THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

BOARD ACTION

- Board of Directors
  Water Planning and Stewardship Committee

1/11/2011 Board Meeting

8-4

Subject

Authorize entering into a Local Resources Program agreement with the Municipal Water District of Orange County and the Irvine Ranch Water District for the IRWD Wells 21 & 22 Desalter Project

Description

This is a request for authorization to enter into a Local Resources Program (LRP) agreement with the Municipal Water District of Orange County and Irvine Ranch Water District (IRWD) for the subject project. Metropolitan would provide financial assistance up to $250 per acre-foot for about 6,400 acre-feet per year of recovered groundwater. The project meets LRP eligibility criteria adopted by the Board to improve regional water supply reliability.

The project, described in **Attachment 1**, would treat degraded groundwater from the Orange County Groundwater Basin (OC Basin) and deliver it for potable uses in IRWD's service area. Portions of the OC Basin have been affected by past agricultural practices that resulted in increased total dissolved solids (TDS) and nitrate levels in groundwater. TDS levels are about 750 mg/L, which exceeds the secondary drinking water standard of 500 mg/L. Nitrate concentrations are 67 mg/L, which exceeds the drinking water standard of 45 mg/L. The project would increase IRWD's groundwater pumping from the OC Basin.

Key terms that would be incorporated into the proposed 25-year agreement include the following:

1. Pay for performance. LRP financial incentives would only be paid for recycled water delivered by the proposed project for beneficial uses;
2. Sliding scale. Incentives up to $250 per acre-foot will be calculated annually and paid based on actual project unit cost above Metropolitan's prevailing water rate;
3. Termination for nonperformance. The agreement will be terminated if construction does not commence within two years of agreement execution or if project does not commence operation within five years of agreement's execution date; and
4. Reduction of contractual yield. Metropolitan will reduce its contractual commitment if the project falls short of production targets specified in the contract.

In April 2007, the Board established a goal of 174,000 acre-feet per year of new LRP yield. Since then, the Board has approved seven projects totaling 57,450 acre-feet per year of production. This project would help meet the Board's goal for additional LRP yield consistent with the new IRP local resources augmentation goal.

Attachment 2 summarizes Municipal Water District of Orange County's performance history under the LRP.

Policy

By Minute Item 47049 dated April 10, 2007, the Board adopted the Local Resources Program.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

Pursuant to the provisions of CEQA and the State CEQA Guidelines, Irvine Ranch Water District (IRWD), acting as the Lead Agency, prepared the Wells 21 and 22 and Tustin Legacy Well 1 Project Mitigated Negative Declaration (MND). On February 8, 2010, the IRWD Board of Directors (Board) adopted the MND and Mitigation Monitoring and Reporting Program (MMRP) and approved the project. Subsequent to that time, IRWD proposed to commence negotiations with Metropolitan as related to the LRP agreement. This new information constituted a minor modification to the originally approved project. As the Lead Agency, IRWD prepared an Addendum to the MND (Addendum) to address this modification to the proposed project. On March 8, 2010, the Board adopted the Addendum and approved the proposed project modification. Metropolitan, as a Responsible Agency under CEQA, is required to certify that it has reviewed and considered the information in the MND, MMRP, and Addendum and adopt the Lead Agency's findings prior to approval of the formal terms and conditions for the proposed agreement. See **Attachment 3** for CEQA documentation.

The CEQA determination is: Review and consider information provided in the adopted 2010 MND, MMRP, and Addendum and adopt the Lead Agency's findings related to the proposed action

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination and authorize the General Manager to enter into a Local Resources Program agreement with Municipal Water District of Orange County and Irvine Ranch Water District for up to 6,400 acre-feet per year of recovered groundwater under terms included in this letter.

Fiscal Impact: Up to $40 million for the production of 160,000 acre-feet of recovered groundwater over 25 years. On an annual basis, incentive payments are factored into Metropolitan's rate projections and would be included in future budgets.

Business Analysis: The project would help achieve Metropolitan's local resources goal of developing 174,000 acre-feet per year of new supply by 2025.

Option #2

Do not authorize execution of an LRP agreement for the proposed project.

Fiscal Impact: None

Business Analysis: Metropolitan would pursue other projects to meet its local resources goal of 174,000 AFY of new water.

Staff Recommendation

Option #1

12/27/2010
Deven N. Upadhyay *Date*
Manager, Water Resource Management

12/28/2010
Jeffrey Kightlinger *Date*
General Manager

Attachment 1 – IRWD Wells 21 & 22 Desalter – Project Description

Attachment 2 – Municipal Water District of Orange County LRP Performance History

Attachment 3 – CEQA Documentation

Ref# wrm12608516

IRWD Wells 21 & 22 Desalter

Project Description

Overview

The proposed Wells 21 & 22 Desalter Project (Project) will be owned and operated by Irvine Ranch Water District (IRWD). The Project would recover, treat, and deliver up to 6,400 acre feet per year (AFY) of degraded groundwater from the Orange County Groundwater Basin for potable use in IRWD's service area.

Project Facilities

The Project involves the rehabilitation of two groundwater wells (Wells 21 and 22), a 7-million gallons per day treatment facility located at the former Tustin Marine Corp Air Station site, and about four miles of raw water, finished water, waste and brine disposal pipelines. The treatment facility includes cartridge filters and reverse osmosis membranes to remove total dissolved solids and nitrate. Treated water will be delivered to IRWD's existing 42 – inch diameter pipeline. The brine concentrate will be conveyed to Orange County Sanitation District's existing sewer system. Figure 1 shows the Project facilities.

Source of Project Water

The source of groundwater is the Orange County Groundwater Basin (OC Basin). Portions of the OC Basin have been affected by past agricultural practices that increased the total dissolved solids (TDS) and nitrates in the groundwater. Current TDS levels are about 750 mg/L, which exceeds the secondary drinking water standard of 500 mg/L. Nitrate concentrations are 67 mg/L, which exceeds the drinking water standard of 45 mg/L. Orange County Water District (OCWD), as manager of the OC Basin, assesses a replenishment assessment for every acre-foot of water pumped from the basin. In addition, OCWD also assesses a Basin Equity Assessment (BEA) for each acre-foot of groundwater that exceeds annual pumping limits established by OCWD. OCWD has exempted this Project from the BEA because the Project would help treat and increase IRWD's groundwater pumping from the OC Basin. The BEA exemption allows the Project to maintain operation for three consecutive years without requiring replenishment water from Metropolitan.

End Users

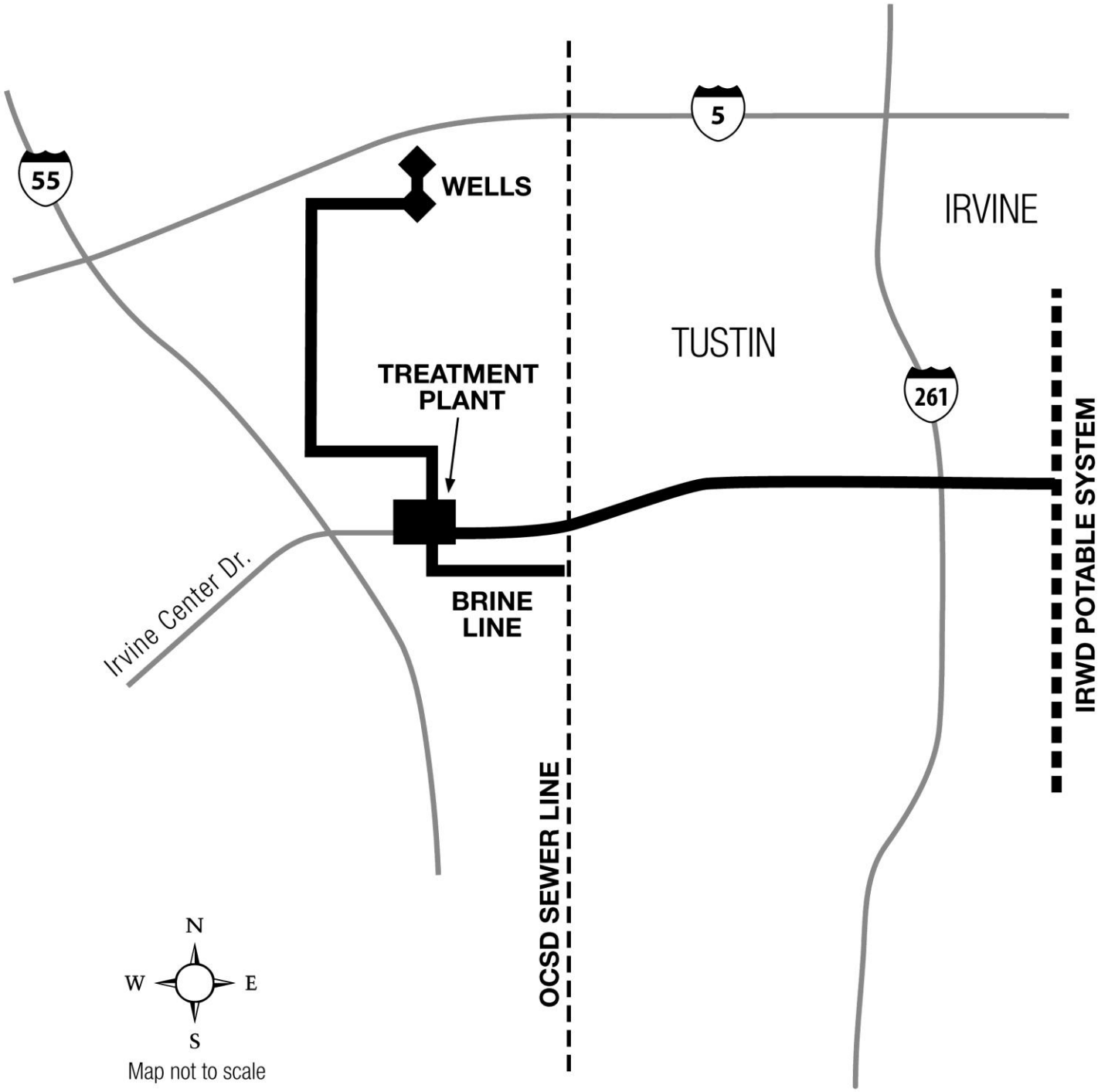
Project water would be delivered to IRWD's potable distribution system and used within IRWD's service area.

Points of Connection

Project facilities begin at the Project wells and terminate at the points of connection to:

- Existing distribution system
- Any discharge points into the storm drain or sewer lines

FIGURE 1
IRWD WELLS 21 & 22 DESALTER PROJECT



Municipal Water District of Orange County LRP Performance History

	Project	Sponsor Agency	Contract Yield (AFY)	Maximum Yield to Date (AF/Year End)	Agreement Date	Start of Operation	Total thru June 2010	
							Yield (AF)	Contribution ($)
1.	Capistrano Beach Desalter Project	Capistrano Beach Water District	1,300	748/09	1998	2007	1,640	409,925
2.	Capistrano Valley Non Domestic Water System Expansion	City of San Juan Capistrano	2,895	0	2000	2006	0	0
3.	Colored Water Treatment Facility Project (Mesa Consolidated)	Mesa Consolidated Water Authority	11,300	5,628/07	1999	2001	34,860	3,924,294
4.	Development of Non Domestic Water System Exp. Ladera and Talega	Santa Margarita Water District	2,772	2,772/07	2000	2005	11,180	1,157,115
5.	Green Acres Reclamation Project*	Orange County Water District	2,800	360/01	1988	1991	33,196	7,946,394
6.	Groundwater Replenishment System Seawater Barrier Project	Orange County Water District	70,000	45,257/09	2004	2008	111,495	13,490,919
7.	Irvine Desalter Project	Irvine Ranch Water District	6,700	4,157/08	1993	2007	11,846	2,961,550
8.	Irvine Reclamation Project	Irvine Ranch Water District	10,000	10,000/02	1986	1986	193,100	29,737,354
9.	IRWD Recycled Water System Upgrade Project	IRWD	8,500	4,175/09	2005	2007	8,120	950,017
10.	Moulton Niguel WD Water Reclamation System	Moulton Niguel Water District/ South Coast Water District	9,276	7,569/07	1992	1993	75,038	11,555,744
11.	San Clemente Water Reclamation Project	City of San Clemente	1,500	442/09	1987	2000	2,771	638,453
12.	San Juan Basin Desalter	City of San Juan Capistrano	4,800	4,799/06	1998	2004	14,834	3,708,475
13.	Santa Margarita Water District Water Reclamation Expansion Project	Santa Margarita Water District	3,600	2,676/00	1987	1988	25,613	3,944,294

	Project	Sponsor Agency	Contract Yield (AFY)	Maximum Yield to Date (AF/Year End)	Agreement Date	Start of Operation	Total thru June 2010	
							Yield (AF)	Contribution ($)
14.	Trabuco Canyon Reclamation Expansion Project	Trabuco Canyon Water District	800	478/04	1989	1992	5,753	885,977
15.	Tustin Desalter Project	City of Tustin	3,271	3,224/07	1992	1996	29,636	2,975,458
16.								
	Total						559,082	84,285,969

***Includes Orange County Water District and City of Santa Ana yields**

Final

WELLS 21 AND 22 PROJECT
TUSTIN LEGACY WELL 1 PROJECT

Mitigated Negative Declaration
Initial Study / Environmental Assessment

SCH# 2009121071

Prepared for
Irvine Ranch Water District

February 2010

ESA

Final

WELLS 21 AND 22 PROJECT
TUSTIN LEGACY WELL 1 PROJECT

Mitigated Negative Declaration
Initial Study / Environmental Assessment

SCH# 2009121071

Prepared for
Irvine Ranch Water District

February 2010

707 Wilshire Boulevard
Suite 1450
Los Angeles, CA 90017
213.599.4300
www.esassoc.com

Oakland

Olympia

Petaluma

Portland

Sacramento

San Diego

San Francisco

Seattle

Tampa

Woodland Hills

209247.01

TABLE OF CONTENTS

Wells 21 & 22/Tustin Legacy Well 1 Projects Initial Study/Environmental Assessment

Page

Chapter 1: Purpose and Need 1-1

Chapter 2: Proposed Action and Alternatives 2-1

Chapter 3: Affected Environment & Environmental Consequences 3-1
Environmental Factors Potentially Affected 3-2
Aesthetics 3-3
Agricultural Resources 3-6
Air Quality and Greenhouse Gases 3-7
Biological Resources 3-13
Cultural Resources 3-18
Geology, Soils, and Seismicity 3-26
Hazards and Hazardous Materials 3-30
Hydrology and Water Quality 3-34
Land Use and Planning 3-39
Mineral Resources 3-41
Noise 3-42
Population, Housing and Environmental Justice 3-48
Public Services 3-49
Recreation 3-50
Transportation and Traffic 3-51
Utilities, Service Systems and Energy 3-54
Mandatory Findings of Significance 3-56

Chapter 4: Summary of Mitigation Measures 4-1

Chapter 5: Consultation and Coordination 5-1

Chapter 6: Report Preparers 6-1

Chapter 7: References 7-1

Chapter 8: Comment Letters 8-1

Chapter 9: Response to Comments 9-1

Chapter 10: Corrections and Additions to the IS/EA 10-1

Chapter 11: Mitigation Monitoring and Reporting Program 11-1

Appendices

A. Air Quality Appendix
B. Hydrology Appendix
C. Consultation and Coordination Appendix (available upon request)

List of Figures

1 Local Vicinity / Service Area 1-2
2 Proposed Project 2-2
1 Local Vicinity / Service Area (Revised) 9-12
3 TL-1 Exploratory Well Preliminary Site Plan (New) 9-15
2 Proposed Project (Revised) 9-17
4 Alternative Treatment Sites, Existing Conditions (New) 9-29
1 Local Vicinity / Service Area (Revised) 10-17
2 Proposed Project (Revised) 10-18
3 TL-1 Exploratory Well Preliminary Site Plan (New) 10-19
4 Alternative Treatment Sites, Existing Conditions (New) 10-21

List of Tables

1-1 Wells 21 and 22 Water Quality 1-4
2-1 Treatment Plant Chemical Use and Delivery 2-9
3-1 Unmitigated Regional Construction Emissions 3-9
3-2 Project Emissions vs. SCAQMD Localized Significance Thresholds 3-11
3-3 Land Use and Zoning Designations for Project Facilities 3-40
3-4 Tustin Exterior Noise Standards 3-43
3-5 Typical Construction Noise Levels 3-45
3-6 Typical Noise Levels from Construction Equipment 3-45
5-1 Agencies and Persons Consulted 5-1

Acronyms

AB	Assembly Bill
Afy	Acre Feet per Year
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARRA	American Recovery and Reinvestment Act
Basin	Orange County Groundwater Basin
BEA	Basin Equity Assessment
BMPs	Best Management Practices
BOR	U.S. Bureau of Reclamation
BPP	Basin Production Percentage
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CEQA	California Environmental Policy Act

CFR	Code of Federal Regulations
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNPS	California Native Plan Society Electronic Inventory
CO	Carbon Monoxide
CRA	California Resource Agency
Cy	Cubic Yards
DATS	Deep Aquifer Treatment System
dBA	Decibal
District	Irvine Ranch Water District
DPM	Diesel Particulate Matter
DRWF	Dyer Road Well Field
DTSC	California Department of Toxic Substances
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ERP	Emergency Response Plan
F	Fahrenheit
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
GHG	Greenhouse Gases
Gpm	Gallons Per Minute
H_2S	Hydrogen Sulfide
HCP	Habitat Conservation Plan
HMBP	Hazardous Materials Business Plan
I	Interstate
IDP	Irvine Desalter Project
IRWD	Irvine Ranch Water District
IS/EA	Initial Study/Environmental Assessment
KW/year	Kilowatts Per Year
LOS	Level Of Service
LST	Localized Significance Thresholds
MCAS	Marine Corps Air Station
MEP	Maximum Extent Practicable
Metropolitan or MWD	Metropolitan Water District of Southern California
Mg/L	Milligrams Per Liter
Mgd	Million Gallons Per Day
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NOI	Notice of Intent
NOx	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NRW	Non-reclaimable Wastewater
O_3	Ozone
OCFA	Orange County Fire Authority
OCSD	Orange County Sanitation District
OCTA	Orange County Transportation Authority
OCWD	Orange County Water District

OSHA	Occupational Safety and Health Administration
PM	Particulate Matter
PPV	Peak Particle Velocity
PRC	Public Resources Code
RMP	Risk Management Plan
RMS	Root Mean Square
RA	Replenishment Assessment
RO	Reverse Osmosis
ROC	Reactive Organic Compound
ROW	Right of Way
RWQCB	Regional Water Quality Control Board, Santa Ana Region
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SOx	Sulfur Dioxide
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
TAC	Toxic Air Contaminants
TDS	Total Dissolved Solids
TL	Tustin Legacy
TL-1	Tustin Legacy Well 1
URBEMIS	Urban Emissions
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOCs	Volatile Organic Chemicals

CHAPTER 1
Purpose and Need

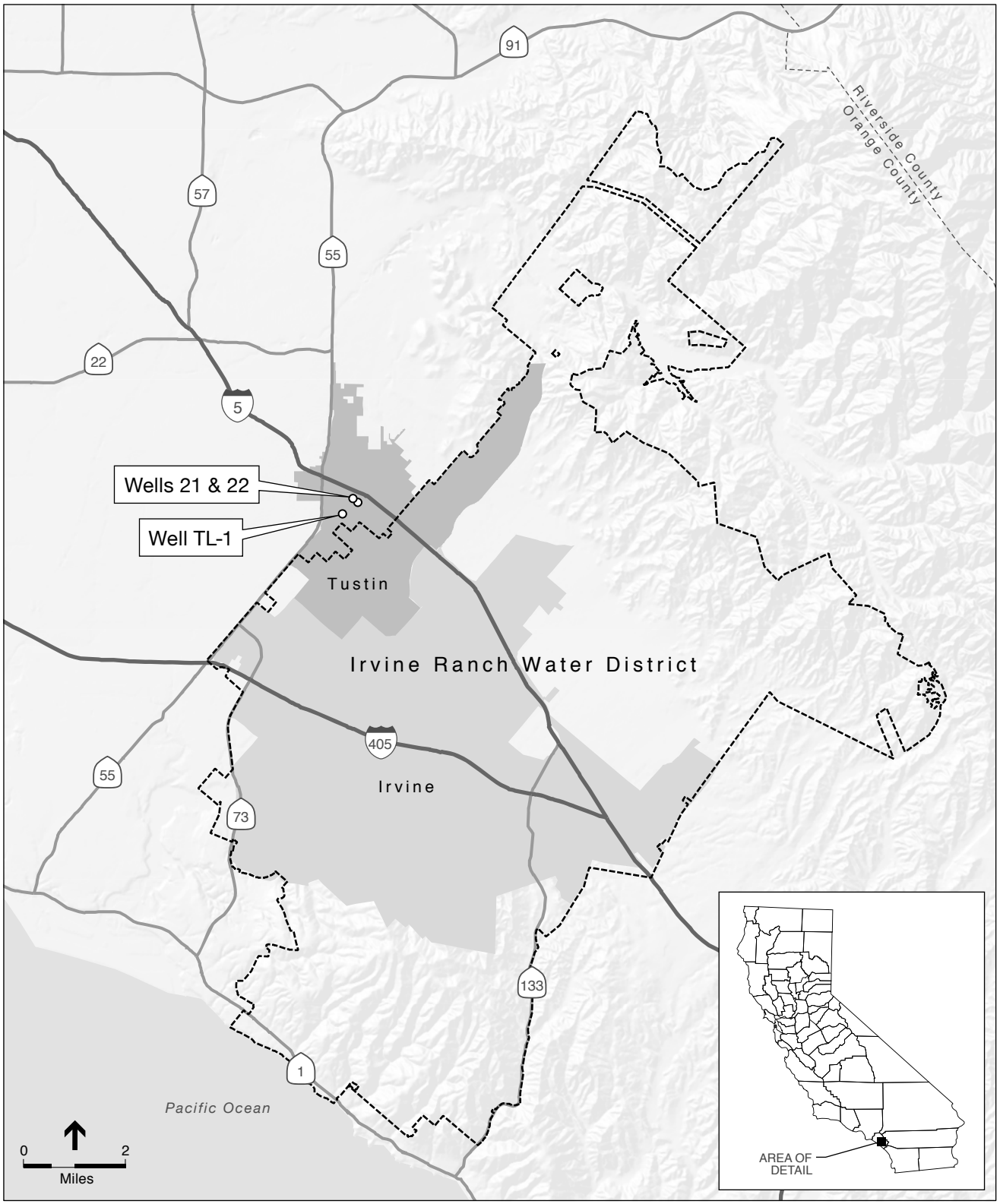
1.1 Introduction

The Irvine Ranch Water District (IRWD or "District") is proposing to implement the Wells 21 and 22 Project and Tustin Legacy Well 1 (TL-1) Project (collectively, "proposed project") to increase local water supplies within the District's service area. The proposed project would recover and treat impaired groundwater to augment local water supplies and increase water supply reliability. The proposed project would install wellhead equipment on two existing groundwater wells (Wells 21 and 22), drill one production well (Well TL-1), and construct a new water treatment plant and water transmission pipelines in the cities of Tustin and Irvine (**Figure 1**). This Initial Study/Environmental Assessment (IS/EA) evaluates the potential effects on the environment from constructing and operating the proposed new facilities.

1.2 CEQA/NEPA Compliance

IRWD, a California Water District, will implement the proposed project and therefore must demonstrate compliance with the California Environmental Quality Act (CEQA) and its procedures. In addition, the District has been awarded federal funds through the American Recovery and Reinvestment Act of 2009 (ARRA) from the Bureau of Reclamation (Reclamation) for this project; therefore, compliance with the National Environmental Policy Act (NEPA) must be completed before construction of the proposed project. As such, this joint Initial Study/Environmental Assessment (IS/EA) is being prepared by Reclamation (federal lead agency) and IRWD (local lead agency) in accordance with NEPA (42 USC Section 4321 et seq), the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR, Sections 1500-1508), the Department of the Interior NEPA Departmental Manual (43 CFR Part 46), the Reclamation NEPA Handbook (Department of the Interior, 2000), CEQA (California Public Resources Code Section 21000 et seq., as amended), and the CEQA Guidelines (CCR, Title 14 Sections 15000 et seq. (2009)). This document will provide the necessary information to determine if further environmental documentation is required before the project can be implemented.

To facilitate the use of this document by both Reclamation and IRWD, a combined format has been developed to include all topical information and analyses required by the Reclamation NEPA Handbook as well as the CEQA Guidelines. This IS/EA evaluates all environmental issues required by Reclamation within the 16 specific environmental resource areas included in the CEQA Initial Study Checklist (CEQA Guidelines, Appendix G). The IS/EA determines whether



IRWD - Tustin Wells . 209247.01

SOURCE: GlobeXplorer, 2009; RBF Consulting, 2009.

Figure 1
Local Vicinity / Service Area

the proposed project would have any potentially significant environmental effects using both CEQA and NEPA criteria and determines whether mitigation is required to reduce potentially significant effects to less-than-significant levels.

1.3 Project Objectives

The objectives of the proposed project are to:

1. recover and treat local impaired groundwater for use in the potable water system to satisfy increasing water demands, and reduce dependence on imported water, and increase supply reliability;
2. build sustainable infrastructure and provide long-term benefits for the IRWD service area;
3. provide engineering, environmental, and construction jobs to promote the economic recovery.

1.4 Purpose and Need

Water Supply and Demand

The combination of drought conditions, jurisdictional limitations, and court-ordered environmental restrictions has reduced imported water supplies for Southern California. Faced with the probability of future shortages of imported water, development of local water resources is a critical component to meeting increasing water demands of the District.

Thirty-five percent of IRWD's drinking water supply is imported from Metropolitan Water District of Southern California (Metropolitan). Metropolitan, which as a water wholesaler gets its supplies from the Colorado River and the State Water Project, is currently faced with shortages that will require conservation and possible rationing. IRWD obtains 65% of its drinking water supplies from the local groundwater basin. IRWD desires to develop more local groundwater to increase supply reliability and to satisfy increasing water demands as the area changes from agricultural to urban land use.

Impaired Groundwater Quality

Wells 21 and 22 were originally constructed in 1992 on two sites that previously housed abandoned irrigation supply wells. In 1992, the estimated combined capacity of the wells was approximately 4,250 gpm: 3000 gpm for Well 21 and 1,250 gpm for Well 22. The water quality in both wells contained nitrate, total dissolved solids (TDS) and total hardness levels above regulated and/or IRWD standards for drinking water. In the original Wells 21 and 22 preliminary engineering study, completed for IRWD in 1993, RO membranes were recommended as the preferred method of treatment to reduce these constituents to acceptable levels for domestic water use. Wells 21 and 22 were never equipped and have sat idle for the past 17 years due to the high estimated cost for treatment and conveyance.

Wells 21 and 22 have been rehabilitated recently, and the combined groundwater production capacity now is estimated to be 4,900 gpm or 7,900 acre-feet per year (afy) assuming 100 percent utilization. Typically, 90 percent utilization is assumed for production facilities. The results of water quality testing in November 2008 (Well 21) and January 2009 (Well 22) still show nitrate concentrations, TDS, and total hardness in excess of drinking water standards as shown in **Table 1-1** below. Therefore, treatment is required to use Wells 21 and 22 as potable water sources.

TABLE 1-1
WELLS 21 AND 22 WATER QUALITY

Contaminant	Well 21	Well 22	Drinking Water Standard
Nitrate (mg/L as nitrate)	67	50	Primary MCL (45 mg/L)
TDS (mg/L)	740	650	Secondary MCL (500 mg/L)
Total Hardness (mg/L as CaCO3)	500	430	IRWD Goal (150-180 mg/L as CaCO3)

The proposed project would provide treatment and beneficial use of sub-potable quality groundwater in this portion of the Basin and also clean up and contain the spread of poor-quality groundwater. The proposed project would reduce the potential for impairment of higher quality groundwater that is down gradient from Wells 21 and 22. OCWD has recently delineated the area of elevated TDS and nitrate in the Tustin area as reaching to the north and east of Wells 21 and 22, approximately to the foothills of the Santa Ana Mountains (OCWD, 2008)

Groundwater quality in the vicinity of the proposed Well TL-1 is expected to exhibit high concentrations of TDS, total hardness, and color due to past agricultural practices and natural hydrogeologic conditions. Based on available historic data for wells in this area, it is assumed that groundwater from the proposed TL-1 well will exceed drinking water standards. The proposed well is located in a hydrogeologic transitional area between the Irvine Groundwater Sub Basin and the Main Orange County Groundwater Basin. Drilling of this well will provide a key piece of hydrogeological information on the geological relationships and connections between the Irvine Groundwater Sub Basin and the Main Orange County Groundwater Basin that will benefit the entire Orange County region.

1.5 Orange County Groundwater Basin Setting

The well components of the proposed project are located in the Orange County Groundwater Basin (Basin) and within the boundaries of the Orange County Water District (OCWD) service area. The Basin is managed by OCWD under the Orange County Water District Act. Producers such as IRWD may install and operate production facilities within the Basin. In accordance with the Act, OCWD manages annual production and recharge and replenishment in the Basin.

According to the OCWD Groundwater Management Plan 2009 Update, the Basin covers approximately 350 square miles bordered by Chino Hills to the north, the Santa Ana Mountains to the northeast and Pacific Ocean to the southwest. Measured recharge consists of all water artificially recharged at OCWD's Forebay percolation facilities and water injected at the Talbert

Barrier and on the Orange County side of the Alamitos Barrier. Groundwater conditions in the Basin are influenced by the natural hydrologic conditions of rainfall, groundwater seepage and stream flow. Incidental recharge accounts for a significant amount of the basin's producible yield including precipitation and subsurface inflow. Measured recharge totals 272,500 acre-feet per year (afy) and unmeasured recharge measures 69,000 afy; groundwater production is 333,500 afy and subsurface outflow is 8,000 afy.

Groundwater pumping rights within the OCWD are not adjudicated but groundwater production is managed by the OCWD through financial incentives. The framework for the financial incentives is based on OCWD establishing the Basin Production Percentage (BPP) each year. The BPP is the ratio of groundwater production to total water demands expressed as a percentage. A Replenishment Assessment (RA) is paid for all water pumped out of the basin. Groundwater production above the BPP is charged a Basin Equity Assessment (BEA), which is set so that the cost of groundwater pumping above the BPP is similar to the cost of imported water. Each year, OCWD sets an allowable amount of pumping (BPP) and assesses a BEA on all water pumped above that limit. Section 38.1 of the Act provides specific criteria for exemption of the BEA, including pumping of impaired groundwater in order to protect water quality in the Basin and to clean up and contain the spread of poor-quality groundwater. IRWD has petitioned the OCWD to exempt the groundwater produced from the proposed Wells 21 and 22 from the BEA. Under the Act, OCWD will make their discretionary decision on the BEA based on their findings and determination that the production of water from the proposed Wells 21 and 22 will have a beneficial effect on the quality of the water supplies of OCWD. OCWD has modeled the operational impacts of Wells 21 and 22 on groundwater levels using its Basin Model. Results of the model run are provided in Appendix B and are discussed further in Chapter 3 of this IS/EA.

IRWD is an operator of other groundwater-producing facilities in the Basin. The majority of potable groundwater supply to IRWD is produced from the Dyer Road Well Field (DRWF) located in the City of Santa Ana. The DRWF consists of 16 wells pumping from the non-colored (non-impaired) water zone of the Basin and two wells pumping from the deep, colored-water (impaired) zone of the Basin (with treatment facilities). The colored-water portion of the DRWF is sometimes referred to as the Deep Aquifer Treatment System or "DATS". The DATS is exempt from the BEA.

IRWD also constructed the Irvine Desalter Project (IDP) treatment plants in the Irvine Subbasin which began operation in early 2007. The IDP was initiated by OCWD and IRWD to clean up the groundwater within the vicinity of the former Marine Corps Air Station, El Toro. IDP consists of three treatment plants, one potable and two non-potable. The potable treatment plant extracts and removes water high in TDS, nitrates and selenium conveying the treated water to IRWD's local potable water distribution system. This project produces approximately 6,500 afy of potable water. The two non-potable treatment plants involve a treatment process to remove volatile organic chemicals (VOCs) to clean up the Basin. This product water is used in IRWD's non-potable system for non-potable uses. The IDP is exempt from the BEA.

CHAPTER 2
Proposed Action and Alternatives

2.1 Summary of Proposed Action

IRWD's proposed project would utilize impaired groundwater resources to help improve supply reliability, serve increasing water demands, and avoid future shortfalls. The proposed project includes construction and operation of four components: (1) supply facilities (Wells 21, 22 and Tustin Legacy Well 1 (TL-1)), (2) raw water conveyance pipeline, (3) treatment facilities and brine disposal pipeline, and (4) finished water transmission pipeline. **Figure 2** shows the alternative locations for the proposed project components. The proposed treatment plant would be located at one of five alternative sites as shown in Figure 2. IRWD expects to select the final site and acquire the selected property by early 2010. IRWD would secure an exclusive easement for the TL-1 well site. The alignments for the proposed raw water conveyance pipeline, treated (finished) water pipeline, and brine disposal pipeline depend on the treatment plant location.

The District has recently rehabilitated Wells 21 and 22, which were previously constructed but never integrated into IRWD's system due to elevated levels of nitrates, TDS, and hardness. The wells have a combined capacity of 4,900 gallons per minute (gpm) or approximately 7.0 million gallons per day (mgd). Water pumped from Wells 21 and 22 would be conveyed through new conveyance pipelines to a new treatment plant that would use reverse osmosis (RO) technology to treat the impaired groundwater. The treatment plant would have capacity to receive all water pumped from Wells 21 and 22 plus two additional future wells to be located in the project vicinity with estimated capacity of 2,000 gpm each. Treated water would then be delivered to an existing IRWD Zone 1 water main located in the City of Irvine. A new sewer pipeline also would be constructed to convey non-reclaimable waste from the treatment plant to an existing IRWD sewer main then delivered to the Orange County Sanitation District's (OCSD) wastewater treatment plant for ultimate disposal. Alternatively (and depending on the final treatment plant location), the sewer pipeline may be connected directly to OCSD's trunk sewer system.

Well TL-1 would be a newly constructed production well that is expected to produce approximately 1,500 gpm, or 2,200 acre-feet per year. There are no proposed conveyance pipelines to connect Well TL-1 to IRWD's system at this time. Well TL-1 would be the first of four future production wells drilled in the former MCAS Tustin area, called the Tustin Legacy Wellfield. The area overlies impaired water quality and it is expected that treatment will be required for this well for use as a potable supply. With Well TL-1, IRWD expects to determine the water quality, estimated zone of influence and projected yield in this area in order to get information for the proposed future Tustin Legacy Wellfield. If IRWD decides to develop Well TL-1 into a full-scale production well in the future, pipelines would be installed within existing or

SOURCE: GlobeXplorer, 2009; RBF Consulting, 2009.

IRWD - Tustin Wells . 209247.01

Figure 2
Proposed Project

future roadway rights-of-way to connect Well TL-1 and other future Tustin Legacy wells to a new treatment facility if the groundwater produced from the wells require treatment. Additional environmental analysis and documentation would be required in accordance with CEQA prior to integrating Well TL-1 into IRWD's water treatment and distribution system.

2.2 Location

The proposed project is primarily located within the City of Tustin in Orange County, California, but a portion of the finished water pipeline is located in the City of Irvine. The proposed project components would be located near or at the former Marine Corps Air Station Base – Tustin (MCAS Tustin), just south of Interstate 5 (I-5), east of State Route 55 (SR-55), north of Interstate 405 (I-405) and west of State Route 261 (SR-261) (Figure 2). IRWD owns the Well 21 and Well 22 sites located in the City of Tustin. Wells 21 and 22 are located within a residentially zoned area in the City of Tustin approximately one mile northeast of the former MCAS Tustin. Specifically, Well 21 is located at 14232 Debusk Lane, Tustin, CA 92780 and Well 22 is located at 1251 Mitchell Avenue, Tustin, CA 92780 (Figure 2).

Well TL-1 would be located in the southwestern portion of the Tustin Legacy development area located on the former MCAS Tustin in an unimproved area on the north side of Barranca Parkway approximately 280 feet east of the intersection with the City of Irvine's Aston Street (Figure 2). IRWD would secure an exclusive easement for the TL-1 well site in early 2010.

The proposed Wells 21 and 22 treatment plant would be located at one of five alternative sites as shown in Figure 2. IRWD expects to select the final site and acquire the selected property by early 2010. The alignments for the proposed raw water conveyance pipeline, treated (finished) water pipeline, and brine disposal pipeline depend on the treatment plant location. Figure 2 shows the alternative pipeline routes. Pipelines would be constructed primarily within the public right-of-way (ROW) beneath existing roadways.

2.3 Environmental Setting

Orange County encompasses a combination of mountains, hills, flatlands, and shorelines. The developed portion of the County is predominantly on an alluvial plain, which is generally less than 300 feet in elevation. The western portion of the County is made up of a series of broad sloping plains (Downey and Tustin Plains) formed from alluvium transported from the mountains by the Santa Ana River, Santiago Creek, and other local streams. Several low-lying mesas interrupt the plains along the northern coast. Orange County is semi-enclosed by the Puente and Chino Hills to the north, the San Joaquin Hills to the south, and the Santiago Foothills and the Santa Ana Mountains to the east. The Puente and Chino Hills, which identify the northern limit of the plains, extend for 22 miles and reach a peak height of 7,780 feet. To the east and southeast of the plains are the Santa Ana Mountains, which have a peak height of 5,691 feet.

The proposed project would be located in the western portion of the Tustin Plain. The sediment that underlies the floodplain has been divided into two general units with the younger

unconsolidated alluvium overlying older semi-consolidated alluvium. These sediments are underlain by consolidated sedimentary bedrock. The combined thickness of younger and older alluvium in the western portion of the Tustin Plain is between 1,100 and 1,400 ft.

The climate of Orange County is typified by warm temperatures and light winds. The average monthly temperatures range from about 52 degrees Fahrenheit (F) in the coastal areas in January, to 72 degrees F in the inland areas of the coastal plain in August. The average rainfall across the County is 14 inches, typically occurring in the winter months. The County's rainfall also exhibits characteristically wide variations annually, from a low of 3.6 inches in 1961 to a high of 32.1 inches in 1940.

MCAS Tustin

In 1992, the City was designated as the Lead Agency under the Base Closure Law for preparation of a Reuse Plan for Marine Corps Air Station (MCAS) Tustin in order to facilitate the closure of MCAS Tustin and its reuse in furtherance of economic development of the city and surrounding region. The MCAS Tustin Specific Plan/Reuse Plan was developed in accordance with this procedure and adopted by the Tustin City Council on October 17, 1996, and subsequently amended in September 1998. Owned and operated by Department of the Navy for nearly 60 years, approximately 1,600 acres of property at the former MCAS Tustin were determined surplus to federal government needs and the military facility was officially closed in July 1999.

The Specific Plan/Reuse Plan includes detailed planning, policies, regulations, implementation strategies and procedures necessary to guide the reuse and development of the site. The Specific Plan/Reuse Plan is intended to serve as both a policy oriented and regulatory document. As part of the proposed project, Well TL-1 and potentially new sewer pipelines would be constructed on the former MCAS Tustin (Figure 2).

2.4 Project Components

Wells 21 and 22

Wells 21 and 22 were rehabilitated in 2008 to increase their capacity, improve efficiency and obtain current water quality testing results. After rehabilitation, Well 21 demonstrated a design discharge rate of 3,300 gpm with an expected 79 feet of drawdown expected after one year of continuous pumping, with a well efficiency of 95 percent. After rehabilitation, Well 22 demonstrated a design discharge rate of 1,600 gpm with 109 feet of drawdown expected after one year of continuous pumping, with a well efficiency of 88 percent. On the ground surface, the lot size of Well 21 is approximately 7,200 square feet, and the lot size of Well 22 is approximately 6,700 square feet.

Under the proposed project, new wellhead equipment would be installed at both Wells 21 and 22. New wellhead equipment would include submersible vertical turbine pumps and electric motors, plus control valves, flow meters, provisions for surge control, piping, SCADA and electrical

panels and antenna, and other miscellaneous appurtenances. The aboveground structures at Wells 21 and 22 would consist of pump discharge piping and appurtenances, storm water piping, surge protection, electrical and SCADA panels and housing, antenna, lighting, and hardscape and landscaping improvements.

Well TL-1

Well TL-1 would be installed in the southwestern portion of the Tustin Legacy development area on an exclusive easement to be secured by IRWD. Well TL-1 would encompass a rectangular area that is approximately 50 feet by 100 feet, enclosed by a 6-foot (minimum) fence. New facilities at the wellhead would include well pump and motor, raw water piping, groundwater bypass and storm water piping, surge protections, motor control center, switch gear pad, overhead lighting, hardscape improvements, and ancillary equipment.

It is anticipated that Well TL-1 would produce about 1,500 gpm of potentially impaired groundwater such that treatment would be necessary to use Well TL-1 as a potable water supply. The specific treatment processes, however, would be dependent upon water quality and would be determined after Well TL-1 is drilled and tested. The capacity of the treatment facilities would depend on the drawdown and yield information gained from Well TL-1. The proposed project does not include the future additional Tustin Legacy wells and the future treatment facilities that would be required for TL-1 to be a potable source. It is estimated that Well TL-1 would ultimately produce approximately 2 mgd, or 2,200 afy of potable water for the IRWD service area.

Groundwater Conveyance Pipeline

The conveyance pipeline would deliver raw water from Wells 21 and 22 to the proposed treatment plant site. The proposed pipeline would consist of two segments: (1) approximately 750 linear feet of 18-inch diameter pipe extending from the Well 21 site to the Well 22 site; and (2) up to 13,400 linear feet of 18-inch to 24-inch diameter pipe extending from the Well 22 site to the proposed treatment plant site (maximum 13,400 linear feet for Site A) (See Figure 2). The conveyance pipeline would be constructed primarily within roadway rights-of-way, and depending on the treatment plant location, could require jack-and-bore segments where the pipeline crosses the Metrolink railroad track.

Treatment Facility

The proposed treatment plant would be located at one of five alternative sites as shown in Figure 2. There are three potential sites in Area 1, located northeast Walnut Avenue and southeast of Interstate 5 (I-5), and two potential sites in Area 2, located southwest of Edinger Avenue and northwest of Red Hill Avenue. IRWD expects to select the final site and acquire the selected property by early 2010. The proposed treatment facility would have a footprint of approximately 1.5 acres. Depending on site, the new water treatment building footprint would be approximately 11,250 square feet and 25 feet in height for a one-story building or 9,100 square feet and 35 feet in

height for a two-story building. The proposed treatment facility would be sized to receive all groundwater produced from Wells 21 and 22 and ultimately two additional future wells using reverse osmosis (RO) membrane technology to treat the impaired groundwater. Initially, about 5.2 mgd of groundwater pumped from Wells 21 and 22 would be treated, producing 4.4 mgd of RO product water and 0.8 mgd of brine concentrate for disposal. The treated RO product water would be blended with approximately 1.8 mgd of raw groundwater from Wells 21 and 22 (bypassing RO) to meet drinking water standards. The resulting initial capacity of the treatment facility would be approximately 6.2 mgd. The main components of the treatment plant would include:

- Cartridge filters
- Acid and threshold inhibitor additional for scale control
- RO membrane feed pumps for boosting RO feed pressure
- RO membrane trains for removing dissolved solids and nitrates with Clean-In Place facilities
- Decarbonators for post treatment pH adjustment and stabilization
- Post treatment chemical conditioning, including pH adjustment, disinfection and corrosion inhibitor
- Product water pumps to transfer finished water to the distribution system
- Chemical storage and feed systems (for scale inhibitor, sulfuric acid, caustic soda, sodium hypochlorite, ammonia, and corrosion inhibitor)
- Electrical, instrumentation and controls
- Building
- Block wall around facility (8 feet height)

Types and quantities of chemicals to be used and stored at the facility include:

- Sulfuric Acid – two 4,000-gallon storage tanks
- Caustic Soda – one 4,000-gallon tank
- Sodium Hypochlorite – one 4,000-gallon tank
- Aqua Ammonia – one 2,000-gallon tank
- Sodium Bisulfite – two 550-gallon tanks
- Corrosion Inhibitor – one 2,000-gallon tank
- Threshold Inhibitor – two 2,000-gallon storage tanks

Brine Disposal Pipeline

The RO process is expected to generate about 0.8 mgd of concentrate (brine), which is proposed to be discharged either directly to OCSD's sewer system or to IRWD sewer facilities that are tributary to the OCSD Wastewater Reclamation Plant No. 1, depending on the selected treatment facility site. If the treatment facility is located in Area 1, then a new 15-inch sewer line would be constructed within roadway right-of-ways and across MCAS Tustin to convey the brine IRWD's sewer system, the closest feasible point of connection to the existing OCSD trunk sewer line (See Figure 2). The pipeline across MCAS Tustin would be located within the future extension of

Tustin Ranch Road as identified in the MCAS Reuse Plan and would require one jack-and-bore segment where Tustin Ranch Road crosses the Metrolink railroad track just north of Edinger Avenue. If the treatment facility is located in Area 2, then a new 15-inch sewer line would be constructed within roadway right-of-ways directly to OCSD's trunk sewer. The brine disposal pipeline would be up to 14,500 linear feet depending on the location of the treatment plant (maximum 14,500 linear feet for Site A).

