater treatment facility would reduce or eliminate significant project impacts. Because no specific information is provided as to how a regional wastewater treatment facility would reduce or eliminate significant project impacts, this proposed alternative is eliminated from detailed consideration and will not be discussed further in the DEIR.

3 REVISIONS TO THE DRAFT EIR

Changes to the text of the DEIR that are made in response to the comments are signified by ~~strikeouts~~ where text is removed and by <u>underline</u> where text is added.

SECTION 4.9, HYDROLOGY AND WATER QUALITY

PAGE 4.9-36 AND -37

Impact 4.9-7, "Effects of Proposed Project Discharges on Electrical Conductivity Concentrations in Receiving Waters," was modified by adding and deleting text as follows (see response to comment RWB-3):

IMPACT 4.9-7 Hydrology and Water Quality—Effects of Proposed Project Discharges on Electrical Conductivity Concentrations in Receiving Waters. *Because the project would result in minor increases in EC in the San Joaquin River at full buildout (27 mgd) and effluent concentrations would ~~be below established EC water quality objectives~~ <u>not substantially affect San Joaquin River EC concentrations</u> during agricultural and nonagricultural seasons, the project would not result in significant EC water quality impacts. Therefore, the project's near-field EC impacts would be* ***less than significant****.*

Manteca WQCF NPDES self-monitoring data from the San Joaquin River at monitoring location R-1 (just upstream of the WQCF discharge) corresponding to dry/below normal water years were used to calculate an estimated impact of WQCF effluent electrical conductivity (EC) in the San Joaquin River under critical (600 cfs) and dry/below normal (1,250 cfs) river flows at the existing permitted discharge of 9.87 mgd and at proposed discharges of 17.5 mgd and 27 mgd. Due to the seasonal EC objectives contained in the Sacramento–San Joaquin Delta Basin Plan, available EC data were divided into two groups for the purpose of the present near-field analysis: April through August data set with a seasonal objective of 700 umhos/cm;(micromhos per centimeter – the standard measure of electrical conductivity in freshwater) and September through March data set with a seasonal objective of 1000 umhos/cm. Although discharge of treated wastewater to the Delta or its tributaries under an NPDES permit can marginally affect EC in the southern Delta, previous State Board decisions and water quality control plans do not mention or consider treated effluent discharges as a source of salinity in the southern Delta (SWRCB 2005).

The incremental change in near-field EC (measured at R-3, see Exhibit 4.9-1) in the San Joaquin River resulting from an increase in WQCF effluent discharged from the current permitted rate (9.87 mgd) to the proposed rate (27 mgd) is approximately 5.1 to 10.1 umhos/cm during the months of April through August (agricultural season) and 0.8 to1.5 umhos/cm during the months of September through March (nonagricultural season) during critical and dry/below normal water years, respectively. Total EC measurements would range from 583 to 591.2 umhos/cm from April through August and 787.2 to 788.4 umhos/cm during September through March, which ~~are substantially below established EC water quality objectives~~ <u>would not substantially affect San Joaquin River EC concentrations</u>. Additionally, the City's potable water supply is expected to reduce EC concentrations compared to pre-August 2005 conditions as a result of blending surface water from the South County Water Supply Program (which has low EC values) with the City's groundwater. The blending of surface water with groundwater for the potable water supply has significantly decreased the EC measured in WQCF effluent when comparing pre- and post-August 2005 plant effluent measurements (LWA 2006b).

Because the project would result in minor increases in EC in the San Joaquin River at full buildout (27 mgd) and effluent concentrations would ~~be below established EC water quality objectives~~ <u>not substantially affect San Joaquin River EC concentrations</u> during agricultural and nonagricultural seasons, the project would not result in significant EC water quality impacts. the project's near-field EC impacts would be **less than significant**.

SECTION 4.10, PUBLIC SERVICES AND UTILITIES

PAGE 4.10-8 AND - 9

Impact 4.10-5, "Impacts on Existing Utility Corridors," was modified by adding and deleting text as follows (see response to comment OWD-4):

IMPACT 4.10-5 Public Services and Utilities—Impacts on Existing Utility Corridors. *Implementation of the proposed project could potentially disrupt existing aboveground and underground utility facilities in the project area, resulting in interruption of service. This would be a* ***potentially significant*** *impact.*