Finished Water Transmission Pipeline

A 30-inch to 42-inch diameter finished water pipeline is proposed to convey potable water from the proposed treatment plant to an IRWD Zone 1 transmission main (Figure 2). Depending on the treatment plant location, the finished water pipeline would cross SR-261 and Peters Canyon Channel either at Walnut Avenue or Edinger Avenue and connect to IRWD's existing water transmission pipeline (Figure 2). The pipeline would be constructed along the side of the existing bridge crossing Peters Canyon Channel. The finished water pipeline would be up to 13,200 linear feet depending on the location of the treatment plant (maximum 13,200 linear feet for Site I).

2.5 Construction Scenario

Construction of the proposed project would take about 15 months, starting in July 2010 and ending approximately September 2011, with the treatment plant operation beginning in September 2011. Project construction activities typically would be conducted Monday through Friday between 7:30 a.m. and 4:00 p.m. Parking for construction workers and staging areas for construction material and equipment would be located onsite and adjacent to Well 21 and/or Well 22 and the treatment plant site (as noted below).

Wells 21 and 22

Construction methods for installation of wellhead equipment at Wells 21 and 22 include excavation and trenching. Equipment may include (but not be limited to) a backhoe, loader, dump truck, compactor, truck mounted crane, concrete trucks, delivery trucks, water truck, and two crew trucks. Three to six construction workers may be required to perform installation of the well pumps, installation of electrical equipment, and installation of raw water drainage piping to the street.

Tustin Legacy Well 1 (TL-1)

Construction of Well TL-1 would include site preparation, mobilization of equipment to the well site, well drilling, water quality testing, installation of the well casing, gravel packing and finishing with a cement seal. Water discharged during well drilling is conveyed to onsite settling basins, recycled back into the well borehole during drilling, and discharged to the storm drain after drilling is complete under a permit from the Regional Water Quality Control Board. Construction equipment would include an auger rig, drill rig, small crane, welder, all-wheel drive

forklift, pipe trailer, generator, Baker tanks, circulation pits and a backhoe. Construction is anticipated to start by early 2010. The duration of the well drilling/testing operation is estimated at approximately three months.

For approximately one month, daily 24-hour drilling would be required. To drill the well, the drill rig must run 24 hours-a-day otherwise the walls of the borehole can collapse. Prior to construction, IRWD would secure a waiver from the City of Tustin's noise ordinance that restricts construction to the daytime hours of 7:30 a.m. to 4:00 p.m. (Municipal Code Section 4616, Specific Disturbing Noises Prohibited) and exempts construction from the City's noise provisions. IRWD would require the construction contractor to set up sound walls and acoustical panels to minimize noise impacts associated with well drilling activities. Temporary overhead nighttime lighting also would be installed during the well drilling period. All lighting would be directed downward to avoid light and glare impacts associated with construction.

Treatment Plant

Construction phases for the new treatment plant would consist of site clearing and grading, demolition of existing buildings (depending on the final treatment plant site), excavation, construction and installment of treatment buildings and equipment, and site restoration. Construction of the treatment building and clearwell would require excavation of approximately 4,000 cubic yards of soil, assuming excavation five feet deep for the treatment building and 15 feet deep for the clearwell. Approximately 700 cy of concrete would be required for construction, which would be delivered in approximately 70 truck loads. Construction equipment may include (but not be limited to) the following: backhoe, loader, dump trucks, crew trucks, concrete trucks, crane, personal vehicles, compactor, delivery trucks, and a water truck. Approximately 12 to 20 construction workers would be onsite at a time, including electrical, building, piping and mechanical workers, one administrator and two foremen. In addition to staging and parking at Wells 21 and 22, limited onsite parking and staging also would be available at the treatment plant site.

Pipelines

Two different construction methods would be used for the pipeline. Open trench construction would be used for the majority of the pipelines. Jack-and-bore methods would be used where pipelines cross the Metrolink railroad tracks, at major vehicular intersections, and storm channels. The finished water pipeline that crosses Peters Canyon Channel would be attached to the side of the existing bridge across the channel. If the pipeline cannot be hung on the bridge, then jack-and-bore methods would be used to cross the channel. Dewatering may be required during construction of all pipelines. Following installation of pipelines, disturbed areas would be restored to pre-existing conditions and roadways would be repaved.

The rate of pipeline installation would range from approximately 100 feet/day to 200 feet/day depending on traffic and location of the pipe. 200 feet/day is expected for most reaches of the raw water conveyance pipeline and finished water transmission pipeline. In places where jack-and–

bore methods are required, the pipeline installation rate would be lower, requiring about 4 weeks for 250 feet of pipe to be installed across the railroad tracks. Jack-and-bore pits would be approximately 10 feet deep and between 200 and 300 square feet in area.

The trench width would depend on the size (diameter) of the pipeline but would generally be between two to four feet. Trench depth similarly would vary with pipeline size, between 6.5 to 15 feet. The volume of excavated soils would depend on the length of the pipeline, which would be determined according to the final treatment plant location. It is estimated that the volume of excavated soils could be as much as 13,400, 13,200 and 14,500 cubic yards (cy) for the raw water, finished water, and brine disposal pipelines, respectively. The associated amount of soil requiring disposal may be as much as 4,450, 6,500, and 1,500 cy for the raw water, finished water, and brine disposal pipelines, respectively. By treatment plant site, the pipelines associated with Site H would require the most excavated soil (34,500 cy) and with Site D the least excavated soil (19,900 cy)**.**

Construction equipment required for installation of each of the three pipelines would include (but not be limited to) the following: two backhoes, loader, skip loader, two dump trucks, crew trucks, 10-ton roller for compaction, one or two semi-truck(s) for pipe delivery, street sweeper, and water truck. A crew of approximately six workers would be required for construction of each pipeline. An additional four crew members would be required for jack-and-bore pipeline installation and the bridge crossing across Peters Canyon Channel.

2.6 Project Operation and Maintenance

Table 2-1 shows the projected daily chemical usage at the water treatment plant in gallons per day (gpd) and the frequency of delivery for each chemical.

TABLE 2-1
TREATMENT PLANT CHEMICAL USE AND DELIVERY[a]

Chemical	Regulated Hazardous Material?	Daily usage (gpd)	Delivery Frequency (days between deliveries)
Sulfuric acid	Yes	73.0	22
Caustic soda	Yes	33.0	32
Sodium hypochlorite	Yes	87.3	14
Aqua ammonia	Yes	15.1	14
Sodium bisulfite	No	0.8	365
Corrosion inhibitor	No	4.4	400
Threshold inhibitor	No	19.6	90

[a] Daily chemical use and delivery frequency at the treatment facility would increase if plant capacity is increased to accommodate two future additional wells.

SOURCE: IRWD 2009.

The Wells 21 and 22 and the new water treatment plant would be operational 24 hours per day for approximately 330 days per year. Wells 21 and 22 would not require daily staff. The new treatment plant would be fully automated and could be monitored remotely. The projected energy consumption at the new facilities would be as follows:

- Well 21: (5,000 KW/day) * (330 days/year) = 1,650,000 KW/year
- Well 22: (3,400 KW/day) * (330 days/year) = 1,122,000 KW/year
- Treatment Plant: (13,600 KW/day) * (330 days/year) = 4,488,000 KW/year

2.7 BEA Exemption

OCWD is empowered to manage and protect the Orange County Groundwater Basin, which currently encompasses over 229,000 acres in twenty cities, as well as unincorporated areas on the coastal plain in central and north Orange County.

The proposed project would not modify the capacity of the groundwater basin or alter the yield of the basin, which is determined by the amount of water that is recharged and OCWD management actions to maintain the basin's sustainable yield. The yield of the basin is subject to operational constraints, such as the need to maintain the seawater intrusion barrier along the coast. OCWD has the ability to increase or decrease groundwater levels as desired to meet certain management goals. OCWD annually establishes the BPP, RA, and BEA, which employ economic incentives to manage basin pumping. By lowering the BPP, OCWD encourages less pumping which may have the effect of increasing groundwater levels. By increasing the BPP, OCWD encourages greater pumping, which may have the effect of decreasing groundwater levels.

Under the OCWD Act, OCWD cannot limit the amount of groundwater pumped by any agency. However, the District can manage the basin through the annual setting of the BPP, RA, and the BEA. OCWD has designed the BEA to discourage excess production from the basin by making groundwater produced above the BPP comparable in price to imported water from Metropolitan, or somewhat higher than Metropolitan water. As a result of this structure, the BPP does not legally, or otherwise, restrict the quantity of groundwater that a groundwater agency can produce from the basin, but rather provides an effective economic incentive for producers to comply with the District's management programs.

The approval of the BEA exemption by OCWD would not directly result in any physical changes to the basin. As discussed in Appendix B, if the BEA exemption for this project is approved and the production above the BPP proceeds as a result, then OCWD, at its sole discretion, could subsequently take action to lower the BPP by approximately one percent to attempt to offset the additional production. However, the decision by OCWD to change the BPP typically takes into account overall hydrologic conditions and specific management goals for the groundwater basin in addition to the anticipated production from BEA exempt projects. Lowering the BPP could have the effect of raising the overall cost of water supplies for the groundwater producers. Reducing the BPP does not however reduce the amount of groundwater available to any individual producer; it merely reduces the amount available without paying the BEA. The decision to pump above or below the BPP is at the sole discretion of the individual producers.

Hypothetically, if groundwater producers pump up to but not over the BPP, except for water quality projects that have BEA exemptions, the lowering of the BPP by OCWD by approximately one percent would offset the exempt production and not impact the total amount of groundwater produced from the basin or the net amount of imported water brought into the groundwater basin. Additionally, lowering the BPP by approximately one percent is a relatively small change in light of the recent changes in the BPP. The BPP was 69 percent in 2008-09 and 62 percent in 2009-10.

2.8 Alternatives

No Action Alternative

An environmental analysis of the No-Action Alternative is required by the CEQ regulations to serve as a benchmark against which the Proposed Action can be evaluated. Under the No-Action Alternative, the proposed project would not be implemented. There would be no groundwater extraction, pipeline, or treatment facilities. The No-Action alternative would not enhance water supply for the District to meet increasing demand within the service area. The No-Action alternative would not clean up and contain the spread of poor-quality groundwater or reduce the potential for impairment of higher quality groundwater that is down gradient from Wells 21 and 22. The No-Action Alternative would result in the fewest direct natural environmental effects of available alternatives, because no physical changes to the environment within the area of potential impact would result.

Project Alternatives

In accordance with the Department of the Interior's NEPA Departmental Manual that contains policies and procedures for implementing NEPA in accordance with the CEQ regulations, "…EAs need only analyze the proposed action and may proceed without consideration of additional alternatives when there are no unresolved conflicts concerning alternative uses of available resources" (43 CFR Part 46). There are no unresolved conflicts concerning alternative uses of available resources, particularly the impaired groundwater that would be put to beneficial use by implementation of the proposed action.

Nonetheless, inherent to the proposed action are five alternative treatment plant locations and associated pipeline alignments. Based on the results of this IS/EA and the availability of properties, IRWD will select the alternative treatment plant site that best meets the project objectives as described in Chapter 1.

CHAPTER 3
Affected Environment and Environmental Consequences

Environmental Checklist

1. Project Title:	Wells 21 and 22 Project Tustin Legacy Well 1 Project
2. Lead Agency Name and Address:	Irvine Ranch Water District (IRWD) 15600 Sand Canyon Avenue Irvine, CA 92618-3102 Bureau of Reclamation (BOR) 27708 Jefferson Ave, Ste 202 Temecula, CA 92590
3. Contact Person and Phone Number:	IRWD: Paul Weghorst, (949) 453-5632 BOR: Doug McPherson (951) 695-5310
4. Project Location:	Cities of Tustin and Irvine, California
5. Project Sponsor's Name and Address:	Irvine Ranch Water District 15600 Sand Canyon Avenue Irvine, CA 92618-3102
6. General Plan Designation(s):	See Chapter 3, Section 3.9
7. Zoning Designation(s):	See Chapter 3, Section 3.9
8. Description of Project:	See Project Description, Chapter 2.
9. Surrounding Land Uses and Setting	See Project Description, Chapter 2.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement. Indicate whether another agency is a responsible or trustee agency.)

Orange County Water District (Responsible Agency)	Approval of Basin Equity Assessment (BEA) exemption
Orange County Sanitation District	Industrial waste permit for brine disposal
City of Tustin	Encroachment Permit; Construction Noise Ordinance Waiver
City of Irvine	Encroachment Permit
State Water Resources Control Board	Notice of Intent to comply with NPDES General Construction Permit (Storm Water Pollution Prevention Plan)
Regional Water Quality Control Board	Waste Discharge Requirements for well drilling discharge

Environmental Factors Potentially Affected

The proposed project could potentially affect the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor.

☒ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology, Soils and Seismicity
☒ Hazards and Hazardous Materials	☒ Hydrology and Water Quality	☐ Land Use and Land Use Planning
☐ Mineral Resources	☒ Noise	☐ Population and Housing
☐ Public Services	☐ Recreation	☒ Transportation and Traffic
☒ Utilities and Service Systems	☒ Mandatory Findings of Significance	

DETERMINATION: (To be completed by Lead Agency)

On the basis of this initial study:

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

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

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

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

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

Signature Date

Printed Name For

3.1 Aesthetics

The proposed project would be located in the Cities of Tustin and Irvine and potentially across the former MCAS Tustin. The natural setting around the project site provides a combination of mountains, hills, and flatlands. Located in central Orange County, Irvine and Tustin are bounded by the City of Orange to the north, Santa Ana to the west, the San Joaquin hills to the south, and the Cleveland National Forest to the east.

The new aboveground facilities associated with the proposed project, which include the proposed treatment facility and Well TL-1, are located in the City of Tustin. There are no scenic corridors or vistas currently designated by the City of Tustin that would be in proximity to the proposed facilities (City of Tustin, 2008). However, the City plans to collaborate with the County of Orange in their effort to transfer a regional park of approximately 84.5 acres (including 11 acres occupied by a blimp hanger) to the MCAS Tustin Specific Plan area as discussed in the Recreation Element of the City's General Plan.

The City of Tustin and Irvine do not contain any state-designated scenic highways within their jurisdictional limits, as designated by the California Department of Transportation (Caltrans) under the California Scenic Highway Program (Caltrans, 2009).

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
1. AESTHETICS—Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway corridor?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	☐	☒	☐	☐

Discussion

a) **No Impact.** The proposed project would result in the construction of new wellhead, treatment, and pipeline facilities at various locations in the Cities of Tustin and Irvine (Figure 2). Although some of the proposed facilities as well as construction equipment would be visible from surrounding streets, there are no designated scenic vistas within the City of Tustin or Irvine (City of Tustin, 2008; City of Irvine, 2006).

The proposed wellhead equipment at Wells 21 and 22 would not introduce a new contrasting feature at the existing well sites that could affect a scenic vista. The proposed raw water conveyance pipeline, finish water pipeline, and brine disposal pipeline would be below ground and would not impact a scenic vista. As mentioned above, these pipeline

construction sites would be visible during their construction but after completion they would all be below ground, with only a few above-ground appurtenances. There would be no impact.

The proposed treatment facility would be located at one of five proposed locations in either Area 1 or Area 2 that is zoned for commercial and industrial land uses (See Section 3.9 Land Use). Currently, the parcels for the proposed treatment facility are either vacant or occupied by commercial buildings that would be demolished and replaced by a water treatment facility, with a maximum height of 35 feet. The proposed project would not introduce a new contrasting feature that could affect a scenic vista. The proposed treatment facility would be similar in size and character to surrounding buildings. There would be no impact

The proposed production Well TL-1 would be constructed within the MCAS Tustin Specific Plan area on land that is currently vacant. There are no scenic corridors or vistas currently designated by the City of Tustin that would be in proximity to these facilities (City of Tustin, 2008). The proposed Well TL-1 would be surrounded by a 6-foot (minimum) security fence that would screen views of the wellhead facilities, with the electrical panels, light pole, communication antenna, and surge tank being visible over the fencing. As a result, Well TL-1 would not have an adverse impact on scenic vistas.

b) **No Impact.** Both the City of Tustin and the City of Irvine do not contain any official state scenic highways within their jurisdictional limits, as designated by Caltrans under the California Scenic Highway Program (Caltrans, 2009). Accordingly, both cities do not have any associated state scenic highway corridors, which are defined as the land generally adjacent to and visible by motorists from a scenic highway. Therefore, construction and operation of the proposed project would have no impact to scenic resources within a state scenic highway corridor. There would be no impact.

c) **Less than Significant with Mitigation.** Proposed new facilities at Wells 21 and 22 would be belowground or at grade and would be within their existing property boundaries. There would be no impact to existing visual character or quality of the sites.

Proposed new facilities for Well TL-1 would be located within the MCAS Tustin Specific Plan Area which is currently being developed. The proposed well potentially would be adjacent to future commercial development. However, the new facilities would be screened from view by a 6-foot (minimum) security fence, with a few taller appurtenances. After completion, the well would not substantially degrade the existing visual character of the site. Impacts would be less than significant.

The proposed pipelines for raw groundwater, treated RO product water, and brine discharge would mostly be constructed in the right-of way of city streets, with the exception of a potential brine disposal pipeline across the former MCAS Tustin if the treatment plant is located in Area 1. Pipeline construction would impact the visual character of the project corridor during construction. However, once constructed all

pipelines would be below ground with a few above-ground appurtenances and would not be visible from surrounding land uses. Implementation of **Mitigation Measure AES-1** would ensure that pipeline construction would not substantially degrade the visual character of the project corridor or surrounding residential land uses by requiring post-construction site restoration. Impacts would be less than significant with mitigation.

The proposed treatment facility would be located in Area 1 or Area 2, both of which are characterized by commercial and industrial land uses and associated buildings. The proposed facility would be consistent with existing land use at the site (see Section 3.9 Land Use). Implementation of the proposed treatment facility would not substantially degrade the visual character of the site. Impacts would be less than significant.

Mitigation Measure

AES-1: Following construction activities, IRWD shall restore disturbed areas by reestablishing pre-existing conditions including topography and repaving roadways.

d) **Less than Significant with Mitigation.** Construction of most of the proposed project facilities located in Tustin, with the exception of Well TL-1, would be limited to the daytime hours of 7:30 a.m. to 4:00 p.m. in accordance with the City of Tustin Noise Ordinance, Municipal Code Section 4616, Specific Disturbing Noises Prohibited. For any construction within Irvine limits, the City's Noise Ordinance (Chapter 2, Division 8, Title 6, Municipal & Zoning Code) applies. There would be no impacts associated with light or glare impacts due to temporary nighttime construction lighting. As a result, there would be no impact to day or nighttime views during project construction.

Construction of Well TL-1 would require temporary overhead nighttime lighting during the three-month well drilling period. As described in Chapter 2, all lighting would be directed downward to avoid light and glare impacts associated with construction. Impacts to nighttime views during project construction would be less than significant.

New permanent nighttime security lighting would be installed at the proposed wellheads, treatment facility and proposed Well TL-1. Implementation of **Mitigation Measure AES-2** would ensure that security lighting would not affect neighboring land uses due to light or glare. Impacts would be less than significant with mitigation.

Mitigation Measure

AES-2: The exterior lighting installed around the project facilities shall be of a minimum standard required to ensure safe visibility. Lighting shall be shielded and directed downward, away from neighboring land uses to minimize impacts of light and glare.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. In general, the project area that includes the existing Wells 21 and 22 would continue to exist as is. Under the No Project Alternative, any environmental impacts that would result due to the proposed project would be avoided. The No Project Alternative would have no short-term or long-term impacts to visual or aesthetic resources. In addition, the No Project Alternative would not introduce additional sources of light or glare to the project area.

3.2 Agricultural Resources

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

Discussion

a-b) **No Impact.** According to the maps prepared for the Farmland Mapping and Monitoring Program of the California Resource Agency (CRA), the project area does not include agricultural resources. The project sites are not designated as Prime, Unique or Important Farmland. The proposed project sites are designated as Urban and Built-Up Land and have already been developed (Department of Conservation, 2009). None of the proposed project components are located on lands that are subject to a Williamson Act contract. Therefore, the proposed project would not conflict with a Williamson Act contract. There would be no impact.

c) **No Impact.** According to the City of Tustin's Reference Zoning Code and the City of Irvine's General Plan Land Use Designation Map, the proposed project component sites and conveyance pipeline corridors lie in areas zoned as Single Family Residential, Medium Density Residential Planned Community Industrial, Planned Community

Commercial, and MCAS Tustin Specific Plan District. These sites are not located on land that has been zoned for agricultural use. Further, the proposed brine discharge pipeline and Well TL-1 within the MCAS Tustin Specific Plan area also are not on land zoned for agricultural use. There would no impact.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. The No Project Alternative would have no short-term or long term impacts to agricultural resources or the conversion of farmland since no development would occur.

3.3 Air Quality

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
3. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
f) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
g) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHG?	☐	☐	☒	☐

Discussion

Air quality is regulated by several agencies, including the U.S. Environmental Protection Agency (USEPA), the California Air Resources Board (CARB), and the South Coast Air Quality Management District (SCAQMD). At the federal level, the USEPA is responsible for implementation of the Federal Clean Air Act (CAA) and establishing the National Ambient Air

Quality Standards (NAAQS). The CARB promulgates ambient standards for California, or the California Ambient Air Quality Standards (CAAQS). NAAQS have been established for the following criteria pollutants: ozone (O_3), particulate matter less than 10 microns in diameter (PM_{10}) and less than 2.5 microns in diameter ($PM_{2.5}$), carbon monoxide (CO), nitrogen oxides (NO_x), Sulfur dioxide (SO_x), and lead. In addition, CAAQS have been established for hydrogen sulfide (H_2S), sulfates, and visibility reducing particles. The proposed project is located in the South Coast Air Basin (Basin), and the SCAQMD is the regional agency responsible for implementing regulations governing emissions of air pollution for this area.

a) **Less than Significant.** A project conflicts with or obstructs implementation of the applicable air quality plan if the project is incompatible with SCAQMD and the Southern California Association of Governments (SCAG) air quality policies. A project would conflict with SCAQMD and SCAG policies if it:

- causes an increase in the frequency or severity of existing air quality violations;
- causes or contributes to new air quality violations;
- delays timely attainment of air quality standards or the interim emission reductions specified in the SCAQMD's Air Quality Management Plan (AQMP), or
- exceeds the assumptions utilized in the SCAQMD's AQMP.

The Basin is a nonattainment area, or does not meet established ambient air quality standards, for O_3 (for both the 1-hour and 8-hour standards), PM_{10}, and $PM_{2.5}$. The CAA sets certain deadlines for meeting the NAAQS within the Basin including: 1-hour O_3 by the year 2010; 8-hour O_3 by the year 2021; and $PM_{2.5}$ by the year 2015. The SCAQMD has developed strategies for reducing emissions and complying with applicable standards, specifically the recently updated 2007 AQMP. The 2007 AQMP aims to define southern California's comprehensive strategy to clean the air we breathe as expeditiously as possible. The 2007 AQMP is designed to meet both state and federal CAA planning requirements for all areas under SCAQMD jurisdiction. The 2007 AQMP focuses on reduction strategies for O_3 and $PM_{2.5}$. The AQMP sets forth procedures for measurements, control strategies, and air quality modeling.

The proposed project is consistent with the current land use and zoning designations. The proposed project would not require a General Plan amendment related to land use, and as such, would be consistent with applicable land use planning documents. This project would not directly result in population growth (e.g. housing development) and the proposed project would not result in an exceedance of the SCAG growth forecasts. Consequently, implementation of the proposed project would be consistent with AQMP attainment forecasts.

b) **Less than Significant.** To determine if the proposed project would violate any air quality standard or contribute substantially to an existing or projected air quality violation, project specific impacts were compared to the following SCAQMD criteria:

- Construction emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 75 pounds per day (lbs/day)

for ROC; (2) 100 lbs/day for NO_X; (3) 550 lbs/day for CO; (4) 150 lbs/day for PM_{10} and (5) 55 lbs/day for $PM_{2.5}$.

- Operational emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 55 lbs/day for ROC and NO_X; (2) 550 lbs/day for CO; (3) 150 lbs/day for PM_{10} and (4) 55 lbs/day for $PM_{2.5}$.

Construction Emissions

Daily emissions during construction were compiled using URBEMIS 2007 9.2.4, which is an emissions estimation/evaluation model developed by the CARB that is based, in part, on SCAQMD CEQA Air Quality Handbook guidelines and methodologies. Calculated unmitigated emissions rates are presented in **Table 3-1.** As shown, construction-related daily emissions for the proposed project would not exceed SCAQMD significance thresholds, and therefore would have less than significant construction emissions. Notably, CO_2 emissions are discussed in Section 3.3(f) below.

TABLE 3-1
UNMITIGATED REGIONAL CONSTRUCTION EMISSIONS[a]
(pounds/day)

YEAR	ROC	NO_X	CO	PM10[b]	PM2.5	CO_2
2010	3	29	15	11	3	2,866
2011	*21*	*53*	*32*	*11*	*3*	*7,739*
2012	*4*	*33*	*21*	*2*	*2*	*4,710*
Regional Daily Significance Threshold	*75*	*100*	*550*	*150*	*55*	*NA*
Exceed Threshold (Yes/No)	**No**	**No**	**No**	**No**	**No**	**NA**

[a] More information can be found in the Air Quality Appendix A.
[b] PM_{10} emissions estimates are not based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.

SOURCE: ESA, 2009.

Any operator involved in demolition activities shall comply with AQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) requirements, and the requirements of Title 40, Part 61 of the code of Federal Regulations. In addition, it is mandatory for all construction projects in the Basin to comply with SCAQMD Rule 403 for controlling fugitive dust. Incorporating Rule 403 into the proposed project would reduce regional PM10 and PM 2.5 emissions from construction activities. SCAQMD Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. As such, the following measures would be implemented:

- General contractors shall implement a fugitive dust control program pursuant to the provisions of SCAQMD Rule 403 including where feasible:
  a. The application of water every 4 hours to the area within 100 feet of a structure being demolished, to reduce vehicle trackout.

b. Apply dust suppressants (e.g., polymer emulsion) to disturbed areas upon completion of demolition.

c. Apply water to disturbed soils after demolition is completed or at the end of each day of cleanup.

d. Prohibit demolition activities when wind speeds exceed 25 mph.

Operational Emissions

Operational emissions for the project would be generated primarily from on-road vehicular traffic. Minimal employees would be required onsite at the treatment plant and for routine operations (i.e., inspection and maintenance) of the wells. These trips would be negligible and would result in a less than significant increase in air quality emissions from project operations. Operational CO_2 emissions associated with energy consumption at new facilities are discussed in Section 3.3(f) below.

c) **Less than Significant.** The construction and operational impacts of the proposed project would not exceed the SCAQMD's thresholds, and therefore are not expected to be cumulatively considerable. Per CEQA Guidelines Section 15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable. Development of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant, and would be less than significant.

d) **Less than Significant.** Some population groups, such as children and the elderly, are considered more sensitive to air pollution than others. The project would be constructed near residential areas.

Toxic Air Contaminants

CARB has declared that Diesel Particulate Matter (DPM) from diesel engine exhaust is a toxic air contaminant (TAC). For construction, there is the possibility of release of DPM associated with heavy equipment operations. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the construction schedule, construction site locations, and the rate of pipeline construction, the proposed project would not result in a long-term (i.e., 70-years) substantial source of TAC emissions. In addition, as provided in Table 3-1, short-term emissions from construction activities would be less than significant. As such, project-related toxic emission impacts during construction would not be significant. Air pollutants from operations would be minimal as there are no major emissions sources operating or planned for operation on-site, and minimal worker trips. As such, operational TAC impacts are considered less than significant.

Localized Significance Thresholds

Localized significance thresholds (LST) are voluntary thresholds only applicable to NOx, CO, PM10, and PM2.5. LST mass rate look-up tables are provided by SCAQMD to determine localized air quality impacts. In **Table 3-2**, daily emissions resulting from construction of the proposed project have been compared to the LST mass rate look-up table. As shown in Table 3-2, emissions of NOx, CO, PM10 and PM2.5 do not exceed the SCAQMD LSTs and therefore a full LST analysis is not required. This would be a less than significant impact without mitigation.

TABLE 3-2
PROJECT EMISSIONS VS SCAQMD LOCALIZED SIGNIFICANCE THRESHOLDS

Pollutant	Construction Thresholds	Project Construction Emissions	Exceed (Yes/No)
NO_x	183 lbs/day	45 lbs/day	No
CO	1,253 lbs/day	29 lbs/day	No
PM_{10}	13 lbs/day	11 lbs/day	No
$PM_{2.5}$	7 lbs/day	3 lbs/day	No

SOURCE: SCAQMD, 2006. The methodology's Appendix C, *Mass Rate Look-up Table*, was revised October 2009.

NOTE: Central Orange County source receptor area, 5 acre, 25 meters.

e) **Less than Significant.** According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. While the project includes a treatment plant, it is for the treatment of impaired groundwater rather than for wastewater. The project does not include any uses identified by the SCAQMD as being associated with odors. Therefore project impacts associated with odors are less than significant without mitigation.

f-g) **Less than Significant.** Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, similar to a greenhouse. The accumulation of GHGs has been implicated as a driving force for Global Climate Change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and the impact of human activities that alter the composition of the global atmosphere. Both natural processes and human activities emit GHGs. Global Climate Change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. Although there is disagreement as to the speed of global warming and the extent of the impacts attributable to human activities, the vast majority of the scientific community now agrees that there is a direct link between increased emission of GHGs and long term global temperature. Potential global

warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years[1]. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. GHG impacts are considered to be exclusively cumulative impacts; there are no non-cumulative greenhouse gas emission impacts from a climate change perspective (CAPCOA, 2008).

On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for GHG emissions, as required by Public Resources Code section 21083.05 (Senate Bill 97) (OPR, 2009). These proposed CEQA Guideline amendments would provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The Natural Resources Agency will conduct formal rulemaking in 2009, prior to certifying and adopting the amendments, as required by Senate Bill 97. The proposed amendments suggest relatively modest changes to various portions of the existing CEQA Guidelines. Modifications address those issues where analysis of GHG emissions may differ in some respects from more traditional CEQA analysis.

On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is the lead agency. The interim threshold consists of five tiers of standards that could result in a finding of less than significant impact. The tiers include CEQA exemptions, consistency with regional GHG budgets, less than significant screening levels for industrial projects (10,000 metric tons/year CO_2 equivalent (CO_2e)) and commercial/residential projects (3,000 metric tons/year CO_2e), performance standards (i.e., 30 percent less than Business As Usual [BAU]), and carbon offsets[2]. The industrial screening level of 10,000 metric tons/year CO_2e was used as the quantitative threshold for the proposed project GHG emissions.

For the proposed project, the worst-case annual emissions associated with construction would be 37 metric tons per year CO_e after amortization over 30 years per SCAQMD methodology. The worst-case annual emissions associated with project operations, primarily emissions associated with electricity production for use at the proposed facilities, would be 2,145 metric tons per year CO_2e. The total annual emissions of approximately 2,145 metric tons CO_2e per year would not exceed the SCAQMD draft screening threshold for industrial sources and would be less than significant without mitigation. The GHG emissions associated with the proposed modifications are insubstantial and would not hinder the State's ability to meet the AB 32 goals.

[2] SCAQMD, December 2008. *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans.*

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged and no new development or improvements would occur. Under the No Project Alternative, any environmental impacts that would result due to the proposed project would be avoided. The No Project Alternative would have no short-term construction-related impacts associated with air emissions or greenhouse gas (GHG) emissions In addition, there would be no long-term air emissions or GHG emissions associated with operation of the proposed project since no development would occur.

3.4 Biological Resources

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
4.	**BIOLOGICAL RESOURCES— Would the project:**				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion

On November 4, 2009, ESA conducted a biological resource assessment to assess existing and potential biological resources on and adjacent to the project site (i.e., well sites, potential filtration plant locations and proposed pipeline alignments) that could be impacted from implementation of the proposed project. The biological assessment included the following:

- Characterization of onsite and adjacent plant communities and determination of their potential to support special-status plants or animals.
- Identification of jurisdictional resources (e.g., "waters of the U.S".).
- Identification of protected trees that could potentially be impacted.
- Evaluation of potential wildlife movement corridors that could be impacted.

Prior to the site visit, ESA conducted a database search to identify special-status species and sensitive habitats that have been previously recorded in the vicinity of the project area. The database search included the California Natural Diversity Database (CNDDB) (CDFG, 2009), the California Native Plant Society Electronic Inventory (CNPS, 2009), and the U.S. Fish and Wildlife Service endangered species list (USFWS, 2008). ESA queried these sources for special-status species records in the Tustin U.S. Geological Survey 7.5-minute quadrangle and the surrounding quadrangles (Orange, Lake Forest, Black Star Canyon, Newport Beach, and Laguna Beach). The potential for special-status species to occur on the project site is based on the proximity of the project to previously recorded occurrences in the CNDDB, on-site vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences, and geographic ranges of special-status plant and wildlife species known to occur in the region. Most of the project area is within the City of Tustin including the former MCAS Tustin, with some sections of proposed pipeline extending into the City of Irvine.

The treatment plant sites are within a light industrial area of the City of Tustin. Three of the sites have existing structures and do not contain significant biological resources. The remaining five sites are vacant lots within the industrial area. These lots have been previously graded and do not contain native vegetation. The plant communities found on the vacant lots are dominated by Russian thistle (*Salsola iberica*), cheatgrass (*Bromus tectorum*) and black mustard (*Brassica nigra*) and do not have the potential to support sensitive biological resources.

The pipelines would be located primarily in city streets or associated right-of–ways (ROWs). The proposed finished water pipeline would cross Peters Canyon Channel, which is a concrete lined, U-shaped drainage. This pipeline would be attached to an existing road bridge across the channel or installed under the channel using jack-and-bore construction methods. If the treatment facility is located in Area 1, then the brine discharge pipeline would cross the former MCAS Tustin property and would follow the ROW established for the continuation of Tustin Ranch Road. The former MCAS Tustin is characterized as highly disturbed (ruderal) non-native, annual grassland. Recent increases in construction activities have increased the level of disturbance further, which was evident during the time of the reconnaissance field survey. The non-native, annual grassland appeared to be dominated by non-native cheatgrass and Russian thistle. The MCAS Tustin area was primarily assessed from Jamboree Avenue, Barranca Parkway, and Edinger Avenue. Based on the level of disturbance observed on the MCAS Tustin, no sensitive biological resources are expected to be present.

Wells 21 and 22 are located in areas where block walls and bare ground are currently present; no biological resources are present on these sites. Well TL-1 would be located on the former MCAS

Tustin and would be surrounded by disturbed ruderal grassland. As indicated above, the vegetation on MCAS Tustin is considered ruderal, dominated by non-native annual species, which do not support sensitive biological resources.

Due to the absence of suitable habitat, no federally- or state-listed threatened or endangered species have the potential to be impacted by this project. Moreover, no federally protected wetlands or Waters of the U.S. would be impacted by the proposed project.

No Wild and Scenic Rivers would be affected by the project; the project is not located in the coastal zone. Therefore the project would not conflict with the Wild and Scenic Rivers Act or the Coastal Act.

a) **Less than Significant with Mitigation.** The project's proposed construction activities would occur within urbanized areas consisting mostly of developed residential and light industrial uses; therefore, no habitats are present to support special-status species. The MCAS Tustin has a long history of disturbance from military activities and increasing recent disturbance from construction, which was observed at the time of the biological reconnaissance survey.

Construction activities have the potential to impact birds using local trees. The federal Migratory Bird Treaty Act (16 USC, Section 703, Supp. I, 1989) prohibits killing, possessing, or trading migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. The term "take" is defined by US Fish and Wildlife Service regulation to mean to "pursue, hunt, shoot, wound, kill, trap, capture or collect" any migratory bird or any part, nest or egg of any migratory bird covered by the conventions, or to attempt those activities.

Migratory birds protected under this law include most native birds, with the exception of a few old world species, such as European starling (*Sturnus vulgaris*) rock pigeon (*Columba livia*), house sparrow (*Passer domesticus*) and certain game birds (e.g. turkeys and pheasants). Migratory birds are also protected by the state of California, under Section 3513 of the California Fish and Game Code (DFG Code). The DFG Code also protects all breeding birds under Section 3503, and raptors under Section 3503.5.

Construction activities associated with the proposed project could affect migratory birds in the event that trees or brush that support birds and their nests are disturbed or removed. Implementation of Mitigation Measure BIO-1 would ensure that the proposed project has a less than significant effect on migratory birds.

Mitigation Measure

BIO-1: Conduct brush removal, tree trimming, building demolition, or grading activities outside of the nesting season when feasible. The California Department of Fish and Game has defined the nesting season as February 1st through August 15th. If construction or site preparation activities occur during the nesting season then the following measures shall be implemented:

- The applicant and/or its contractors shall retain a qualified biologist to conduct nest surveys in potential nesting habitat within and adjacent to the project site prior to commencement of construction or site preparation activities.
- At least one survey shall be conducted within 30 days of ground disturbance activities associated with construction or grading. A survey shall also be conducted no more than five days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, additional pre-construction surveys shall be conducted such that no more than five days shall have elapsed between the last survey and the commencement of ground disturbance activities.
- Surveys shall include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known to occur in the area are shrub or ground nesters.
- If active nests are found, construction activity within 300 feet, or a distance otherwise determined by a qualified biologist, of an active nest should be delayed until the nest is no longer active and there is no evidence of a second attempt at nesting during the same year, as determined by the biologist.
- Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel shall be instructed on the sensitivity of nest areas.
- The biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts to these nests occur.
- The results of the survey and monitoring, and any avoidance measures taken, shall be submitted to the Irvine Ranch Water District within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native and migratory birds.

b-c) **No Impact.** The proposed alternative treatment plant sites are located within previously developed industrial areas and do not contain riparian habitats, wetlands or other sensitive, protected habitats. The proposed pipelines would be located primarily within existing streets and would not encounter sensitive habitats. The proposed finished water pipeline that would cross Peters Canyon Channel would be attached to the side of the existing bridge across the channel or installed under the channel using jack-and-bore methods so as not to disturb the channel. Well TL-1 and the potential brine disposal pipeline across MCAS Tustin would cross disturbed nonnative grassland that does not contain wetland or other sensitive habitats. There would be no impact to riparian habitats, wetlands, or other sensitive protected habitats.

d) **No Impact.** Wildlife corridors are pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or human-induced factors, such as urbanization. The proposed project sites are not part of any corridors for wildlife movement because the sites occur in areas characterized by residential and light industrial development and are

adjacent to busy roads. Construction of any of the pipelines within city ROWs would not interfere with local or regional wildlife movement. The former MCAS Tustin is surrounded by urbanized areas and does not represent a wildlife movement corridor. Construction activities associated with Well TL-1 and the potential pipeline alignments within the MCAS Tustin would not impact any wildlife movement corridors. There would be no impact.

e) **Less than Significant.** Construction of the proposed pipelines in the cities of Tustin and Irvine may require tree trimming or removal. Both of these cities have ordinances protecting all trees on city property. In the City of Tustin, approval for tree trimming or removal on city-owned property must be obtained in writing from the City's Manager of Field Services. In the City of Irvine, a Tree Cutting Permit must be obtained from the City Arborist prior to pruning or removing trees. Trees would not be removed or pruned without first obtaining required permission from the city; therefore, impacts would be considered less than significant.

f) **No Impact.** The Orange County Natural Community Conservation Plan/ Habitat Conservation Plan. (NCCP/HCP) sets forth a proposed Conservation Strategy that would be implemented by the County of Orange in cooperation with state and federal agencies and Participating Landowners in Orange County. The proposed Conservation Strategy focuses on long-term protection and management of multiple natural communities that provide habitat essential to the survival of a broad array of wildlife and plant species.

The proposed project would be constructed in areas designated as Non-Reserve Lands in the NCCP/HCP. Construction of these facilities would not be in conflict with the NCCP/HCP.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. Under the No Project Alternative, any environmental impacts that would result due to the proposed project would be avoided. The No Project Alternative would have no short-term construction-related impacts or long-term operational impacts to biological resources since no development would occur.

3.5 Cultural Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
5. CULTURAL RESOURCES— Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion

A cultural resources study and a paleontological resources study were conducted for this project. The cultural resources study consisted of a records search, survey, and Native American contact program. In addition, local historical societies were contacted to provide information about resources located within the area of potential effects (APE). The paleontological resources study consisted of a paleontological records search and survey.

Cultural Resources Records Search

An archaeological/historic resources records search for the project was conducted on November 2, 2009 at the South Central Coastal Information Center (SCCIC) housed at California State University, Fullerton. The records search included a review of all recorded archaeological sites within a ½-mile radius of the APE, as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historical Resources, the National Register of Historic Places, and the California State Historic Resources Inventory listings were reviewed for this project.

A total of 12 cultural resources, including archaeological sites, isolated artifacts, and historic resources, have been recorded within a ½-mile radius of the APE. Six of the 12 cultural resources are prehistoric archaeological sites (CA-ORA-300, -301, -353, -373, -381, and -1652). No historic-era archaeological sites have been previously recorded. One prehistoric isolate (CA-ORA-350) and one historic-era isolate (CA-ORA-351) have been previously recorded within ½-mile of the APE. Four historic (built) resources (30-162471, -176663, -176664, and -176837) have been identified within ½-mile radius of the APE, including two within the project APE. These resources are discussed below.

Archaeological Resources

Six prehistoric archaeological sites (CA-ORA-300, -301, -353, -373, -381, and -1652) have been previously recorded with ½-mile of the project APE, although none are located within the project APE.

Site CA-ORA-300 was first recorded in 1971 and was located east of Red Hill Avenue between Mitchell Avenue and Walnut Avenue, approximately 0.35 southeast of Well #22 (Sperry, 1971a). At that time, the site measured 106.7 meters by 182.9 meters and included human burials, lithics, shell, and ground stone. The area currently houses an apartment complex.

Site CA-ORA-301 was first recorded in 1971 and was located north of Laguna Road between Newport Avenue and Red Hill Avenue, approximately 0.35 mile northeast of Well #22 (Sperry, 1971b). At that time, the site consisted of two ground stone artifacts located six feet below surface level.

Site CA-ORA-353 was first recorded in 1972 (Sperry, 1972a). The site was located at the northeast corner of Red Hill Avenue and Walnut Avenue, approximately 0.15 mile southwest of site CA-ORA-300. CA-ORA-353 consisted of a small concentration of ground stone fragments and a scraper.

Site CA-ORA-373 was first recorded in 1972 and was bound on the north by the railroad ROW, on the east by Culver Drive, on the south by Valencia Avenue, and on the west by Harvard Avenue (Houser, 1972). At that time, the site measured 182.9 meters by 182.9 meters and consisted of a scattering of ground stone and lithics. CA-ORA-373 was re-recorded in 1977 (Schuster, 1977). The surveyor noted that the northern portion of the site had been partially destroyed by trenching for pipelines and the railroad. Additional cultural constituents noted include possible human bone. The site was covered with sterile fill and made into a park in the 1980s (Padon, 1984).

Site CA-ORA-381 was first recorded in 1972 and was located east of Red Hill Avenue, approximately 0.29 mile south of Valencia Avenue (Sperry, 1972b). The site was recorded based on information provided by a previous tenant, who had collected artifacts while farming at this location. The extent and size of the original find was not noted. The artifacts were turned into the Bowers Museum, who subsequently surveyed the area, but found no further evidence of an archaeological site.

Site CA-ORA-1652 was first recorded in 2006 (Demcak, 2006). At that time, the site measured 30 meters by 30 meters and consisted of a small lithic scatter with some shell and faunal bone. The site was located adjacent to Edinger Avenue, 0.40 mile northwest of Jamboree Road, within the former MCAS property. Artifacts observed include 12 flakes, two flake tools, one core tool, one possible hammerstone, three shell fragments, and two pieces of burnt faunal bone.

Two isolates (CA-ORA-350 and -351) have also been recorded within the ½-mile of the project APE. CA-ORA-350 consisted of an isolated andesite mortar bowl recovered during construction monitoring in 2004 and was located south of the railroad ROW approximately 50 meters

southeast of the Peter's Canyon Channel (Hanna and Tuma, 2004a). CA-ORA-351 was also recorded during construction monitoring for the same project and consisted of six historic-era clay sewer pipes (Hanna and Tuma, 2004b). The pipes were located approximately 50 meters west of the Peter's Canyon Channel and continued toward the historic location of the creek.

Historic Resources

Four historic resources (30-162471, -176663, -176664, and -176837) have been recorded within a 1/2-mile radius of the project APE. Two of these four resources (30-176663 and -176664) are located within a portion of the project APE itself.

The two historic resources (30-176663 and 30-176664) located within a portion of the project APE consist of two individual segments of the Burlington Northern Santa Fe (formerly Atchison, Topeka, and Santa Fe) Railway. The railway was first recorded in 2002 by CRM Tech (Ballester and Tang, 2002). At that time, the site consisted of a 14.7-mile segment of railway. The rail line was originally constructed in the 1880s, but has largely been modernized over the years. The railway was not recommended eligible for the National Register or California Register. An additional portion of this railway was recorded in December 2002 and was designated 30-176664. The only portion of these resources located within the project APE is a small section that crosses Newport Avenue near Edinger Avenue.

The two other historic resources consist of a historic district in Tustin (30-162471) and two buildings related to the former MCAS Tustin (30-176837). Resource 30-162471 consists of a historic district known as Old Town Tustin recorded in 2001. The district is located north of the Santa Ana Freeway and is generally bounded by First Street on the north, Sixth Street on the south, the 55 Freeway on the west, and Prospect Avenue on the east. The district is listed as "5S2" or "individual property that is eligible for local listing or designation." Resource 30-176837 consists of two historic-era buildings located on the former MCAS Tustin adjacent to Barranca Parkway (PAR Environmental Services, Inc., 2006). The buildings include a 1963 reserve center and 1974 mechanic shop. The buildings are listed as "6Z" or "ineligible for NR, CR or local designation through survey evaluation."

The California Register of Historic Places lists 25 properties within a ½-mile radius of the project APE. These are properties determined to have a National Register status of 1 or 2, a California Historical Landmark numbering 770 and higher, or a Point of Historical Interest listed after 1/1/1998. Of these, 15 are listed as located on the "USMC Air Station" in Tustin. The buildings were evaluated in 1995 and are listed as "2D2" or "Contributor to a district determined eligible for NR by consensus through Section 106 process. Listed in the CR." However, these buildings appear to have been demolished or removed from the area (Flock, 2006). One of the properties (30-160312) is the Lighter-Than-Air hangars, located adjacent to a portion of the project APE. The remaining nine properties are not adjacent to the project APE.

The National Register lists three properties within a ½-mile radius of the project APE. One of these properties, the Lighter-Than-Air hangars (30-160312) is located near a portion of the

project. The southernmost hangar is located approximately 500 feet west of the southern terminus of the proposed brine disposal pipeline extending from Tustin Ranch Road.

The California Historic Resources Inventory lists 96 properties that have been evaluated for historical significance within a ½-mile radius of the project APE. One of these properties, located at 1681 Mitchell Avenue, is adjacent to a portion of the project APE. The building is a single-family dwelling constructed in 1919 and is listed as "5S2" or "Individual property that is eligible for local listing or designation." The building was recorded in 2003.

The California Point of Historical Interest of the Office of Historic Preservation, Department of Parks and Recreation, lists no properties within a ½-mile radius of the project APE.

The California Historical Landmarks of the Office of Historic Preservation, Department of Parks and Recreation, lists no properties within a ½-mile radius of the project APE.

Native American Contact Program

As part of this investigation, a Native American and other interested parties contact program was conducted to solicit information and concerns regarding sacred sites or cultural resources that may be present within the APE. The program involved contacting Native American representatives provided by the Native American Heritage Commission (NAHC) and local historical societies to solicit comments and concerns regarding the project.

A letter was prepared and mailed to the NAHC on October 23, 2009. The letter requested that a Sacred Lands File (SLF) check be conducted for the project and that contact information be provided for Native American groups or individuals that may have concerns about cultural resources in the APE. The NAHC responded to the request in a letter dated November 2, 2009. The letter indicated that "the SLF search did not indicate the presence of several Native American cultural resources within one-half-mile radius of the proposed projects (APE)." The letter also included an attached list of Native American contacts.

Letters were sent on November 12, 2009 to each group or individual provided on the contact list. Maps depicting the APE and response forms were attached to each letter. To date, only one response has been received. In an electronic correspondence dated November 12, 2009, Mr. Rosas, Tribal Administrator for the Tongva Ancestral Territorial Tribal Nation expressed his desire to be consulted as required by Section 106 of the NHPA for this project. He did not provide any specific knowledge of Native American resources or Traditional Cultural Properties within the APE.

Historical Societies Contact Program

Letters soliciting information regarding local historic-era resources within the APE were sent on November 18, 2009 to the Tustin Area Historical Society, Tustin Preservation Conservancy, Orange County Historical Society, and Orange County Historical Commission. To date, no responses have been received.

Cultural Resources Survey

A cultural resources survey was conducted for this project on November 12, 2009 and December 9, 2009. Survey methods varied depending upon surface conditions. The areas surveyed on foot include the five potential treatment site locations (Sites A, D, F, H, and I), the two existing well locations (Wells #21 and #22), the areas of proposed new pipeline routes within the former MCAS area, and the TL-1 Well site, also located within the former MCAS boundaries. The remainder of the APE includes the proposed pipeline alignments within existing road right-of-ways (ROWs). The areas within existing road ROWs were not surveyed due to visibility limitations. The roads are paved with curbs on either side. No ground surface was visible. No new cultural resources were identified within the project APE as a result of the survey.

Paleontological Records Search

A paleontological records search was performed by Dr. Sam McLeod of the Natural History Museum of Los Angeles County on November 22, 2009. The results of the records search indicated that no fossil localities have been previously recorded within the project APE. However, several fossil localities had been recorded nearby in the same type of sediments that underlie the APE.

Paleontological Survey

A paleontological survey of the project APE was conducted on November 17, 2009. No surface fossils were observed within the APE.

a) **No Impact.** One National Register-listed property (30-160312) is located near a portion of the APE. The resource is the Lighter-Than-Air Ship hangars located near the intersection of Valencia Avenue and Red Hill Avenue. The southernmost hangar is located approximately 500 feet west of the southern terminus of the proposed brine disposal pipeline extending from Tustin Ranch Road. Since the proposed pipeline would be limited to a narrow corridor located approximately 500 feet away and would be placed underground, the project would not result in a substantial adverse change in the significance of this historical resource. No mitigation is required.

One locally-significant historical resource, located at 1681 Mitchell Avenue, is designated as eligible for local listing or designation according to the California Historic Resources Inventory. Since the proposed pipeline would be constructed within the Mitchell Avenue right-of-way and would be placed below ground, no impacts to this resource are anticipated as a result of this project. No mitigation is required.

Two additional resources (30-176663 and 30-176664), which are components of the Burlington Northern Santa Fe (formerly Atchison, Topeka, and Santa Fe) Railway, have been recorded within the project APE. A portion of these resources crosses the APE at Newport Avenue near Edinger Avenue. These resources, originally constructed in the 1880s, have been modernized throughout the years are currently in use as a railway. However, these resources were not recommended as eligible for either the National

Register or the California Register due to the modernization. Therefore, these resources are not considered historical resources as defined in §15064.5.

b) **Less than Significant with Mitigation.** The proposed project is located in an area known to be sensitive for prehistoric archaeological sites. A total of six prehistoric archaeological sites and one isolated artifact have been identified within ½-mile of the APE, although none are located within the project APE. With the implementation of Mitigation Measure CUL-1, impacts to archaeological resources would be reduced to less than significant.

Mitigation Measure

CUL-1: A qualified archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (qualified archaeologist) shall be retained by the applicant to develop an Archaeological Resources Monitoring and Mitigation Plan. Areas that require monitoring, monitoring procedures, and reporting requirements shall be described in the plan. The plan shall follow the procedures outlined below, at a minimum. These procedures are in accordance with the recommendations provided in the Archaeological Resources Technical Report (Ehringer, 2009) for this project. The plan shall also establish emergency procedures applicable to the discovery of unanticipated significant archaeological resources (e.g., large, complex sites as determined by the qualified archaeologist).

During all construction activities that involve soil disturbance, the following policies shall be implemented:

a. A qualified archaeologist shall be retained to supervise monitoring of construction excavations. All archaeological resources monitoring shall be conducted under the supervision of the qualified archaeologist. Archaeological monitoring shall be conducted for all ground-disturbing activities including, but not limited to, pavement/asphalt removal, grubbing, brush removal, boring, trenching, grading, excavating, and the demolition of building foundations.

b. Archaeological monitors shall have the authority to temporarily halt or redirect work to permit the exploration, identification, evaluation, and/or recovery of archaeological materials. If archaeological resources are encountered by construction personnel in portions of the area of potential effect (APE) where a monitor is not present, work in the immediate vicinity shall be suspended until the archaeological monitor investigates the discovery and determines appropriate treatment.

c. The duration and timing of monitoring shall be determined by the qualified archaeologist in consultation with the lead agencies.

d. The qualified archaeologist shall be present at the pre-construction meeting to explain the established procedures to the construction contractors.

e. Monitoring of archaeologically sensitive soils, as defined in the Archaeological Resources Monitoring and Mitigation Plan, shall be conducted on a full-time basis, unless the qualified archaeologist determines otherwise.

f. The qualified archaeologist shall prepare monthly progress reports to be filed with the client and the lead agencies.

g. If archaeological materials are uncovered, appropriate field data forms shall be used to record the location and document the find. The qualified archaeologist may provide recommendations for further treatment of the resources. Archaeological materials shall be transported to a facility meeting the Secretary of Interior's Standards.

h. Upon completion of all ground-disturbing activities associated with this project, an Archaeological Resources Monitoring and Mitigation Report shall be prepared documenting construction activities observed, including copies of all daily archaeological monitoring logs. If discoveries are made during ground-disturbing activities, the report shall also document the archaeological materials and the methods of treatment as determined appropriate by the qualified archaeologist. The report shall be filed with the client, the lead agencies, and the appropriate repositories.

c) **Less than Significant with Mitigation.** Although no fossil localities have been recorded with the APE, several fossils have been recovered from depths of 8 to 25 feet below ground surface within the Irvine Business Complex, just south of the Tustin MCAS property. In addition, the majority of the APE appears to be underlain by Quaternary Holocene alluvium. While significant vertebrate fossils are unlikely to be contained in the uppermost layers, deeper excavations into older Quaternary alluvium retain the potential to uncover fossil vertebrates. Therefore, there exists the possibility that paleontological resources may be impacted by the project. With the implementation of Mitigation Measure CUL-2, impacts to paleontological resources would be reduced to less than significant.

Mitigation Measure

CUL-2: Prior to the start of any earth moving activities, an Orange County Certified (OCC) Paleontologist shall be retained. The OCC Paleontologist shall review all geotechnical investigations and construction design plans related to the APE. Based on geotechnical findings and the construction design plans, the OCC Paleontologist shall determine areas that shall be subject to excavations in excess of 10 feet below ground surface (bgs). The OCC Paleontologist shall then develop a Paleontological Resources Mitigation and Monitoring Plan. The plan shall follow the procedures outlined below, at a minimum. These procedures are in accordance with the recommendations described in the Paleontological Resources Technical Report (Aron, 2009) for this project. The plan shall also establish emergency procedures applicable to the discovery of unanticipated significant paleontological resources (e.g., large specimens or significant concentrations of specimens as determined by the OCC Paleontologist).

During all construction activities that involve soil disturbance at 10 feet bgs or deeper, the following policies shall be implemented:

a. An OCC Paleontologist shall be retained to supervise monitoring of construction excavations. Paleontological monitoring shall include inspection of exposed rock units and microscopic examination of matrix to determine if fossils are present. The monitor shall have the authority to temporarily halt or redirect work to permit sampling, identification, evaluation, and/or recovery of

fossils specimens. An emphasis shall be placed on thorough fossil locality documentation and stratigraphic data collection. All required paleontological resources monitoring shall be performed by qualified paleontological monitors.

b. The OCC Paleontologist shall be present at the pre-construction meeting to explain the established procedures to the construction contractors.

c. Monitoring of paleontologically sensitive soils, as defined in the Paleontological Mitigation and Monitoring Plan, shall be conducted on a full-time basis, unless the OCC Paleontologist determines otherwise.

d. The OCC Paleontologist shall prepare monthly progress reports to be filed with the client and the lead agencies.

e. If fossils are uncovered, field data forms shall be used to record the locality, stratigraphic columns shall be measured, and appropriate scientific samples submitted for analysis.

f. If microfossils are present, the monitor shall collect matrix for processing. In order to expedite removal of fossilerous matrix, the monitor may request heavy machinery assistance to move large quantities of matrix out of the path of construction to designated stockpile areas. Testing of stockpiles shall consist of screen washing small samples (approximately 90 kilograms, or 200 pounds) to determine if significant fossils are present. Productive tests shall result in screen washing of additional matrix from the stockpiles to a maximum of 2,700 kilograms (6,000 pounds) per locality to ensure recovery of a scientifically significant sample.

g. Recovered fossils shall be prepared to the point of identification, identified by qualified experts, entered in a database to facilitate inventory, analyzed for significance, and deposited in a designated repository such as a County of Orange curation facility, which shall have the first right-of-refusal of the collection. If the fossil collection is not accepted by the County of Orange, then other Southern California accredited facilities shall be sought out to accept the collection, such as the Natural History Museum of Los Angeles County or San Diego Natural History Museum. If further denied, the fossils may be used for educational purposes.

h. The OCC Paleontologist shall prepare a final mitigation report to be filed with the client, the lead agencies, and the repository.

d) **Less than Significant with Mitigation.** Native American human remains have been recovered from archaeological sites located within 0.35 mile of the project APE, including remains recovered from site CA-ORA-300. There exists the possibility that human remains may be located within portions of the project APE. Impacts to human remains would be reduced to less than significant with the implementation of Mitigation Measures CUL-1, described above, and Mitigation Measure CUL-3, described below.

Mitigation Measure

CUL-3*:* If human skeletal remains are uncovered during project construction, the project proponent shall immediately halt work, contact the Orange County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the project proponent shall contact the Native American Heritage Commission (NAHC), in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC shall designate a Most Likely Descendent (MLD) for the remains Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. Under the No Project Alternative, any environmental impacts that would result due to the proposed project would be avoided. The No Project Alternative would have no short-term construction-related impacts or long-term operational impacts to cultural resources since no ground disturbance would occur.

3.6 Geology, Soils, and Seismicity

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
6. GEOLOGY, SOILS, AND SEISMICITY— Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Discussion

a.i) **No Impact.** The Alquist-Priolo Earthquake Fault Zoning Act requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development and prohibit construction on or near active fault traces to reduce hazards associated with fault rupture. The Alquist-Priolo Earthquake Fault Zones are the regulatory zones that include surface traces of active faults. There are no known Alquist-Priolo fault zones in the vicinity of the proposed project components. Therefore, the proposed project would not adversely affect people or structures due to fault rupture. There would be no impact.

a.ii) **Less than Significant.** The proposed project components are located in a seismically active area, as is all of southern California, and has the potential to experience strong ground shaking. The closest faults to the proposed project are the Newport-Inglewood and Elsinore Faults. Other regional faults include the offshore Palos Verdes fault, the Whittier fault, and the San Jacinto fault. The Newport-Inglewood fault is considered an active fault and thus requires special near-source factors to be incorporated into buildings developed within 10 kilometers of the fault. A major earthquake associated with any of these faults could result in moderate to severe groundshaking in the project area and would be a potential hazard to the proposed project. Damage to buildings and infrastructure associated with the proposed project, both above and belowground, could be expected as a result of groundshaking during a seismic event.

The California Building Code (CBC) (California Code of Regulations (CCR) Title 24) provides engineering design criteria for grading, foundations, retaining walls, and structures within zones of seismic activity. The procedures and design limitations for the design of structures are based onsite characteristics, occupancy type, configuration, structural system height, and seismic zoning. Seismic zones are mapped areas that are based on proximity to known active faults, the potential for future earthquakes, and intensity of seismic shaking. Seismic zones range from 0 to 4, with areas mapped as Zone 4 being potentially subject to the highest accelerations due to seismic shaking and the

shortest recurrence levels. According to the CBC, all of Orange County is within Seismic Zone 4. The proposed project components would be designed to include all technical specifications required by the seismic safety codes for Seismic Zone 4 of the CBC, in compliance with CCR Title 24, to minimize impacts due to seismic ground shaking. Impacts would be less than significant.

a.iii) **Less than Significant.** Liquefaction is the sudden temporary loss of shear strength in saturated, loose- to medium-density, granular soils subjected to ground shaking. Liquefaction can cause foundation failure of buildings and other facilities due to the reduction of foundation bearing strength. The City of Tustin's General Plan identifies the project area as having a high potential for liquefaction. However, compliance with the California Building Code (as mentioned above) would ensure that the project components would be designed to include technical specifications designed to minimize impacts due to liquefaction. Therefore, impacts associated with liquefaction would be considered less than significant.

a.iv) **No Impact.** None of the proposed project components are located on or near steep slopes. Due to the relatively flat topography of the project site, the proposed project components do not have the potential to be impacted by landslides. No impact would occur.

b) **Less than Significant.** Soil removal from grading, trenching and excavation activities for all components of the proposed project would reduce soil cohesion. Excavated soils would be stockpiled and potentially exposed to erosive forces such as wind and water. Furthermore, excavation or grading also would expose base soils to erosion by wind or water. As required by state law, a Storm Water Pollution Prevention Plan (SWPPP) would be a requirement of project approval. In compliance with the statewide NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit) (Order No. 99-08-DWQ), a SWPPP would be prepared, including an Erosion Control Plan to minimize soil erosion during construction and prevent soil from washing off the construction site into storm drains natural habitats. Soil erosion and sediment control measures would reflect best management practices (BMPs) and include, but not be limited to, sediment barriers and traps, silt basins, and silt fences. As a result, construction and operation of the facilities would not result in significant erosion or loss of topsoil. Impacts would be less than significant.

c) **Less than Significant with Mitigation.** The City of Tustin's General Plan has identified the project site as exhibiting a high potential for liquefaction. Implementation of Mitigation Measure GEO-1 would require pre-construction geotechnical assessments to characterize the soils to be encountered in and around each project component and to determine the site-specific design criteria to mitigate potential risks of project construction and operation due to lateral spreading, liquefaction, and subsidence. In addition, all project components would be designed and constructed in compliance with the CBC (CCR Title 24) to minimize impacts due to landslides, liquefaction, and subsidence. Impacts would be less than significant with mitigation.

Mitigation Measure

GEO-1: Prior to approval of construction plans for the proposed project, a design-level geotechnical investigation, including collection of site-specific subsurface data shall be completed by IRWD for all project components. The geotechnical investigation shall be conducted by a certified engineering geologist or registered geotechnical engineer. The geotechnical investigation shall identify appropriate engineering considerations, including density profiles, approximate maximum shallow groundwater level, vertical and lateral extent of the saturated sand/silt layers that could undergo liquefaction, and potential presence of expansive soils. The geotechnical investigation shall recommend site-specific design criteria to mitigate potential risks due to liquefaction, lateral spreading, subsidence, and expansive soils. Recommended design criteria shall become part of the proposed project.

d) **Less than Significant with Mitigation.** Soils with shrink-swell or expansive properties typically occur in fine-grained clay sediments and cause damage through volume changes as a result of a wetting and drying process. Structural damage may occur over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils.

Implementation of Mitigation Measure GEO-1 would require pre-construction geotechnical assessments to determine whether expansive soils exist in and around each project component and to determine the site-specific design criteria to mitigate potential risks due to expansive soils, such as soil replacement or conditioning. In addition, all project facilities would be designed and constructed in compliance with the CBC (CCR Title 24) to minimize impacts due to expansive soils. Impacts would be less than significant with mitigation.

Mitigation Measure

Implement Mitigation Measure GEO-1.

e) **No Impact.** The proposed project would not involve the use of septic tanks. There would be no impact.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. Implementing the No Project Alternative would eliminate all potential geologic risks that would result from constructing the facilities associated with the proposed project.

3.7 Hazards and Hazardous Materials

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

Discussion

a-b) **Less than Significant.** The California Office of Emergency Services oversees state agencies and programs that regulate hazardous materials (Health and Safety Code, Article 1, Chapter 6.95). A hazardous material is any material that because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or environment.[3]

The California Accidental Release Prevention (CalARP) Program regulates facilities that use or store regulated substances, such as toxic or flammable chemicals, in quantities that exceed established thresholds (California Code of Regulations (CCR) Title 19, Division

[3] California Office of Emergency Services, *Hazardous Material Business Plan Factsheet,* June 2005.

2, Chapter 4.5). The purpose of the CalARP program is to prevent accidental releases of regulated substances and reduce the severity of releases that do occur. The CalARP Program meets all requirements of the U.S. Environmental Protection Agency's (USEPA) Risk Management Program, established pursuant to the Clean Air Act Amendments (42 USCA Section 7412(4)). The Orange County Fire Authority administers the CalARP Program in the City of Tustin.[4]

The CalARP Program requires facilities that use regulated substances to develop a Risk Management Plan (RMP). The on-site volumes of the regulated substances would be determined during project design, and these volumes would determine if a site-specific RMP is required. If required, IRWD would prepare a RMP for the proposed treatment facility and keep the RMP on file with the Orange County Fire Authority and USEPA. The RMP is a public document that reflects a facility's overall effort to manage and prevent risks associated with the storage, use, and/or processing of regulated substances. The hazardous materials regulated under the CalARP Program that would be stored and/or used onsite at the treatment facility are sulfuric acid (CAS 7664-93-9) and aqua ammonia (ammonium hydroxide, CAS 1336-21-6) (see Chapter 2, Table 2-1). These substances, along with caustic soda (sodium hydroxide, CAS 1310-73-2) and sodium hypochlorite (CAS 7681-52-9) also are regulated under the U.S. Occupational Safety and Health Administration (OSHA) Hazard Communication Rule 29 CFR. The corrosion inhibitors and threshold inhibitor used for drinking water treatment applications are not classified as hazardous materials.

All chemicals at the proposed new treatment facility would be stored in aboveground tanks with secondary containment areas to confine accidental spills and prevent exposure to the environment. The California Hazardous Materials Release Response Plans and Inventory Program (CCR Title 19, Division 2, Chapter 4) requires facilities that store hazardous materials onsite to prepare a Hazardous Materials Business Plan (HMBP) that includes an inventory of hazardous substances and an Emergency Response Plan (ERP). The HMBP is submitted to local health and fire departments.

The closest fire station that would provide emergency response to chemical or fire emergencies is the Santa Ana Fire Station 9, located 1.2 miles west at 1320 East Warner in Santa Ana.

Operation of the proposed treatment facility would require frequent delivery of the chemicals listed in Table 2-1. The transport of hazardous materials is regulated by Caltrans. Transporters of hazardous waste are required to be certified by Caltrans. All hazardous materials delivered to the project site would be tracked by Caltrans and delivery vehicles would be required to utilize roadways approved for transportation of hazardous materials. The proposed project would conform to the required hazardous

[4] Orange County Fire Authority, California Accidental Release Prevention Program (CalARP) / Risk Management Program (RMP), April 9, 2009. Available online at: http://www.ocfa.org/pages/ocfa.asp?filename=calarp.asp

materials transportation plan and thus would not create a significant hazard to the public due to the transport of hazardous materials.

The RMP and HMBP would reduce existing potential risks to the public, environment, and sensitive receptors through transport, use, or accidental release of hazardous materials at the proposed treatment facility to less than significant levels. Therefore, the risk of injury to the public or environment due to hazard material transport or use would be less than significant.

c) **Less than Significant.** Construction of the proposed project would require the use of fuels, oils, and lubricants that can be hazardous to the environment. In addition, the operation of the proposed treatment facility would involve onsite chemical use and storage. Two schools are located in the vicinity of the project site. W. R. Nelson Elementary School is located 14392 Browning Ave. in Tustin, approximately 0.5 miles northwest of treatment plant Area 1. Beswick Elementary School is located at 1362 Mitchell Avenue in Tustin, approximately 0.15 miles south of Well 22. Although neither school is located within one-quarter mile of the treatment plant, construction activities at Wells 21 and 22 could require handling of hazardous materials within the vicinity of these schools. However, compliance with applicable state and federal regulations as well as the HMBP (as mentioned above) during construction would ensure that any potential risk would be less than significant.

d) **No Impact.** Government Code Section 65962.5 requires the California Environmental Protection Agency (Cal EPA) to develop and annually update the Hazardous Waste and Substances Sites (Cortese) List. The Cortese List is a planning document used by state and local agencies to comply with CEQA requirements in providing information about the location of hazardous materials release sites. The information contained in the Cortese List is provided by Cal EPA's Department of Toxic Substance Control (DTSC) and other state and local government agencies.

The project sites or pipeline alignment for the proposed wells, treatment facility, and Conveyance pipelines are not listed on the Cortese List for Orange County.[5] The DTSC Envirostor Database was searched in August 2009 for hazardous material sites within the cities of Tustin and Irvine. The two closest hazardous materials sites to the proposed project are located on MCAS Tustin near the intersection of Red Hill Avenue and Valencia Avenue. These are listed as State Response and Voluntary Cleanup sites. Another nearby hazardous materials site is the Tustin NG Rifle Range (State Response site) which is located 1 mile south of Well 22. Although there are hazardous material sites within the vicinity of the proposed project, none of the project components would be located on a hazardous material site and would not create a significant hazard to the public or the environment. There would be no impact.

[5] DTSC, Hazardous Waste and Substance Sites (Cortese) List, accessed August 29, 2009: http://www.calepa.ca.gov/SiteCleanup/CorteseList/.

e) **Less than Significant.** The proposed project is located adjacent to the MCAS Tustin and approximately five miles northwest of MCAS El Toro; these military air stations have been decommissioned and would not be affected by the proposed project.

However, the proposed Well TL-1 is located approximately 2.0 miles northeast of the John Wayne International Airport (JWA). Components of the proposed project, including Well TL-1, potential pipeline alignments across and around MCAS Tustin, and proposed treatment plant sites in Area 2, are within the FAR Part 77 Notification Area for JWA, according the *Airport Environs Land Use Plan for JWA* (AELUP) (Orange County ALUC, 2008). Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace, identifies criteria for determining whether a structure located within a certain radius of an airport is considered an obstruction to navigable airspace, based on building height. Projects that include structures that exceed certain height limitations require FAA notification. Height limitations typically increase with distance from the airport; in Orange County, construction or alteration of buildings that exceed 200 feet require notification to the FAA and Orange County Airport Land Use Commission (ALUC).

On December 9, 2009, ESA contacted the Orange County ALUC regarding the compatibility of the proposed project with the AELUP. It was confirmed that, due to the distance of the proposed project from JWA and the maximum height of the proposed treatment plant at 35 feet, the proposed project would be compatible with the AELUP. Therefore, IRWD would not be required to notify the Orange County ALUC regarding project construction to verify compatibility with the AELUP. Most of the proposed pipelines, once constructed, would be located underground, and the well heads and treatment plant are expected to be less than 35 feet height; therefore, no long-term conflicts with the AELUP would occur. The proposed project would not result in an airport-related safety hazard for people in the project area. Impacts would be considered less than significant.

f) **No Impact.** There are no private airstrips in the vicinity of the proposed project. There would be no impact.

g) **Less than Significant with Mitigation.** Construction of the proposed pipelines could occur within the ROW of Walnut Avenue and Tustin Ranch Road, both of which are listed as emergency evacuation routes by the City of Tustin's General Plan. Also, the delivery of construction materials and equipment could temporarily impede access for emergency response vehicles. The City of Tustin has an Emergency Preparedness Plan that establishes coordinated action plans for emergency situations. The closest fire station to the project site is OCFA Fire Station #37, located at the corner of Red Hill Ave. and Edinger at 14901 Red Hill Ave. Implementation of Mitigation Measure TR-1, requiring a traffic control plan, and Mitigation Measure TR-3, requiring coordination with emergency service providers, would reduce impacts to emergency response and access associated with construction traffic to a less than significant level.

Mitigation Measures

Implement Mitigation Measures TR-1 and TR-3.

h) **Less than Significant.** The City of Tustin is subject to both wild and urban fires as its eastern portion is contiguous with the Cleveland National Forest. However, the proposed project area is not identified by the Tustin General Plan as having a high fire hazard rating. The project would not include flammable structures such as residences that could be threatened from wildfires nor would the project generate a large number of people that could be threatened by a wildfire. Impacts would be less than significant.

No Project Alternative

Under the No Project Alternative, no new hazardous materials would be used or transported within the project area, and no new hazardous wastes would be generated. In addition, under the No Project Alternative no new hazardous materials would be handled in the vicinity of an existing school; there would be no safety hazards for people in the vicinity of JWA; and there would be no potential interference with emergency evacuation plans.

3.8 Hydrology and Water Quality

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
8. HYDROLOGY AND WATER QUALITY— Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or, by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f)	Otherwise substantially degrade water quality?	☐	☐	☒	☐
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	☐	☐	☐	☒
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j)	Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion

a) **Less than Significant.** The proposed project would require earthwork activities such as site preparation, grading, stockpiling of soils and excavation. These construction activities would disturb surface soils that are currently covered by asphalt/concrete or vegetation. Once disturbed, these soils could be exposed to the effects of wind and water erosion causing sedimentation in stormwater runoff. Project construction would also involve use of chemicals and solvents such as fuel and lubricating grease for motorized heavy equipment. Inadvertent spills or releases of such chemicals could cause an adverse water quality impact. Please refer to Section 3.7, Hazards and Hazardous Materials, for additional information.

Project construction would encompass an area greater than an acre; therefore project construction would be subject to a General Construction Permit under the National Pollutant Discharge Elimination System (NPDES) permit program of the federal Clean Water Act. As required under the General Construction Permit, IRWD or its contractor would prepare and implement a stormwater pollution prevention plan (SWPPP). The objectives of a SWPPP is to identify pollutant sources (such as sediment) that may affect the quality of stormwater discharge and to implement best management practices (BMPs) to reduce pollutants in stormwater.

IRWD and/or its construction contractor would use BMPs, such as those as described in *The Construction Site Best Management Practices (BMPs) Manual* (California Department of Transportation, 2003). In particular, erosion control BMPs would be used to prevent the degradation of water quality in the construction area. Other BMPs that could be used to enhance erosion control include scheduling to avoid wet weather events; preservation of existing vegetation where feasible; hydraulic mulching; hydroseeding; using soil binders; straw mulching; using geotextiles, plastic covers, and erosion control blankets/mats; and

wood mulching. Example of erosion control BMPs are installing a silt fence; creating a sediment/desilting basin; installing sediment traps; installing check dams; using fiber rolls; creating gravel bag berms; street sweeping and vacuuming; creating a sandbag barrier; creating a straw bale barrier; and storm drain inlet protection.

BMPs would also include practices for proper handling of chemicals such as avoiding fueling at the construction site and overtopping during fueling and installing containment pans. Further, implementation of standard construction procedures and precautions as discussed in Section 7, Hazards and Hazardous Materials, and compliance with the Orange County Stormwater Program requirements regulating stormwater would also ensure that the water quality impacts related to the handling of hazardous materials from project construction would be less than significant.

Drilling of Well TL-1 would involve discharge of waters extracted during the well drilling process. IRWD and/or its construction contractor would secure waste discharge requirements (WDRs) from the RWQCB for discharge of such waters to the storm drain system. Implementation of the terms and conditions of the WDRs would mitigate impacts to storm water quality as a result of well drilling activities to less than significant levels.

Following construction, the proposed project would discharge approximately 0.8 mgd of concentrate (brine) to sewer facilities that are tributary to the Orange County Sanitation District Wastewater Reclamation Plant No. 1. The discharge water would be in accordance with the water quality criteria set by OCSD. The OCSD reclamation plant discharges a total of approximately 200 mgd of treated wastewater to the Pacific Ocean under a waste discharge permit from the Santa Ana Regional Water Quality Control Board. The OCSD plant also provides recycled water to Orange County Water District's (OCWD) Groundwater Replenishment System, an innovative water purification facility that assists in recharging groundwater supplies within the basin. All discharges are required to adhere to the NPDES permit requirements.

Storm water runoff from the proposed treatment plant could adversely affect the water quality of receiving waters, if not designed appropriately. However, the proposed treatment plant would be designed to be compatible with the Orange County Stormwater Program and include BMP design measures for new development that minimizes the potential for stormwater contaminants to be discharged from the project site. Incorporation of these measures such as biofiltration swales, detention basins, and limited introduction of impervious surfaces would be effective in reducing the potential impact to water quality to less than significant levels.

b,f) **Less than Significant.** The proposed project would not interfere with groundwater recharge as it introduces a negligible increase in impervious surfaces. The proposed project would, however, require long-term withdrawal of groundwater that is currently considered impaired and unsuitable for use without treatment. The proposed groundwater withdrawal associated with the project could affect local groundwater levels.

The project site is located within the Orange County Groundwater Basin (Basin) which is managed by Orange County Water District (OCWD) under the Orange County Water District Act. In accordance with the Act, OCWD manages annual production and recharge and replenishment in the Basin through financial incentives and implementation of a Groundwater Management Plan. A basin-wide groundwater model has been developed by OCWD for the basin to plan and predict future effects of groundwater extraction within the groundwater basin.

Wells 21 and 22 were originally constructed but never integrated into IRWD's system due to elevated levels of nitrates, total dissolved solids (TDS), and hardness. Both of these wells are completed in what is known as the Principal aquifer which is between the shallow and deep aquifer systems of the region. The proposed well, Tustin Legacy Well 1 (TL-1), would be located in an area that is likely to contain groundwater that is also impaired. OCWD has conducted modeling runs of the basin with the proposed project to compare with baseline effects that project out to the year 2035 (Herndon, 2009 and included in Appendix B). The model measures potential effects in groundwater levels of the shallow, principal and deep aquifers as a result of pumping from the proposed project. According to those modeling results, the proposed pumping associated with the project would produce no significant water level change in the shallow aquifer (Figure 1 of Appendix B). The greatest decline of groundwater levels (between 20 and 33 feet) observed in the model runs was seen from the principal aquifer in the immediate vicinity of Wells 21/22 where the groundwater is known to be impaired (Figure 2 of Appendix B). A 5-feet or greater water level change in the Principal aquifer occurs within a distance of approximately three miles of Wells 21 and 22 (Herndon, 2009). Approximately 2 percent of the pumping from Wells 21/22 was applied to the underlying deep aquifer based on screened intervals that partially penetrate this aquifer. Therefore, up to 26 feet of drawdown in the immediate vicinity of Wells 21 and 22 was noted in the deep aquifer (Figure 3 of Appendix B). Overall, there are not any significant changes noted across the basin other than the localized effects previously discussed (Figures 4 through 9 in Appendix B).

The proposed Tustin Legacy Well, TL-1, was already factored in to the modeling runs for the basin as part of the development of OCWD's 2009 Groundwater Management Plan. As such, the potential effects of groundwater extraction from this well have been incorporated into the overall management of the basin such that there would be no significant loss of groundwater supplies to the basin. However, similar to the effects noted for Wells 21 and 22, there would be an anticipated localized effect around Well TL-1 that could result in lower groundwater levels.

All three proposed wells would extract groundwater of impaired water quality. Without treatment, this groundwater would not be suitable for potable use. As shown in the groundwater model runs, extraction would create a localized decline in water levels which is also known as a cone of depression. The cone of depression acts to alter groundwater gradients within the sphere of influence such that groundwater flows towards the extraction well. In the case of areas where groundwater is contaminated, a

cone of depression can be used to help contain the spread of poor water quality that would occur without extraction.

Therefore, based on these modeling results, implementation of the proposed project would result in a lowering of groundwater levels ranging from 5 to 30 feet in a three mile radius of Wells 21 and 22. The rest of the basin would not be significantly altered from the proposed pumping in any of the three identified aquifers. The localized lower groundwater levels would create a cone of depression that would help contain the spread of groundwater with poor water quality. A localized lowering of impaired groundwater that would not otherwise be suitable for use is therefore considered to be less than significant.

In addition, because the localized lower groundwater levels would create a cone of depression that would help contain the spread of groundwater with poor water quality, OCWD's granting of a BEA exemption would have a beneficial effect on the quality of OCWD water supplies.

c,d) **Less than Significant.** The proposed project may alter the drainage patterns within the existing project site through construction of new or additional impervious surfaces. A significant portion of the proposed improvements associated with the project consist of pipelines which would be installed below ground surface having no measureable impact on drainage patterns. However, construction of the proposed treatment plant might result in a net increase in impervious surfaces. Many of the proposed locations for the treatment plant sites are currently vacant undeveloped sites. Final design of the treatment plant would require adherence to the NPDES permits of the Santa Ana region which specify requirements to protect the beneficial uses of all receiving waters. Furthermore, they require the permittees to develop and implement BMPs to control/reduce the discharge of pollutants to waters of the United States to the maximum extent practicable (MEP). With adherence to these requirements, the proposed improvements where new impervious surfaces are introduced would include design measures to minimize potential impacts to receiving waters to less than significant levels.

e) **Less than Significant.** The proposed project would primarily include construction activities and placement of pipelines underground which would not affect the current stormwater runoff flows in the long term with the potential exception of the new water treatment plant. Drainage control at the new water treatment plant would be required to adhere to the requirements of NPDES permits of the Santa Ana region. As stated above, these requirements are designed to minimize the potential discharge of pollutants in addition to staying within the capacities of existing stormwater drainage facilities. With adherence to these requirements, the proposed improvements where new impervious surfaces are introduced would include design measures to minimize potential impacts to receiving waters to less than significant levels

g-i) **No Impact.** The proposed project does not include any elements that would construct housing. The only above ground improvement would be the new water treatment plant,

wellheads, and pipeline appurtenances. All of the proposed locations for the new treatment plant and the well sites are located in areas outside of the FEMA FIRM maps which indicate areas of the 100-year flood (FEMA, 2009). In addition, the proposed locations are also not susceptible to flooding as a result of a levee or dam failure. There would be no impact related to flooding or flood hazard areas.

j) **No Impact.** The proposed project site is located well inland and away from any enclosed body of water that would make it susceptible to tsunami or seiche hazards. In addition, the project area is relatively flat and not susceptible to mudflows. There would be no impact related to seiche, tsunami, or mudflows.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. Under the No Project Alternative, any environmental impacts that would result due to the proposed project would be avoided. There would be no impacts to surface water or groundwater quality or to groundwater levels in the project vicinity.

3.9 Land Use and Land Use Planning

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
9.	**LAND USE AND LAND USE PLANNING— Would the project:**				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion

a) **No Impact.** The proposed project involves construction of linear underground pipeline networks that would be installed primarily within the ROW of existing city streets, with the exception of a potential pipeline segments to be installed across the former MCAS Tustin with the ROW of future city streets. The pipelines would be entirely underground with some above-ground appurtenances and would not physically divide an established community. Wells 21 and 22 are existing facilities to which new underground and at grade facilities would be added; these project components would not physically divide an established community. The proposed treatment facility, Wells 21 and 22, and Well TL-1

would be new aboveground structures; however, they would be located approximately 1.75 miles from each other and would not create a physical barrier that would divide an established community. There would be no impact.

b) **Less than Significant.** The land use and zoning designations for the project components are shown in **Table 3-3**. The project area consists of commercial, residential, and industrial uses. Land uses within the project area are under the jurisdiction of the City of Tustin and the City of Irvine and are based on the cities' General Plans. The pipelines would be constructed within existing or future ROW for city streets and would not conflict with any applicable land use plans, policies or regulations.

Wells 21 and 22 are already constructed and therefore would not conflict with the City of Tustin's Land Use Plan or zoning ordinance. Wells 21 and 22 are designated as Low Density Residential land use and zoned for Single Family Residential.

Well TL-1 would be located within the MCAS Tustin Specific Plan Area (City of Tustin, 2003) in an area designated as Commercial Business. The Specific Plan approves the delineation and dedication of up to five new wells sites for IRWD within MCAS Tustin along Barranca Parkway.

TABLE 3-3
LAND USE AND ZONING DESIGNATIONS FOR PROJECT FACILITIES

Project Component	General Plan Land Use	Zoning
Well 21	Low Density Residential	Single Family Residential
Well 22	Low Density Residential	Single Family Residential
Well TL-1	MCAS Tustin Specific Plan, Commercial Business	MCAS Tustin Specific Plan District
Treatment Plant: Area 1		
Site A	PC Commercial/Business	Planned Community Industrial
Site F	PC Commercial/Business	Planned Community Industrial
Site H	PC Commercial/Business	Planned Community Industrial
Treatment Plant: Area 2		
Site D	PC Commercial/Business	PC Commercial, SP 11 Pacific Center East
Site I	PC Commercial/Business	PC Commercial, SP 11 Pacific Center East

The proposed treatment plant sites in Area 1 are designated as PC Commercial/Business land use and zoned for Planned Community Industrial. Public utility uses are compatible with these land use and zoning categories. The proposed treatment plant sites in Area 2 are designated as PC Commercial/Business land use, zoned for PC Commercial, and included in the Pacific Center East Specific Plan. Under the Pacific Center East Specific Plan (PBR, 1994), Site D is designated as Commercial Center land use, and Site I is designated as Regional Center land use. Both designations would allow public utility

facilities subject to approval of a conditional use permit; however, water production and treatment facilities are not subject to city zoning regulation, per Government Code 53091. Therefore, the proposed project would not conflict with any land use plans, policies or designations.

c) **No Impact.** As explained above under Section 3.4 (f), the proposed project would be constructed in areas designated as Non-Reserve Lands in the NCCP/HCP. Construction of these facilities would not be in conflict with the NCCP/HCP.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. The No Project Alternative would not divide an established community and would not conflict with any land use plans.

3.10 Mineral Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
10. MINERAL RESOURCES—Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion

a-b) **No Impact.** The whole of the proposed project occurs at locations where no mineral resources are identified. The proposed project areas are not classified by the Tustin General Plan (2005) or by the Irvine General Plan (2009) as having significant mineral deposits and are not located near an important mineral resource recovery site. Implementation of the proposed project would not result in the loss of availability of an important mineral resource or mineral resource recovery site. There would be no impact.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. The No Project Alternative would result in no impacts to mineral resources.

3.11 Noise

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
11. NOISE—Would the project:				
a) Result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Result in exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☐	☒
f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion

a) **Less than Significant.** Total project construction is anticipated to occur for approximately 15 months. An increase in ambient noise levels would result from project construction activities. However, long-term operational noise would be similar to current site conditions.

The City of Tustin's Noise Ordinance (**Table 3-4**) establishes noise standards for the project area. A construction noise exemption is included in the City Code stating that noise sources associated with construction between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and the hours of 9:00 a.m. and 5:00 p.m. on Saturdays, excluding city observed federal holidays are exempted from the City noise provisions. The hours of construction for the proposed project would be 7:30 a.m. to 4:00 p.m. and would qualify for the noise exemption, with the exception of construction of Well TL-1. Construction of Well TL-1 would require daily 24-hour drilling for approximately one month. IRWD would secure a waiver from the City of Tustin's noise ordinance that restricts construction to the daytime hours of 7:30 a.m. to 4:00 p.m. The waiver would exempt construction of Well TL-1 from the City's noise provisions. IRWD would require the construction contractor to set up acoustical panels to minimize noise impacts associated with well drilling if necessary. As described below in Section 3.11(d), there are no sensitive receptors in the vicinity of well TL-1.

TABLE 3-4
TUSTIN EXTERIOR NOISE STANDARDS

Noise zone	Noise Level (dBA)	Time Period
All Residential Properties	55	7:00 a.m. – 10:00 p.m.
All Residential Properties	*50*	10:00 p.m. – 7:00 a.m.
All Commercial Properties	*60*	
All Industrial Properties	*70*	Any time
Hospitals, Convalescent Homes, Schools, Libraries, Churches	55	Any time
All Mixed Use Properties	60	Any time

SOURCE: Or. No. 828, Sec. 1,7-21-80; Ord. No. 1277, Sec. 3, 7-7-03

As determined in Section 3.11(d) below, construction noise impacts to the closest sensitive land use would be less than significant with the implementation of mitigation measures. In addition, project operations would not result in a significant increase in noise levels. As determined in Section 3.11(c) below, noise due to long-term project operations would be less than significant and no mitigations would be required. As such, the proposed project would not result in the exposure of persons to or generation of noise levels in excess of standards established in City noise ordinance. Impacts would be less than significant.

b) **Less than Significant.** Vibration associated with noise, which takes the form of oscillatory motion, can be described in terms of acceleration, velocity, and displacement. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the affect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. The Federal Transit Administration's (FTA) threshold of architectural damage for conventional sensitive structures is 0.2 in/sec PPV and the FTA threshold of human annoyance to ground-borne vibration is 80 RMS (FTA, 2006). Construction activities associated with the proposed treatment facilities and wells would employ conventional equipment/techniques and would not cause excessive ground-borne vibration. However drilling would be required at two locations during pipeline installation and during construction of Well TL-1. Drilling generates vibration levels of up to 0.089 PPV and 87 RMS at 25 feet. The nearest sensitive receptor to the pipeline would be approximately 50 feet from heavy equipment activity and could experience vibration levels of 0.03 PPV and 78 RMS. Vibration levels at these receptors would not exceed the potential building damage threshold of 0.2 PPV or the annoyance threshold of 80 RMS. Other sensitive receptors in the project vicinity would be exposed to vibration levels at incrementally

lower levels. There are no sensitive receptors in proximity to the proposed site for Well TL-1. This impact would be less than significant without mitigation.

c) **Less than Significant with Mitigation.** Operations of the proposed wells and treatment facility would not result in a substantial permanent increase in ambient noise above existing levels nor result in noise levels that exceed applicable City Code significance thresholds. Both Wells 21 and 22 would have limited aboveground structures, and the sites are surrounded by a wall. The new facilities would operate within the City's noise ordinance. Well TL-1 would introduce new aboveground structures at the project site, but there are no sensitive receptors in the vicinity of Well TL-1.

Operational noise from the proposed treatment facility would be generated by the onsite pumps and treatment units. The proposed treatment plant would have approximately 7 to 10 pumps onsite in excess of 10 hp. The closest sensitive receptor to the alternative treatment plant sites is 50 feet (Site D). Implementation of Mitigation Measure NOISE-1 would ensure that the treatment plant is designed in compliance with the City of Tustin's noise ordinance and that operational noise levels at neighboring receptors do not exceed the noise ordinance's thresholds at the property line. Impacts would be less than significant with mitigation.