Implementation of the proposed project could potentially disrupt existing aboveground and underground utility and wastewater treatment facilities in the project area, including a PG&E high-voltage electrical transmission line crossing the WQCF property 400 feet south of existing developed areas at the WQCF; ~~, and~~ overhead electrical transmission lines along the proposed alignment of the treated-effluent outfall pipeline; and Oakwood Lake Water District's (OLWD's) planned treated effluent spray fields along the proposed alignment of the treated-effluent outfall pipeline. Implementation of the proposed project may require that high-voltage electrical transmission towers and other electrical transmission facilities be moved to accommodate additional WQCF facilities and pipelines. During the project's design phase, the City would consult with the local utility companies (including OLWD) to avoid potential disturbances to utility and wastewater facilities in the project area, where possible. Existing utilities are installed within roadways throughout the project area. Construction and installation of wastewater collection system pipelines, recycled-water distribution pipelines, the parallel treated-effluent outfall pipeline, and wastewater pumping stations could potentially disrupt existing utility facilities in the project area. In accordance with City policies, the City would consult during the design phase with utility companies that operate underground or aboveground utilities and wastewater treatment facilities in the project area to determine the exact location of these facilities. Typically, the City would avoid existing utilities where possible. If these utilities cannot be avoided, the City would coordinate with the utility companies to determine the best method of minimizing potential disturbances. Nonetheless, implementation of the proposed project could potentially disrupt existing aboveground and underground utility and wastewater treatment facilities in the project area, and this impact would be **potentially significant**.

PAGE 4.10-9

Mitigation Measure 4.10-5, "Impacts on Existing Utility Corridors," was modified by adding text as follows (see response to comment OWD-4):

Mitigation Measure 4.10-5: Impacts on Existing Utility Corridors.

PG&E owns and operates gas and electric facilities that are located within and adjacent to the proposed project area. 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, the City of Manteca will coordinate with PG&E early in the development of project plans. Any proposed development plans will provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities. In addition, the OLWD owns and operates wastewater treatment facilities in the project area, and has plans to implement a treated effluent spray field system. The City of Manteca will coordinate with OLWD early in the development of project plans. Any proposed development plans will provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of OLWD's wastewater facilities.

The requesting party will be responsible for the costs associated with the relocation of existing PG&E facilities to accommodate the development of the proposed project. Because facilities relocations require long lead times and

are not always feasible, the City will consult with PG&E as early in the 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 CPUC. If required, this approval process could take up to 2 years to complete. The City will consult with PG&E and OLWD for additional information and assistance in the development of its project schedule to reduce effects on utility and wastewater service associated with project development.

SECTION 4.13, FISHERIES AND AQUATIC RESOURCES

PAGE 4.13-23

Impact 4.13-2, "Thermal Effects on Fish and Benthic Macroinvertebrates Exposed to the Plume While Moving Downstream Past the Discharge Outfall," was modified by deleting text as follows (see response to comment RWB-9):

IMPACT 4.13-2 Fisheries and Aquatic Resources — Thermal Effects on Fish and Benthic Macroinvertebrates Exposed to the Plume While Moving Downstream Past the Discharge Outfall. *At full build-out, the proposed project would result in a thermal plume of increased temperatures, relative to the ambient temperatures, across portions of the water column, under all conditions, that is larger than the thermal plume that currently exists ~~(and permitted)~~ downstream of the discharge outfall. The project-specific changes to the size and characteristics of this plume would be considerable, as would project-specific effects on the frequency with which specific plume characteristics occur. A zone of passage would remain along the west bank river margin of the water column where river temperatures are unaffected by discharges. When achievable, actively swimming young-of-the-year fishes emigrating from upstream rearing areas would select migration routes past the discharge outfall that avoid elevated temperatures and excessive temperature differentials. The macroinvertebrate communities inhabiting the sediments and drifting through the plume are generally tolerant of the absolute temperature regime and differences created by the proposed project, particularly for the relatively short period of time they would be drifting through the plume. However, passively drifting fish are typically transported past the discharge in the near-shore habitats and along the upper portion of the water column, both of which are noticeably affected by the effluent plume. Based on the findings for passively drifting fish being noticeably affected by the thermal plume, the proposed project would have a* ***potentially significant*** *impact on the populations and communities of fish moving downstream in the lower San Joaquin River and Delta.*

SECTION 5, CUMULATIVE IMPACTS

PAGE 5-1

The first paragraph in Section 5.2, "Projects Contributing to Potential Cumulative Impacts," was modified by adding text as follows (see response to comment OWD-8):

5.2 PROJECTS CONTRIBUTING TO POTENTIAL CUMULATIVE IMPACTS

The State CEQA Guidelines identify two methods for establishing the cumulative environment in which the project is to be considered: the use of a list of past, present, and probable future projects or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. For this DEIR, both the list and the plan approach have been combined to generate the most reliable future projections possible. A list approach is used to define the local project environment and includes projects within the City of Manteca and certain projects outside of Manteca city limits. In addition, a list approach is used to define regional water quality projects that could affect San Joaquin River water quality. Because the project directly influences and is influenced by regional development activities, the plan approach is also used to allow a cumulative analysis on a regional scale. The plan approach encompasses large-scale water programs that could

affect the water quality of the San Joaquin River and the Sacramento-San Joaquin Delta. Projects and plans included in these two approaches are described below.