Mitigation Measure

NOISE-1: During the design phase of the proposed project, once the treatment plant location is selected, the closest sensitive receptor(s) shall be identified. The treatment plant shall be designed to ensure that operational noise levels at the property line of neighboring receptors would be in compliance with the City of Tustin's noise ordinance.

d) **Less than Significant with Mitigation.** Construction noise levels at and near the project construction zones would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. In addition, certain types of construction equipment generate impulsive noises (such as pile driving), which can be particularly annoying. Pile driving, however, is not expected to be needed for development of the proposed project. **Table 3-5** shows typical noise levels associated with different construction stages. **Table 3-6** shows typical noise levels produced by various types of construction equipment.

Construction equipment used during the proposed project would generate a significant amount of noise. Noise from construction activities generally attenuates at a rate of 4.5 to 7.5 dBA per doubling of distance; for this analysis a rate of 6 dBA was used. Some land uses are considered more sensitive to noise than others due to the amount of noise exposure and the types of activities typically involved. The nearest sensitive receptor and their corresponding construction noise exposure levels for each project component is

explained below. Other sensitive receptors in the vicinity of the project components would be exposed to construction noise at incrementally lower levels.

TABLE 3-5
TYPICAL CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level (dBA, Leq)[a]
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

[a] Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

SOURCE: U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971.

TABLE 3-6
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Construction Equipment	Noise Level (dBA, Leq at 50 feet)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88
Jack Hammer	88
Dozer	87
Paver	89
Generator	76
Rock Drill	98
Backhoe	85

SOURCE: Cunniff, *Environmental Noise Pollution*, 1977.

Well 21

The nearest sensitive receptors to Well 21 are single family residences located on the northeast, and southeast site boundaries. If construction were to occur within five feet of the site boundaries, noise levels at the nearest receptor would be approximately 109 dBA. These noise levels would be lessened by the wall surrounding the well site. Noise levels would be further reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Well 22

The nearest sensitive receptors to Well 22 are single family residences located on the northwest, northeast, and southeast site boundaries. If construction were to occur within five feet of the site boundaries, noise levels at the nearest receptor would be approximately 109 dBA. These noise levels would be lessened by the wall surrounding the well site. Noise levels would be further reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Well TL-1

No sensitive receptors are in the vicinity of Well TL-1; therefore, construction noise levels would be less than significant.

Treatment Plant Site A

The nearest sensitive receptor to Treatment Plant Site A is the 1st Korean Baptist Church located approximately 1,450 feet from the site. Construction noise at the nearest receptor would be approximately 60 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site D

The nearest sensitive receptor to Treatment Plant Site D is a single family residence located approximately 200 feet from the site. Construction noise at the nearest receptor would be approximately 77 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site F

The nearest sensitive receptor to Treatment Plant Site F is the Resurrection Life Center International located approximately 180 feet from the site. Construction noise at the nearest receptor would be approximately 78 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site G

The nearest sensitive receptor to Treatment Plant Site G is a single family residence located approximately 1,350 feet from the site. Construction noise at the nearest receptor would be approximately 60 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site I

The nearest sensitive receptor to Treatment Plant Location I is a single family residence located approximately 1,550 feet from the site. Construction noise at the nearest receptor would be approximately 59 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Pipelines

The nearest sensitive receptors to the potential pipeline alignments are single family residences approximately 50 feet away. Construction noise associated with pipeline installation would be approximately 89 dBA at the nearest receptor. Where caisson drilling is performed, residences at 50 feet would experience noise levels of approximately 98 dBA. Pipeline construction would move at a rate of approximately 100 to 200 feet a day and therefore sensitive receptors would be exposed to pipeline construction noise for very short periods of time. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Pipeline construction noise would be considered less than significant with mitigation.

Mitigation Measures

NOISE-2: In order to avoid noise-sensitive hours of the day and night, construction contractors shall comply with the following:

- Construction shall be limited to between the hours of 7:00 am and 6:00 pm Monday through Friday and the hours of 9:00 am and 5:00 pm on Saturdays, and exclude city observed federal holidays

NOISE-3: To reduce noise impacts due to construction, the applicant shall require construction contractors to implement the following measures:

- During construction, the contractor shall outfit all equipment, fixed or mobile, with properly operating and maintained exhaust and intake mufflers, consistent with manufacturers' standards.
- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. External jackets on the tools themselves shall be used where feasible. Quieter procedures, such as use of drills rather than impact tools, shall be used whenever feasible.
- Stationary noise sources that could affect adjacent receptors shall be located as far from adjacent receptors as possible.

e-f) **No Impact.** The project is not in an area within two miles of a public airport, public use airport, or private airstrip facilities. No impacts would occur and no mitigation measures would be required.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. The No Project Alternative would not result in any noise impacts since no new facilities would be constructed or operated.

3.12 Population, Housing and Environmental Justice

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
12. POPULATION AND HOUSING— Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
d) Cause disproportionate impacts to minority or low income populations?	☐	☐	☐	☒

Discussion

a) **Less than Significant.** The proposed project does not include the construction of new homes or businesses and thus would not directly induce population growth within IRWD's service area.

The proposed project would provide a new water supply for existing and future development within IRWD's service area and would meet the demands of planned future growth. IRWD is responsible for ensuring a sustainable water supply to meet future water demands within its service area. IRWD has taken an integrated approach to enhancing diversity of supply sources in order to achieve reliable and economical water system operations. By the year 2030, IRWD's potable system demands are projected to reach approximately 96,500 acre-feet per year (AFY), an increase of about 30,500 AFY from current levels. Development of additional groundwater and recycled water are projected to reduce dependence on imported water supply for future District operations. If the groundwater supplies are expanded as planned, IRWD's potable demand will be served primarily from local supplies produced, supplemented by water imported from Metropolitan Water District of Southern California (Metropolitan). Should IRWD choose not to expand groundwater resources for cost or other reasons, future demands would need to be served with imported treated water from Metropolitan. The proposed project

would help to meet existing and future demands and would reduce demands on Metropolitan for imported supplies. Impacts would be considered less than significant.

b-c) **No Impact.** The proposed project does not involve the construction or demolition of housing. Therefore, the proposed project would not displace people or housing, and there would be no impact.

d) **No Impact.** The project site is located within a community that is predominantly Caucasian and generally considered to have a higher economic level than other communities in the County (City of Tustin, 2004). However, there are no industries or contaminated sites in or around the project area that this project would comprise a new hazard and additional hazard to a particular population. The proposed project would temporarily impact those residents along the pipeline routes and in the vicinity of the treatment plan, but it has no potential to adversely impact any low income or ethnic communities in the long term. Furthermore, the locations of the project facilities were not based on socio-economic characteristics of communities such as income level or race/ethnicity. Therefore, the project itself would be an improvement to area services that would benefit the population.

No Project Alternative

Under the No Project Alternative, no development or improvements would occur; there would be no impacts to induce substantial population growth or require the relocation of housing elsewhere. In addition, no disproportionate impacts to minority or low income populations would occur.

3.13 Public Services

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
13. PUBLIC SERVICES— Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Discussion

a) **No Impact.** The proposed project would expand groundwater production capability for IRWD and would provide a sustainable water supply to a growing population. The increased water supply would meet, but not exceed, the increased demands of planned growth, and therefore is not a growth inducing activity. The proposed project would not require additional public services, such as fire protection, police protection, schools or parks beyond that expected by the municipalities within IRWD's service area due to planned future growth. There would be no impact to public services.

No Project Alternative

Under the No Project Alternative, no direct demand for public services would occur. Since no development would occur, the demand for public services would remain unchanged.

3.14 Recreation

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
14. RECREATION—Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion

a-b) **No Impact.** The proposed project would expand groundwater production capability for IRWD and would provide a sustainable water supply to a growing population. The increased water supply would meet, but not exceed, the increased demands of planned growth, and itself is not considered a growth inducing activity. The proposed project would not result in the increased use, construction, or expansion of parks or recreational

facilities beyond that expected by the municipalities within IRWD's service area due to planned future growth. There would be no impact.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. The No Project Alternative would not induce deterioration of existing recreational facilities or construct any facilities in an area zoned for recreation.

3.15 Transportation and Traffic

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

Discussion

a) **Less than Significant with Mitigation. D**uring project construction, construction vehicles could result in short-term, intermittent lessening of roadway capacities due to slower moving vehicles, the larger turning radii of the trucks (as compared to passenger vehicles), and lane closures during installation of the proposed pipelines within roadway ROWs. Traffic-generating construction activities would consist of the daily arrival and departure of construction workers, trucks hauling equipment and materials to and from

the construction site, and the hauling of excavated soils. Implementation of Mitigation Measure TR-1, requiring a Traffic Control/Traffic Management Plan, would reduce impacts associated with construction traffic to a less than significant level.

Operation of the proposed treatment facility would require periodic deliveries of chemicals, as listed in Table 2-1. There would also be regular operational and maintenance inspections and repairs at the treatment plant and Wells 21, 22, and TL-1. The frequency and number of trucks for scheduled deliveries and vehicles for scheduled maintenance would not be great enough to result in degradation of traffic conditions or levels of service on local roadways. Impacts would be less than significant.

Mitigation Measure

TR-1: The construction contractors shall prepare and implement a Traffic Control/Traffic Management Plan subject to approval by the cities prior to construction. The plan shall:

- Identify hours of construction and hours for deliveries;
- Include a discussion of haul routes, limits on the length of open trench, work area delineation, traffic control and flagging;
- Identify all access and parking restrictions, pavement markings and signage requirements (e.g., speed limit, temporary loading zones);
- Maintain access to residence and business driveways, public facilities, and recreational resources at all times to the extent feasible; Minimize access disruptions to businesses and residences;
- Layout a plan for notifications and a process for communication with affected residents, businesses, and public transit agencies prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints;
- Include a plan to coordinate all construction activities with emergency service providers in the area at least one month in advance. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times.

b) **Less than Significant.** The Orange County Transportation Authority (OCTA) is the designated Congestion Management Agency for Orange County. The OCTA prepares the Orange County Congestion Management Program (CMP), the goals of which are to reduce traffic congestion and provide a mechanism for coordinating land use and development decisions.[6] The CMP identifies cost-effective improvements and strategies for mitigation of performance problems within the CMP. The CMP is defined as a

6 OCTA, *2003 Update, Orange County Congestion Management Program*, November 2003.

network of state highways and arterials, level of service (LOS) standards and related procedures, and provides technical justification for the approach. LOS standards for roadways that are part of the Orange County CMP network are intended to regulate long-term traffic increases resulting from the operation of new development, and do not apply to temporary construction projects. Therefore, for the proposed project, temporary construction-generated traffic would not result in any long-term degradation in operating conditions or LOS on any nearby roadways. The proposed project would not introduce any new facilities to the project area that would otherwise generate long-term changes in traffic. Following installation of pipelines, disturbed areas would be restored to pre-existing conditions and roadways would be repaved. There would be no impact.

c-d) **No Impact.** The construction and operation of the proposed project would not affect air traffic patterns, levels, or locations. The proposed project would not alter current roadway designs or result in increased hazards due to design features. There would be no impact.

e) **Less than Significant with Mitigation.** The closest fire station to the project components is Santa Ana Fire Station 9, located 1.2 miles west at 1320 East Warner in Santa Ana. Construction of the proposed project would result in temporary lane closures due to installation of the proposed pipelines and the transport and delivery of construction equipment, materials, excavated soils, and backfill. Implementation of Mitigation Measure TR-1 would ensure the Traffic Control Plan prepared by the project contractor would incorporate specific measures to avoid interference with emergency access and reduce potential impacts to less than significant levels.

Mitigation Measure

Implement Mitigation Measure TR-1.

f) **No Impact.** Construction of the proposed project would create a temporary demand for parking for construction workers and construction vehicles. Construction vehicle parking would occur in the vicinity of the active work area. Staging areas would be designed to accommodate parking for all construction workers and construction equipment. On-site parking for construction workers and staging areas for construction material and equipment would be located to the greatest extent possible at the plant site, Well TL-1, Well 21 and/or Well 22. Construction of the proposed project would not displace any existing parking spaces. There would be no impact.

g) **Less than Significant with Mitigation.** The proposed project could affect traffic circulation on city streets that support alternative transportation routes, such as Orange County Transit Authority public bus routes on Walnut Avenue and Edinger Avenue. Implementation of Mitigation Measure TR-1 would require the Traffic Control Plan to include a process for notifying and communicating with public transit agencies regarding the location and duration of construction activities and lane closures. Impacts would be temporary during project construction and would be considered less than significant.

The proposed pipelines also would cross the Metrolink train tracks. However, jack-and-bore techniques would be utilized to install the proposed pipelines under the train tracks and avoid disruption to train services. There would be no impact.

The proposed project would otherwise not conflict with adopted plans and policies supporting alternative transportation.

Mitigation Measure

Implement Mitigation Measure TR-1.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. The No Project Alternative would not result in any traffic-related impacts.

3.16 Utilities, Service Systems and Energy

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
16. UTILITIES AND SERVICE SYSTEMS—Would the project:				
a) Conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☒	☐	☐
c) Require or result in the construction of new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Require new or expanded water supply resources or entitlements?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion

a) **No Impact.** The proposed project would not conflict with wastewater treatment requirements as it does not involve wastewater treatment facilities. Non-reclaimable wastewater (NRW) from the proposed treatment facility would be conveyed to Orange County Sanitation District's existing Wastewater Reclamation Plant No. 1. There would be no impact.

b) **Less than Significant with Mitigation.** The proposed project would result in the construction of new water treatment facilities, the effects of which are discussed throughout this Initial Study/Environmental Assessment. All environmental impacts would be mitigated to less than significant levels.

Operation of the proposed treatment plant and Wells 21 and 22 would increase the amount of electricity used by IRWD's system by a total of 22,000 KW/day, or 22 megawatts per day. The proposed project would be served by Southern California Edison. The existing peak demand of the Southern California Edison system is about 23,000 megawatts per day. The proposed project electricity demand would be less than 0.1 percent of SCE total peak demand.

c) **Less than Significant.** The proposed project would not result in the construction of new storm water drainage facilities or require the expansion of existing facilities. The proposed improvements at Wells 21, 22, and TL-1 and the proposed treatment plant facility would include connections to the existing storm water system. Although the proposed project could create new impervious surfaces, the increase would not substantially increase the volume of surface water runoff and would not require an expansion of the existing storm drain system. Impacts would be less than significant.

d) **No Impact.** Implementation of the proposed project would provide an additional supply source for 6.2 mgd of treated drinking water to IRWD customers. The source of the water is untreated groundwater extracted from the Orange County Groundwater Basin (Basin), within the boundaries of the Orange County Water District (OCWD) service area. The Basin is managed by OCWD under the Orange County Water District Act. Producers such as IRWD may install and operate production facilities within the Basin. In accordance with the Act, OCWD manages annual production and recharge and replenishment in the Basin. Groundwater pumping rights within the OCWD are not adjudicated but groundwater production is managed by the OCWD through financial incentives, such as the BEA (see Chapter 1, Section 1.5). IRWD has petitioned the OCWD to exempt the groundwater produced from the proposed Wells 21 and 22 from the BEA. No new entitlements would be necessary, and there would be no impact.

e) **Less than Significant.** Non-reclaimable wastewater (NRW) from the proposed treatment facility would be conveyed to OCSD's existing Wastewater Reclamation Plant No. 1. IRWD is consulting with OCSD regarding capacity at WRP No. 1 and the ability for OCSD to serve the project by receiving NRW from the proposed treatment facility.

Subsequent meetings with OCSD will be scheduled during the design phase of the proposed project to ensure coordination with OCSD and compatibility with requirements for influent to WRP No. 1. Impacts would be less than significant.

f) **No Impact.** Construction of the proposed project would result in the excavation and disposal of up to 16,000 cubic yards of material for the proposed pipelines and treatment facility. Depending on the selected treatment plant location, the proposed project also would generate demolition debris. All excavated spoils and construction debris would be hauled offsite and legally disposed in an appropriate manner. The disposal site locations, including landfills that accept construction waste, would be part of the SWPPP required for the project (See Section 3.8, Hydrology and Water Quality). There would be no impact to landfills due to solid waste disposal.

g) **Less than Significant.** The California Integrated Waste Management Act of 1989 (Public Resources Code [PRC], Division 30), enacted through Assembly Bill (AB) 939 and modified by subsequent legislation, requires all California cities and counties to implement programs to reduce, recycle, and compost at least 50 percent of wastes by the year 2000 (PRC Section 41780). Construction of the proposed project would generate solid waste, including excavated soil and demolition debris. The project would be subject to the California Waste Management Act. In addition, all generated brine would be appropriately discharged to sewer facilities tributary to the Orange County Sanitation District Wastewater Reclamation Plant No. 1. Impacts would be less than significant.

No Project Alternative

Under the No Project Alternative, all project sites would remain unchanged, and no new development or improvements would occur. The No Project Alternative would not result in any impacts associated with electricity, water, wastewater, or gas since no new facilities would be constructed or operated.

3.17 Mandatory Findings of Significance

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
17. MANDATORY FINDINGS OF SIGNIFICANCE—Would the project:				
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
b) Have impacts that would be individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☐	☒
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion

a) **Less than Significant with Mitigation.** The proposed project includes new water treatment facilities, groundwater production facilities, and water pipelines. The sites being considered for all project components are either already developed or located in primarily commercial or industrial areas of the cities of Tustin and Irvine. The project sites contain no vegetation that would be considered valuable wildlife habitat. The proposed project would not degrade the quality of the environment or substantially affect populations or communities of fish or wildlife or their habitat. The proposed project would not reduce the number or restrict the range of rare or endangered plants or animals.

The proposed project could involve the removal of vegetation that may provide nesting habitat for birds. With the incorporation of Mitigation Measure BIO-1 any potential significant impacts to biological resources would be reduced to less than significant levels.

The proposed project would involve earth moving and excavation activities, such as trenching, jack-and-bore, and grading. Cultural resources have been found within the Tustin and Irvine planning area, and thus could be uncovered during project construction. With the incorporation of Mitigation Measures CUL-1, CUL-2, and CUL-3 any potential impacts to cultural resources that represent major periods of California history or prehistory would be reduced to less than significant levels.

b) **No Impact.** There would be no significant cumulative impacts of the proposed project. The project would increase water supply within the IRWD service area to meet planned growth, but would not be considered a growth-inducing activity. Implementation of the proposed project would allow IRWD to meet existing water demand and the water demand of a future population as determined by long-range planning estimates. In addition, OCWD's basin management programs would ensure that the less than significant effects on groundwater elevations and gradients from the proposed project and other projects would not be cumulatively considerable.

c) **Less than Significant with Mitigation.** Construction and operation of the proposed project would generate noise and produce air emissions. Air emissions associated with project construction and operation would not be significant and would not adversely

affect human beings. With incorporation of Mitigation Measures NOISE-2 and NOISE-2, the temporary impacts associated with construction noise would be reduced to less than significant levels and would not adversely affect human sensitive receptors. With incorporation of Mitigation Measure NOISE-1, permanent impacts associated with operational noise impacts to neighboring sensitive receptors at the proposed treatment plant would be less than significant. Construction and operation of the proposed project requires the use, handling, and transport of hazardous materials. As described in Section 3.7, compliance with regulations pertaining to use, handling, and transport of hazardous materials would ensure that substantial adverse effects to human beings do not occur due to accidental upset of materials. The proposed project would be not cause substantial direct or indirect adverse effects to human beings.

CHAPTER 4
Summary of Mitigation Measures

Aesthetics

AES-1: Following construction activities, IRWD shall restore disturbed areas by reestablishing pre-existing conditions including topography and repaving roadways.

AES-2: The exterior lighting installed around the project facilities shall be of a minimum standard required to ensure safe visibility. Lighting shall be shielded and directed downward, away from neighboring land uses to minimize impacts of light and glare.

Biological Resources

BIO-1: Conduct brush removal, tree trimming, building demolition, or grading activities outside of the nesting season when feasible. The California Department of Fish and Game has defined the nesting season as February 1st through August 15th. If construction or site preparation activities occur during the nesting season then the following measures shall be implemented:

- The applicant and/or its contractors shall retain a qualified biologist to conduct nest surveys in potential nesting habitat within and adjacent to the Project Site prior to commencement of construction or site preparation activities.
- At least one survey shall be conducted within 30 days of ground disturbance activities associated with construction or grading. A survey shall also be conducted no more than five days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, additional pre-construction surveys shall be conducted such that no more than five days shall have elapsed between the last survey and the commencement of ground disturbance activities.
- Surveys shall include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known to occur in the area are shrub or ground nesters.
- If active nests are found, construction activity within 300 feet, or a distance otherwise determined by a qualified biologist, of an active nest should be delayed until the nest is no longer active and there is no evidence of a second attempt at nesting during the same year, as determined by the biologist.
- Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel shall be instructed on the sensitivity of nest areas.

- The biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts to these nests occur.
- The results of the survey and monitoring, and any avoidance measures taken, shall be submitted to the Irvine Ranch Water District within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native and migratory birds.

Cultural Resources

CUL-1: A qualified archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (qualified archaeologist) shall be retained by the applicant to develop an Archaeological Resources Monitoring and Mitigation Plan. Areas that require monitoring, monitoring procedures, and reporting requirements shall be described in the plan. The plan shall follow the procedures outlined below, at a minimum. These procedures are in accordance with the recommendations provided in the Archaeological Resources Technical Report (Ehringer, 2009) for this project. The plan shall also establish emergency procedures applicable to the discovery of unanticipated significant archaeological resources (e.g., large, complex sites as determined by the qualified archaeologist).

During all construction activities that involve soil disturbance, the following policies shall be implemented:

a. A qualified archaeologist shall be retained to supervise monitoring of construction excavations. All archaeological resources monitoring shall be conducted under the supervision of the qualified archaeologist. Archaeological monitoring shall be conducted for all ground-disturbing activities including, but not limited to, pavement/asphalt removal, grubbing, brush removal, boring, trenching, grading, excavating, and the demolition of building foundations.

b. Archaeological monitors shall have the authority to temporarily halt or redirect work to permit the exploration, identification, evaluation, and/or recovery of archaeological materials. If archaeological resources are encountered by construction personnel in portions of the area of potential effect (APE) where a monitor is not present, work in the immediate vicinity shall be suspended until the archaeological monitor investigates the discovery and determines appropriate treatment.

c. The duration and timing of monitoring shall be determined by the qualified archaeologist in consultation with the lead agencies.

d. The qualified archaeologist shall be present at the pre-construction meeting to explain the established procedures to the construction contractors.

e. Monitoring of archaeologically sensitive soils, as defined in the Archaeological Resources Monitoring and Mitigation Plan, shall be conducted on a full-time basis, unless the qualified archaeologist determines otherwise.

f. The qualified archaeologist shall prepare monthly progress reports to be filed with the client and the lead agencies.

g. If archaeological materials are uncovered, appropriate field data forms shall be used to record the location and document the find. The qualified archaeologist may provide recommendations for further treatment of the resources. Archaeological materials shall be transported to a facility meeting the Secretary of Interior's Standards.

h. Upon completion of all ground-disturbing activities associated with this project, an Archaeological Resources Monitoring and Mitigation Report shall be prepared documenting construction activities observed, including copies of all daily archaeological monitoring logs. If discoveries are made during ground-disturbing activities, the report shall also document the archaeological materials and the methods of treatment as determined appropriate by the qualified archaeologist. The report shall be filed with the client, the lead agencies, and the appropriate repositories.

CUL-2: Prior to the start of any earth moving activities, an Orange County Certified (OCC) Paleontologist shall be retained. The OCC Paleontologist shall review all geotechnical investigations and construction design plans related to the APE. Based on geotechnical findings and the construction design plans, the OCC Paleontologist shall determine areas that shall be subject to excavations in excess of 10 feet below ground surface (bgs). The OCC Paleontologist shall then develop a Paleontological Resources Mitigation and Monitoring Plan. The plan shall follow the procedures outlined below, at a minimum. These procedures are in accordance with the recommendations described in the Paleontological Resources Technical Report (Aron, 2009) for this project. The plan shall also establish emergency procedures applicable to the discovery of unanticipated significant paleontological resources (e.g., large specimens or significant concentrations of specimens as determined by the OCC Paleontologist).

During all construction activities that involve soil disturbance at 10 feet bgs or deeper, the following policies shall be implemented:

a. An OCC Paleontologist shall be retained to supervise monitoring of construction excavations. Paleontological monitoring shall include inspection of exposed rock units and microscopic examination of matrix to determine if fossils are present. The monitor shall have the authority to temporarily halt or redirect work to permit sampling, identification, evaluation, and/or recovery of fossils specimens. An emphasis shall be placed on thorough fossil locality documentation and stratigraphic data collection. All required paleontological resources monitoring shall be performed by qualified paleontological monitors.

b. The OCC Paleontologist shall be present at the pre-construction meeting to explain the established procedures to the construction contractors.

c. Monitoring of paleontologically sensitive soils, as defined in the Paleontological Mitigation and Monitoring Plan, shall be conducted on a full-time basis, unless the OCC Paleontologist determines otherwise.

d. The OCC Paleontologist shall prepare monthly progress reports to be filed with the client and the lead agencies.

e. If fossils are uncovered, field data forms shall be used to record the locality, stratigraphic columns shall be measured, and appropriate scientific samples submitted for analysis.

f. If microfossils are present, the monitor shall collect matrix for processing. In order to expedite removal of fossilerous matrix, the monitor may request heavy machinery assistance to move large quantities of matrix out of the path of construction to designated stockpile areas. Testing of stockpiles shall consist of screen washing small samples (approximately 90 kilograms, or 200 pounds) to determine if significant fossils are present. Productive tests shall result in screen washing of additional matrix from the stockpiles to a maximum of 2,700 kilograms (6,000 pounds) per locality to ensure recovery of a scientifically significant sample.

g. Recovered fossils shall be prepared to the point of identification, identified by qualified experts, entered in a database to facilitate inventory, analyzed for significance, and deposited in a designated repository such as a County of Orange curation facility, which shall have the first right-of-refusal of the collection. If the fossil collection is not accepted by the County of Orange, then other Southern California accredited facilities shall be sought out to accept the collection, such as the Natural History Museum of Los Angeles County or San Diego Natural History Museum. If further denied, the fossils may be used for educational purposes.

h. The OCC Paleontologist shall prepare a final mitigation report to be filed with the client, the lead agencies, and the repository.

CUL-3*:* If human skeletal remains are uncovered during project construction, the project proponent shall immediately halt work, contact the Orange County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the project proponent shall contact the Native American Heritage Commission (NAHC), in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC shall designate a Most Likely Descendent (MLD) for the remains Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

Geology, Soils and Seismicity

GEO-1: Prior to approval of construction plans for the proposed project, a design-level geotechnical investigation, including collection of site-specific subsurface data shall be completed by IRWD for all project components. The geotechnical investigation shall be conducted by a certified engineering geologist or registered geotechnical engineer. The geotechnical investigation shall identify appropriate engineering considerations, including density profiles, approximate maximum shallow groundwater level, vertical and lateral extent of the saturated sand/silt layers that could undergo liquefaction, and potential presence of expansive soils. The geotechnical investigation shall recommend site-specific design criteria to mitigate

potential risks due to liquefaction, lateral spreading, subsidence, and expansive soils. Recommended design criteria shall become part of the proposed project.

Noise

NOISE-1: During the design phase of the proposed project, once the treatment plant location is selected, the closest sensitive receptor(s) shall be identified. The treatment plant shall be designed to ensure that operational noise levels at the property line of neighboring receptors would be in compliance with the City of Tustin's noise ordinance.

NOISE-2: In order to avoid noise-sensitive hours of the day and night, construction contractors shall comply with the following:

- Construction shall be limited to between the hours of 7:00 am and 6:00 pm Monday through Friday and the hours of 9:00 am and 5:00 pm on Saturdays, and exclude city observed federal holidays

NOISE-3: To reduce noise impacts due to construction, the applicant shall require construction contractors to implement the following measures:

- During construction, the contractor shall outfit all equipment, fixed or mobile, with properly operating and maintained exhaust and intake mufflers, consistent with manufacturers' standards.
- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. External jackets on the tools themselves shall be used where feasible. Quieter procedures, such as use of drills rather than impact tools, shall be used whenever feasible.
- Stationary noise sources that could affect adjacent receptors shall be located as far from adjacent receptors as possible.

Transportation and Traffic

TR-1: The construction contractors shall prepare and implement a Traffic Control/Traffic Management Plan subject to approval by the cities prior to construction. The plan shall:

- Identify hours of construction and hours for deliveries;
- Include a discussion of haul routes, limits on the length of open trench, work area delineation, traffic control and flagging;
- Identify all access and parking restrictions, pavement markings and signage requirements (e.g., speed limit, temporary loading zones);

- Maintain access to residence and business driveways, public facilities, and recreational resources at all times to the extent feasible; Minimize access disruptions to businesses and residences;
- Layout a plan for notifications and a process for communication with affected residents, businesses, and public transit agencies prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints;
- Include a plan to coordinate all construction activities with emergency service providers in the area at least one month in advance. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times.

CHAPTER 5
Consultation and Coordination

The agencies and persons consulted during the preparation of this IS/EA are listed below in **Table 5-1**. Copies of correspondence with such agencies and persons are included in **Appendix C**, which is available upon request. The distribution list for this IS/EA is also included here.

TABLE 5-1
AGENCIES AND PERSONS CONSULTED

Name	Affiliation	Address/Contact Information
Dave Singleton, Program Analyst	Native American Heritage Commission	915 Capitol Mall, Room 364 Sacramento, CA 95814
Anthony Rivera, Chairman		31211-A La Matanza Street San Juan Capistrano, CA 92675
Joyce Perry	Juaneno Band of Mission Indians Acjachemen Nation	4955 Paseo Segovia Irvine, CA 92612
David Belardes, Chairperson	Juaneno Band of Mission Indians Acjachemen Nation	32161 Avenida Los Amigos San Juan Capistrano, CA 92675
Sonia Johnston, Tribal Chairperson	Juaneno Band of Mission Indians	P.O. Box 25628 Santa Ana, CA 92799
Anita Espinoza	Juaneno Band of Mission Indians	1740 Concerto Drive Anaheim, CA 92807
Alfred Cruz, Cultural Resources Coordinator	Juaneno Band of Mission Indians	P.O. Box 25628 Santa Ana, CA 92799
Anthony Morales, Chairperson	Gabrielino/Tongva San Gabriel Band of Mission Indians	P.O. Box 693 San Gabriel, CA 91778
Robert Dorame, Tribal Chair	Gabrielino-Tongva Indians of California Tribal Council	P.O. Box 490 Bellflower, CA 90707
Linda Candelaria, Chairwoman	Gabrielino-Tongva Tribe	501 Santa Monica Blvd, #500 Santa Monica, CA 90401
Bernie Acuna	Gabrielino-Tongva Tribe	501 Santa Monica Blvd, #500 Santa Monica, CA 90401
John Tommy Rosas, Tribal Administrator	Tongva Ancestral Territorial Tribal Nation	tattnlaw@gmail.com
Cindi Alvitre	Ti'At Society	6515 E. Seaside Walk #C Long Beach, CA 90803
	Tustin Area Historical Society	395 El Camino Real Tustin, CA 92780
	Orange County Historical Society	P.O. Box 10984 Santa Ana, CA 92711
	Orange County Historical Commission	211 West Santa Ana Blvd. Santa Ana, CA 92701
Stacy S. James, Coordinator	South Central Coastal Information Center	California State University, Fullerton Department of Anthropology 800 North State College Blvd Fullerton, CA 92834
Samuel A. McLeod, Ph.D., Vertebrate Paleontology	Natural History Museum of Los Angeles County	900 Exposition Blvd Los Angeles, CA 90007
Sue Tanner, Secretary	Orange County Airport Land Use Commission	3160 Airway Avenue Costa Mesa, CA 92626
Roy Herndon	Orange County Water District	18700 Ward Street Fountain Valley, CA 92728

First Name	Last Name	Title	Organization	Division	Address	City	State	ZIP	IS/EA	NOI
NEWSPAPERS										
			Orange County Register-Recorder		www.ocregister.com					1
LIBRARIES										
			Orange County Public Library	Tustin Branch	345 E. Main Street	Tustin	CA	92780	1	1
			Orange County Public Library	Katie Wheeler Library	13109 Old Myford Rd.	Irvine	CA	92602	1	1
LOCAL--COUNTY--REGIONAL										
Terry	Roberts	Director	California State Clearinghouse	Governor's Office of Planning & Research	1400 Tenth St	Sacramento	CA	95812-3044	15	15
			County of Orange	Planning Department	300 N. Flower Street	Santa Ana	CA	92703	1	1
Tom	Daly	County Clerk	County of Orange		12 Civic Center Plaza, Room 101	Santa Ana	CA	92701		2
			Southern California Association of Governments	Orange County Regional Office	600 South Main Street, 9th Floor	Orange	CA	92863	1	1
			South Coast Air Quality Management District		21865 Copley Dr.	Diamond Bar	CA	91765	1	1
			County of Orange	Department of Public Health	P.O. Box 355	Santa Ana	CA	92702	1	1
			City of Tustin	Community Development Department	300 Centennial Way	Tustin	CA	92780	1	1
			City of Tustin	Public Works Department	300 Centennial Way	Tustin	CA	92780	1	1
			City of Irvine	Community Development Department	1 Civic Center Plaza	Irvine	CA	92623	1	1
			City of Irvine	Public Works Department	1 Civic Center Plaza	Irvine	CA	92623	1	1
Roy	Herndon		Orange County Water District		18700 Ward Street	Fountain Valley	CA	92708	1	1
		EIR Review Coordinator	Orange County Sanitation District	Reclamation Plant No. 1	10844 Ellis Avenue	Fountain Valley	CA	92708	1	1
			Municipal Water District of Orange County		18700 Ward Street	Fountain Valley	CA	92708	1	1
			Regional Water Quality Control Board	Santa Ana Region 8	3737 Main Street, Suite 500	Riverside	CA	92501	1	1
Johntommy	Rosas	Tribal Administrator	Tongva Ancestral Territorial Tribal Nation		tattnlaw@gmail.com					
STATE/REGIONAL (Sent by OPR as indicated on SCH Notice of Completion)										
			Calif. Dept. of Toxic Substances Control						x	
			California Air Resources Board						x	
			California Dept of Health Services						x	
			California Dept of Transportation						x	
			California Dept of Water Resources						x	
			State Water Resources Control Board						x	
			California Dept of Fish & Game						x	
			Native American Heritage Commission						x	
			Office of Historic Preservation						x	
									29	**32**
									TOTAL	**TOTAL**

CHAPTER 6
Report Preparers

6.1 Project Sponsors / Lead Agencies

Irvine Ranch Water District (CEQA)

Irvine Ranch Water District
15600 Sand Canyon Ave.800 Kern Street
Irvine, CA 92618-3102

Paul Weghorst – Project Director
Kellie Welch – Project Manager

U.S. Bureau of Reclamation (NEPA)

U.S. Bureau of Reclamation
Temecula, California

Doug McPherson – Project Manager

6.2 EIR Authors and Consultants

Environmental Science Associates

707 Wilshire Boulevard, Suite 1450
Los Angeles, California 90017

Tom Barnes – Project Director
Jennifer Jacobus – Project Manager

Technical Staff

Greg Ainsworth
Donald Ambroziak
Madeleine Bray
Justin Conley
Candace Ehringer, RPA
Gus JaFolla
Mitch Jenkins
Jason Nielsen
Eric Schniewind
Monica Strauss
Linda Uehara
Victoria Zalameda

PaleoSolutions

2035 Placentia Ave, Unit D
Costa Mesa, CA 92627

Geraldine Aron – Project Manager

CHAPTER 7
References

Aron, Geraldine, *Paleontological Assessment Sensitivity Report for the Irvine Water District Wells 1, 21, and 22 Project*, unpublished report on file at Environmental Science Associates, 2009.

Ballester, Daniel and Bai Tang, *Site Record for 30-176663*, on file at South Central Coastal Information Center, California State University, Fullerton, 2002.

California Air Pollution Control Officers Association (CAPCOA), 2008. CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act.

California Air Resources Board (CARB), Area Designations Maps/State and National, webpage (http://www.arb.ca.gov/desig/adm/adm.htm) updated July 26, 2007.

California Air Resources Board (CARB), 2006. Public Workshop to Discuss Establishing the *1990 Emissions Level and the California 2020 Limit and Developing Regulations to Require Reporting of Greenhouse Gas Emissions*. December 1, 2006.Cunniff, Patrick, *Environmental Noise Pollution*, 1977.

California Department of Fish and Game (CDFG), California Natural Diversity Database 3.1.0 for Tustin 7.5-minute topographic quadrangle. Information dated Nov 3, 2009.

California Department of Fish and Game. 2006. *Fish and Game Code of California*.

California Department of Transportation (Caltrans), *California Scenic Highway Mapping System*, accessed September 3, 2009: http://www.dot.ca.gov/hq/LandArch/scenic_highways/

California Department of Transportation (Caltrans), *The Construction Site Best Management Practices (BMPs) Manual*, March 2003, accessed December 8, 2009: http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf.

California Department of Transportation (Caltrans), *Technical Noise Supplement*, 1998.

California Native Plant Society (CNPS), CNPS Electronic Inventory for Lake Forest 7.5-minute topographic quadrangle. Available online at http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi, accessed March 2009.

California Native Plant Society Rare Plant Advisory Committee, (December 1983, revised June 2001). *Botanical Survey Guidelines of the California Native Plant Society*.

City of Irvine Municipal Code - rev. April 28, 2009.

City of Orange, *General Plan Program EIR*, February 10, 2009, accessed at http://www.edaw.com/orange/PDFs/EIR/08110170.02_Orange_GP_EIR_-_Chapter_4.pdf.

City of Tustin Municipal Code, June 21, 1994 (rev. July 1, 2008)

City of Tustin, *Municipal Code – 4614 Exterior Noise Standards,* adopted November 4, 2008, revised January 2009, accessed September 3, 2009: http://www.municode.com/resources/gateway.asp?pid=11307&sid=5

City of Tustin California, *City Code of Tustin California*, June 2009

City of Tustin, *General Plan*, June 17, 2008.

City of Tustin, 2004. *Recirculated Draft EIR/EIS MCAS Tustin Specific Plan/Reuse Plan*. Accessed December 21, 2009: http://www.tustinlegacy.com/articlePrint.cfm?id=50.

City of Tustin, Local Redevelopment Authority, MCAS Tustin Specific Plan, adopted February 3, 2003.

City of Tustin, Planning Department, *Reference Zoning Map*, 2008. Accessed September 3, 2009: http://www.tustinca.org/departments/commdev/documents/Planning and Zoning/Zoning-MAP.pdf

DDB Engineering, Inc., *IRWD Tustin Legacy Well 1 Project*, April 2009.

DDB Engineering, Inc., *IRWD Wells 21 and 22 Project*, April 2009.

Demcak, Carol, *Site Record for CA-ORA-1652*, on file at South Central Coastal Information Center, California State University, Fullerton, 2006.

Department of Conservation, *Farmland Mapping and Monitoring Program*, *Orange County*, August 2004.

Ehringer, Candace, *Phase I Cultural Resources Assessment for the Irvine Ranch Water District Wells 21 & 22/Tustin Legacy Well 1 Projects*, unpublished report on file at Environmental Science Associates, Los Angeles, CA, 2009.

Federal Emergency Management Agency (FEMA), 2009. National Flood Insurance Program, Flood Insurance Rate Map, Orange County, National Panel Number 06059C0277J, December 3.

Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2006.

Flock, James F. *Statement of BGEN James F. Flock, Assistant Deputy Commandant, Installations and Logistics, Headquarters, U.S. Marine Corps Before the Subcommittee on Readiness of the House Armed Services Committee on Historic Properties, 8 March 2006*, electronic document accessed at http://armedservices.house.gov/comdocs/schedules/2006.shtml on December 20, 2009.

Hanna, David C. Jr., and Michael W. Tuma, *Site Record for CA-ORA-350*, on file at South Central Coastal Information Center, California State University, Fullerton, 2004a.

Hanna, David C. Jr., and Michael W. Tuma, *Site Record for CA-ORA-351*, on file at South Central Coastal Information Center, California State University, Fullerton, 2004b.

Herndon, Roy, Orange County Water District, personal communication, December 4, 2009.

Houser, J.B., *Site Record for CA-ORA-373,* on file at South Central Coastal Information Center, California State University, Fullerton, 1972.

Orange County Airport Land Use Commission (ALUC), *Airport Environs Land Use Plan for John Wayne Airport*, Amended April 17, 2008.

Orange County Water District, Basin Model Run, T3ANX01B, T3ANX02B, November 20, 2009.

Orange County Water District, 2008. *Updated Assessment of TDS, Nitrate, and Perchlorate Concentrations in Tustin Area Groundwater*. Technical Memorandum to Fred Adjarian, City of Tustin, from Tim Sovich and Roy Herndon, OCWD, July 28, 2008.

Padon, Beth, *Site Update Information on CA-ORA-373,* on file at South Central Coastal Information Center, California State University, Fullerton, 1984.

PAR Environmental Services, Inc., *Site Record for 30-76837,* on file at South Central Coastal Information Center, California State University, Fullerton, 2006.

PBR, *Pacific Center East Specific Plan*, December 1990, Amended May 1994, prepared for City of Tustin.

Schuster, T.J., *Site Record for CA-ORA-373*, on file at South Central Coastal Information Center, California State University, Fullerton, 1977.

South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

South Coast Air Quality Management District (SCAQMD), 2003. *Final Localized Significance Threshold Methodology*, June 2003.

Sperry, Pat, *Site Record for CA-ORA-300*, on file at South Central Coastal Information Center, California State University, Fullerton, 1971a.

Sperry, Pat, *Site Record for CA-ORA*-301, on file at South Central Coastal Information Center, California State University, Fullerton, 1971b.

Sperry, Pat, *Site Record for CA-ORA-353,* on file at South Central Coastal Information Center, California State University, Fullerton, 1972a.

Sperry, Pat, *Site Record for CA-ORA-381,* on file at South Central Coastal Information Center, California State University, Fullerton, 1972b.

U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971.

CHAPTER 8
Comment Letters

The Initial Study/Environmental Assessment for the Wells 21 and 22 Project and Tustin Legacy Well 1 Project (collectively, "proposed project") was circulated for public review for 30 days (December 24, 2009, through January 22, 2010). IRWD received five comment letters during the public review period. The letters have been bracketed and numbered and are presented in the order listed in the table below.

COMMENT LETTERS RECEIVED

Comment No.	Commenting Agency	Date of Comment
1	California Department of Toxic Substances Control	January 13, 2010
2	City of Tustin	January 21, 2010
3	Orange County Department of Public Works	January 21, 2010
4	Orange County Water District	January 22, 2010
5	California Department of Transportation	January 22, 2010

JAN 14 2010
IRVINE RANCH WATER DISTRICT

Department of Toxic Substances Control

Linda S. Adams
Secretary for
Environmental Protection

Maziar Movassaghi, Acting Director
5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

January 13, 2010

Mr. Paul Weghorst
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, California 92618

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR THE TUSTIN WELLS 21 AND 22 PROJECT AND TUSTIN LEGACY WELL 1 PROJECT (SCH # 2009121071), ORANGE COUNTY

Dear Mr. Weghorst:

The Department of Toxic Substances Control (DTSC) has received your submitted draft Initial Study (IS) and proposed draft Mitigated Negative Declaration (MND) for the above-mentioned project. The following project description is stated in your document: "The proposed projects would recover and treat impaired groundwater to augment local water supplies and increase water supply reliability. The proposed project would install wellhead equipment on two existing groundwater wells (Wells 21 and 22), drill one production well (Tustin Legacy Well 1), and construct a new water treatment plant and water transmission pipelines in the cities of Tustin and Irvine. The proposed project includes construction and operation of four components: (1) supply facilities (Wells 21, 22 and Tustin Legacy Well 1 (TL-1), (2) raw water conveyance pipeline, (3) treatment facilities and brine disposal pipeline, and (4) finished water transmission pipeline. Well TI-1 would be newly constructed production well. Irvine Ranch Water District (IRWD) expects to select the final project site and acquire the selected property by early 2010. The proposed project is primarily located within the City of Tustin in Orange County, California, but a portion of the finished water pipeline is located in the City of Irvine. The proposed project components would be located near or at the former Marine Corps Air Station base – Tustin (MCAS Tustin), just south of Interstate 5 (I-5), east of State Route 55 (SR-55), north of Interstate Route 405 (I-405) and west of State Route 261 (SR-261). Wells 21 and 22 are located within a residential zoned area in the City of Tustin approximately one mile northeast of the former MCAS". DTSC has the following comments:

1) The MND should identify the mechanism to initiate any required investigation and/or remediation for sites within the proposed Project area that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents. Please see comment No. 9 below for more information.

For all identified sites, the MND should evaluate whether conditions at the site may pose a threat to human health or the environment. Following are the databases of some of the pertinent regulatory agencies:

- National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).
- EnviroStor: A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).
- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.
- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.
- Leaking Underground Storage Tanks (LUST) / Spills, Leaks, Investigations and Cleanups (SLIC): A list that is maintained by Regional Water Quality Control Boards.
- Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.
- The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).

DTSC - 1

2) All environmental investigations, sampling and/or remediation for any site within the project area should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of any investigations, including any Phase I or II Environmental Site Assessment Investigations should be summarized in the

DTSC - 2

document. All sampling results in which hazardous substances were found should be clearly summarized in a table. ↑ DTSC - 2 cont.

3) If buildings or other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should be conducted for the presence of other related hazardous chemicals, lead-based paints or products, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies. DTSC - 3

4) Project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination. DTSC - 4

5) Human health and the environment of sensitive receptors should be protected during the construction or demolition activities. If it is found necessary, a study of the site and a health risk assessment overseen and approved by the appropriate government agency and a qualified health risk assessor should be conducted to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment. DTSC - 5

6) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA. DTSC - 6

7) If during construction/demolition of the project, the soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented. DTSC - 7

8) If the site was used for agricultural, livestock or related activities, onsite soils and groundwater might contain pesticides, agricultural chemical, organic waste or other related residue. Proper investigation, and remedial actions, if necessary, should be conducted under the oversight of and approved by a government agency at the site prior to construction of the project. — DTSC - 8

9) DTSC can provide guidance for cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies that are not responsible parties under CERCLA, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA or VCA, please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489. — DTSC - 9

10) In future CEQA documents, please provide your e-mail address, so DTSC can send you comments both electronically and by mail — DTSC - 10

If you have any questions regarding this letter, please contact Mr. Rafiq Ahmed, Project Manager, at rahmed@dtsc.ca.gov, or by phone at (714) 484-5491.

Sincerely,

Greg Holmes
Unit Chief
Brownfields and Environmental Restoration Program - Cypress Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
state.clearinghouse@opr.ca.gov

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
1001 I Street, 22nd Floor, M.S. 22-2
Sacramento, California 95814
ADelacr1@dtsc.ca.gov

CEQA# 2770

Community Development Department

TUSTIN

BUILDING OUR FUTURE
HONORING OUR PAST

ENGINEERING & PLANNING
JAN 22 2010
IRVINE RANCH
WATER DISTRICT

January 21, 2010

Paul Weghorst
Project Director
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

SUBJECT: DRAFT INITIAL STUDY/ENVIRONMENTAL ASSESSMENT FOR IRWD TUSTIN LEGACY WELL 1 AND WELLS 21 AND 22 PROJECT

Dear Mr. Weghorst:

Thank you for the opportunity to provide comments on the Initial Study/Environmental Assessment for the construction of: 1) new wellhead equipment at two existing groundwater wells, 2) a new production well at Tustin Legacy, 3) a new water treatment plant and 4) water transmission pipelines in the cities of Tustin and Irvine.

The City of Tustin offers the following comments on the Draft Initial Study/Environmental Assessment:

1. The Initial Study/Environmental Assessment evaluates the potential effects on the environment from the construction and operation of the proposed new facilities (Wells 21, 22, Tustin Legacy Well 1, new water treatment plant, and water transmission pipelines) to demonstrate compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

   However, particularly as it relates to Tustin Legacy Well 1, the document fails to identify the context of the project within the scope of a previous environmental analysis nor does it utilize the established process for evaluating projects at Tustin Legacy (Former MCAS Tustin). A Final Joint Environmental Impact Statement/Environmental Impact Report (FEIS/EIR) and supplemental documents for the Disposal and Reuse of Marine Corps Air Station (MCAS) Tustin and the Mitigation Monitoring and Reporting Program were previously prepared by the City of Tustin and the Department of the Navy (DoN) in accordance with CEQA and NEPA. The document was prepared as a program FEIR/EIS. T-1A

   The Program FEIS/EIR analyzed the environmental consequences of the Navy disposal and local community reuse of the MCAS Tustin site per the Reuse Plan and the MCAS Tustin Specific Plan/Reuse Plan. The CEQA analysis also analyzed the environmental impacts of certain "Implementation Actions" that the City of Tustin, City of Irvine, and other responsible agencies would take to implement the MCAS Tustin Specific Plan/Reuse Plan. The FEIS/EIR and Mitigation Monitoring and Reporting Program were adopted by the Tustin City Council on January 16, 2001. The DoN published its Record of Decision (ROD) on March 3, 2001. On December 6, 2004 the City of Tustin certified a Supplement to the FEIS/EIR and on April 3, 2006, the City Council adopted Resolution No. 06-43 approving an Addendum to the

FEIS/EIR. The documents are hereinafter referred to collectively, as amended, as the Program FEIS/EIR. T-1A cont.

The MCAS Tustin Specific Plan proposed and the FEIS/EIR and Addendum analyzed a multi-year development period for the planned urban reuse project. When individual activities with the MCAS Tustin Specific Plan are proposed, such as the Well TL-1 improvements near Barranca Parkway, the City and/or responsible agency is required to examine the individual activities to determine if their effects were fully analyzed in the FEIS/EIR. The concept of a program document is intended to layer any additional supplemental analysis or addendum, as necessary, to fully clarify the project and to evaluate the full environmental impacts of such project. The City and/or the responsible agency can approve the activities as being within the scope of the project covered by the FEIS/EIR. If the City and/or responsible agency finds that pursuant to Sections 15162, 15164, and 15183 of the CEQA Guidelines that no new effects would occur, nor would a substantial increase in the severity of previously identified significant effects occur, then no supplemental or subsequent environmental document is required provided that the existing environmental documents adequately define and evaluate the project. Otherwise, an Addendum or Supplemental EIR would be required. This finding would be supported with actions taken by the City and/or responsible agency in approving and moving forward on a discretionary project (as part of the record and environmental findings). T-1B

As a result, a Mitigated Negative Declaration is not the appropriate action for the Tustin Legacy Well 1 portion of the projects described in the IRWD Negative Declaration. The Tustin Legacy Well 1 project and its associated evaluation needs to be bifurcated from the analysis of the non-Tustin Legacy improvements. The City of Tustin is also an approving authority for the Tustin Legacy Well Project and would be the lead agency for portions of the project which require its discretionary approvals (i.e. approval of an interim license, non-exclusive easements for public utility purposes to IRWD and well site access, and an exclusive easement for the well site). Since both IRWD and the City would be approving separate discretionary actions, it would seem appropriate that both agencies would be co-lead agencies for the Tustin Legacy Well 1 portion of the project in order to undertake the initial study and findings and conclusions noted above. Consequently, the City at this time, as a responsible and lead agency for the Tustin Legacy project does not support any IRWD approval of the document until revisions are made as requested and reviewed as acceptable by the City of Tustin. T-1C

2. Figure 1 (Page 1-2): The figure incorrectly identifies the location of the Tustin Legacy Well (TL-1) site and should be verified for accuracy. The City reviewed and approved a preliminary location for the well to be supported by a detailed legal description that has not been submitted by IRWD. Once the site and a preliminary legal description has been reviewed and approved, the City can concur with the site location for the Tustin Legacy Well 1 site. T-2

3. Page 2-1, First Paragraph: It is noted that a proposed treatment plant would be located at one of five alternative sites as shown on Figure 2. However, unfortunately, the level of detail for the properties identified on Figure 2 are of a scale that precludes adequate evaluation as to the impacts of such treatment facilities on adjacent uses and current underlying general plan and zoning for the locations noted. T-3A

Page 2-1, Third Paragraph: The paragraph discusses that a "Well TL-1 would be a newly constructed production well" and that it may be developed into a "full-scale production well" in the future. By breaking the project into smaller phases, the cumulative impacts of the overall project are not evaluated. Just as alternative treatment facilities are proposed, the potential full-scale production well phase, including transmission lines and treatment facility should also be evaluated at the same time in the initial study. Again, bifurcating the analysis for the well site as part of the "Program FEIS/EIR" and evaluating whether there has been any change in condition from what was evaluated in the MCAS Tustin Specific Plan or FEIS/EIR is the approach that should be used for the Tustin Legacy Well 1 project. T-3B

4. Page 2-2: Figure 2-1 is too broad to evaluate the specific components of each project (ie. Wells 21 and 22, new water treatment plant locations, and water transmission lines). As noted, the Tustin Legacy Well 1 analysis and its supporting project components need to be separately evaluated.

   More specifically on all project components (whether for the Tustin Legacy Well 1 or otherwise), more details need to be provided for the individual treatment and well facilities, and it is unclear where each of the different treatment plants and specific types of transmission lines (raw, potable, brine) will be located as they relate to the public right-of-way and property lines. T-4A

   Actual properties within the City of Tustin where well locations are identified should be specifically identified at a scale to determine uses around each site (addresses and legal descriptions as well as specific site locations exhibits needed). Further, if acquisition has not been obtained and authorities as necessary for the construction of any facilities including transmission pipelines, treatment facilities, etc. then the property owners affected need to be identified, and the size, square footage and interest necessary for acquisition need to be specifically identified and narratively described. T-4B

   Potential water treatment sites are also shown on Figure 2 south of Edinger Avenue. This is within a Pacific Center East Specific Plan Area that the City recently acquired at a cost of over $70 Million dollars for roadway and additional land area for redevelopment purposes. The vicinity and intersection area of Del Amo Avenue either on the north side of Edinger Avenue or on the east side of Del Amo Avenue as generally shown on Figure 2 have a high identify profile for the Pacific Center East Project Area. The City is unable to support IRWD siting a treatment facility within the limits of a redevelopment project area that has major regional significance, high identify and valuation considerations to the City of Tustin. Further, a review of the Pacific Center East Specific Plan does not indicate that a utility treatment facility would be permitted by the current Planned Community Development Regulations for these identified locations on Figure 2. More information on the three sites north of Walnut and south of the I-5 Freeway will have to be provided as to the specific properties involved for the City to be able to evaluate the potential impacts of a treatment facility on adjacent uses. T-4C

   Figure 2-1 also identifies proposed alternative pipeline route alignments of transmission lines which should not be identified until IRWD properly consults, as required by CEQA, with the City of Tustin as a responsible agency. Encroachment permits and authorization from the City T-4D

will be required. Further, there should be some relationship between the proposed pipeline route alignments that are identified and what would be clearly acceptable treatment facilities (see comments regarding information and issues associated with proposed potential Tustin water treatment sites). T-4-D cont.

Further, in the case of the location at Edinger Avenue and Newport Avenue where a proposed alignment of pipeline routes extends north of Newport (which is also identified on Figure 2), the City has currently programmed the Newport Avenue Extension Project (CIP 7131) in this vicinity which is a $54M project that would extend Newport Avenue north to Sycamore Avenue and construct a grade separated interchange under the SCRAA right-of-way and OCFD Flood Control Channel. Until the right-of-way limits are definitely established and design and construction of this improvement is completed, the proposed IRWD transmission routing is not acceptable and should be revised. T-4E

In the case of the Tustin Legacy Well 1, the bicurcated analysis needs to also identify the different types and locations of the pipeline transmission lines. Based on previous communications the City has had with IRWD, a treatment facility at Tustin Legacy has not been authorized by the City at this time. Further, the figure shows proposed pipeline routes within future public rights-of-way and roadway projects [Armstrong, Tustin Ranch Road (from Warner north all the way to Walnut the road is not yet completed), Park Avenue (west of Tustin Ranch Road to future Armstrong), and Newport Avenue]. However, the CEQA analysis needs to reflect the fact that the schedules for constructing the roadways are currently unknown which will likely not be by the 2011 well completion date identified by IRWD, as well as the vertical geometrics of the roadways and final grades of future improvements. This could impact the ability for the City to agree to grant any easements across the property for the pipelines at Tustin Legacy locations until more design features are definitive for several of the roadways and until precise grading is complete. Recognizing this constraint, the environmental documentation needs to evaluate alternative approaches for transmission until such time as definitive alignments and their depths can be established. This may require the reexamination of pipeline routing and transmission alternatives identified in Figure 2. T-4F

Further in the case of the future Tustin Ranch Road extension—there will be a grade separated interchange at Edinger Avenue which will extend over the SCRRA right-of-way, and any extension of IRWD lines would need to be coordinated with this design project and constructed so as to not be an impediment to the City's completion of the project. T-4G

5. Page 2-3:

   a. First Paragraph top of page - As noted in Comment #3 above, the Tustin Legacy Well 1 portion of the project needs to bifurcated and IRWD needs to address the cumulative impacts of Well TL-1 and integration into IRWD's water treatment and distribution. T-5A

   b. Second Paragraph - It is noted that IRWD will secure an exclusive easement. Per the Tustin City Attorney's office, the City will be only considering the grant of an exclusive easement for public utility purposes for the TL-1 Well site itself (all off-site pipeline easements will be for public utility purposes only and not isolated to IRWD, access will be also be non-exclusive and relocatable) after all environmental documentation is completed to Tustin's satisfaction and information and documents are approved by the City. T-5B

c. Third Paragraph – IRWD needs to submit all legal descriptions and exhibits for all easement and license areas for TL-1 to the City of Tustin, and they need to be reviewed and approved by Tustin prior to completing the environmental analysis. As part of the project, IRWD needs to identify not only alternatives that it has looked at, but the selected treatment facility site as well, in order to define the "project" as required by CEQA. T-5C

d. Fourth Paragraph – As noted above, the schedules for constructing future roadways within the City of Tustin at Tustin Legacy are currently unknown and do not correspond at this time to being "existing roadways" as described by IRWD—See comments above, the evaluations need to evaluate how the lines will be installed if the roads are not yet completed by the end of the IRWD project in 2011. T-5D

6. Page 2-4:

a. MCAS Tustin discussion - The City was designated as the Local Redevelopment Agency for the MCAS Tustin project in l991, and not l992. Designation of Lead Agency is not a federal designation under the base closure process but one under CEQA and NEPA. The City and Navy were determined Joint Lead Agencies for purposes of CEQA and NEPA with the City of Irvine transferring their lead agency responsibility to Tustin for CEQA/NEPA purposes. The Reuse Plan portion of the MCAS Tustin Specific Plan was adopted on October 17, 2006 and amended in September 1998. However, the Specific Plan portion of the document which regulates development was adopted on February 3, 2003 and amended several times (Ordinance 1294, 1295 on March 7, 2005, Ordinance 1297 on March 7, 2005, and Ordinance 1299 on June 5, 2005 and Ordinance 1311 on April 17, 2006.) T-6A

b. MCAS Tustin discussion - As part of the proposed project, it is indicated that Well TL-1 and potential sewer pipelines were identified. However, Section 2.9 of the Specific Plan identifies that they proposed to exchange existing rights along Red Hill Ave., including four abandoned well sites for four new well sites along Barranca Parkway with the actual location of the new well sites to be established during development project reviews to ensure compatibility with future land uses. IRWD does need to identify and reinforce the commitment as part of the project for abandoning all of the existing abandoned well sites and releasing title encumbrances on those sites and provide the more definitive location with regards to one of the four new well sites being proposed at this time. Second Paragraph – Well TL-1 will need to be screened pursuant to the MCAS Tustin Specific Plan, which will need to consist of one or more of the following as the City determines appropriate and approves: walls, landscape berms, or evergreen or deciduous trees or shrubs per the requirements of the Specific Plan. T-6B

7. Page 2-5:

a. Well TL-1- The City of Tustin will be the granting authority for the Well TL-1 easement. While IRWD indicates that a fence will enclose the well site, the well site will need to be screened specifically pursuant to the MCAS Tustin Specific Plan which will consist of one or more of the following as City determines appropriate (in our real estate negotiations with IRWD) including walls, landscape berms, or evergreen and deciduous trees or shrubs to ensure compatibility with adjacent proposed land uses. However, since this is a real T-7A

estate transaction, there are Legacy Park Design Guidelines for this area that detail architectural materials that should be used on ancillary structures and improvements that will have to be incorporated into the design. The project description at this time falls short of identifying enough information details to allow an adequate conformity determination with the Specific Plan and Design Guidelines. T-7A cont.

b. Well TL-1 - The City has not approved treatment facilities yet on the Well TL-1 Site and has indicated to IRWD that no treatment facilities at Tustin Legacy have yet been approved. The narrative implies that treatment facilities are proposed with no definitive information about the location and scale of any proposed treatment facilities and certainly no consultation with Tustin who control the disposition of real estate at Tustin Legacy. CEQA does not support breaking a project up into segments and evaluating the segments incrementally. If the TL-1 well will not function without treatment facilities then IRWD should discuss and consult on their location and design with the City of Tustin at this time. T-7B

c. Groundwater Conveyance Pipelines - As noted above, several of the defined pipeline routing locations are not consistent with current CIP projects under design in Tustin. Since approval of the City will be necessary with encroachment permits and the like, consultation of the best routing of the pipeline alignment alternatives should be worked out first since merely jack-bore segments as an approach will not be acceptable. T-7C

d. Treatment Facility - IRWD is too broad in its examination of alternative treatment facility sites and is not declaring the actual "project" site and providing the specifics of the project related to that site in order to provide an adequate opportunity to evaluate impacts. At this point, for instance, information should be identified on the selected site, and what specific site improvement are proposed (not if it's one story it will be one height and if its two stories it will be another height). As a responsible agency, consultation of project components within our boundary and as it affects coordination within the public right-of-way will be required. T-7D

8. Page 2-6: Brine Disposal Pipeline. See comments above regarding proposed pipeline alignment alternatives that require consultation with the City of Tustin. In particular, please see references to routing pipelines across MCAS Tustin before specific roadway alignments are finalized. T-8

9. Page 2-7:

a. Finished Water Transmission Pipeline. See comments above regarding the lack of project definition and reference merely to alternatives, which is not acceptable to the City. T-9A

b. Construction Scenario and TL-1 - As noted in the comments, the schedules for constructing future roadways within the City of Tustin are currently unknown. How will transmission occur and be installed if the roads are not yet completed by the end of the IRWD project. More detail on a site layout as part of the detailed project description should be provided T-9B

c. Fifth Paragraph:

i. Please clarify what is meant by "onsite settling basins". Please identify the location on the site location for the well. T-9C

ii. Please clarify where the discharge of discharged water will be discharged to the storm drain. There is no current storm drain in Aston—so where will storm drain discharge be transmitted to? It would seem that until infrastructure is in place at Tustin Legacy to accept discharge, discharge will need to be stored in tanks and taken off-site. What other options are being evaluated? T-9D

iii. Please identify the initial/potential depth of Well TL-1. T-9E

10. Page 2-8:

a. First Paragraph – Any waiver from the City of Tustin's Noise Ordinance is subject to the City of Tustin's sole approval and any inference that it will automatically be secured is inaccurate. Securing any such variance will need to be incorporated as a mitigation measure for Well TL-1. T-10A

b. Third Paragraph:

i. Additional clearances will be required from regulatory agencies for crossing any railroad and flood control easements and/or rights-of-way. The different responsible agencies and permits/clearances should be identified and incorporated as mitigation measures. See comments above regarding pipeline alignment alternatives that impact Tustin Ranch Road and Newport Avenue which correspond with Tustin right-of-way issues and construction projects. T-10B

ii. Since the extension of Tustin Ranch Road and the proposed grade separated overcrossing at Edinger Avenue is not yet constructed it would seem that the jack and bore method proposed to be used along the north side of the railroad right-of-way where a substantial grade difference exists between the grade of the future Tustin Ranch Road roadway and the existing railroad might be a coordination issue particularly since any right-of-way extension for the transmission lines north or south with future Tustin Ranch Road right-of-way would require approval by the City of Tustin. The same issue applies to the Newport Avenue extension. It, is therefore, not a simple pipeline installation across the railroad and flood control channels (in both locations) but coordinating with the actual design and construction of the future City improvements that has not been adequately taken into consideration by IRWD. T-10C

11. Page 2-9, First Paragraph: A portion of the proposed pipeline in future Tustin Ranch Road, north of Warner Avenue, would be located in a portion of property retained by the Department of the Navy (currently leased to the City of Tustin) due to the Navy's T-11

responsibility and on-going effort to remediate remaining groundwater contamination (trichloroethene). Any soil removal in this area is subject to review and approval of the City of Tustin and the Department of the Navy and may be subject to special handling and disposal procedures in the event contaminated soil is encountered. In addition, any pipeline construction may be subject to utilizing special construction techniques subject to review and approval of the Department of Navy, Department of Toxic Substances Control, and the Regional Water Quality Control Board. T-11 cont.

12. Page 3-1:

a. As noted above, the Tustin Legacy portions of the project need to be bifurcated from this initial study and dealt with in the context of a tiered document from the "program document". The City of Tustin also needs to be identified as a co-lead agency for portions of the project that we have full discretion over at Tustin Legacy (ie. all real estate approvals, licenses and easements, zoning approvals, etc) with the City contact person noted as Assistant City Manager Christine Shingleton, (714) 573-3107. T-12A

b. Section 10 (a future Checklist section) : T-12B

i. At Tustin Legacy and elsewhere within the City of Tustin, the City of Tustin will also be responsible for providing easements and licenses to IRWD.

ii. At Tustin Legacy, the Department of the Navy through a routing transmittal through the City of Tustin (as the lead coordinator with the Navy) will need to approve any proposed improvements within Navy-owned Lot 8 of Tract 17026 (north corner of Warner Avenue and Park Avenue). T-12C

iii. Within Tustin, clearances will be required from other agencies such as, but not limited to: Public Utility Commission, Southern California Regional Rail Authority, and Orange County Flood Control District. T-12D

13. Page 3-3: Aesthetics do not just involve impacts on scenic vistas but the impacts of a project on the quality of any area and the quality of the site and its surroundings. There has been nothing provided by IRWD in the project descriptions for any of the project components that provide enough detail regarding the specific architectural design and features of improvements that will be above-ground (well sites and treatment facilities). Without having site plans, and specific details including heights, colors and materials, and elevations, an adequate evaluation cannot be completed nor a finding of no impact (since there is nothing concrete and the conclusion would be merely speculative and unsubstantiated based on the lack of facts) or an identification of potential mitigation measures. T-13

14. Page 3-4, First Paragraph: As noted above, the analysis of alternative treatment sites is too broad and lacks the specificity needed to evaluate the sites in question and surrounding properties. It would seem significant that whether a building is present on a site or vacant, that there would be different impacts. As noted above, an evaluation of impacts on aesthetics is not limited just to properties or projects adjacent to a scenic vista. T-14A

The Project treatment facility location needs to be defined and the specifics of uses around it evaluated for impacts on aesthetics based on the characteristics of what is specifically being proposed on the site with buildings and improvements. T-14A cont.

Second Paragraph – In not tiering the analysis for the Well TL-1, IRWD has not complied with the minimum mitigation measures identified in the FEIS/EIR nor ensured compatibility with future development at Tustin Legacy. It is unclear how the proposed 6-foot security fence would provide adequate screening of a facility with equipment and appurtenances up to 35 feet in height. The City screening requirements will have to be met with specific plans of the facilities submitted to Tustin for approval, demonstrating that the required screen wall, etc and the specific design of the facilities is consistent with the MCAS Tustin Specific Plan, Legacy Park Design Guidelines, and will not degrade the existing and future visual character or quality of the site and its surroundings and future land uses. In the future revisions, reference and inclusion of the mitigation measures applicable as contained in the FEIS/EIR will be required including the requirement that IRWD provide all plans in a submittal to Tustin for review and approval by the City of Tustin for design related issues prior to the City entering into an easement agreement with IRWD. T-14B

Third Paragraph (b) No Impact and Less than Significant with Mitigation(c). The City is unable to concur with the conclusion of no impacts for any portion of the projects without the level of detail and corrections noted above. T-14C

15. Page 3-5, Mitigation Measures (c) and (d): The City is unable to concur that additional mitigation measures should not be required for any of the project components without more details as noted above and the corrections requested. Further, since new mitigation measures are identified under the Well T-1 site, the criteria for preparing a Supplemental EIR to the FEIS/EIR would be triggered. T-15

16. Page 3-8:

    a. Less than Significant (a). It is stated that the proposed project is consistent with current land use and zoning designations, but there has been no facts provided in the document to support that all project components including treatment facilities are consistent with current land use and zoning designations. This finding cannot be made and there has been no consultation with Tustin on the determinations as it affects the portion of the project within Tustin. T-16

17. Page 3-11, Second Paragraph – It is noted that the "project does not include any uses identified by the SCAQMD as being associated with odors;" however, there is no reference to the chemicals listed in Table 2-1 that will be delivered, used, and stored at the facility. A discussion related to the potential odors from these chemicals should be added to this section. T-17

18. Page 3-15, First Paragraph – It is likely that by creating Well TI-1 as a "full-scale production well," a connection to the existing Barranca Parkway transmission lines would need to be made. It is also unknown at this point when ultimate improvements to Barranca Channel (including placing the channel underground) will occur, thus likely resulting in the need for a connection across the existing open channel (which the City of T-18

Tustin owns the right-of-way for; OCFCD only has an easement). This potential issue and the impacts of such a connection need to be identified and evaluated within the context of the City retaining the control of the real estate (and not likely wanting to see a visual connection over or through the channel, certain permits that have been previously obtained from Army Corps of Engineers, Department of Fish and Game, and Regional Water Quality Control Board by the City of Irvine and Tustin's Master Developer (Tustin Legacy Community Partners, LLC) that will propose ultimately modifying/removing the channel.) T-18 cont.

19. Page 3-17, Section e): Please change the authority for tree trimming and removal on public property to the City Engineer. T-19

20. Page 3-18 through 3-26, Cultural Resources: In evaluating cultural resources particularly as it relates to the Tustin Legacy project, the tiering approach is required and any required mitigation measures as applicable to the Tustin Legacy project need to be identified in any environmental documentation with the same required mitigation measures identified in the FEIS/EIR, as amended. As the mitigation measures in this section of the analysis are reviewed, they are not consistent with the FEIS/EIR as applicable to any portion of the projects in Tustin Legacy. Refer particularly to Paleontological mitigation measures contained on pages 4-99 of the FEIS/EIR as applicable to the Well TL-1 site and related transmission pipelines, etc. T-20A

    a. On Page 23, as it relates to the rest of the project components, under Policy "f" all affected property owners should be added, including the City of Tustin, as needing to be identified as recipients of any monthly progress reports. T-20B

    b. On Page 3-24, Policy "h": All affected property owners, including the City of Tustin, need to be identified as recipients of any discovery reports. T-20C

    c. Page 3-25, Policies "d" and "h": All affected property owners, including the City of Tustin, need to be identified as recipients of any monthly progress reports and/or final mitigation reports. T-20D

    d. Page 3-26, MM CUL-3: Property owner notification needs to be added to the mitigation measure. T-20E

21. Page 3-32, Last Paragraph: As noted in comments above, a portion of the proposed pipeline in future Tustin Ranch Road, north of Warner Avenue, would be located in a portion of property retained by the Department of the Navy (currently leased to the City of Tustin) due to groundwater contamination issues. Any pipeline construction may be subject to utilizing special construction techniques subject to review and approval of the Department of Navy, Department of Toxic Substances Control, and the Regional Water Quality Control Board. In addition, this portion of the project is actually still part of three active projects on DTSC's Envirostar Database as they relate to MCAS Tustin, specifically the portion of future Tustin Ranch Road located within the Navy Carve-Out Area 9. CO-9 contains a contaminated groundwater plume containing trichloroethene (TCE). T-21

22. Page 3-33, Last Paragraph: Please note the incorrect location for Fire Station #37. Fire Station # 37 is located at the corner of Red Hill Avenue and Service Road not "Edinger." T-22

23. Page 3-34 through 3-37: The Initial Study/Environmental Assessment (IS/EA) does not address the potential negative impacts of Wells 21 and 22 on the City of Tustin's existing groundwater wells and treatment plants.

    a. Under Section 3.8 (Page 3-34/Item No. 8(b)), the checklist indicates that the project will have a less than significant impact in lowering the existing groundwater table. However, the City is concerned that Wells 21 and 22 could have a potentially significant impact on all City wells. T-23A

    b. A statement is made in Section 3.8 (Discussion/Section b/f Page 3-37) that OCWD's ground water model for the principal aquifer in the area of Wells 21 and 22 anticipates a 5-foot to 30-foot water level change within a distance of 3-miles of Wells 21 and 22. It should be noted that OCWD's groundwater model for Wells 21 and 22 was run at a combined production capacity of 5,000 acre-feet/year. Section 1.4 (Purpose and Need - Impaired Groundwater Quality/ Page 1-4) projects a higher production capacity of 7,900 acre-feet/year for Wells 21 and 22. The groundwater model run needs to be revised to reflect this higher capacity, and its impacts on the groundwater levels at each of the City's wells. The projected 5-foot to 30-foot water level change stated in the report may actually be a lot higher, and should be addressed. T-23B

    c. All of the City's wells are located within the zone of influence that would be created by Wells 21 and 22. Some of the City's wells are currently operating at, or close to, their pump bowl depth. The potential drawdown caused by Wells 21 and 22 could run these wells dry, causing a loss of production capacity and a decrease in the City's water system reliability. This issue needs to be addressed in the environmental documents prior to approval of reactivation of Wells 21 and 22. T-23C

    d. The City is concerned that this project could significantly impact the City's existing treatment plant capabilities. The IS/EA needs to evaluate the potential impacts of Wells 21 and 22 on each City well and treatment facility and develop mitigation measures to relieve those impacts. T-23D

24. Page 3-35: As noted, earthwork activities will require grading and soils excavation. Drainage and grading plans will require review and approval by the City of Tustin. Further, as it relates to the Well TL-1 and related facilities and pipelines, adequate storm drain facilities have not been installed at this time. Consequently, development of the well site by IRWD will require an evaluation of the impacts on drainage and an analysis of how the well site will drain given specific identified improvements, including but not limited to, the addition of any impervious surfacing on the sites. A hydrology study with calculations should be provided for review by Tustin as well as IRWD identifying how any runoff will be conveyed and to what existing storm drain locations (given that improvements at Tustin Legacy will be some time off into the future). IRWD would be responsible for any drainage lines needed to comply with City and County standards. Prior to issuance of any grading permits, the City will also require submittal by IRWD of a Water Quality Management Plan T-24

(WQMP) using City of Tustin Guidance for Preparing Project WQMP's. IRWD will also be responsible for certifying all structural best management practices described in the WQMP (not just a general reference to the *Manual*) have been constructed and installed in conformance with approved plans and specifications. Whether improvements are being constructed by a public agency, private entity or public utility, the City is required to require any project proponent to indemnify the City and Orange County Flood Control District against any and all claims, loss, liability or damages arising from damage to property or injury to persons resulting from flooding or erosion until completion of future improvements to the Peters Canyon Channel and Barranca Channel (and modification to channel to accommodate the proposed Legacy park Detention Basin). T-24 cont.

25. Page 3-36, Third Paragraph: Additional approvals may be required from the City of Tustin for storm drains that the City owns (not just approvals from RWQCB) and any above ground conveyance piping for discharging water encountered through dewatering activities. Alternatives to discharging into the storm drain system versus the sanitary sewage systems should be discussed. Furthermore, the statement is made that IRWD and/or its construction contractor would secure waste discharge requirements from the RWQCB to discharge waters extracted during the well drilling process to the storm drain system. It should be noted that such discharges into the storm drain system and/or the Barranca Channel directly have not been permitted in the past and are not expected to be permitted in the future. Therefore, IRWD should plan on discharging such waters into the sanitary sewer system T-25

26. Page 3-38, Paragraph (c), (d) and (e) conclusions: As noted in comments above, adequate specific information for each project component has not been provided to enable reviewers to fully evaluate the implications for the project and its environmental impacts. Consequently, the City cannot support the findings made by IRWD. T-26

27. Page 3-39, Last Paragraph and Page 3-40, top of page: It should be clarified that potential pipeline segments are proposed across private property north of Edinger Avenue from Treatment Facilities I and D. See above comments regarding pipeline routes and treatment facilities within the City of Tustin and Tustin concerns about the routes and treatment facility locations. As noted above, the well TL-1 and its related facilities should be bifurcated and tiered in its analysis using the FEIS/EIR. T-27A

Given the lack of specificity regarding site improvements and the specific locations of treatment facilities proposed, the actual project the District is pursuing has not been fully identified. It has also not been factually established that treatment facilities are consistent with specific land use and zoning requirements in the City of Tustin. While each well site and treatment area is identified in a potential general plan and zoning designation, there is no information provided establishing that the well and treatment facility uses would be permitted under the designations identified. There is also no specific information on proximity and specific type of uses around each site, nor the specific improvements to be constructed and their character to make an evaluation of the impacts of the facilities relevant and at the level of detail required by CEQA. Rather, conclusions are based on broad descriptions with no detailed analysis of existing conditions and impacts on existing and future uses. T-27B

28. Page 3-42: The proposed project would result in significant temporary and permanent noise impacts that need to be accurately identified to establish appropriate and effective mitigation measures. Therefore, the IRWD should conduct a thorough noise study for the proposed project that analyzes each construction site in detail and identifies on a location-specific basic all additional feasible noise mitigation measures which may include the installation of temporary noise attenuation walls around each construction site and regular noise monitoring during construction. Proposed Mitigation Measures Noise-1, 2 and 3 are too general and are not location-specific. T-28

29. Page 3-46: The absence of sensitive receptors in the vicinity of Well TL-1 does not justify the conclusion that "construction noise levels would be less than significant" because the City of Tustin exterior noise standards apply to both sensitive receptors in addition to less sensitive commercial and industrial properties. Potential noise impacts to employees and others at commercial and industrial properties needs to be analyzed, and corresponding mitigation measures included, in the Initial Study/Environmental Assessment. T-29

30. Page 3-47: The potentially significant construction noise impacts associated with the proposed construction of pipelines in the public right-of-way have not been adequately addressed in the Initial Study/Environmental Assessment. In addition to sensitive residential uses, there are also schools and places of worship located along the streets where the construction of pipelines is potentially proposed. Although it is indicated on Page 3-47 that pipeline construction would "move at a rate of approximately 100 to 200 feet a day" and that "sensitive receptors would be exposed to pipeline construction noise for very short periods of time," these temporary noise impacts could be very disruptive to residents, worshippers, students, and school faculty. For example, required school testing could be scheduled on a day when construction takes place. A mitigation measure should be included that would require the IRWD to consult with the Tustin Unified School District, and all homeowners associations, apartment owners, and leaders of places of worship along the construction routes to minimize disruption to these individuals. T-30

31. Page 3-47, Mitigation Measue Noise -3: Proposed Mitigation Measure Noise-3 would require construction to be limited to specified daytime hours, consistent with the City of Tustin Noise Ordinance. However, the construction of Tustin Legacy Well No. 1 would require daily 24-hour drilling for approximately one month, according to Section 3.11 of the Initial Study. It is indicated that IRWD would secure a waiver from the City of Tustin's Noise Ordinance, and that this waiver would exempt the construction of Tustin Legacy Well No. 1 from the City's noise provisions. Such an exemption, without feasible mitigated incorporated, would not be consistent with the California Environmental Quality Act, which requires the implementation of all feasible mitigation measures. The Initial Study/Environmental Assessment should identify all such mitigation measures related to construction during evening and nighttime hours. T-31

32. Page 3-47: As noted above, there are numerous schools along the proposed pipeline routes which will be affected by the construction of pipelines. Accordingly, the proposed noise mitigation measures should be modified and construction activities/ hours will need to be adjusted around schools and along the "Safe Routes to Schools" so as to T-32

minimize conflicts when schools are in session and to minimize conflicts with school drop-offs and pick-ups, and with children walking to and/from school. T-32 cont.

33. Page 3-42: The hours for operation and restrictions of the Noise Ordinance apply to all construction activity unless exemption granted. The description and discussion is not completely correct and presented by IRWD. While construction between the hours of 7:30 and 4pm would be permitted on Monday thru Friday, the hours would be 9am-5pm on Saturdays. No work is permitted on federal holidays. It is noted that construction of well TL-1 would require 24 hour drilling with an indication that a 24 hour waiver from the City's noise ordinance would be obtained from Tustin. This is not an assumption that should be automatic and one that would require approval by the City's Community Development Department. Further, any mitigation for well TL-1 should reflect the required noise mitigation measures in the FEIS/EIR. T-33

34. Page 3-44: A mitigation measure needs to be included to require obtaining any necessary approvals from the City of Tustin for variations from the City's Noise Ordinance for those provisions of the Noise Ordinance that are authorized to be modified. See comment #33 above. T-34

35. Page 3-47, MM Noise-2: The mitigation measure contradicts previous discussions that Well TL-1 would operate outside of the listed construction hours. See comments above T-35

36. Page 3-49, Population, Housing: Reference to characterizing Tustin as predominately Caucasian is misleading and not consistent with City's current demographic composition. Further, statistics for the areas proposed for the project components are more relevant (i.e. Census tract statistics) in characterizing the project environment and surrounding area. T-36

37. Page 3-50: The proposed project will significantly impact public services in that the project proposes significant pipeline installation on many roads that were only recently reconstructed (i.e. Edinger Avenue, Valencia Avenue, etc.). As such, there will be a significant costs to the City in that the integrity of the right-of-way improvements will be impacted by drilling and pipeline installations proposed by IRWD, resulting in increased maintenance costs and operational costs. The cost of the short and long range impact on the City's operational and maintenance costs of its right-of-way areas needs to be examined and evaluated along with identification of appropriate mitigation measures. IRWD needs to consult with Tustin on this issue prior to finalizing its analysis. T-37A

Further, we have found based on experience in Tustin that construction activities in the short run, such as pipeline installations, do disrupt traffic and require additional policing and traffic direction during construction. This has short term impacts on policing demands which can include overtime costs and redirection of normal policing priorities. IRWD needs to consult with Tustin on this fact in evaluating the project and determining appropriate mitigation measures. T-37B

38. Page 3-52. As noted above, the well TL-1 and its related facilities need to be evaluated in the context of the FEIR/EIR. As it relates to other impacts, any costs associated with traffic management plan preparation, policing costs incurred and other short term impacts T-38

to the City as a result of construction impacting Tustin rights-of-way areas will be a cost that will need to be borne completely by IRWD. T-38 cont.

39. Page 3-52: Mitigation Measure TR-1 needs to be enhanced to include a discussion concerning the implementation of a suitable plan for construction activities where schools and/or school children are affected. T-39

40. Page 3-53, Third Paragraph: The discussion regarding temporary parking is overly broad and since IRWD has not identified a project, there is really no specific information or identified staging or work areas that can be identified that would permit a full and adequate evaluation of the impacts of the project. There has been no information provided regarding the amount of parking needed for any project such as well construction or a treatment facility and certainly no information regarding required staging areas needed for pipeline installation and construction. As a consequence, the analysis is inadequate and does not meet the standard necessary for CEQA compliance. T-40

41. Page 3-53. Third Paragraph: The fire station that is listed as the closest station to the project is inconsistent with Section 3.7g on Page 3-37. T-41

42. Page 3-57: It is not possible to make the finding that all cumulative impacts have been considered with the cumulative project has not yet been evaluated, including the potential treatment facility and transmission lines at Tustin Legacy. T-42

43. Page 4-1: The Draft Initial Study/Environmental Assessment proposes implementation measures that serve to mitigate potential impacts to the environment. Although these measures are not referenced as mitigation measures, it would be informative to summarize the implementation measures in a similar manner as the mitigation measures are summarized in Chapter 4. T-43

44. Pages 4-5 and 4-6: Additional language needs to be included that notes that special attention needs to be paid to construction activity sequencing/timing/hours in areas where schools exist and school children travel to and from schools. On Page 4-5 under "Transportation and Traffic", additional language needs to be included that notes that special construction planning needs to be done at schools and along all routes to school. On Page 4-6 under first bullet point, it should be noted that access needs to be maintained at schools also. On Page 4-6 under the second bullet point, it should be noted that a comprehensive communications plan needs to be established with all affected schools and with the City of Tustin. T-44

45. Page 5-1. It is interesting to note that as a lead agency for its own discretionary actions and a responsible agency for all of the IRWD project components, the District did not previously consult with the City of Tustin. Given the proximity of project components (such as well sites and treatment sites) to established developed areas, the process that IRWD has taken has also failed to permit the property owners of affected and surrounding properties to meaningfully review the analysis completed by IRWD and provide their concerns. It would be strongly suggested that all property owners within 300 feet of a well or treatment alternative site be provided with notice of any revisions of the environmental analysis before it is acted on by IRWD. It would also be suggested that a map of any T-45

revised pipeline locations and routes be published in the Register and Tustin News with a notice of the evaluation process to provide residents, businesses and property owners with the opportunity to comment on any environmental evaluation that will impact them. T-45 cont.

Thank you again for the opportunity to provide comments on the Initial Study/Environmental Assessment for the project. We look forward to discussing the proposed project with you and your staff as you move forward. If you have any questions regarding the City's comments, please call me at (714) 573-3016 or Doug Anderson, Transportation and Development Services Manager at (714) 573-3172.

Sincerely,

Scott Reekstin

Scott Reekstin
Senior Planner

cc: Christine A. Shingleton, Assistant City Manager
Elizabeth A. Binsack, Community Development Director
Douglas S. Stack, Acting Public Works Director
Doug Anderson, Transportation and Development Services Manager
Dana Kasdan, Engineering Services Manager

S:\Cdd\SCOTT\Environmental etc\IRWD Wells 1 21 and 22 DMND Comment Letter.DOC

ORANGE COUNTY PublicWorks
Our Community. Our Commitment.

Jess A. Carbajal, Director
300 N. Flower Street
Santa Ana, CA
P.O. Box 4048
Santa Ana, CA 92702-4048
Telephone: (714) 834-2300
Fax: (714) 834-5188

NCL 09-041

January 21, 2010

Mr. Paul Weghorst
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

SUBJECT: Wells 21 and 22 Project; Tustin Legacy Well 1 Project

Dear Mr. Weghorst:

The County of Orange has reviewed the Initial Study/Environmental Assessment for Wells 21 and 22 Project and the Tustin Legacy Well 1 Project located in the cities of Tustin and Irvine. The following comments have been offered concerning flood, bikeways, riding and hiking trails, and watershed.

General

1. The project proponent will be requested to obtain an encroachment permit prior to beginning work within County of Orange Flood Control District right-of-way. — OCPW-1

2. If the project needs to temporarily close the Peters Canyon Class I Bikeway or the Peters Canyon Riding and Hiking Trail (in the area of Walnut Avenue) or the Barranca Class I Bikeway, a detour will be required. — OCPW-2

3. On Figure 1 it appears that Well TL-1 is depicted incorrectly, and should be shown at the south edge of Tustin, along Barranca Parkway. — OCPW-3

Bikeways

The Orange County Transportation Authority's *Commuter Bikeways Strategic Plan* identifies the following regional Class I (paved off-road) bikeways:

4. **Barranca Bikeway:** Located parallel to Barranca Parkway and the Barranca Channel (F09), this regional bikeway currently exists along the Barranca Parkway side of The District shopping center, and is proposed to ultimately connect the regional Class II bikeway along Red Hill Avenue to the regional Class I bikeway along Peters Canyon Wash. Class I bikeways are used for commuting, general transportation, and recreation by both bicyclists and pedestrians. — OCPW-4

The construction of Tustin Legacy Well 1 should not preclude the implementation of the Barranca Bikeway to Class I standards, and landscaped setbacks. OCPW-4 cont.

5. **Peters Canyon Bikeway:** In the project vicinity, this proposed regional bikeway is located along the east side of the Peters Canyon Channel. The construction of the treatment plant for Wells 21 and 22, if ultimately located along Peters Canyon Channel, should not impact this existing mountains-to-sea bikeway. Project design plans should also allow room for setbacks and landscaping. OCPW-5

Riding & Hiking Trails

The County's Master Plan of Regional Riding and Hiking Trails identifies the following regional trail:

6. **Peters Canyon Regional Riding and Hiking Trail:** In the project vicinity, this existing regional trail (from above Walnut Avenue south to the levee top and proposed from that location to below Edinger) is located on the west side of the Peters Canyon Channel on its levee service road. Project design plans should locate the manholes/vaults away from the trail and allow room for setbacks and landscaping. OCPW-6

Watershed

7. Beginning Page 1-3: The discussion on the current status of impairment of groundwater in the immediate vicinity of the proposed facilities should be expanded to address concentrations of selenium. References are made to Nitrate, TDS, Total Hardness, and color, with possible concentrations indicated for Nitrate, TDS, and Total Hardness, but not selenium, which would be expected to represent a significant problem as well. OCPW-7

8. Beginning Page 2-5: The description of the Treatment Facility should address the impervious area to be added, as well as the footprint of the building. OCPW-8

9. Page 2-7: It is noted that after a month of continuous drilling of Tustin Legacy Well 1, some water will need to be "discharged to the storm drain" under a permit from the Regional Water Quality Control Board. At present, such a discharge would appear to be regulated under Santa Ana Regional Water Quality Control Board Time Schedule Order R8-2009-0069 adopted 12/10/09, which specifically requires dischargers to evaluate alternatives to storm drain system disposal and report to the Board the feasibility of: "(1) discharge to land; (2) discharge to sewer; and (3) offsite transport and disposal." Absent technical data confirming this discharge would not present significant environmental impacts for selenium content, the required feasibility analysis needs to be conducted now, and made a part of the Negative Declaration public review. Additionally, discussion is needed as to what further contamination might result from the process of drilling. OCPW-9

10. Page 3-1: The Orange County Flood Control District needs to be added to the list of Responsible Agencies (Item 10), as IRWD will need the County's permission to place a potable water line over or under Peters Canyon Channel, as is proposed. OCPW-10

11. Beginning Page 3-11: The discussion on possible global warming impacts should note there may be more years of extreme weather, not merely more drought years. The discussion on consequent changes in State CEQA Guidelines needs to be updated, since the ND refers to actions that will occur in 2009, which is now past. OCPW-11

12. Page 3-28: The reference to "an Erosion Control Plan to minimize soil erosion during construction and prevent soil from washing off the construction site into storm drains natural habitats" seems to be missing a word or two. OCPW-12

13. Beginning Page 3-31: The discussion on the possible need to produce a Risk Management Plan for the new treatment facility for public review never clearly states whether such a Plan is required, despite the ND stating the exact quantities of chemicals that would be on-site on Page 2-6. As it is stated "the RMP" would contribute to reducing potential hazards to a level of insignificance, the ND needs to make clear whether it is in fact required and what the public review process will be. OCPW-13

14. Beginning Page 3-33: References are made to Mitigation Measure TR-3, which does not appear in the Summary of approved Mitigation Measures at the end of the ND. OCPW-14

15. Beginning Page 3-34: One of the key frameworks by which potential water quality impacts can be judged is whether or not waters to which project elements might drain are deemed "impaired" for the types of impacts that might be associated with that drainage. For example, Peters Canyon Channel is officially considered impaired (see the 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments) for pH, DDT and Toxaphene. It drains to San Diego Creek, which is officially considered impaired for Fecal Coliform, Selenium, other Metals, and Toxaphene. San Diego Creek drains to Newport Bay, which is officially considered impaired for Chlordane, Copper, DDT, other Metals, PCBs (Polychlorinated biphenyls), and Sediment Toxicity. OCPW-15

There is, however, neither focus nor analysis in this regard in the proposed Negative Declaration. There is, in fact, no mention of impaired surface water bodies that the project would drain to at all. One important focus should be on identifying the extent of selenium that might be present in the waters to be discharged to the storm drain system after the one month of drilling of Tustin Legacy Well 1 and addressing any possible impacts to downstream selenium impairments. DDT and Toxaphene should present less of an issue, since, as they tend to bind to particulate matter, screening of the well waste water and disposing of particulate matter other than into the stormdrain would seem an effective, appropriate, reasonable and feasible measure to implement.