PAGE 5-11

The following text has been added before Section 5.3 (see response to comment OWD-8):

5.2.6 OTHER LOCAL RELATED PROJECTS

The list of past, present, and probable future local projects used for this cumulative analysis also includes certain projects that have occurred or are planned to occur outside of Manteca city limits. For the purposes of this discussion, the projects that may have a cumulative effect on the resources in the project area will also be referred to as "related projects." The related Oakwood Lake Water District (OLWD) project is described below.

The OLWD and Beck Properties, Inc. are currently developing a residential development immediately adjacent to and contiguous with the Manteca Primary Urban Service Boundary. The development is currently under construction. The approximately 360-acre parcel is located south of SR 120, east of the San Joaquin River, and south of the Union Pacific Railroad. The residential subdivision at Oakwood Lake will include approximately 484 single family residential units and commercial development.

SECTION 7, ALTERNATIVES TO THE PROPOSED PROJECT

PAGE 7-9

The following paragraph was modified by adding and deleting text as follows (see response to comment RWB-10):

Fisheries and Aquatic Resources

The Increased Land Disposal Alternative would result in ~~greater~~ similar impacts to fisheries and aquatic resources compared to the project. The existing WQCF does not comply with one objective of the Thermal Plan. Although the City has prepared a Thermal Exception Report and requested an exception to the Thermal Plan, an exception to the Thermal Plan has not been granted as of the date of publication of this document. For purposes of this analysis it is assumed that the City will sufficiently address Thermal Plan objectives to protect fisheries and aquatic resources. While the project would increase the effluent discharge rate to 27 mgd, which would result in the exceedance of all three thermal plan objectives (see Section 4.13, "Fisheries and Aquatic Resources"), mitigation is recommend that would require the construction of cooling towers at the WQCF. The cooling towers would ~~bring the WQCF's effluent into compliance with all three objectives of the Thermal Plan~~ reduce the temperature of the WQCF's effluent and protect fisheries and aquatic resources. ~~and would eliminate the WQCF's existing exceedance of one Thermal Plan objective.~~ Because the City would comply with Thermal Plan objectives under the Increased Land Disposal Alternative and under the project, thermal impacts would be similar under this alternative. ~~This alternative would not eliminate this exceedance; therefore, thermal impacts would be greater under this alternative.~~ ***[Similar ~~Greater~~]***

PAGE 7-14 AND -15

Table 7-1, "Comparison of the Impacts of the Alternatives with Those of the Proposed Project," and the paragraph that follows the table were modified by adding and deleting text as follows (see response to comment RWB-10):

Table 7-1
Comparison of the Impacts of the Alternatives with Those of the Proposed Project

Environmental Issues	Alternative			
	No Project (9.87 mgd)	Increased Land Disposal	Advanced Wastewater Treatment	Modified Pipeline Alignment
Land Use and Agricultural Resources	Less	Similar or Greater	Similar	Similar
Visual Resources	Less	Similar	Similar	Similar
Air Quality	Less	Similar	Similar	Similar
Noise	Less	Similar	Similar	Similar
Terrestrial Biological Resources	Less	Greater	Similar	Less
Hazards and Hazardous Materials	Similar	Similar	Similar or Greater	Similar
Geology, Soils, and Seismicity	Similar	Similar	Similar	Similar
Paleontological Resources	Less	Similar	Similar	Similar
Hydrology and Water Quality	Similar	Similar	Less	Similar
Public Services and Utilities	Similar	Similar	Similar	Similar
Transportation and Circulation	Less	Greater	Similar	Similar
Cultural Resources	Less	Similar	Similar	Similar
Fisheries and Aquatic Resources	Similar	Similar ~~Greater~~	Less*	Similar*

* Assumes construction of a treated effluent cooling tower to reduce thermal impacts.
Source: EDAW 2007"

The Increased Land Disposal Alternative would not be environmentally superior to the project because it would not avoid any of the project significant and unavoidable impacts related to Important Farmland and generation of odors and it would result in greater environmental impacts in **4** three resource areas including greater impacts to Important Farmland, sensitive habitats and species, and construction-related traffic impacts ~~and fishery impacts~~. While this alternative may achieve most project objectives, because of the substantial expense involved with securing additional land for effluent disposal, it may not be able to meet the project objective of providing for the "cost-effective" expansion of City WQCF facilities.

4 REPORT PREPARATION

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