16. Page 3-35: It is stated "implementation of standard construction procedures and practices as discussed in Section 7, Hazards and Hazardous Materials, and compliance with the Orange County Stormwater Program requirements regulating stormwater would also ensure that the water quality impacts related to the handling of hazardous materials from project construction would be less than significant": OCPW-16A

Point 1: There is no discussion in Section 3.7 (which appears to be the correct reference) to "standard construction procedures and practices", but only "compliance with applicable state and federal regulations…during construction";

Point 2: IRWD is not subject to the Orange County Stormwater Program and associated City/County construction inspections; and OCPW-16B

Point 3: It is not clear what specific elements of the Orange County Stormwater Program are being referenced as mitigating potential impacts during construction from "hazardous materials".

17. Page 3-36: Reference is made to securing "waste discharge requirements…from the RWQCB for discharge of (waters extracted during the well drilling process) to the storm drain system". It may not be presumed compliance with an NPDES permit reduces pollutants in a discharge to levels of insignificance, absent evidence to that effect. In this regard, please identify the potential impacts, particularly in terms of selenium in well water discharge, on downstream impaired surface water bodies, as well as the mitigations to discharge of alternate complete or partial: (1) discharge to land; (2) discharge to sewer; or (3) offsite transport and disposal. As Page 2-1 suggests this may be only the first of seven similar new wells, the cumulative impact of repeating this process seven times over needs to be considered. OCPW-17A

Reference is then made that "the proposed treatment plant would be designed to be compatible with the Orange County Stormwater Program…" and, later on Page 3-38, that "final design of the treatment plant would require adherence to the NPDES permits of the Santa Ana region…the proposed improvements where new impervious surfaces are introduced would include design measures to minimize potential impacts receiving waters to less than significant levels."

Since IRWD is not a Permittee of the Orange County Stormwater Program, the ND needs to be precise as to what measures are being voluntarily here agreed to by IRWD. For example, in the Santa Ana Regional Stormwater Permit, there are provisions for commercial/industrial projects creating more than 10,000 square of impervious area to "infiltrate, harvest and re-use, evapotranspire, or biotreat the 85th percentile storm event" as a design runoff capture volume, or otherwise treat any portion of such volume not so treated. OCPW-17B

18. Beginning on Page 3-48, the discussion on whether or not this infrastructure project would induce growth makes no mention of the General Plans of the cities involved. In particular it is stated on Page 3-50 that "the increased water supply would meet, but not exceed, the increased demands of planned growth", and on Page 3-57 that "implementation of the proposed project would allow IRWD to meet...the water demand of a future population as determined by long-range planning estimates", but it is never clear if the planning reference is to IRWD service area population projections, city population general planning, or both. OCPW-18

19. The statement is made on Page 3-55 that "the proposed improvements at Wells 21, 22, and TL-1 and the proposed treatment facility would include connections to the existing storm water system". Please describe which project elements would be using new stormdrain inlets as opposed to existing street gutters, sheet flow over existing impervious areas, etc. OCPW-19

20. On Page 3-58, duplicate reference is made to "Mitigation Measures NOISE-2 and NOISE-2". OCPW-20

If you have any questions, please contact Chris Uzo Diribe at (714) 834-2542.

Sincerely,

Michael Balsamo, Manager
Land Use Planning

DIRECTORS
CLAUDIA C. ALVAREZ, ESQ.
PHILIP L. ANTHONY
DON BANKHEAD
KATHRYN L. BARR
DENIS R. BILODEAU, P.E.
JAN DEBAY
IRV PICKLER
STEPHEN R. SHELDON
ROGER C. YOH, P.E.

ORANGE COUNTY WATER DISTRICT
ORANGE COUNTY'S GROUNDWATER AUTHORITY

OFFICERS
President
KATHRYN L. BARR
First Vice President
PHILIP L. ANTHONY
Second Vice President
JAN DEBAY
General Manager
MICHAEL R. MARKUS, P.E.

January 22, 2010

Paul Weghorst
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

Subject: **Wells 21 and 22/Tustin Legacy Well 1 Projects**
Initial Study/Environmental Assessment

Dear Mr. Weghorst:

The Orange County Water District (OCWD) appreciates the opportunity to submit comments on the Draft Initial Study/Environmental Assessment for the Irvine Ranch Water District – Wells 21 and 22 Project and the Tustin Legacy Well 1 Project dated December 2009.

OCWD was established by the State of California in 1933 to manage the Orange County Groundwater Basin. Our comments reflect OCWD's interest in protecting groundwater quality and managing the groundwater basin.

OCWD comments are as follows:

- Section 3.7 of the Draft Initial Study/Environmental Assessment indicates that a database search was done to determine the presence of hazardous sites in the project area. Please clarify if this database search identified any sites with groundwater contamination and/or ongoing contamination cleanup activities within one mile of the proposed project sites. The environmental analysis should examine any potential impacts to groundwater contamination plumes. Potential impacts that should be considered include spreading of groundwater contaminant plumes, if any, due to changes in groundwater flow velocity caused by pumping and potential impacts to remediation systems. If needed, mitigation measures should be proposed. OCWD-1

- In relation to the Tustin Legacy Well 1 project, the environmental analysis should examine any potential impacts to the volatile organic compound (VOC) plume that is currently being remediated by the United States Department of the Navy at the Marine Corps Air Station Tustin site. The potential impacts that should be considered include spreading of the VOC plume due to changes in groundwater flow OCWD-2

PO Box 8300
Fountain Valley, CA 92728-8300
18700 Ward Street
Fountain Valley, CA 92708
(714) 378-3200
(714) 378-3373 fax
www.ocwd.com

velocity caused by pumping and potential impacts to the remediation system. If needed, mitigation measures should be proposed. OCWD-2 cont.

- The proposed project includes one of potentially four production wells that may be drilled as part of the Tustin Legacy Wellfield as discussed in Section 2.1 of the Draft Initial Study/Environmental Assessment. The Draft Initial Study/Environmental Assessment indicates that IRWD intends to prepare separate environmental documentation for the additional wells. The evaluation of potential impacts to VOC plume migration and plume remediation systems should evaluate the cumulative impacts of all four wells. OCWD-3

- Section 3.8 on page 3-37 Draft Initial Study/Environmental Assessment states that the proposed Tustin Legacy Well "was already factored in to the modeling runs for the basin as part of the development of OCWD's 2009 Groundwater Management Plan" and concludes that "the potential effects of groundwater extraction from this well have been incorporated into the overall management of the basin such that there would be no significant loss of groundwater supplies to the basin." Please cite the location of information contained in the Groundwater Management Plan and how that information led to the conclusion stated above. OCWD-4

- OCWD's groundwater modeling evaluation referenced in the draft IS/MND estimated groundwater level decreases of between 11 and 16 feet at five City of Tustin production wells (T-17S2, T-17S4, T-NEWP, T-MS3, and T-MS4) used to extract groundwater impaired with nitrate and/or salts. OCWD provides a BEA exemption for these Tustin wells due to the water quality benefit that they provide to the basin. We consider the estimated water level decreases to constitute a negative impact if they cause the City of Tustin to reduce its production from its wells. This potential impact should be described and addressed in the IS/MND. OCWD-5

Thank for the opportunity to submit these comments. We look forward to working cooperatively with you on the proposed projects. If you have any questions regarding our comments please contact Greg Woodside at gwoodside@ocwd.com or 714-378-3275.

Sincerely,

Craig D. Miller, P.E.
Executive Director of Engineering and Planning

DEPARTMENT OF TRANSPORTATION
District 12
3337 Michelson Drive, Suite 380
Irvine, CA 92612-8894
Tel: (949) 724-2241
Fax: (949) 724-2592

ENGINEERING AND PLANNING
JAN 27 2010
IRVINE RANCH
WATER DISTRICT

Flex your power!
Be energy efficient!

January 22, 2010

Paul Weghorst
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, California 92618

File: IGR/CEQA
SCH#: 2009121071
Log #: 2441
I-5, SR-55, SR-261

Subject: Wells 21 and 22 Project; Tustin Legacy Well 1 Project

Dear Mr. Weghorst,

Thank you for the opportunity to review and comment on the **Initial Study and Mitigated Negative Declaration (MND) for the Wells 21 and 22 Project and Tustin Legacy Well 1 Project.** The proposal is to install wellhead equipment on two existing groundwater wells (Wells 21 and 22), drill one production well (Tustin Legacy Well 1), and construct a new water treatment plant and water transmission pipelines. The project sites are located at or near the former Tustin Marine Corps Air Station Base in the cities of Tustin and Irvine. The nearest State route to the project sites are I-5, SR-55 and SR-261.

The Department of Transportation (Department) is a responsible agency on this project and we have the following comments:

1. As part of Mitigation Measure TR-1 (as listed on Page 3-52 of the Initial Study/Environmental Assessment), a Traffic Control/Traffic Management Plan shall be submitted to Caltrans, summarizing the procedures that may be used to minimize traffic impacts and the process for distribution of accurate and timely traffic information to the public. DOT-1

2. Any project work proposed in the vicinity of the Department's right-of-way would require an encroachment permit and all environmental concerns must be adequately addressed. If the environmental documentation for the project does not meet the Department's requirements, additional documentation would be required before approval of the encroachment permit. Please coordinate with Department to meet requirements for any work within or near State right-of-way. All entities other than the Department working within the Department's right-of-way must obtain an Encroachment Permit prior to commencement of work. Please allow 2 to 4 weeks for a complete submittal to be reviewed and for a permit to be issued. When applying for an Encroachment Permit, please incorporate Environmental Documentation, SWPPP/ WPCP, Hydraulic Calculations, Traffic Control Plans, Geotechnical Analysis, right-of-way certification and all relevant design details including design exception approvals. For specific details on the Caltrans Encroachment Permits procedure, please refer to the Caltrans Encroachment Permits Manual. The latest edition of the manual is available on the web site: http://www.dot.ca.gov/hq/traffops/developserv/permits/ DOT-2

Please continue to keep us informed of this project and any future developments, which could potentially impact the State Transportation Facilities. If you have any questions or need to contact us, please do not hesitate to call Marlon Regisford at (949) 724-2241.

Sincerely,

Maryam Molavi, Acting Branch Chief
Local Development/Intergovernmental Review

CHAPTER 9
Response to Comments

The Initial Study/Environmental Assessment for the Wells 21 and 22 Project and Tustin Legacy Well 1 Project (collectively, "proposed project") was circulated for public review for 30 days (December 24, 2009, through January 22, 2010). IRWD received five comment letters during the public review period from the California Department of Toxic Substances Control, the City of Tustin, the Orange County Department of Public Works, the Orange County Water District, and the Department of Transportation. The letters have been bracketed and numbered in the order listed in the table below. The bracketed letters are included in Chapter 8.

COMMENT LETTERS RECEIVED

Comment No.	Commenting Agency	Date of Comment
1	California Department of Toxic Substances Control	January 13, 2010
2	City of Tustin	January 21, 2010
3	Orange County Department of Public Works	January 21, 2010
4	Orange County Water District	January 22, 2010
5	California Department of Transportation	January 22, 2010

IRWD's responses to these comment letters are provided below. Some of the topics and issues addressed in the comment letters are similar and overlap across comments and/or across agencies. As such, IRWD has prepared summary responses to three issues, which are presented first in Section 1.0. In Section 2.0, IRWD provides individual responses to the bracketed comments in each agency's letter. Where appropriate the individual responses include references to the summary responses. The summary responses are cross-referenced, where applicable, in response to the bracketed comments.

1.0 Summary Issue Responses

1.1 Summary Issue 1: Well Operation

1A. Well Drawdown and Effects on Neighboring Wells

As described in Section 3.8 (b)(f) on pages 3-37 and 3-38 of the IS/EA, operation of Wells 21 and 22 would have a local effect on groundwater levels within an approximately three-mile radius.

The rest of the basin would not be significantly altered from operation of Wells 21 and 22. Operation of the wells as intended would result in a lowering of groundwater levels in the principal aquifer, ranging between 5 and 30 feet within the three-mile radius as shown in Figure 2 of Appendix B of the IS/EA. Five existing wells owned and operated by the City of Tustin that recover water from the principal aquifer are included in this three-mile radius (T-17S2, T-17S4, T-NEWP, T-MS3, and T-MS4). OCWD provides a BEA exemption for these wells, which pump from the same zone intended for the proposed Wells 21 and 22. Thus, the City is also extracting impaired water from the Irvine Groundwater Sub Basin for beneficial uses.

Operation of Wells 21 and 22 would not substantially deplete groundwater supplies or substantially lower groundwater elevations in the basin. Rather, the proposed project would put impaired groundwater to beneficial use and as such, act to remediate groundwater quality in the sphere of influence and contain the spread of poor quality groundwater. However, operation of Wells 21 and 22 could result in a localized decrease in groundwater levels at the above-mentioned City wells of between 11 and 16 feet, as determined by the Basin Model run prepared by OCWD for the proposed project (see Appendix B of the IS/EA). This localized decrease would not prevent the City from operating its wells or drop the production rate of its wells to a level that would not support existing land uses or planned uses for which permits have been granted (CEQA Guidelines, Appendix G, Section VIII(b)). The localized decrease in groundwater levels is within the existing range of variability for groundwater levels in the project area as evidenced by annual groundwater elevation hydrographs prepared by OCWD and reported in their *2007-2008 Engineer's Report on the Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District*. All flow rate and pressure zone service capabilities of wells in the Orange County Groundwater Basin are subject to the normal range of variability in groundwater levels. The localized decrease in groundwater levels due to operation of Wells 21 and 22 could cause the City to incur minor additional costs to operate the wells, due to an increased energy requirement to pump the water from a lower depth up to the surface. This is an economic effect, not an environmental effect, of the proposed project. The IS/EA evaluates the environmental impacts of the proposed project. CEQA does not require an analysis of economic effects, and economic effects of a project are not to be considered significant effects on the environment (CEQA Guidelines Section 15131). The IS/EA concludes that the lowering of groundwater levels up to 16 feet at City wells is not a significant impact.

Any groundwater pumped that is located within the Orange County Groundwater Basin is subject to a replenishment assessment to recover the costs associated with recharging the Basin. The groundwater basin is managed by OCWD for the benefit of the overlying producers in the region, and the proposed project would not deplete groundwater sources, but rather further augment local water supplies through the increased production of the local resource.

The following changes have been made on page 3-38 of the IS/EA:

> Therefore, based on these modeling results, implementation of the proposed project would result in a lowering of groundwater levels ranging from 5 to 30 feet in a three mile radius of Wells 21 and 22. The rest of the basin would not be significantly altered from

the proposed pumping in any of the three identified aquifers. The localized lower groundwater levels would create a cone of depression that would help contain the spread of groundwater with poor water quality. The lower groundwater levels may be realized at existing production wells within three miles of Wells 21 and 22, including five wells owned and operated by the City of Tustin (T-17S2, T-17S4, T-NEWP, T-MS3, and T-MS4). OCWD provides a BEA exemption for these City wells, which pump impaired water from the principal aquifer. Operation of Wells 21 and 22 would result in a localized decrease in groundwater levels at the above-mentioned City wells of between 11 and 16 feet, as determined by the Basin Model run prepared by OCWD for the proposed project (see Appendix B). This localized decrease would not prevent the City from operating its wells or drop the production rate of its wells to a level that would not support existing land uses or planned uses for which permits have been granted. Rather, the localized decrease in groundwater levels may cause the City to incur additional costs to operate the wells, due to an increased energy requirement to pump the water from a lower depth up to the surface. The localized decrease in groundwater levels is within the existing range of variability for groundwater levels in the project area as evidenced by annual groundwater elevation hydrographs prepared by OCWD and reported in their *2007-2008 Engineer's Report on the Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District*. ~~A localized lowering of impaired groundwater that would not otherwise be suitable for use is therefore considered to be less than significant.~~

1B. Hazardous Materials and Contaminant Plumes

Areas of contaminated groundwater have been delineated on the former Marine Corps Air Station (MCAS) Tustin as well as north of Wells 21 and 22 (See Response T-11 in Section 2.0 below). These groundwater contaminant plumes are located in the shallow aquifer, which is substantially separate from the principal aquifer by an intervening aquitard (MCAS Tustin Specific Plan/Reuse Plan FEIS/EIR, page 3-100; U.S. Department of the Navy (DON) and City of Tustin, 2001; DON, 2001; DON 1998). The Basin Model run performed by OCWD for the proposed project provides evidence of the substantial separation between the shallow and principal aquifer; the results show no impact to the shallow aquifer when pumping Wells 21 and 22 from the principal aquifer (see Appendix B, Figures 1 and 2).

Wells 21 and 22 are completed in the principal aquifer at 1110 and 1028 feet below ground surface (bgs), respectively, in the same zone as the City of Tustin wells described above. Well TL-1 also will be completed in the principal aquifer, no deeper than 1300 feet bgs. Due to the substantial hydraulic separation between the shallow and principal aquifers in the project area, operation of Wells 21 and 22 would affect the principal aquifer (Appendix B, Figure 2) but not the shallow aquifer (Appendix B, Figure 1) or the associated contaminant plumes. Thus, Wells 21 and 22 would not cause the location of the plumes to change or migrate and would not affect any ongoing remediation activities. Well TL-1 will be an exploratory well and any pumping associated with this well would be restricted to water quality testing and production capacity testing. Operation of Well TL-1 as an exploratory well would result in operation of the well for

approximately three weeks. This short-term operation of Well TL-1 would have no affect on contaminant plumes or ongoing remediation activities.

1.2 Summary Issue 2: CEQA Procedures

2A. Lead Agency

According to the CEQA Guidelines Section 15051, if two or more agencies are involved in a project, the determination of lead agency is governed by the following criteria:

(a) If the project will be carried out by a public agency, that agency shall be the lead agency even if the project would be located within the jurisdiction of another public agency.

The proposed project would be carried out by IRWD within the jurisdiction of the City of Tustin and the City of Irvine. Thus, IRWD is the Lead Agency for the proposed project. According to the CEQA Guidelines Section 15367, the lead agency "has the principal responsibility for carrying out or approving a project" and decides whether an EIR or negative declaration is required for the project. As the Lead Agency for the proposed project, IRWD has determined that a Mitigated Negative Declaration (MND) is the appropriate environmental document based on the IS/EA.

The City of Tustin is considered a Responsible Agency for the proposed project. According to the CEQA Guidelines Section 15381, a responsible agency is a public agency other than the lead agency that has "discretionary approval power over the project." The City of Tustin would have discretionary approval authority over the exclusive easement for Well TL-1 and encroachment permits for facilities in the public right-of-way of city streets. The discretionary approval for the easement has been added to the list of approvals on page 3-1 of the IS/EA.

2B. Tiering

The City of Tustin and the U.S. Department of the Navy (DON) jointly prepared the MCAS Tustin Specific Plan/Reuse Plan Final Program Environmental Impact Statement/ Environmental Impact Report (FEIS/EIR). The proposed Tustin Legacy Well 1 (TL-1) would be located within the boundaries of the MCAS Tustin Specific Plan within the City of Tustin. Depending on the final proposed treatment plant location for Wells 21 and 22, some water transmission pipelines may be located within the boundaries of the MCAS Tustin Specific Plan. The FEIS/EIR analysis includes the provision of water and sewer services and infrastructure to the Specific Plan area. Although not explicitly part of the project description or the alternatives considered, the FEIS/EIR mentions IRWD's interest in exchanging four existing well properties on the northwest side of the former MCAS Tustin for four new well sites near the southern border, where the proposed exploratory Well TL-1 is planned to be located. The FEIS/EIR states the actual sites would be negotiated between IRWD and the City of Tustin. The FEIS/EIR provides no mitigation measures explicitly associated with these four potential new wells. The FEIS/EIR does not

analyze the effects of IRWD operating new wells onsite or offsite of the MCAS Tustin Specific Plan area.

IRWD is not required under CEQA to prepare a document that would tier from the FEIS/EIR. Tiering is "encouraged" under CEQA when a previous environmental document can "eliminate repetitive discussions of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environment review" (CEQA Guidelines Section 15152(b)). As Lead Agency, IRWD has prepared the IS/EA as a stand-alone document that fully evaluates the environmental impacts of the proposed project and includes mitigation measures where necessary to reduce environmental impacts to less than significant levels. In particular, for the Well TL-1 component of the proposed project, the IS/EA includes all necessary analysis and mitigation measures pertaining to potential environmental effects. The IS/EA does not tier from the FEIS/EIR and as such no mitigation measures from the FEIS/EIR apply to Well TL-1 or other project components.

1.3 Summary Issue 3: Pipeline Alignments

The proposed pipeline alignment alternatives associated with potential treatment plants located in Area 1 or Area 2 are shown in Figure 2. Figure 2 has been revised to provide additional detail, as requested, regarding the location of project facilities and alternatives being considered. Transmission pipelines, including raw water, treated water, and brine disposal pipelines, would be located primarily within public right-of-way of public roadways. Prior to implementing the proposed project, IRWD would request encroachment permits from the City of Tustin and the City of Irvine for installation of the pipelines in the public right-of-way. The final pipeline alignments will be determined by the final treatment plant location and are subject to encroachment permit approval by the cities. If any portion of the pipelines is required to cross private property, then IRWD would secure an easement from the property owner prior to finalizing the pipeline route and initiating construction.

Depending on the final treatment plant location, transmission pipelines would need to cross the Southern California Regional Rail Authority (SCRRA) right-of-way (ROW) and the Orange County Flood Control District (OCFCD) channel and easement in one of three locations where the railroad ROW and flood control channel run parallel to Edinger Avenue in the City of Tustin. Prior to implementing the proposed project, IRWD would request encroachment permits from the SCRRA and OCFCD for the pipeline crossings of each agency's facilities. As described in Chapter 2 of the IS/EA, IRWD would require its construction contractor to utilize jack-and-bore methods to install the pipeline underneath the railroad and flood control channel to avoid disturbance of either facility. The final pipeline alignments and the associated locations of railway and flood control channel crossings will be determined by the final treatment plant location and are subject to permit approval by the SCRRA and OCFCD.

If the treatment plant is located in Area 1, then as shown in the revised Figure 2, there are two options for the proposed brine disposal pipeline. One optional alignment is to run the brine disposal pipeline along the existing Tustin Ranch Road and then across the MCAS Tustin within

the right-of-way for the future extension of Tustin Ranch Road. The right-of-way for this future roadway has not been finalized and the roadway will not be constructed prior to IRWD's proposed installation of pipelines; therefore the final alignment for this optional alignment will be coordinated with the City of Tustin. The second optional alignment is to run the brine disposal pipeline along the existing Tustin Ranch Road and then along Edinger Avenue to Red Hill Avenue. The final alignment for the pipeline will be coordinated with the City as part of the application for an encroachment permit. In addition, the City's Capital Improvement Projects (CIPs) include an extension of Tustin Ranch Road over the SCRRA right-of-way and flood control channel and onto MCAS Tustin. This CIP will not be complete prior to IRWD's proposed installation of pipelines. The final alignment for the pipeline will be coordinated with the City as part of the application for an encroachment permit.

If the treatment plant is located in Area 2, then as shown in the Revised Figure 2, the proposed raw water pipeline could cross the SCRRA ROW and flood control channel at either Newport Avenue or at School Lane. The potential pipeline crossing at Newport Avenue coincides with the City's CIP 71731, Newport Avenue Extension Project, which would connect Newport Avenue to Edinger Ave by potentially crossing under the railway and flood control channel. The City has not finalized the right-of-way limits for the future roadway connection. The final alignment for the pipeline will be coordinated with the City as part of the application for an encroachment permit. Any crossing at Newport Avenue would also be coordinated with the City of Tustin.

The text of the IS/EA has been modified as follows:

> Page 2-5:
> The conveyance pipeline would be constructed primarily within roadway rights-of-way, and depending on the treatment plant location, could require jack-and-bore segments where the pipeline crosses the Southern California Regional Rail Authority (SCRRA) right-of-way and Orange County Flood Control District (OCFCD) channel. ~~Metrolink railroad track~~.
>
> Page 2-6 to 2-7:
> The pipeline across MCAS Tustin would be located within the future extension of Tustin Ranch Road as identified in the MCAS Reuse Plan and would require one jack-and-bore segment where Tustin Ranch Road crosses the SCRRA right-of-way and OCFCD channel ~~Metrolink railroad track~~ just north of Edinger Avenue.

2.0 Comment Letter Responses

Letter 1: Department of Toxic Substances Control

Comment DTSC-1

The comment states that the MND should identify the mechanism for investigating and/or remediating contaminated sites in the project area. The comment states that for all identified sites,

the MND should evaluate whether conditions at the identified sites would pose a threat to human health or the environment. The comment lists databases pertinent to identifying contaminated sites.

Response DTSC-1

A search of Cortese List databases was conducted for locations of hazardous materials sites in the project area (see page 3-32 of the IS/EA). See Response T-11 below for additional information about contaminated sites not included on the Cortese List.

Comment DTSC-2

The comment states that environmental investigations, sampling, and remediation for contaminated sites within the project area should be conducted under a Workplan approved by the appropriate regulatory agency.

Response DTSC-2

If hazardous materials are discovered during project implementation, the appropriate regulatory agencies with jurisdiction over the materials would be notified, and IRWD would comply with existing hazardous waste handling and disposal regulations.

Comment DTSC-3

The comment states that if buildings or structures are planned for demolition then an investigation for hazardous materials should be conducted, and if found, contaminants should be remediated in compliance with California environmental regulations and policies.

Response DTSC-3

The final selection of the treatment plant location would determine whether the proposed project would require demolition of an existing building. If demolition is required, then IRWD and the construction contractor would comply with all relevant environmental regulations to identify if any hazardous materials are present on site. If hazardous materials are found, then IRWD would comply with all applicable hazardous waste handling, disposal and, if necessary, remediation regulations.

Comment DTSC-4

The comment states that project construction may require soil excavation or filling and that sampling is required to determine if excavated soils or soils intended for backfill are contaminated. Land Disposal Restrictions may be applicable to contaminated soils.

Response DTSC-4

If contaminated soils are encountered during project construction, IRWD would be required to comply with the USEPA's Land Disposal Restrictions (LDR) Program before disposing of such soils in any landfill. The LDR program ensures that toxic constituents present in hazardous waste are properly treated before hazardous waste is land disposed. IRWD would ensure that any

contaminated soils are treated to the standards required by the LDR Program before being placed in a landfill. See Response T-11 below for additional information about the potential presence, handling, and disposal of contaminated soils on MCAS Tustin; Mitigation Measure HAZ-1 has been added to ensure coordination with the U.S. Department of the Navy (DON) and the City of Tustin prior to construction of transmission pipelines across MCAS Tustin.

Comment DTSC-5

The comment states that a health risk assessment may be required to ensure that the project construction and demolition activities do not adversely affect sensitive receptors, human health, or the environment.

Response DTSC-5

As described in Section 3.3(d) of the IS/EA, project construction activities would not adversely affect sensitive receptors. IRWD has determined that a health risk assessment is not required. IRWD would comply with regulations regarding the handling and disposal of hazardous waste during project construction and operation to ensure no significant impacts result due to potential releases from hazardous materials.

Comment DTSC-6

The comment outlines regulations and regulatory agencies that manage hazardous waste disposal.

Response DTSC-6

IRWD would comply with regulations regarding the handling and disposal of hazardous waste generated by project implementation. There will be no hazardous waste generated by operation of the treatment plant or wells.

Comment DTSC-7

The comment states that if soil or groundwater contamination occurs during project construction or demolition, appropriate health and safety procedures should be implemented.

Response DTSC-7

The IRWD would comply with regulations regarding the handling and disposal of hazardous waste. Implementation of Mitigation Measure HYDRO-1 and HAZ-1 would ensure appropriate agency coordination and proper handling and disposal of hazardous materials used during construction. These mitigation measures are presented in Responses T-11 and OCPW-16A below.

Comment DTSC-8

The comment recommends proper investigation and remedial actions for pesticides, agricultural chemicals, organic wastes, or other related residue if the site was used for agricultural activities.

Response DTSC-8

As described on page 3-6 of the IS/EA, the project components are not located in areas used for agriculture. In the event that chemicals are found onsite, the IRWD would comply with regulations regarding the handling and disposal of hazardous materials and contaminated soils.

Comment DTSC-9

The comment identifies that the DTSC can assist in the managing of hazardous cleanups.

Response DTSC-9

The comment is noted. The IRWD would comply with regulations regarding the handling and disposal of hazardous waste.

Comment DTSC-10

The comment requests that email addresses be included in contact information for future CEQA compliance documents.

Response DTSC-10

The comment is noted.

Letter 2: City of Tustin

Comment T-1A

The comment describes the MCAS Tustin Specific Plan/Reuse Plan Final Program Environmental Impact Statement/ Environmental Impact Report (FEIS/EIR) prepared jointly by the U.S. Department of the Navy (DON) and the City of Tustin. The proposed Tustin Legacy Well 1 (TL-1) would be located within the boundaries of the MCAS Tustin Specific Plan. Depending on the final proposed treatment plant location for Wells 21 and 22, some water transmission pipelines may be located within the boundaries of the MCAS Tustin Specific Plan. The comment states that the IS/EA does not analyze the proposed project in the proper context of the previous environmental documents prepared for the Tustin Legacy site (former MCAS Tustin), specifically the MCAS Tustin Specific Plan/Reuse Plan FEIS/EIR.

Response T-1A

The MCAS Tustin Specific Plan/Reuse Plan EIS/EIR was reviewed and considered during preparation of the IS/EA and is listed in Section Chapter 7, References. The FEIS/EIR is part of the administrative record for the IS/EA. See Summary Issue 2: CEQA Procedures for additional discussion.

Comment T-1B

The comment states that for individual activities within the MCAS Tustin Specific Plan, the City is required to review the FEIS/EIR and determine if the environmental effects have been fully examined. If not, then a subsequent or supplemental environmental document would be required,

such as a Supplemental EIR or Addendum. This finding would be required for the City to move forward with any discretionary actions.

Response T-1B

IRWD is the Lead Agency for the proposed project. IRWD is not required to tier from the FEIS/EIR. IRWD has fully evaluated the environmental impacts of the proposed project in the IS/EA. Please see Summary Issue 2: CEQA Procedures for further explanation.

Comment T-1C

The comment states that a Mitigated Negative Declaration (MND) is not the correct action for Well TL-1, that Well TL-1 should be analyzed separately from the rest of the proposed project, and that the City and IRWD would be co-lead agencies for the Well TL-1 portion of the proposed project.

Response T-1C

IRWD is the Lead Agency for the proposed project, including Well TL-1. As Lead Agency, IRWD has determined that a MND is the appropriate environmental document based on the IS/EA. IRWD is not required under CEQA to prepare a document that would tier from the FEIS/EIR. As Lead Agency, IRWD has prepared the IS/EA as a stand-alone document that fully evaluates the environmental impacts of the proposed project and includes mitigation measures where necessary to reduce environmental impacts to less than significant levels. Please see Summary Issue 2: CEQA Procedures for further explanation.

Comment T-2

The comment states that Figure 1 does not show the correct location for Well TL-1 based on the preliminary location that the City has approved.

Response T-2

Figure 1 has been revised to reflect the correct location of Well TL-1.

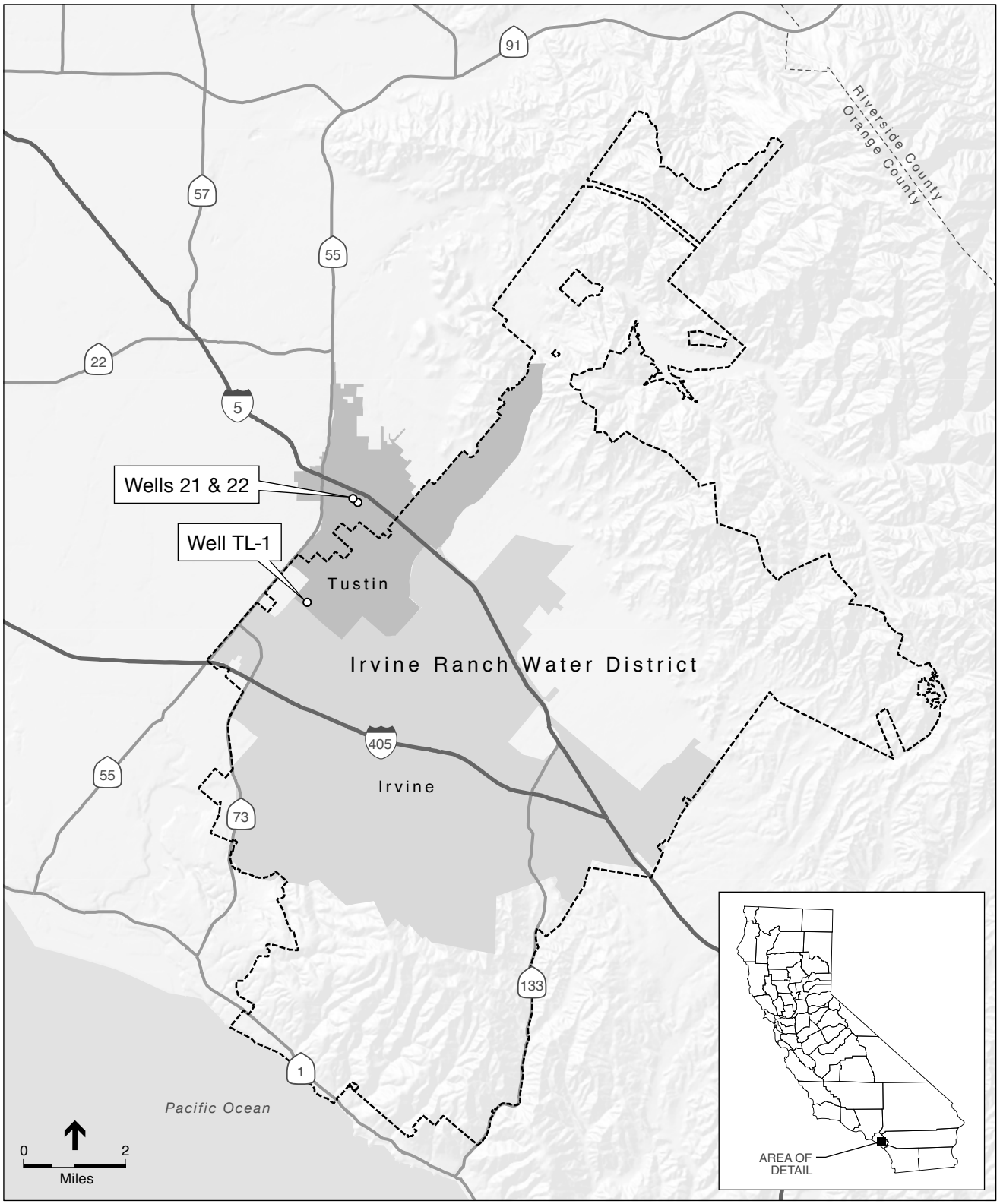
Comment T-3A

The comment requests additional detail about the five treatment plant locations. The comment states that the level of detail is insufficient to evaluate impacts of the treatment facilities on adjacent land uses, general plan land use, and zoning.

Response T-3A

The addresses and/or APN numbers for the proposed treatment plant locations are as follows:

Treatment Plant Site	Address	APN
Site A		432-391-40
Site F	2601 Walnut Avenue	432-473-38
Site H		432-391-59
Site I	Del Amo Ave	430-253-15
Site D	1221 Edinger Ave	430-252-12



IRWD - Tustin Wells . 209247.01

SOURCE: GlobeXplorer, 2009; RBF Consulting, 2009.

Figure 1
Local Vicinity / Service Area

The IS/EA provides a complete evaluation of the compatibility of all treatment plant sites with existing General Plan and Specific Plan designated land uses and zoning (page 3-40). Land use and zoning designations are provided in Table 3-3. The IS/EA concludes that the proposed project would not conflict with any land use plans, policies or designations.

Comment T-3B

The comment states that the future full-scale production facilities for Well TL-1, including transmission lines and treatment facility should be evaluated in the IS/EA. The comment states that the environmental analysis for Well TL-1 should be separate from the rest of the proposed project and should be evaluated against the previous FEIS/EIR for the MCAS Tustin Specific Plan.

Response T-3B

The proposed Well TL-1 is an exploratory well. If water quality and production capacity tests at Well TL-1 indicate it is feasible to expand Well TL-1 into a full-scale production well, then at that time, the wellhead, pipeline, and treatment facility will be designed and potential location alternatives will be developed. The IS/EA states on page 2-3 that separate environmental documentation pursuant to CEQA will be prepared for any full-scale production facilities proposed at Well TL-1.

IRWD is the Lead Agency for the proposed project. IRWD is not required to tier from the FEIS/EIR. As Lead Agency, IRWD has determined that a MND is the appropriate environmental document for the proposed project, including Well TL-1, based on the IS/EA. IRWD is not required under CEQA to prepare a document that would tier from the FEIS/EIR. As Lead Agency, IRWD has prepared the IS/EA as a stand-alone document that fully evaluates the environmental impacts of the proposed project and includes mitigation measures where necessary to reduce environmental impacts to less than significant levels. Please see Summary Issue 2: CEQA Procedures for further explanation.

Comment T-4A

The comment states that Figure 2-1 does not provide enough information about each project component and that Well TL-1 needs to be evaluated separately. The comment requests additional detail for all project components, including Well TL-1. The comment requests specific information about the location of treatment plant sites, well sites, and transmission lines relative to public right-of-way and property lines.

Response T-4A

The addresses and/or APN numbers for the proposed treatment plant locations are provided above in Response T-3A. Transmission pipelines (raw, potable, or brine) would be located primarily within the public right-of-way of public roadways as shown in Figure 2. In response to the comment, IRWD has prepared a new Figure 3 that shows the specific location and preliminary site plan for Well TL-1.

In response to the comment, the text of the IS/EA on page 2-3 has been modified:

> Well TL-1 would be located in the southwestern portion of the Tustin Legacy development area located on the former MCAS Tustin in an unimproved area on the north side of Barranca Parkway approximately 280 feet east of the intersection with the City of Irvine's Aston Street (**Figure 3** ~~Figure 2~~).

Comment T-4B

The comment requests specific addresses for well locations. The comment requests that property owners be notified for facilities where property acquisition or authorities need to be obtained.

Response T-4B

The addresses for the existing Wells 21 and 22 are included in the IS/EA on page 2-3. The specific location and site plan for the proposed Well TL-1 is shown in the new Figure 3 (see Response T-4A above). For the alternative treatment plant sites being considered, IRWD has been in contact with each of the private property owners. Transmission pipelines would be located primarily within the public right-of-way of public roadways. See Summary Response 3: Pipeline Alignments for additional discussion.

Comment T-4C

The comment states that Sites D and I for the proposed treatment plant are located within the Pacific Center East Specific Plan Area. The comment states that the Pacific Center East Specific Plan does not indicate that a utility treatment facility would be permitted by the designated land use. The comment requests more information for Sites A, F, and H to evaluate impacts of the proposed treatment facility on land use.

Response T-4C

The IS/EA identifies Sites D and I as being within the Pacific Center East Specific Plan (page 3-40 and Table 3-3). The land use designation for both sites and adjacent sites is PC Commercial/Business and the zoning is designated as PC Commercial, SP 11 Pacific Center East. Under the Pacific Center East Specific Plan (PBR, 1994), Site D is designated as Commercial Center land use, and Site I is designated as Regional Center land use. Both designations allow public utility facilities subject to approval of a conditional use permit; however, water production and treatment facilities are not subject to city zoning regulation, per Government Code 53091.

As stated on page 3-40 of the IS/EA, Sites A, F, and H are designated as PC Commercial/Business land use and zoned for Planned Community Industrial. Public utility uses are compatible with these land use and zoning categories.

Comment T-4D

The comment states that pipeline routes for the proposed project should not be identified until IRWD consults with the City of Tustin. The comment states that encroachment permits and authorization from the City are required for the pipelines. The comment requests identification of alternative pipeline alignments associated with each treatment plant site alternative.

Response T-4D

Transmission pipelines would be located primarily with the public right-of-way of public roadways. Prior to implementing the proposed project, IRWD would request encroachment permits from the City of Tustin and the City of Irvine for installation of the pipelines in the public right-of-way. The final pipeline alignments will be determined by the final treatment plant location and are subject to permit approval by the cities. See Summary Response 3: Pipeline Alignments for additional discussion.

In response to the comment, Figure 2 has been modified to show alternative pipeline alignments associated with the alternative treatment plant sites in Areas 1 and 2.

Comment T-4E

The comment states that the proposed pipeline alignment along Newport Avenue that crosses the OCFD Flood Control Channel and SCRRA right-of-way would coincide with the location for the City's future Newport Avenue Extension Project (CIP 7131). The comment states that IRWD's pipeline routing is not acceptable because the right-of-way limits for the future roadway connecting Newport Avenue to Edinger Avenue are not established.

Response T-4E

See Summary Response 3: Pipeline Alignments for additional discussion.

Comment T-4F

The comment states that the environmental analysis for Well TL-1 needs to be separate from the rest of the proposed project and needs to include future transmission pipelines associated with Well TL-1.

Response T-4F

See Response T-3B.

Comment T-4G

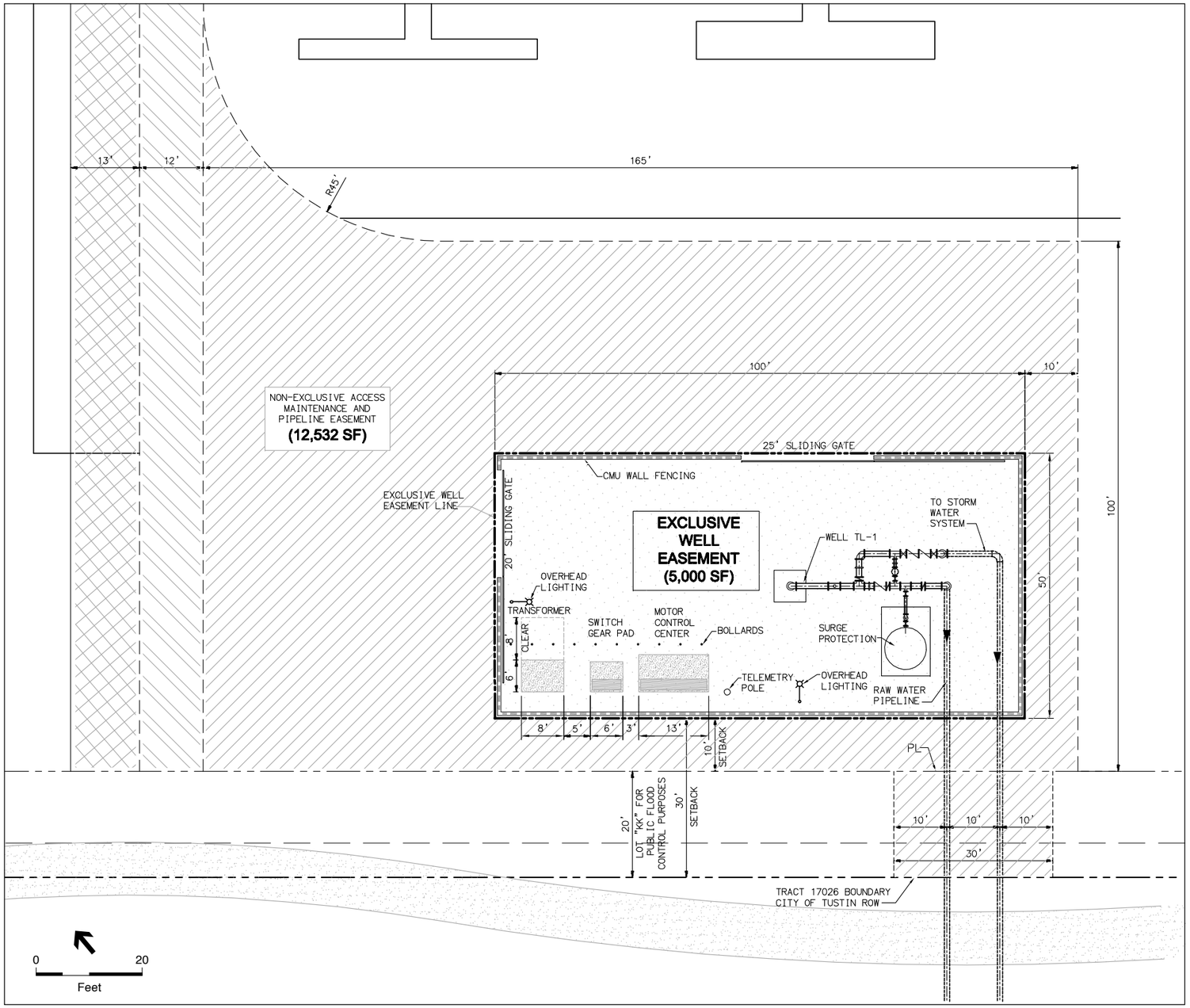
The comment states that the proposed transmission pipeline along Tustin Ranch Road that crosses the SCRRA right-of-way would coincide with the location of the City's roadway extension project, which will extend over the SCRRA right-of-way. The comment requests coordination with the City to avoid impeding the future roadway project.

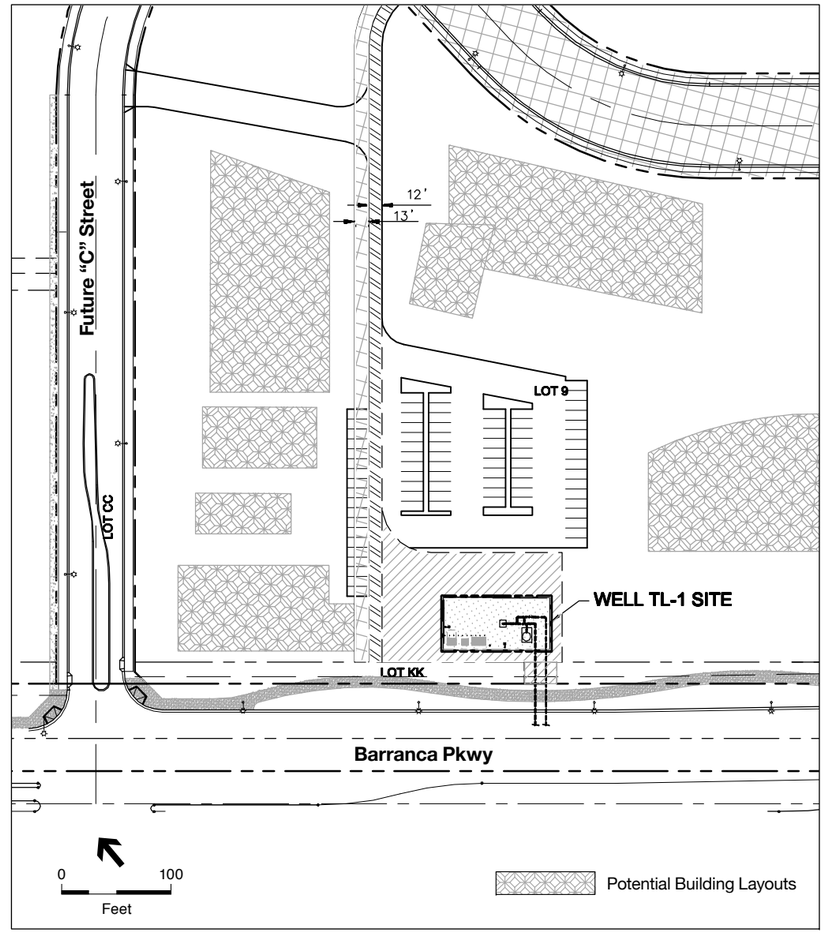
Response T-4G

See Summary Response 3: Pipeline Alignments for additional discussion.

Comment T-5A

The comment states that the environmental analysis for Well TL-1 should be separate from the rest of the proposed project. The comment states that the future full-scale production facilities for Well TL-1 should be evaluated in the IS/EA, including cumulative impacts.





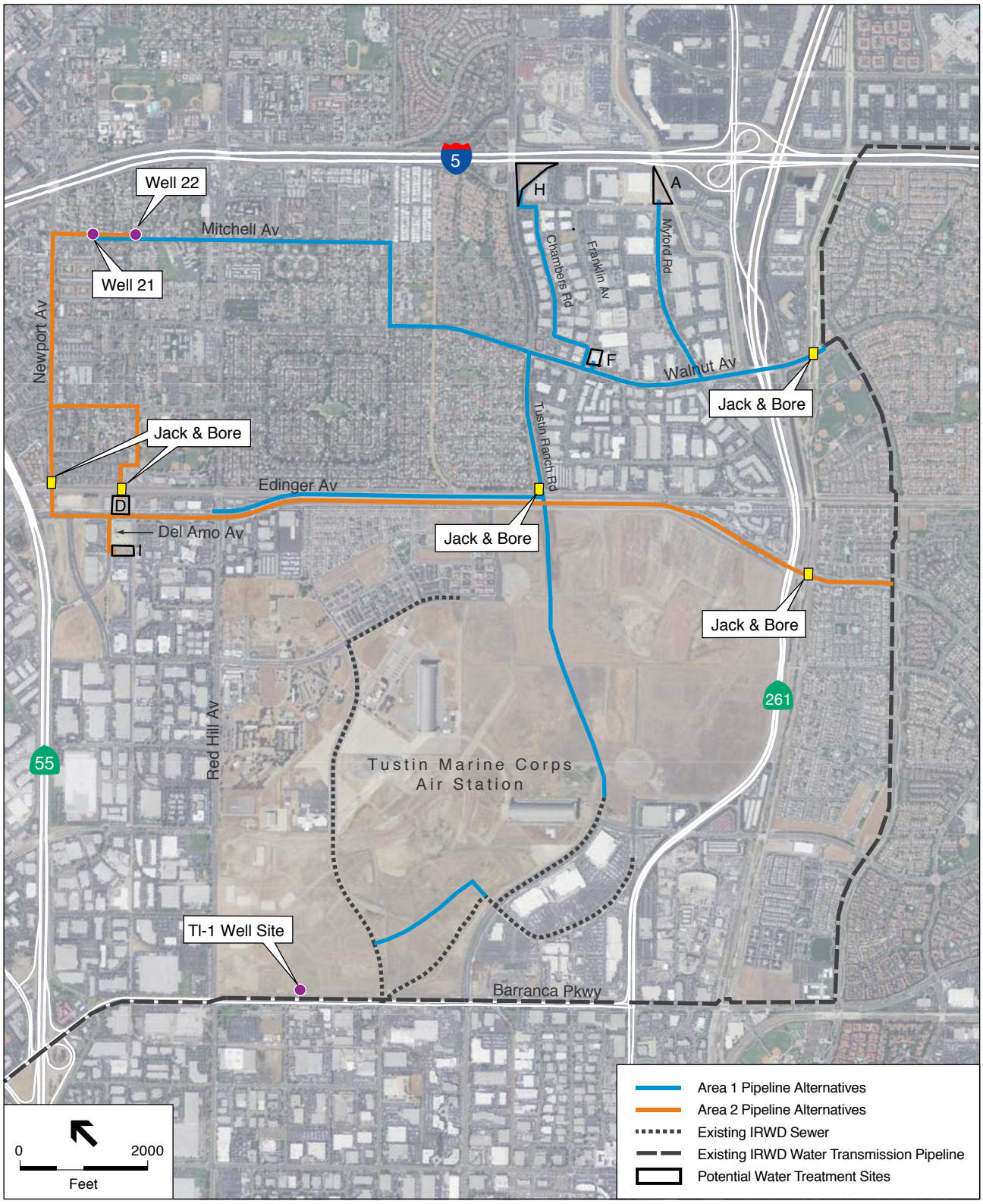
Easement Symbology

- Non-exclusive Floating Access Easement
- Non-exclusive Access Maintenance and Pipeline Easement
- Exclusive Well Easement (Portion of Lot 22, Tract 17026)
- Access for License to Easement Parcels

SOURCE: RBF Consulting, 2010.

IRWD - Tustin Wells . 209247.01

Figure 3
TL-1 Exploratory Well
Preliminary Site Plan



SOURCE: GlobeXplorer, 2009; RBF Consulting, 2009.

IRWD - Tustin Wells . 209247.01

Figure 2
Proposed Project

Response T-5A

See Response T-3B.

Comment T-5B

The comment states that the City will consider granting an exclusive easement for public utility purposes for Well TL-1 after all environmental documentation is completed.

Response T-5B

IRWD will request an exclusive easement for Well TL-1 in accordance with the existing agreement between IRWD and the City, approved by City Council on December 16, 1996, granting IRWD four well sites and one treatment plant site within the boundaries of the MCAS Tustin Specific Plan area. In response to the comment, the text on page 2-3 of the IS/EA has been further modified as follows:

> Well TL-1 would be located in the southwestern portion of the Tustin Legacy development area located on the former MCAS Tustin in an unimproved area on the north side of Barranca Parkway approximately 280 feet east of the intersection with the City of Irvine's Aston Street (**Figure 3** ~~**Figure 2**~~). IRWD would request an exclusive easement from the City of Tustin ~~secure an exclusive easement~~ for the TL-1 well site in early 2010, in accordance with an existing agreement (December 16, 1996) between the City of Tustin and IRWD. Implementation of Well TL-1 is contingent upon the City's discretionary approval of such an easement.

Comment T-5C

The comment states that IRWD needs to submit to the City legal descriptions and exhibits for all easement and license areas for Well TL-1. The comment states that such descriptions and exhibits need to be approved by the City prior to completing the environmental analysis. The comment states that IRWD needs to identify and analyze pursuant to CEQA the future treatment facility associated with Well TL-1.

Response T-5C

As stated in the previous response, IRWD will request an exclusive easement for Well TL-1 in accordance with the existing agreement between IRWD and the City granting IRWD four well sites and one treatment plant site within the boundaries of the MCAS Tustin Specific Plan area. Figure 3 has been added to show additional detail regarding the location and preliminary site plan for Well TL-1, including the location of easement and license areas.

The proposed Well TL-1 is an exploratory well. If water quality and production capacity tests at Well TL-1 indicate it is feasible to expand Well TL-1 into a full-scale production well, then at that time, the wellhead, pipeline, and treatment facility will be designed and potential location alternatives will be developed. Separate environmental documentation pursuant to CEQA will be prepared for any full-scale production facilities proposed at Well TL-1.

Comment T-5D

The comment states that portions of the proposed transmission pipeline alignments are located within future roadways within the City of Tustin at Tustin Legacy (former MCAS Tustin) that will not be completed before IRWD proposes to install its pipelines.

Response T-5D

See Summary Response 3: Pipeline Alignments for additional discussion.

Comment T-6A

The comment provides clarification regarding the process for the MCAS Tustin base closure and associated documentation facilitating the transfer of property to the City.

Response T-6A

In response to the comment, the text on page 2-4 of the IS/EA has been modified as follows:

MCAS Tustin

In 1991, the City was designated as the Local Redevelopment Agency ~~Lead Agency~~ under the Base Closure Law for preparation of a Reuse Plan for Marine Corps Air Station (MCAS) Tustin in order to facilitate the closure of MCAS Tustin and its reuse in furtherance of economic development of the city and surrounding region. The MCAS Tustin Specific Plan/Reuse Plan was developed in accordance with this procedure. The Reuse Plan was ~~and~~ adopted by the Tustin City Council on October 17, 1996, and subsequently amended in September 1998. The Specific Plan, which regulates development, was adopted on February 3, 2003 and subsequently amended several times in 2005 and 2006. Owned and operated by Department of the Navy for nearly 60 years, approximately 1,600 acres of property at the former MCAS Tustin were determined surplus to federal government needs and the military facility was officially closed in July 1999.

Comment T-6B

The comment states that IRWD proposed to exchange rights to existing wells along Red Hill Avenue in exchange for four new well sites. The comment requests IRWD reinforce its commitment to abandon such wells and release title encumbrances for those sites. The comment requests addition information about the location of Well TL-1. The comment states that Well TL-1 will need to be screened with appropriate landscaping in accordance with the MCAS Tustin Specific Plan.

Response T-6B

The matter of agreements/commitments between IRWD and the City regarding property rights and title encumbrances is beyond the scope of the environmental analysis and is not pertinent to CEQA.

As previously mentioned, a new Figure 3 has been added to show the location of Well TL-1. IRWD would request an exclusive easement from the City of Tustin for the Well TL-1 site. IRWD would comply with the terms of the easement if granted, including any requirements for screening or landscaping in accordance with the guidelines in the MCAS Tustin Specific Plan.

In response to the comment, the text on page 2-5 of the IS/EA has been modified as follows:

> Well TL-1 would be installed in the southwestern portion of the Tustin Legacy development area ~~on an exclusive easement to be secured by IRWD~~. IRWD would request an exclusive easement from the City of Tustin for the TL-1 well site in early 2010. IRWD would comply with the terms of the easement if granted, including any requirements for screening or landscaping in accordance with MCAS Tustin Specific Plan or requirements for architectural materials in accordance with the Legacy Park Design Guidelines. Well TL-1 would encompass a rectangular area that is approximately 50 feet by 100 feet, enclosed by a 6-foot (minimum) fence. New facilities at the wellhead would include well pump and motor, raw water piping, groundwater bypass and storm water piping, surge protections, motor control center, switch gear pad, overhead lighting, hardscape improvements, and ancillary equipment.

Comment T-7A

The comment states that the City will be granting an easement for Well TL-1 and as such the site design will need to include landscaping in accordance with the requirements in the MCAS Tustin Specific Plan and architectural materials in accordance with Legacy Park Design Guidelines.

Response T-7A

See previous Response T-6B.

Comment T-7B

The comment states that treatment facilities that may be proposed for Well TL-1 in the future should be included in the project description to avoid segmenting the project pursuant to CEQA.

Response T-7B

Well TL-1 is an exploratory well and does not require treatment facilities to function as such. The Well TL-1 component of the proposed project has independent utility. IRWD is not segmenting the project by evaluating the exploratory well without treatment facilities. In response to the comment, the text of the IS/EA has been modified as follows:

> Page 2-1:
>
> Well TL-1 would be a newly constructed exploratory ~~production~~ well that is expected to produce approximately 1,500 gpm, or 2,200 acre-feet per year. There are no proposed conveyance pipelines to connect Well TL-1 to IRWD's system at this time. Well TL-1 may ~~would~~ be the first of four future production wells drilled in the former MCAS Tustin area, called the Tustin Legacy Wellfield.

Page 2-5:

It is anticipated that Well TL-1 would produce about 1,500 gpm of potentially impaired groundwater such that treatment would be necessary to use Well TL-1 as a potable water supply. The specific treatment processes, however, would be dependent upon water quality and would be determined after Well TL-1 is drilled and tested. If IRWD determines that it is feasible to develop Well TL-1 into a full-scale production well, the capacity and potential locations of the treatment facilities would then be developed, depending on the drawdown and yield information gained from Well TL-1. The proposed project does not include the future additional Tustin Legacy wells and the future treatment facilities that would be required for TL-1 to be a potable source. Additional environmental analysis and documentation would be required in accordance with CEQA prior to integrating Well TL-1 and any other Tustin Legacy wells into IRWD's water treatment and distribution system. ~~It is estimated that Well TL-1 would ultimately produce approximately 2 mgd, or 2,200 afy of potable water for the IRWD service area.~~

Comment T-7C

The comment reiterates previous comments regarding the potential conflict between the proposed transmission pipeline alignments and planned roadway CIPs in the City of Tustin.

Response T-7C

See Summary Response 3: Pipeline Alignments for additional discussion.

Comment T-7D

The comment reiterates previous comments requesting additional information about alternative treatment plant locations and specific planned site improvements.

Response T-7D

Additional information about the location of the alternative treatment plant locations are provided in Response T-3A. The main components of the treatment plant that would be installed regardless of the selected site are provided on page 2-6 of the IS/EA, along with the chemicals to be used and stored on site. The final treatment plant layout will be prepared once the final site is selected. The information provided in Chapter 2 of the IS/EA is adequate to evaluate impacts associated with constructing and operating the proposed treatment facility. Potential impacts associated with all five alternative sites have been evaluated in the IS/EA.

Comment T-8

The comment reiterates previous comments regarding the proposed pipelines across MCAS Tustin and states that coordination with the City is required before finalizing pipeline routes in the right-of-way of future roadways that do not have finalized alignments.

Response T-8

See Summary Response 3: Pipeline Alignments for additional discussion.

Comment T-9A

The comment reiterates previous comments about the lack of project details and definitions of pipeline alternatives.

Response T-9A

Figure 2 has been modified to show alternative pipeline alignments associated with the alternative treatment plant sites in Areas 1 and 2.

Comment T-9B

The comment reiterates previous comments requesting additional project description detail for Well TL-1.

Response T-9B

In response to this and previous comments, IRWD has prepared a new Figure 3 that shows the specific location and preliminary site plan for Well TL-1. As explained in previous responses, Well TL-1 is an exploratory well. There are no transmission pipelines associated with implementation of Well TL-1 at this time.

Comment T-9C

The comment requests clarification regarding "onsite settling basins" and their location onsite at Well TL-1.

Response T-9C

During construction and drilling of Well TL-1, water discharged during drilling would be conveyed to onsite settling basins, or Baker tanks, prior to being recycled back into the borehole and discharged or otherwise disposed.

Comment T-9D

The comment requests clarification regarding the intended storm drain for discharge water during well drilling.

Response T-9D

The discharge water would either be discharged to the storm drain system, if feasible, or discharged to the sanitary sewer. If storm drain discharges are feasible, the discharge water would be discharged to the open storm channel located on the north side of Barranca Parkway designated as Orange County Flood Control F09 (Barranca Channel).

Comment T-9E

The comment requests the initial/potential depth of Well TL-1.

Response T-9E

Well TL-1 would be drilled between 900 and 1300 feet deep.

Comment T-10A

The comment states that any waiver from the City of Tustin's Noise Ordinance is subject to the City's approval and would not be automatically granted. Securing the waiver should be included as a mitigation measure for Well TL-1.

Response T-10A

In response to the comment, the text of the IS/EA has been modified as follows:

Page 2-8:

For approximately one month, daily 24-hour drilling would be required. To drill the well, the drill rig must run 24 hours-a-day otherwise the walls of the borehole can collapse. Prior to construction, IRWD would request ~~secure~~ a waiver from the City of Tustin's noise ordinance that restricts construction to the daytime hours of 7:30 a.m. to 4:00 p.m. (Municipal Code Section 4616, Specific Disturbing Noises Prohibited) and exempts construction from the City's noise provisions. IRWD would require the construction contractor to set up sound walls and acoustical panels to minimize noise impacts associated with well drilling activities and to comply with other terms and conditions of the noise waiver if granted.

Page 3-42:

The City of Tustin's Noise Ordinance (**Table 3-4**) establishes noise standards for the project area. A construction noise exemption is included in the City Code stating that noise sources associated with construction between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and the hours of 9:00 a.m. and 5:00 p.m. on Saturdays, excluding city observed federal holidays are exempted from the City noise provisions. The hours of construction for the proposed project would be 7:30 a.m. to 4:00 p.m. and would qualify for the noise exemption, with the exception of construction of Well TL-1. Construction of Well TL-1 would require daily 24-hour drilling for approximately one month. IRWD would request ~~secure~~ a waiver from the City of Tustin's noise ordinance ~~that restricts construction to the daytime hours of 7:30 a.m. to 4:00 p.m~~. If granted, the ~~The~~ waiver would exempt construction of Well TL-1 from the City's noise provisions. IRWD would require the construction contractor to set up acoustical panels to minimize noise impacts associated with well drilling if necessary and to comply with other terms and conditions of the noise waiver if granted. ~~As described below in Section 3.11(d), there are no sensitive receptors in the vicinity of well TL-1.~~

Mitigation Measure

NOISE-4: IRWD shall request and secure a waiver from the City of Tustin's noise ordinance that restricts construction to the daytime hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays, excluding City observed federal holidays, prior to initiation of construction and drilling of Well TL-1. IRWD shall require the construction contractor to set up acoustical panels to

minimize noise impacts associated with well drilling if necessary and to comply with other terms and conditions of the noise waiver.

Comment T-10B

The comment states that permits/clearances are required from regulatory/responsible agencies for the proposed pipeline crossings of railroad and flood control easements and/or rights-of-way. The comment requests that these permits/clearances be identified and incorporated as mitigation measures in the IS/EA. The comment reiterates previous comments regarding pipeline alignments that impact future roadway projects within Tustin Ranch Road and Newport Avenue.

Response T-10B

Depending on the final treatment plant location, transmission pipelines would need to cross the SCRRA ROW and the OCFCD channel and easement in one of three locations where the railroad ROW and flood control channel run parallel to Edinger Avenue in the City of Tustin. Prior to implementing the proposed project, IRWD would be required to request encroachment permits from the SCRRA and OCFCD for the pipeline crossings of each agency's facilities. Mitigation measures are not necessary to require such permits. See Summary Response 3: Pipeline Alignments for additional discussion.

Comment T-10C

The comment states that City approval would be required for any right-of-way extension of Tustin Ranch Road or Newport Avenue across the SCRRA railroad or Orange County flood control channel. The comment requests that the proposed pipeline alignment should be coordinated with the City so as not to conflict with future roadway CIP projects within Tustin Ranch Road and Newport Avenue, which plan future crossings over or under the railroad and flood control channel.

Response T-10C

See Summary Response 3: Pipeline Alignments for additional discussion.

Comment T-11

The comment states that the proposed pipeline alignment across MCAS Tustin within the future Tustin Ranch Road would cross property retained by the Department of the Navy due to ongoing remediation activities for contaminated groundwater (TCE). Soil removal for installation of the pipeline may be subject to special handling and disposal procedures and special construction techniques in the event contaminated soil is encountered.

Response T-11

In response to the comment, the text on page 3-32 of the IS/EA has been modified as follows:

The project sites or pipeline alignment for the proposed wells, treatment facility, and Conveyance pipelines are not listed on the Cortese List for Orange County.[1] The DTSC Envirostor Database was searched in August 2009 for hazardous material sites within the cities of Tustin and Irvine. The two closest hazardous materials sites to the proposed project are located on MCAS Tustin near the intersection of Red Hill Avenue and Valencia Avenue. These are listed as State Response and Voluntary Cleanup sites. Another nearby hazardous materials site is the Tustin NG Rifle Range (State Response site) which is located 1 mile south of Well 22. There are additional contamination sites in the project area not included on the Cortese List. Within MCAS Tustin, the U.S. Department of the Navy (DON) has retained ownership of several sites that are characterized by groundwater contamination in the shallow aquifer, including volatile organic compounds (VOCs). The DON has ongoing remediation systems at these contamination sites. If the treatment plant is located in Area 1 and the proposed brine disposal pipeline route crosses MCAS Tustin, then the pipeline may pass through one of the DON contamination sites. Construction of this pipeline could result in significant impacts to worker health and safety if contaminated soils are encountered, and special handling, disposal procedures, and construction techniques would be required for excavated contaminated soils to avoid significant impacts to the environment. IRWD would comply with all regulations regarding the handling and disposal of hazardous waste generated by project implementation to avoid impacts to the environment. Implementation of Mitigation Measure HAZ-1 would ensure IRWD coordinates with the DON and the City of Tustin regarding potential transmission pipeline alignments across MCAS Tustin. ~~Although there are hazardous material sites within the vicinity of the proposed project, none of the project components would be located on a hazardous material site and would not create a significant hazard to the public or the environment. There would be no impact.~~

In response to the comment, the following mitigation measure has been added to page 3-32 of the IS/EA:

HAZ-1: In the event that the project requires construction of transmission pipelines across MCAS Tustin, IRWD shall coordinate with the U.S. Department of the Navy (DON) and the City of Tustin regarding the pipeline alignment. IRWD shall require the construction contractor to conduct a geotechnical study that includes soil testing. If soil testing confirms the presence of contaminated soils at the depth of excavation for the proposed pipeline then IRWD shall consult with the DON and City of Tustin to determine if special construction techniques, handling techniques, and disposal requirements and procedures are requirements. IRWD shall require the construction contractor to abide by such requirements, if necessary.

[1] DTSC, Hazardous Waste and Substance Sites (Cortese) List, accessed August 29, 2009: http://www.calepa.ca.gov/SiteCleanup/CorteseList/.

Comment T-12A

The comment reiterates previous comments that Well TL-1 needs to be evaluated separately from the rest of the proposed project and that the City needs to be the co-Lead Agency.

Response T-12A

See Response T-3B.

Comment T-12B

The comment lists additional responsible agencies and approvals for the proposed project.

Response T-12B

In response to the comment, the text on page 3-1 of IS/EA has been modified as follows:

> **10. Other public agencies whose approval is required** (e.g., permits, financing approval, or participation agreement. Indicate whether another agency is a responsible or trustee agency.)

Orange County Water District (Responsible Agency)	Approval of Basin Equity Assessment (BEA) exemption
Orange County Sanitation District	Industrial waste permit for brine disposal
City of Tustin	Encroachment Permit; Construction Noise Ordinance Waiver; Exclusive Easement and Licenses
City of Irvine	Encroachment Permit
State Water Resources Control Board	Notice of Intent to comply with NPDES General Construction Permit (Storm Water Pollution Prevention Plan)
Regional Water Quality Control Board	Waste Discharge Requirements for well drilling discharge
U.S. Department of the Navy	Approval of pipeline improvements on MCAS Tustin
Southern California Regional Rail Authority	Encroachment Permit
Orange County Flood Control District	Encroachment Permit

Comment T-13

The comment states that the analysis of impacts of the proposed project to the quality of the project sites and surroundings is not adequate.

Response T-13

The analysis of the proposed project to the existing visual character or quality of the project sites and surroundings is provided on page 3-4 and 3-5 of the IS/EA. Substantial aboveground facilities associated with the project include the proposed treatment plant and Well TL-1. As mentioned above in Response T-6B, the project description has been modified to ensure the design of Well TL-1 would incorporate any terms and conditions of the easement if granted by the City of Tustin, including architectural and landscaping requirements. This would ensure no impacts to the visual character of the site.

The treatment plant would be located in an area characterized by commercial and industrial land uses, regardless of the final chosen site. Additional information is not required to conclude that the treatment plant would not have an impact on the quality of the site and its surroundings.

Comment T-14A

The comment reiterates previous comments regarding the nature of the analysis of alternative treatment plant sites and states additional information is required for each site to adequately evaluate the potential impacts to aesthetics at each site and its surroundings.

Response T-14A

In response to the comment, a new Figure 4 has been prepared to show the existing conditions of the treatment plant sites. As stated in the IS/EA, the proposed treatment facility would include a one-story or two-story treatment building and the components listed on page 2-6. The facility would be surrounded by a block wall and would be characterized as an industrial building similar to other buildings in Areas 1 and 2. Adding a new industrial building or replacing an existing industrial building in an area zoned for commercial and industrial land use would not result in an adverse impact to the visual character of the site or its surroundings. Thus, as concluded on page 3-4 of the IS/EA, impacts would be less than significant.

The text on page 3-4 has been modified as follows to incorporate reference to the new Figure 4:

> Currently, the parcels for the proposed treatment facility are either vacant or occupied by commercial buildings **(Figure 4)** that would be demolished and replaced by a water treatment facility, with a maximum height of 35 feet.

Comment T-14B

The comment reiterates that Well TL-1 should be evaluated separately in a document that tiers from the FEIS/EIR, is subject to mitigation measures contained in the FEIS/EIR, and should be designed in accordance with the City's landscaping and architectural guidelines.

Response T-14B

See Summary Issue 2: CEQA Procedures and Response T-6B.

Comment T-14C

The comment reiterates that the City disagrees with the conclusions of the aesthetic impact analysis of page 3-5 and 3-6 as noted in previous comments.

Response T-14C

See Response T-13 and T-14A.

Comment T-15

The comment states that the City does not concur with the conclusions regarding aesthetic impacts for 3.1(c) and 3.1(d) and states that additional mitigation measures are required to mitigate environmental effects to aesthetics.

Response T-15

See Response T-13 and T-14A.

Area 1

Site A

Site F

Site H

Area 2

Site D

Site I

SOURCE: ESA, 2010.

IRWD - Tustin Wells . 209247.01

Figure 4
Alternative Treatment Sites,
Existing Conditions

Comment T-16

The comment states that there has been no information provided to prove the project is consistent with current land use and zoning designations.

Response T-16

See Response T-4C.

Comment T-17

The comment states that the IS/EA should discuss the impacts associated with chemical odors at the treatment plant.

Response T-17

The IS/EA correctly identifies that the project does not qualify as one of the land uses associated with odor as defined by the SCAQMD Air Quality Handbook. The chemicals to be transported, used, and stored at the proposed treatment plant would be fully contained and would not result in any nuisance odors.

Comment T-18

The comment states that if Well TL-1 becomes a full-scale production well it would need to connect to the existing Barranca Parkway transmission lines which would require crossing of Barranca Channel (flood control channel).

Response T-18

As explained in previous responses, Well TL-1 is an exploratory well. There are no transmission pipelines associated with implementation of Well TL-1 at this time. See Response T-3B.

Comment T-19

The comment requests changing the authority for tree trimming and removal in the City of Tustin to the City Engineer.

Response T-19

In response to the comment, the following text on page 3-17 of the IS/EA has been modified:

> In the City of Tustin, approval for tree trimming or removal on city-owned property must be obtained in writing from the City Engineer ~~City's Manager of Field Services~~.

Comment T-20A

The comment reiterates previous comments stating that the analysis of impacts to cultural resources on MCAS Tustin should be tiered from the FEIS/EIR and subject to mitigation measures contained in the FEIS/EIR.

Response T-20A

See Summary Response 2, CEQA Procedures.

Comment T-20B, T-20C, T-20D, T-20E

The comments request modifications to mitigation measures pertaining to cultural resources to require progress reports and discovery reports to be submitted to property owners, including the City of Tustin.

Response T-20B, T-20C, T-20D, T-20E

In response to the comments, the following changes have been made to the text of the IS/EA:

Page 3-23

f. The qualified archaeologist shall prepare monthly progress reports to be filed with the client and the lead agencies and property owners if applicable.

Page 3-24

h. Upon completion of all ground-disturbing activities associated with this project, an Archaeological Resources Monitoring and Mitigation Report shall be prepared documenting construction activities observed, including copies of all daily archaeological monitoring logs. If discoveries are made during ground-disturbing activities, the report shall also document the archaeological materials and the methods of treatment as determined appropriate by the qualified archaeologist. The report shall be filed with the client, the lead agencies, the property owners if applicable, and the appropriate repositories.

Page 3-25

d. The OCC Paleontologist shall prepare monthly progress reports to be filed with the client and the lead agencies and property owners if applicable.

h. The OCC Paleontologist shall prepare a final mitigation report to be filed with the client, the lead agencies, property owners if applicable, and the repository.

Page 3-26

CUL-3*:* If human skeletal remains are uncovered during project construction, the project proponent shall immediately halt work, contact the lead agency, property owner, and the Orange County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines...

Comment T-21

The comment reiterates previous comments and states that the proposed pipeline across MCAS Tustin would cross property retained by the Department of the Navy due to ongoing remediation activities for contaminated groundwater (TCE). Soil removal for installation of the pipeline may

be subject to special handling and disposal procedures and special construction techniques in the event contaminated soil is encountered.

Response T-21

See Response T-11.

Comment T-22

The comment provides the correct location of Fire Station #37.

Response T-22

In response to the comment, the text of the IS/EA on page 3-33 has been modified as follows:

> The closest fire station to the project site is OCFA Fire Station #37, located at ~~the corner of Red Hill Ave. and Edinger at~~ 14901 Red Hill Ave.

Comment T-23A

The comment states the IS/EA does not address the potential negative impacts of Wells 21 and 22 on the City of Tustin's existing groundwater wells and treatment plants. The comment states that the IS/EA concludes Wells 21 and 22 will have a less than significant impact in lowering the groundwater table. The comment states that Wells 21 and 22 could have a potentially significant impact on all City wells.

Response T-23A

See Summary Issue 1: Well Operation.

Comment T-23B

The comment states that OCWD's groundwater model for the principal aquifer in the area of Wells 21 and 22 was run at a combined production capacity of 5000 afy and should be rerun to reflect the higher production capacity of 7900 afy for Wells 21 and 22.

Response T-23B

The groundwater model run by OCWD for the proposed project assumed Well 21 and 22 pumping at a constant flow year–round totaling 6000 af and a reduction in pumping from Well 53 by 750 afy (see Appendix B). As indicated on page 1-4, 90 percent utilization is assumed for production facilities. As such a net effect to the basin of 6750 afy, which is approximately 90 percent of utilization, is an adequate characterization for impacts associated with operation of Wells 21 and 22.

Comment T-23C

The comment states that drawdown resulting from operation of Wells 21 and 22 could affect the City's wells which are operating at or close to their pump bowl depth. The comment requests this issue be addressed in the IS/EA.

Response T-23C

See Summary Issue 1, Well Operation.

Comment T-23D

The comment states that the project could impact the City's existing treatment plant capabilities, and the IS/EA needs to evaluate the impacts of Wells 21 and 22 on the City's wells and treatment facility.

Response T-23D

See Summary Issue 1, Well Operation.

Comment T-24

The comment states that IRWD would need to prepare drainage and grading plans for approval by the City for earthwork activities at Well TL-1. There are inadequate storm drain facilities near Well TL-1 and IRWD will be required to prepare hydrology study to calculate runoff and plans for conveying runoff to storm drains. The comment states the City would require IRWD to prepare a Water Quality Management Plan (WQMP) prior to issuance of a grading permit. The comment states IRWD would be required to indemnify the City and OCFCD again any liability or damages due to flooding or erosion until future improvements to Peters Canyon Channel and Barranca Channel are completed.

Response T-24

As stated on page 2-1 and 3-1 of the IS/EA, IRWD would request an exclusive easement from the City of Tustin for the TL-1 well site along with other non-exclusive easements and licenses and would comply with the terms of the easement if granted, including any requirements for grading plans, hydrology studies, or WQMPs.

Comment T-25

The comment states that approvals are required to discharge to the storm drain system. The comment requests discussion regarding alternatives to discharging into the storm drain system, such as discharging to the sanitary system, because WDRs for discharging into the storm drain system or Barranca Channel have not been permitted by RWQCB in the past. IRWD should plan on discharging such waters into the sanitary sewer system.

Response T-25

See Response OCPW-9 and OCPW-15.

Comment T-26

The comment states that as noted previously, the City does not support the findings made by IRWD for 3.8(d), 3.8(e), and 3.8(f).

Response T-26

Comment noted.

Comment T-27A

The comment states that potential pipeline segments are proposed across private property north of Edinger Avenue from Treatment Facilities I and D. The comment reiterates previous comments regarding pipeline routes and treatment facility locations and the need to tier the analysis for TL-1 from the FEIS/EIR.

Response T-27A

See Summary Issue 3: Pipeline Alignments and Summary Issue 2: CEQA Procedures.

Comment T-27B

The comment reiterates previous comments, stating that the IS/EA does not provide adequate information about treatment facilities and their location and does not evaluate impacts at a level of detail required by CEQA.

Response T-27B

See Response T-4C and T-14A.

Comment T-28

The comment states that the project would result in significant temporary and permanent noise impacts and that the mitigation measures proposed in the IS/EA are too broad and not location-specific. The comment requests that IRWD conduct a noise study for the project and add mitigation measures such as installation of temporary noise attenuation walls and regular construction noise monitoring.

Response T-28

The noise impacts associated with the proposed project are adequately assessed in Section 3.11 of the IS/EA. Potential impacts associated with noise would be reduced to less than significant levels with implementation of Mitigation Measures NOISE-1 through NOISE-3. In addition, on page 2-8 of the IS/EA, the project description includes the installation of sound walls and acoustical panels during well drilling activities to minimize noise impacts. The mitigation measures included in the IS/EA are designed to be applicable to multiple project components. The IS/EA identifies the mitigation measures associated with each project component.

Comment T-29

The comment states that potential noise impacts to commercial and industrial properties need to be considered, in addition to sensitive receptors.

Response T-29

In response to the comment, the text of the IS/EA has been modified as follows:

Page 3-46:

Well TL-1

~~No sensitive receptors are in the vicinity of Well TL-1; therefore, construction noise levels would be less than significant.~~ The nearest receptor to Well TL-1 is a commercial building approximately 250 feet across Barranca Pkwy. If construction were to occur within 250 feet, noise levels at the nearest receptor would be approximately 75 dBA. These noise levels would be lessened by the acoustical panels surrounding the well site. Noise levels would be further reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site A

The nearest sensitive receptor to Treatment Plant Site A is the 1st Korean Baptist Church located approximately 1,450 feet from the site. Construction noise at the nearest sensitive receptor would be approximately 60 dBA. The nearest building to Treatment Plant Site A is located approximately 65 feet from the site. Construction noise at the nearest building would be approximately 87 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site D

The nearest sensitive receptor to Treatment Plant Site D is a single family residence located approximately 200 feet from the site. Construction noise at the nearest sensitive receptor would be approximately 77 dBA. The nearest building to Treatment Plant Site D is located approximately 60 feet from the site. Construction noise at the nearest building would be approximately 87 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site F

The nearest sensitive receptor to Treatment Plant Site F is the Resurrection Life Center International located approximately 180 feet from the site. Construction noise at the nearest sensitive receptor would be approximately 78 dBA. The nearest building to Treatment Plant Site F is located approximately 25 feet from the site. Construction noise at the nearest building would be approximately 95 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site G

The nearest sensitive receptor to Treatment Plant Site G is a single family residence located approximately 1,350 feet from the site. Construction noise at the nearest sensitive receptor would be approximately 60 dBA. The nearest building to Treatment Plant Site G is located approximately 25 feet from the site. Construction noise at the nearest building would be approximately 95 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Page 3-47

Treatment Plant Site I

The nearest sensitive receptor to Treatment Plant Location I is a single family residence located approximately 1,550 feet from the site. Construction noise at the nearest receptor would be approximately 59 dBA. The nearest building to Treatment Plant Site I is located approximately 190 feet from the site. Construction noise at the nearest building would be approximately 77 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Comment T-30

The comment states that schools and places of worship are located along the proposed pipeline routes and temporary noise impacts associated with construction could be disruptive to such land uses. The comment requests the addition of a mitigation measure for consultation with Tustin Unified School District, property owners, and leaders of places of worship along the construction routes to minimize disruption to these sensitive land uses.

Response T-30

In response to the comment, the text of the IS/EA has been modified to acknowledge additional sensitive land uses along the alternative pipeline alignments. Mitigation measures have also been added or modified to ensure construction-related impacts to sensitive land uses are minimized.

Page 3-32

Less than Significant. Construction of the proposed project would require the use of fuels, oils, and lubricants that can be hazardous to the environment. In addition, the operation of the proposed treatment facility would involve onsite chemical use and storage. Two schools are located in the vicinity of the project site. W. R. Nelson Elementary School is located 14392 Browning Ave. in Tustin, ~~approximately 0.5 miles northwest of treatment plant Area 1~~ and along the transmission pipeline route associated with Area 1 treatment plant alternatives. Beswick Elementary School is located at 1362 Mitchell Avenue in Tustin, approximately 0.15 miles south of Well 22, and also along the transmission pipeline route associated with Area 1 treatment plant alternatives. ~~Although~~

~~neither~~ Neither school is located within one-quarter mile of the treatment plant, however, construction activities ~~at Wells 21 and 22~~ could require handling of hazardous materials within the vicinity of these schools. ~~However, compliance~~ Compliance with applicable state and federal regulations as well as the HMBP (as mentioned above) and SWPPP (see Section 3.8(a)) during construction would ensure that any potential risk associated with handling of hazardous materials would be less than significant. Implementation of HYDRO-1 would ensure BMPs for proper handling of hazardous materials are included in the SWPPP.

See Response OCPW-16A for the text of Mitigation Measure HYDRO-1.

Page 3-46

Well 22

The nearest sensitive receptors to Well 22 are single family residences located on the northwest, northeast, and southeast site boundaries, and Beswick Elementary School located at 1362 Mitchell Avenue.

Page 3-47

Pipelines

The nearest sensitive receptors to the potential pipeline alignments are single family residences approximately 50 feet away. In addition, two schools are located along the transmission pipeline route associated with Area 1 treatment plant alternatives. W.R. Nelson Elementary School is located 14392 Browning Ave. in Tustin; Beswick Elementary School is located at 1362 Mitchell Avenue in Tustin. Construction noise associated with pipeline installation would be approximately 89 dBA at the nearest receptor. Where caisson drilling is performed, residences at 50 feet would experience noise levels of approximately 98 dBA. Pipeline construction would move at a rate of approximately 100 to 200 feet a day and therefore sensitive receptors would be exposed to pipeline construction noise for very short periods of time. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. In addition, Mitigation Measure TR-1 requires consultation and coordination of construction related activities with Tustin Unified School District, residents, and property owners along the pipeline route to ensure construction noise does not significantly affect school activities and to ensure construction does not significantly affect access to properties along the pipeline route. Pipeline construction noise would be considered less than significant with mitigation.

The following item has been added to Mitigation Measure TR-1 on page 3-52:

- Include a plan to coordinate all construction activities with the Tustin Unified School District at least two months in advance. The School District shall be notified of the timing, location, and duration of construction activities. The implementing agencies

shall require its contractor to maintain vehicle, pedestrian, and school bus service during construction through inclusion of such provisions in the construction contract. The assignment of temporary crossing guards at designated intersections may be needed to enhance pedestrian safety during project construction. Also the following provisions shall be met:

- Pipeline construction near schools shall occur when school is not in session (i.e., summer or holiday breaks). If this is not feasible, a minimum of two months prior to project construction, the implementing agencies shall coordinate with the Tustin Unified School District to identify peak circulation periods at schools along the alignment(s) (i.e., the arrival and departure of students), and require their contractor to avoid construction and lane closures during those periods;
- A minimum of two months prior to project construction, the implementing agencies shall coordinate with the Tustin Unified School District to identify alternatives to their Safe Routes to School program, alternatives for the school busing routes and stop locations, and other circulation provisions, as part of the Traffic Control/Traffic Management Plan.

Comment T-31

The comment requests identification of all feasible mitigation measures related to construction during evening and nighttime house during well drilling activities at Well TL-1.

Response T-31

On page 2-8 of the IS/EA, the project description includes the installation of sound walls and acoustical panels during well drilling activities to minimize noise impacts.

Comment T-32

The comment states that there are schools along the proposed pipeline routes and that mitigation measures should be modified to minimize noise impacts while schools are in session and to minimize conflicts with drop-off and pick-up activities and children walking to/from school.

Response T-32

See Response T-30.

Comment T-33

The comment states that project construction between the hours of 7:30 a.m. and 4:00 p.m. would be permitted Monday through Friday per the City's Noise Ordinance. The comment clarifies that construction on Saturday would need to be restricted to the hours of 9:00 a.m. and 5:00 p.m. to be considered exempt under the Noise Ordinance. The comment states that the City's Community Development Department would need to approve any construction noise waiver required for 24-hour drilling of Well TL-1. The comment reiterates previous comments that mitigation measures from the FEIS/EIR apply to Well TL-1.

Response T-33

Regarding construction hours, the project description states on page 2-7 of the IS/EA that project construction activities would be conducted Monday through Friday between 7:30 a.m. and 4:00 p.m. Construction is not expected to occur on Saturday, except during the 24-hour drilling of Well TL-1. Regarding the noise ordinance waiver for drilling of Well TL-1, Mitigation Measure NOISE-4 has been added requiring IRWD to request and secure the waiver prior to initiating construction of Well TL-1. See Response T-10A for additional details.

Comment T-34

The comment requests a mitigation measure be added that requires IRWD to obtain approvals from the City of Tustin for any variations from the City's Noise Ordinance.

Response T-34

See Response T-33 and T-10A.

Comment T-35

The comment states that Mitigation Measure NOISE-2 contradicts discussions that construction of Well TL-1 would require 24-hour drilling.

Response T-35

See Response T-33 and T-10A.

Comment T-36

The comment requests additional characterization of the demographic composition of the project area.

Response T-36

In response to the comment, the text on page 3-49 of the IS/EA has been modified as follows:

> **No Impact.** The project site is located throughout the City of Tustin, within various Census Tracts. According to the U.S. Census 2000 dataset, the population of the City of Tustin is predominantly white (59%) and hispanic (34%); median household income ($55,985) is slightly less than that of Orange County ($58,820) but greater than the State of California ($47,493) (U.S. Census Bureau, 2009).[2] ~~within a community that is predominantly Caucasian and generally considered to have a higher economic level than other communities in the County (City of Tustin, 2004). However, there~~There are no industries or contaminated sites in or around the project area that this project would comprise a new hazard and additional hazard to a particular population. Wells 21 and 22 are existing facilities already located in a residential area. The proposed project would temporarily impact those residents along the pipeline routes ~~and in the vicinity of the~~

[2] U.S. Census Bureau, State and County QuickFacts; 2000 Census of Population and Housing; Summary File 1 (SF1) and Summary File 3 (SF3); available online at http://www.census.gov/main/www/cen2000.html, accessed February 1, 2010.

~~treatment plant~~, but it has no potential to adversely impact any low income or ethnic communities in the long term. The proposed treatment plant would not be located in a residential area. Furthermore, the locations of the project facilities were not based on socio-economic characteristics of communities such as income level or race/ethnicity. ~~Therefore, the~~ The project itself would be an improvement to area services that would benefit the population of Tustin and other communities within IRWD's service area.

Comment T-37A

The comment states that installation of pipelines in the public right-of-way of newly reconstructed roads, such as Edinger Avenue, would result in additional operational and maintenance costs to the City. The comment requests an analysis of impacts on the City's operational and maintenance costs.

Response T-37A

Implementation of Mitigation Measure AES-1 would ensure that IRWD restores any disturbed right-of-way back to preexisting conditions following project construction. This would be at no cost to the City of Tustin. The IS/EA evaluates the environmental impacts of the proposed project. CEQA does not require an analysis of economic effects, and economic effects of a project are not to be considered significant effects on the environment (CEQA Guidelines Section 15131).

Comment T-37B

The comment states that construction activities such as pipeline installations disrupt traffic and require additional policing and traffic direction during construction. This short term impact can include overtime costs and redirection of policing priorities. IRWD should consult with Tustin to determine appropriate mitigation measures.

Response T-37B

Implementation of the Traffic Control Plan as required by Mitigation Measure TR-1 would minimize traffic disruptions due to construction-related activities to less than significant levels. CEQA does not require an analysis of economic effects, and economic effects of a project are not to be considered significant effects on the environment (CEQA Guidelines Section 15131). All costs associated with implementation of the Traffic Control Plan for the proposed project would be incurred by IRWD and/or its construction contractor. IRWD will request encroachment permits from the City for the installation of transmission pipelines in the public right-of-way and would comply with all terms and conditions of such permits, if granted.

Comment T-38

The comment reiterates previous comments, stating that Well TL-1 needs to be evaluated in the context of the FEIS/EIR. The comment states that any costs associated with implementation of the traffic management plan, traffic costs, or other short term impacts to the right-of-way due to installation of pipelines need to be borne by IRWD.

Response T-38

See Response T-37A, T-37B and Summary Issue 2: CEQA Procedures.

Comment T-39

The comment states the Mitigation Measure TR-1 needs to be modified to include plans for construction activities where schools and/or children are affected.

Response T-39

See Response T-30 for modifications made to Mitigation Measure TR-1.

Comment T-40

The comment states the analysis of temporary parking is too broad and information regarding staging and work areas are not specific. The comment states that as a result the analysis does not meet the standards for CEQA compliance.

Response T-40

On page 2-7 of the IS/EA, the project description states that parking for construction workers and staging areas for construction material and equipment would be located onsite and adjacent to Well 21 and/or Well 22 and the treatment plant site. Staging and parking areas for Well TL-1 also would be provided onsite. The amount of parking needed for each project component is indicated by the approximate number of workers required for each project component, as described in the project description.

Comment T-41

The comment notes an inconsistency with the closest fire station to the project sites.

Response T-41

In response to the comment, the text of the IS/EA on page 3-53 has been modified as follows:

> **Less than Significant with Mitigation.** The closest fire station to the project components is ~~Santa Ana Fire Station 9, located 1.2 miles west at 1320 East Warner in Santa Ana~~OCFA Fire Station #37, located at 14901 Red Hill Avenue in Tustin.

Comment T-42

The comment reiterates previous comments and states that cumulative impacts need to consider the treatment facility and transmission lines associated with Well TL-1.

Response T-42

Well TL-1 is an exploratory well that will be drilled at a depth between 900 and 1300 feet into the principal aquifer. The future Tustin Legacy Wellfield project and wells will be defined based on water quality and production capacity testing at Well TL-1. A detail cumulative impact analysis

of the full-scale production wells will be conducted as part of future CEQA anlaysis for the proposed project.

Comment T-43

The comment states that it would be helpful to summarize the implementation measures that serve to mitigate potential impacts but are not referenced as mitigation measures.

Response T-43

Comment noted.

Comment T-44

The comment requests modifications to Mitigation Measure TL-1 to address construction activities near schools and to ensure access is maintained to schools.

Response T-44

See Response T-30.

Comment T-45

The comment states that IRWD did not consult with the City of Tustin and has not provided property owners in the project area with adequate notification to be able to review and comment on the project. The comment suggests IRWD provide all property owners within 300 feet of a well or treatment plant alternative site with the environmental document and suggests IRWD publish a map of revised pipeline locations and routes in the Register and Tustin News.

Response T-45

IRWD has had previous and ongoing consultation with the City of Tustin regarding the proposed project. IRWD and the City have held staff-level meetings during 2009, including a meeting on April 29, 2009 to review the Wells 21 and 22 Project and a meeting on August 4, 2009 to discuss the Well TL-1 project. Starting in mid-2009, discussions began regarding property acquisition for the Well TL-1 site and the Wells 21 and 22 treatment plant site. Various locations, concept plans, and access for proposed facilities were discussed. IRWD and the City have an agreement for Well TL-1 and the four Tustin Legacy wells on MCAS Tustin (approved by City Council on December 16, 1996). In addition, there has been substantial communication activity regarding the Well TL-1 easement between IRWD and the City.

IRWD has provided adequate notification to the public regarding the availability of the IS/EA in accordance with CEQA. According to CEQA Guidelines Section 15073, the lead agency is required to provide a public review period of not less than 20 days. IRWD has provided a 30-day public review period. According to CEQA Guidelines Section 15072, the lead agency shall provide a notice of intent to adopt a MND to the county clerk and shall notify the public of the availability of the environmental document and review period by one of three procedures, *either* (1) publication in a newspaper of general circulation in the area affected, *or* (2) posting a notice onsite and offsite in the area where the project would be located, *or* (3) direct mailing to owners

and occupants of properties contiguous to the project. IRWD published a notice of intent in both the Orange County Register (December 28, 2009) and the Tustin News (January 7, 2010). The IS/EA was available in electronic format on the IRWD web site and in hard-copy format at Tustin Library, 345 E. Main Street, Tustin, CA 92780, and at Katie Wheeler Library, 13109 Old Myford Road, Irvine, CA 92602. Additional direct mailing to property owners is not required by CEQA.

Letter 3: Orange County Public Works

Comment OCPW-1

The comment states that the project proponent will be requested to obtain an encroachment permit prior to beginning work within the County of Orange Flood Control District (OCFCD) right-of-way

Response OCPW-1

IRWD would request an encroachment permit prior to initiating construction within, across or under the OCFCD right-of-way. See Summary Issue Response 3, Pipeline Alignments for additional discussion.

Comment OCPW-2

The comment states that a detour will be required in the event that the project requires closure of the Peters Canyon Class I Bikeway, the Peters Canyon Riding and Hiking Trail (in the area of Walnut Avenue), or the Barranca Class I Bikeway.

Response OCPW-2

The proposed transmission pipeline crossings of the Peters Canyon Channel and associated bikeways and trails would not directly affect these facilities. The pipeline would either be attached to the bridge crossing channel, or IRWD would utilize jack-and-bore construction methods to cross under the channel without affecting the ground surface. The proposed Well TL-1 would be set back from Barranca Parkway and is not expected to affect the bikeway. If, however, project construction does impede upon the use of or access to any trails or bikeways, IRWD would be required to maintain access to such recreational resources in accordance with Mitigation Measure TR-1, Traffic Control Plan, including detours if necessary.

Comment OCPW-3

The comment states that Well TL-1 is depicted incorrectly on Figure 1, and should be shown at the south edge of Tustin along Barranca Parkway.

Response OCPW-3

Figure 1 has been revised to accurately depict the location of Well TL-1.

Comment OCPW-4

This comment states that construction of Well TL-1 should not preclude the implementation of the Barranca Bikeway to Class I standards, and landscaped setbacks. This bikeway currently

exists along Barranca Parkway on The District shopping center side, and is proposed to ultimately connect the regional Class II bikeway along Red Hill Avenue to the regional Class I bikeway along Peters Canyon Wash.

Response OCPW-4

Well TL-1 would be set back from Barranca Parkway and would not impair Barranca Bikeway in any way. A new Figure 2 has been added to provide additional detail about the location of Well TL-1, including its location relative to Barranca Parkway.

Comment OCPW-5

The comment states that if the proposed treatment plant for Wells 21 and 22 is ultimately constructed along Peters Canyon Channel, it should not impact the Peters Canyon Bikeway and project design plans should allow room for setbacks and landscaping.

Response OCPW-5

The treatment plant is not proposed to be constructed at any sites directly adjacent to Peters Canyon Channel and therefore would not impact the Peters Canyon Bikeway. Please refer to Figure 2 for the proposed alternative treatment plant locations.

Comment OCPW-6

The comment states that the project design plans should locate manholes/vaults away from Peters Canyon Regional Riding and Hiking Trail and allow room for setbacks and landscaping. The trail is located above Walnut Avenue south to the levee top and proposed from that location to below Edinger.

Response OCPW-6

IRWD will request an encroachment permit from OCFCD prior to construction of the proposed transmission pipelines over or under Peters Canyon Channel and regional Riding and Hiking trail. The pipeline would not directly affect the trail.

Comment OCPW-7

The comment states that the discussion on page 1-3 about the current status of groundwater impairment in the vicinity of the proposed facilities should be expanded to address concentrations of selenium, which would be expected to represent a significant problem.

Response OCPW-7

See Response to Comment OCPW-15.

Comment OCPW-8

The comment states that the description of the Treatment Facility on page 2-5 should address impervious area to be added, as well as the footprint of the building.

Response OCPW-8

In response to the comment, IRWD will provide more information regarding the impervious areas to be added as well as the footprint of the building during the design phase of the project. IRWD will develop specific treatment plant design and site layout once the final location is chosen. Additional impervious area to be added would not substantially increase above that of the building footprint. Additional impervious surfaces would be required for access roads.

Comment OCPW-9

This comment provides clarification to text on page 2-7. The water discharged to the storm drain from drilling and testing Well TL-1 would be regulated under the Santa Ana Regional Water Quality Control Board Time Schedule Order R8-2009-0069 which was adopted 12/10/2009. This would require Irvine Ranch Water District to evaluate alternatives to storm drain system disposal and report to the Board about the feasibility of the following: (1) Discharge to land, (2) discharge to sewer, and (3) offsite transport and disposal. This comment states that the required feasibility analysis should be conducted now and made part of the Negative Declaration for public review. Lastly, this comment states that discussion is needed as to what further contamination might result from the drilling of Well TL-1.

Response OCPW-9

In response to the comment, the text on page 2-7 of the IS/EA has been modified as follows:

> Water discharged during well drilling is conveyed to onsite settling basins, recycled back into the well borehole during drilling, and <u>either</u> discharged to the storm drain ~~after drilling is complete~~ under a permit from the Regional Water Quality Control Board <u>(TSO R8-2009-0069) or discharged to the sanitary sewer, depending on water quality</u>.

See also Response OCPW-15

Comment OCPW-10

The comment states that the OCFCD should be included on page 3-1 to the list of Responsible Agencies (item 10) because IRWD would need permission from the County to place a potable water line over or under Peters Canyon Channel, as is proposed.

Response OCPW-10

IRWD will request an encroachment permit from OCFCD prior to construction of transmission pipelines under or over Peters Canyon Channel or any flood control channel maintained by OCFCD. In response to the comment, the OCFCD has been as added to the List of Responsible Agencies on page 3-1.

Comment OCPW-11

This comment states that the discussion of global warming impacts on page 3-11 should note that there may be more years of extreme weather and not merely more drought years. This comment also states that the discussion on consequent changes in State CEQA Guidelines needs to be

updated, since the Negative Declaration refers to actions that will occur in 2009, which is now past.

Response OCPW-11

In response to the comment, the text on pages 3-11 and 3-12 of the IS/EA has been modified as follows:

> Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, ~~and~~ more drought years~~.~~, and more years of extreme weather.
>
> On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for GHG emissions, as required by Public Resources Code section 21083.05 (Senate Bill 97) (OPR, 2009). These proposed CEQA Guideline amendments would provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The Natural Resources Agency ~~will conduct formal rulemaking in 2009, prior to certifying and adopting the amendments, as required by Senate Bill 97. The proposed amendments suggest relatively modest changes to various portions of the existing CEQA Guidelines. Modifications address those issues where analysis of GHG emissions may differ in some respects from more traditional CEQA analysis.~~ adopted the CEQA Guidelines Amendments with minor, non-substantial changes on December 31, 2009 and transmitted the Adopted Amendments and the entire rulemaking file to the Office of Administrative Law (OAL). OAL has 30 working days to review the Adopted Amendments and the Natural Resources Agency's rulemaking file. The Adopted Amendments will become effective 30 days after OAL completes its review and submits them to the Secretary of State for inclusion in the California Code of Regulations.

At this point the 30 days has passed, however no update has been announced on the status of the CEQA Guideline Amendments.

Comment OCPW-12

This comment states that on page 3-28, the sentence "an Erosion Control Plan to minimize soil erosion during construction and prevent soil from washing off the construction site into storm drains natural habitat" needs to be edited.

Response OCPW-12

In response to the comment, the text on page 3-28 of the IS/EA has been modified as follows:

> "…an Erosion Control Plan to minimize soil erosion during construction and prevent soil from washing off the construction site into storm drains and natural habitat."

Comment OCPW-13

This comment states that discussion of the Risk Management Plan should include if such a Plan is required even though the Negative Declaration states the exact quantities of chemicals that would be used onside. If required, the Negative Declaration needs to make clear what the public review process will be.

Response OCPW-13

IRWD will prepare a Risk Management Plan (RMP) for the new treatment facility. The requirement for the RMP is triggered by the quantity of aqua ammonia intended for use. The RMP to be developed is a CAL-ARP (California Accidental Release Program), Program Level II. The RMP would be made available for public review in accordance with any Orange County Fire Authority and City of Tustin requirements.

Comment OCPW-14

This comment states that references on page 3-33 are made to Mitigation Measure TR-3 which is not included in the Summary of approved Mitigation Measures at the end of the Negative Declaration

Response OCPW-14

In response to the comment, the text on page 3-33 of the IS/EA has been modified as follows:

> Implementation of Mitigation Measure TR-1, which requires a traffic control plan and ~~requiring a traffic control plan, and Mitigation Measure TR-3, requiring~~ coordination with emergency service providers, would reduce impacts to emergency response and access associated with construction traffic to a less than significant level.

Comment OCPW-15

The comment states that the Negative Declaration does not include a discussion of impaired surface water bodies in the project vicinity that are on the Clean Water Act Section 303(d) List. This comments further states that selenium might be present in the waters to be discharged to the storm drain after the one month of drilling Well TL-1, and the Negative Declaration should address potential impacts to downstream selenium impairments such as San Diego Creek.

Response OCPW-15

In response to the comment, the text on page 3-36 of the IS/EA has been modified as follows:

> Drilling of Well TL-1 would involve discharge of waters extracted during the well drilling process. Dewatering waters may contain elevated concentrations of selenium and other toxic constituents. According to the Regional Water Quality Control Plan (Basin Plan) for the Santa Ana River Basin (2008), surface waters in the project vicinity, namely San Diego Creek and Newport Bay, do not meet water quality objectives for selenium, heavy metals, DDT, PCBs, and other compounds. San Diego Creek, Newport Bay and Peters Canyon Channel are listed as impaired water bodies pursuant to Section 303(d) of

the Clean Water Act (RWQCB, 2007). IRWD and/or its construction contractor would either secure waste discharge requirements (WDRs) from the RWQCB pursuant to Time Schedule Order R8-2009-0069 for discharge of ~~such~~ dewatering waters to the storm drain system or if selenium concentrations exceed acceptable thresholds for discharge, IRWD would discharge dewatering waters to the sanitary sewer subject to an Industrial Waste Permit issued by the Orange County Sanitation District. Implementation of the terms and conditions of the WDRs or discharge to the sanitary sewer would mitigate impacts to storm water and surface water quality as a result of well drilling activities to less than significant levels.

Comment OCPW-16 A

This comment states that there is no discussion in Section 3.7 of "standard construction procedures and practices" even though that discussion is referenced on page 3-35.

Response OCPW-16A

In response to the comment, the text on page 3-36 of the IS/EA has been modified as follows:

BMPs would also include practices for proper handling of chemicals such as avoiding fueling at the construction site and overtopping during fueling and installing containment pans. ~~Further, implementation of standard construction procedures and precautions as discussed in Section 7, Hazards and Hazardous Materials, and compliance with the Orange County Stormwater Program requirements regulating stormwater would also ensure that the water quality impacts related to the handling of hazardous materials from project construction would be less than significant.~~ Implementation of Mitigation Measure HYDRO-1 would ensure these BMPs are ~~would be~~ included as part of the SWPPP and would ensure proper handling of hazardous materials.

In addition, the following mitigation measure has been added to page 3-36.

HYDRO-1: IRWD shall require the construction contractor to include the following BMPs in the SWPPP that would prevent the accidental release of hazardous materials. The plan shall include, but not be limited to, the following BMPs:

- Follow manufacturers' recommendations and regulatory requirements for use, storage, and disposal of chemical products and hazardous materials used in construction.
- During routine maintenance of construction equipment, properly contain and remove grease and oils.
- Properly dispose of discarded containers of fuels and other chemicals.
- In the event of a petroleum product spill (including pipeline rupture), the contractor will contain the spill and clean up the contaminated area in compliance with regulations with DTSC and RWQCB approval. Contaminated soils will be removed and disposed of in accordance with applicable regulations.

Comment OCPW-16 B

This comment states that IRWD is not subject to the Orange County Stormwater Program and associated City/County construction inspections as referenced on page 3-35. Furthermore, this comment suggests that it is not clear what specific elements of the Orange County Stormwater Program are being referenced as mitigating potential impacts during construction from hazardous materials.

Response OCPW-16 B

IRWD is not subject to the Orange County Stormwater Program. See Response OCPW-16A.

Comment OCPW-17 A

The comment states that compliance solely with an NPDES permit would not reduce pollutants in a discharge to levels of insignificance. Therefore, the comment requests potential impacts be identified, particularly in terms of selenium in well water discharge, on downstream impaired surface water bodies, as well as the discharge alternatives to storm drains. Furthermore, this comment states that the potential construction of 7 similar new wells, as mentioned on page 2-1, needs to be cumulatively considered.

Response OCPW-17 A

See Response OCPW-15.

Comment OCPW-17 B

This comment states that IRWD is not a Permittee of the Orange County Stormwater Program, even though it is referenced on page 3-36. Therefore, this comment suggests that the Negative Declaration needs to be precise as to what measures are being voluntarily agreed upon by IRWD.

Response OCPW-17 B

IRWD is not subject to the Orange County Stormwater Program. Therefore, in response to the comment, the text on page 3-36 of the IS/EA has been modified as follows:

> Storm water runoff from the proposed treatment plant could adversely affect the water quality of receiving waters, if not designed appropriately. Any storm water discharges from the treatment plant would be required by the federal Clean Water Act to meet water quality standards for receiving waters established by the Regional Water Quality Contol Board (RWQCB). Although IRWD is not subject to the Orange County Stormwater Program, ~~However,~~ the proposed treatment plant would be designed to be compatible with the Orange County Stormwater Program and include BMP design measures for new development that minimizes the potential for stormwater contaminants to be discharged from the project site. Implementation of Mitigation Measure HYRDO-2 would ensure BMPs are incorporated into the treatment plant design, ~~Incorporation of these measures~~ such as biofiltration swales, detention basins, and limited introduction of impervious surfaces.

In addition, the following mitigation measure has been added to page 3-36.

> **HYDRO-2**: IRWD shall ensure that the treatment plant design includes BMPs to minimize contaminated storm water runoff from the site, such as biofiltration swale, detention basins, and limitations on impervious surfaces.

Comment OCPW-18

This comment describes that the Negative Declaration states that this infrastructure project would meet the increased demands of planned growth. However, the Negative Declaration needs to specify whether the planned growth is to IRWD service area, the General Plans of the cities involved, or both.

Response OCPW-18

In response to the comment, the IS/EA specifies on page 3-48 that the planning reference is in regards to IRWD service area and is stated as such:

> "The proposed project would provide a new water supply for existing and future development within IRWD's service area and would meet the demands of planned future growth."

Comment OCPW-19

This comment asks to describe which project elements would be using new storm drain inlets as opposed to existing street gutters, sheet flow over existing impervious areas, etc. This is in regards to the statement made on page 3-55: "the proposed improvements at Well 21, 22, and TL-1 and the proposed treatment facility would include connections to the existing storm water system."

Response OCPW-19

The reference to storm drain connections as quoted in the comment is not related to the capture of storm water but rather raw water. Typically, wells have a pump-to-waste feature that allows the pumps to discharge to the storm drain during initial start-up of the well. See Response T-9D for additional discussion.

Comment OCPW-20

This comment states that a duplicate reference is made on page 3-58 to Mitigation Measure NOISE-2.

Response OCPW-20

In response to the comment, the text on page 3-58 of the IS/EA has been modified as follows:

> With incorporation of Mitigation Measures NOISE-2 and ~~NOISE-2~~ Noise 3, the temporary impacts associated with construction noise would be reduced to less than significant levels and would not adversely affect human sensitive receptors.

Letter 4: Orange County Water District

Comment OCWD-1

The comment requests clarification regarding the presence of any groundwater contamination or ongoing remediation activities within one mile of the proposed project sites. The comment requests analysis of potential impacts to any groundwater contamination plumes, including spreading of plumes, and potential impacts to remediation systems.

Response OCWD-1

In addition to Response T-11, in response to the comment, the text on page 3-32 of the IS/EA has been further modified as follows:

> In addition, there is a perchlorate plume in the shallow aquifer that starts approximately 1500 feet north of Wells 21 and 22 (OCWD, 2008). Wells 21, 22, and TL-1 would be completed in the principal aquifer, which is deeper and is substantially hydraulically separate from the shallow aquifer where the contamination plume are contained. Operation of Wells 21 and 22 would not affect any existing shallow groundwater contamination plumes or remediation activities. Operation of exploratory Well TL-1 would be minimal, with pumping lasting for a maximum of three weeks, and also would not affect any existing contamination plumes or remediation activities.

See Summary Issue 1: Well Operation, 1B. Hazardous Materials and Contaminant Plumes for additional discussion.

Comment OCWD-2

The comment requests analysis of potential impacts to the volatile organic compound (VOC) plume currently being remediated by the DON at the MCAS Tustin, including spreading of the VOC plume due to pumping at Well TL-1 and potential impacts to the remediation system.

Response OCWD-2

Well TL-1 is an exploratory well. Operation of Well TL-1 would involve pumping for approximately three weeks to conduct water quality testing and production capacity testing. Well TL-1 would have no affect on contaminant plumes or ongoing remediation activities. See Response T-11 and Summary Issue 1: Well Operation, 1B. Hazardous Materials and Contaminant Plumes.

Comment OCWD-3

The comment states that the IS/EA should evaluate the cumulative impact of all four Tustin Legacy production wells on the VOC plume migration and remediation activities.

Response OCWD-3

Well TL-1 is an exploratory well that will be drilled to a depth between 900 and 1300 feet into the principal aquifer. The future Tustin Legacy Wellfield project and wells will be defined based

on water quality and production capacity testing at Well TL-1. A detail cumulative impact analysis of the full-scale production wells will be conducted as part of future CEQA analysis for the proposed project. Nonetheless, assuming that future Tustin Legacy Wells would be screened to produce from the principal aquifer, there is expected to be no cumulative impacts of the wells on the VOC plume and plume remediation systems due to the location of the contamination in the shallow aquifer and physical separation between the principal and shallow aquifer. See Summary Issue I: Well Operation, 1B. Hazardous Materials and Contaminant Plumes, for additional discussion.

Comment OCWD-4

The comment requests confirmation that Well TL-1 was included in OCWD's 2009 Groundwater Management Plan and clarification regarding the conclusion that groundwater extraction from Well TL-1 would have no significant impact on groundwater supplies in the basin.

Response OCWD-4

Well TL-1 is an exploratory well. Operation of Well TL-1 would involve pumping for approximately three weeks to conduct water quality testing and production capacity testing. Well TL-1 would have no significant impact on groundwater supplies in the basin.

Comment OCWD-5

The comment states that OCWD's groundwater modeling prepared for the proposed project estimates groundwater level decreases between 11 and 16 feet at five existing City of Tustin production wells that are used to extract impaired water under a BEA exemption granted by OCWD. The comment states that this groundwater level decrease constitutes a negative impact if they cause the City of Tustin to reduce its production from its wells. The comment requests this issue be addressed in the IS/EA.

Response OCWD-5

See Summary Issue 1: Well Operation, 1A. Well Drawdown and Effects on Neighboring Wells.

Letter 5: California Department of Transportation

Comment DOT-1

The comment states that the Traffic Control/Traffic Management Plan required by Mitigation Measure TR-1 should be submitted to Caltrans, summarizing the procedures to be used to reduce traffic impacts as well as the process for distribution of accurate and timely traffic information to the public.

Response DOT-1

Mitigation Measure TR-1 includes measures to minimize impacts and a process for distribution of traffic information to the public. In response to the comment, Mitigation Measure TR-1 on page 3-52 of the IS/EA has been modified as follows:

TR-1: The construction contractors shall prepare and implement a Traffic Control/Traffic Management Plan subject to approval by the cities and Caltrans prior to construction.

Comment DOT-2

The comment states that an encroachment permit is required for any project work in the vicinity of the Department's right-of-way, and all environmental documentation must adequately address the Department's requirements prior to issuance of an encroachment permit.

Response DOT-2

IRWD will request an encroachment permit from Caltrans and submit all necessary environmental documentation prior to initiating construction within the Department's right-of-ways. In response to the comment, the text on page 3-1 of IS/EA has been modified as follows:

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement. Indicate whether another agency is a responsible or trustee agency.)

Orange County Water District (Responsible Agency)	Approval of Basin Equity Assessment (BEA) exemption
Orange County Sanitation District	Industrial waste permit for brine disposal
City of Tustin	Encroachment Permit; Construction Noise Ordinance Waiver; Exclusive Easement and Licenses
City of Irvine	Encroachment Permit
State Water Resources Control Board	Notice of Intent to comply with NPDES General Construction Permit (Storm Water Pollution Prevention Plan)
Regional Water Quality Control Board	Waste Discharge Requirements for well drilling discharge
California Department of Transportation	Encroachment Permit

3.0 References

Orange County Water District, 2009. 2007-2008 Engineer's Report on the Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, February 2009.

U.S. Department of the Navy (DON) and City of Tustin, 2001. MCAS Tustin Specific Plan/Reuse Plan Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR). Adopted by Tustin City Council on January 16, 2001. Record of Decision (ROD) published in Federal Register by DON on March 3, 2001.

U.S. Department of the Navy (DON), 2001. Record of Decision for the Disposal and Reuse of marine Corps Air Station Tustin, California. Federal Register, March 2, 2001, Volume 66, number 42.

U.S. Department of the Navy (DON), 1998. Draft Basewide Environmental Baseline Survey, Marine Corps Air Facility, Tustin, California. Prepared by Bechtel National, Inc. June 25. As cited in DON/City of Tustin, 2001.

CHAPTER 10
Corrections and Additions to the IS/EA

This chapter provides a summary of all revisions made to the IS/EA. Where the responses indicate additions or deletions to the text of IS/EA, additions are included as underlined text, and deletions as ~~stricken text~~. The revisions do not significantly alter the conclusions in the IS/EA.

Chapter 1: Purpose and Need

Page 1-2:

A revised Figure 1 has been included at the end of this chapter.

Chapter 2: Proposed Action and Alternatives

Page 2-1:

Well TL-1 would be a newly constructed exploratory ~~production~~ well that is expected to produce approximately 1,500 gpm, or 2,200 acre-feet per year. There are no proposed conveyance pipelines to connect Well TL-1 to IRWD's system at this time. Well TL-1 may ~~would~~ be the first of four future production wells drilled in the former MCAS Tustin area, called the Tustin Legacy Wellfield.

Page 2-2:

A revised Figure 2 has been included at the end of this chapter.

Page 2-3:

Well TL-1 would be located in the southwestern portion of the Tustin Legacy development area located on the former MCAS Tustin in an unimproved area on the north side of Barranca Parkway approximately 280 feet east of the intersection with the City of Irvine's Aston Street (**Figure 3** ~~Figure 2~~). IRWD would request an exclusive easement from the City of Tustin ~~secure an exclusive easement~~ for the TL-1 well site in early 2010, in accordance with an existing agreement (December 16, 1996) between the City of Tustin and IRWD. Implementation of Well TL-1 is contingent upon the City's discretionary approval of such an easement.

A new Figure 3 has been included at the end of this chapter.

Page 2-4:

In 1991, the City was designated as the Local Redevelopment Agency ~~Lead Agency~~ under the Base Closure Law for preparation of a Reuse Plan for Marine Corps Air Station (MCAS) Tustin in order to facilitate the closure of MCAS Tustin and its reuse in furtherance of economic development of the city and surrounding region. The MCAS Tustin Specific Plan/Reuse Plan was developed in accordance with this procedure. The Reuse Plan was ~~and~~ adopted by the Tustin City Council on October 17, 1996, and subsequently amended in September 1998. The Specific Plan, which regulates development, was adopted on February 3, 2003 and subsequently amended several times in 2005 and 2006. Owned and operated by Department of the Navy for nearly 60 years, approximately 1,600 acres of property at the former MCAS Tustin were determined surplus to federal government needs and the military facility was officially closed in July 1999.

Page 2-5:

Well TL-1 would be installed in the southwestern portion of the Tustin Legacy development area ~~on an exclusive easement to be secured by IRWD~~. IRWD would request an exclusive easement from the City of Tustin for the TL-1 well site in early 2010. IRWD would comply with the terms of the easement if granted, including any requirements for screening or landscaping in accordance with MCAS Tustin Specific Plan or requirements for architectural materials in accordance with the Legacy Park Design Guidelines. Well TL-1 would encompass a rectangular area that is approximately 50 feet by 100 feet, enclosed by a 6-foot (minimum) fence. New facilities at the wellhead would include well pump and motor, raw water piping, groundwater bypass and storm water piping, surge protections, motor control center, switch gear pad, overhead lighting, hardscape improvements, and ancillary equipment.

It is anticipated that Well TL-1 would produce about 1,500 gpm of potentially impaired groundwater such that treatment would be necessary to use Well TL-1 as a potable water supply. The specific treatment processes, however, would be dependent upon water quality and would be determined after Well TL-1 is drilled and tested. If IRWD determines that it is feasible to develop Well TL-1 into a full-scale production well, the capacity and potential locations of the treatment facilities would then be developed, depending on the drawdown and yield information gained from Well TL-1. The proposed project does not include the future additional Tustin Legacy wells and the future treatment facilities that would be required for TL-1 to be a potable source. Additional environmental analysis and documentation would be required in accordance with CEQA prior to integrating Well TL-1 and any other Tustin Legacy wells into IRWD's water treatment and distribution system. ~~It is estimated that Well TL-1 would ultimately produce approximately 2 mgd, or 2,200 afy of potable water for the IRWD service area.~~

Page 2-5:

The conveyance pipeline would be constructed primarily within roadway rights-of-way, and depending on the treatment plant location, could require jack-and-bore segments where the pipeline crosses the Southern California Regional Rail Authority (SCRRA) right-of-way and Orange County Flood Control District (OCFCD) channel. ~~Metrolink railroad track~~.

Page 2-6 to 2-7:

The pipeline across MCAS Tustin would be located within the future extension of Tustin Ranch Road as identified in the MCAS Reuse Plan and would require one jack-and-bore segment where Tustin Ranch Road crosses the SCRRA right-of-way and OCFCD channel ~~Metrolink railroad track~~ just north of Edinger Avenue.

Page 2-7:

Water discharged during well drilling is conveyed to onsite settling basins, recycled back into the well borehole during drilling, and either discharged to the storm drain ~~after drilling is complete~~ under a permit from the Regional Water Quality Control Board (TSO R8-2009-0069) or discharged to the sanitary sewer, depending on water quality.

Page 2-8:

For approximately one month, daily 24-hour drilling would be required. To drill the well, the drill rig must run 24 hours-a-day otherwise the walls of the borehole can collapse. Prior to construction, IRWD would request ~~secure~~ a waiver from the City of Tustin's noise ordinance that restricts construction to the daytime hours of 7:30 a.m. to 4:00 p.m. (Municipal Code Section 4616, Specific Disturbing Noises Prohibited) and exempts construction from the City's noise provisions. IRWD would require the construction contractor to set up sound walls and acoustical panels to minimize noise impacts associated with well drilling activities and to comply with other terms and conditions of the noise waiver if granted.

Chapter 3: Affected Environment & Environmental Consequences

Page 3-1:

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement. Indicate whether another agency is a responsible or trustee agency.)

Orange County Water District (Responsible Agency)	Approval of Basin Equity Assessment (BEA) exemption
Orange County Sanitation District	Industrial waste permit for brine disposal
City of Tustin	Encroachment Permit; Construction Noise Ordinance Waiver; Exclusive Easement and Licenses
City of Irvine	Encroachment Permit
State Water Resources Control Board	Notice of Intent to comply with NPDES General Construction Permit (Storm Water Pollution Prevention Plan)
Regional Water Quality Control Board	Waste Discharge Requirements for well drilling discharge
U.S. Department of the Navy	Approval of pipeline improvements on MCAS Tustin
Southern California Regional Rail Authority	Encroachment Permit
Orange County Flood Control District	Encroachment Permit
California Department of Transportation	Encroachment Permit

Page 3-4:

> Currently, the parcels for the proposed treatment facility are either vacant or occupied by commercial buildings **(Figure 4)** that would be demolished and replaced by a water treatment facility, with a maximum height of 35 feet.

A new Figure 4 has been included at the end of this chapter.

Page 3-11:

> Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, ~~and~~ more drought years~~.~~, and more years of extreme weather.
>
> On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for GHG emissions, as required by Public Resources Code section 21083.05 (Senate Bill 97) (OPR, 2009). These proposed CEQA Guideline amendments would provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The Natural Resources Agency ~~will conduct formal rulemaking in 2009, prior to certifying and adopting the amendments, as required by Senate Bill 97. The proposed amendments suggest relatively modest changes to various portions of the existing CEQA Guidelines. Modifications address those issues where analysis of GHG emissions may differ in some respects from more traditional CEQA analysis.~~ adopted the CEQA Guidelines Amendments with minor, non-substantial changes on December 31, 2009 and transmitted the Adopted Amendments and the entire rulemaking file to the Office of Administrative Law (OAL). OAL has 30 working days to review the Adopted Amendments and the Natural Resources Agency's rulemaking file. The Adopted Amendments will become effective 30 days after OAL completes its review and submits them to the Secretary of State for inclusion in the California Code of Regulations.

Page 3-17:

In the City of Tustin, approval for tree trimming or removal on city-owned property must be obtained in writing from the City Engineer ~~City's Manager of Field Services~~.

Page 3-23

> f. The qualified archaeologist shall prepare monthly progress reports to be filed with the client and the lead agencies and property owners if applicable.

Page 3-24

> h. Upon completion of all ground-disturbing activities associated with this project, an Archaeological Resources Monitoring and Mitigation Report shall be prepared documenting construction activities observed, including copies of all daily

archaeological monitoring logs. If discoveries are made during ground-disturbing activities, the report shall also document the archaeological materials and the methods of treatment as determined appropriate by the qualified archaeologist. The report shall be filed with the client, the lead agencies, the property owners if applicable, and the appropriate repositories.

Page 3-25

d. The OCC Paleontologist shall prepare monthly progress reports to be filed with the client and the lead agencies and property owners if applicable.

h. The OCC Paleontologist shall prepare a final mitigation report to be filed with the client, the lead agencies, property owners if applicable, and the repository.

Page 3-26

CUL-3*:* If human skeletal remains are uncovered during project construction, the project proponent shall immediately halt work, contact the lead agency, property owner, and the Orange County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines...

Page 3-28:

"…an Erosion Control Plan to minimize soil erosion during construction and prevent soil from washing off the construction site into storm drains and natural habitat."

Page 3-32:

c) Less than Significant. Construction of the proposed project would require the use of fuels, oils, and lubricants that can be hazardous to the environment. In addition, the operation of the proposed treatment facility would involve onsite chemical use and storage. Two schools are located in the vicinity of the project site. W. R. Nelson Elementary School is located 14392 Browning Ave. in Tustin, ~~approximately 0.5 miles northwest of treatment plant Area 1~~ and along the transmission pipeline route associated with Area 1 treatment plant alternatives. Beswick Elementary School is located at 1362 Mitchell Avenue in Tustin, approximately 0.15 miles south of Well 22, and also along the transmission pipeline route associated with Area 1 treatment plant alternatives. ~~Although neither~~ Neither school is located within one-quarter mile of the treatment plant, however, construction activities ~~at Wells 21 and 22~~ could require handling of hazardous materials within the vicinity of these schools. ~~However, compliance~~ Compliance with applicable state and federal regulations as well as the HMBP (as mentioned above) and SWPPP (see Section 3.8(a)) during construction would ensure that any potential risk associated with handling of hazardous materials would be less than significant. Implementation of HYDRO-1 would ensure BMPs for proper handling of hazardous materials are included in the SWPPP.

Page 3-32:

The project sites or pipeline alignment for the proposed wells, treatment facility, and Conveyance pipelines are not listed on the Cortese List for Orange County.[1] The DTSC Envirostor Database was searched in August 2009 for hazardous material sites within the cities of Tustin and Irvine. The two closest hazardous materials sites to the proposed project are located on MCAS Tustin near the intersection of Red Hill Avenue and Valencia Avenue. These are listed as State Response and Voluntary Cleanup sites. Another nearby hazardous materials site is the Tustin NG Rifle Range (State Response site) which is located 1 mile south of Well 22. There are additional contamination sites in the project area not included on the Cortese List. Within MCAS Tustin, the U.S. Department of the Navy (DON) has retained ownership of several sites that are characterized by groundwater contamination in the shallow aquifer, including volatile organic compounds (VOCs). The DON has ongoing remediation systems at these contamination sites. If the treatment plant is located in Area 1 and the proposed brine disposal pipeline route crosses MCAS Tustin, then the pipeline may pass through one of the DON contamination sites. Construction of this pipeline could result in significant impacts to worker health and safety if contaminated soils are encountered, and special handling, disposal procedures, and construction techniques would be required for excavated contaminated soils to avoid significant impacts to the environment. IRWD would comply with all regulations regarding the handling and disposal of hazardous waste generated by project implementation to avoid impacts to the environment. Implementation of Mitigation Measure HAZ-1 would ensure IRWD coordinates with the DON and the City of Tustin regarding potential transmission pipeline alignments across MCAS Tustin.~~Although there are hazardous material sites within the vicinity of the proposed project, none of the project components would be located on a hazardous material site and would not create a significant hazard to the public or the environment. There would be no impact.~~

In addition, there is a perchlorate plume in the shallow aquifer that starts approximately 1500 feet north of Wells 21 and 22 (OCWD, 2008). Wells 21, 22, and TL-1 would be completed in the principal aquifer, which is deeper and is substantially hydraulically separate from the shallow aquifer where the contamination plume are contained. Operation of Wells 21 and 22 would not affect any existing shallow groundwater contamination plumes or remediation activities. Operation of exploratory Well TL-1 would be minimal, with pumping lasting for a maximum of three weeks, and also would not affect any existing contamination plumes or remediation activities.

Mitigation Measure

HAZ-1: In the event that the project requires construction of transmission pipelines across MCAS Tustin, IRWD shall coordinate with the U.S. Department

[1] DTSC, Hazardous Waste and Substance Sites (Cortese) List, accessed August 29, 2009: http://www.calepa.ca.gov/SiteCleanup/CorteseList/.

of the Navy (DON) and the City of Tustin regarding the pipeline alignment. IRWD shall require the construction contractor to conduct a geotechnical study that includes soil testing. If soil testing confirms the presence of contaminated soils at the depth of excavation for the proposed pipeline then IRWD shall consult with the DON and City of Tustin to determine if special construction techniques, handling techniques, and disposal requirements and procedures are requirements. IRWD shall require the construction contractor to abide by such requirements, if necessary.

Page 3-33:

The closest fire station to the project site is OCFA Fire Station #37, located at ~~the corner of Red Hill Ave. and Edinger at~~ 14901 Red Hill Ave.

Page 3-33:

Implementation of Mitigation Measure TR-1, which requires a traffic control plan and ~~requiring a traffic control plan, and Mitigation Measure TR-3, requiring~~ coordination with emergency service providers, would reduce impacts to emergency response and access associated with construction traffic to a less than significant level.

Page 3-36:

BMPs would also include practices for proper handling of chemicals such as avoiding fueling at the construction site and overtopping during fueling and installing containment pans. ~~Further, implementation of standard construction procedures and precautions as discussed in Section 7, Hazards and Hazardous Materials, and compliance with the Orange County Stormwater Program requirements regulating stormwater would also ensure that the water quality impacts related to the handling of hazardous materials from project construction would be less than significant.~~ Implementation of Mitigation Measure HYDRO-1 would ensure these BMPs are ~~would be~~ included as part of the SWPPP and would ensure proper handling of hazardous materials.

Drilling of Well TL-1 would involve discharge of waters extracted during the well drilling process. Dewatering waters may contain elevated concentrations of selenium and other toxic constituents. According to the Regional Water Quality Control Plan (Basin Plan) for the Santa Ana River Basin (2008), surface waters in the project vicinity, namely San Diego Creek and Newport Bay, do not meet water quality objectives for selenium, heavy metals, DDT, PCBs, and other compounds. San Diego Creek, Newport Bay and Peters Canyon Channel are listed as impaired water bodies pursuant to Section 303(d) of the Clean Water Act (RWQCB, 2007). IRWD and/or its construction contractor would either secure waste discharge requirements (WDRs) from the RWQCB pursuant to Time Schedule Order R8-2009-0069 for discharge of ~~such~~ dewatering waters to the storm drain system or if selenium concentrations exceed acceptable thresholds for discharge, IRWD would discharge dewatering waters to the sanitary sewer subject to an Industrial Waste

Permit issued by the Orange County Sanitation District. Implementation of the terms and conditions of the WDRs or discharge to the sanitary sewer would mitigate impacts to storm water and surface water quality as a result of well drilling activities to less than significant levels.

Storm water runoff from the proposed treatment plant could adversely affect the water quality of receiving waters, if not designed appropriately. Any storm water discharges from the treatment plant would be required by the federal Clean Water Act to meet water quality standards for receiving waters established by the Regional Water Quality Contol Board (RWQCB). Although IRWD is not subject to the Orange County Stormwater Program, ~~However,~~ the proposed treatment plant would be designed to be compatible with the Orange County Stormwater Program and include BMP design measures for new development that minimizes the potential for stormwater contaminants to be discharged from the project site. Implementation of Mitigation Measure HYRDO-2 would ensure BMPs are incorporated into the treatment plant design, ~~Incorporation of these measures~~ such as biofiltration swales, detention basins, and limited introduction of impervious surfaces.

Mitigation Measures

HYDRO-1: IRWD shall require the construction contractor to include the following BMPs in the SWPPP that would prevent the accidental release of hazardous materials. The plan shall include, but not be limited to, the following BMPs:

- Follow manufacturers' recommendations and regulatory requirements for use, storage, and disposal of chemical products and hazardous materials used in construction.
- During routine maintenance of construction equipment, properly contain and remove grease and oils.
- Properly dispose of discarded containers of fuels and other chemicals.
- In the event of a petroleum product spill (including pipeline rupture), the contractor will contain the spill and clean up the contaminated area in compliance with regulations with DTSC and RWQCB approval. Contaminated soils will be removed and disposed of in accordance with applicable regulations.

HYDRO-2: IRWD shall ensure that the treatment plant design includes BMPs to minimize contaminated storm water runoff from the site, such as biofiltration swale, detention basins, and limitations on impervious surfaces.

Page 3-38:

Therefore, based on these modeling results, implementation of the proposed project would result in a lowering of groundwater levels ranging from 5 to 30 feet in a three mile

radius of Wells 21 and 22. The rest of the basin would not be significantly altered from the proposed pumping in any of the three identified aquifers. The localized lower groundwater levels would create a cone of depression that would help contain the spread of groundwater with poor water quality. The lower groundwater levels may be realized at existing production wells within three miles of Wells 21 and 22, including five wells owned and operated by the City of Tustin (T-17S2, T-17S4, T-NEWP, T-MS3, and T-MS4). OCWD provides a BEA exemption for these City wells, which pump impaired water from the principal aquifer. Operation of Wells 21 and 22 would result in a localized decrease in groundwater levels at the above-mentioned City wells of between 11 and 16 feet, as determined by the Basin Model run prepared by OCWD for the proposed project (see Appendix B). This localized decrease would not prevent the City from operating its wells or drop the production rate of its wells to a level that would not support existing land uses or planned uses for which permits have been granted. Rather, the localized decrease in groundwater levels may cause the City to incur additional costs to operate the wells, due to an increased energy requirement to pump the water from a lower depth up to the surface. The localized decrease in groundwater levels is within the existing range of variability for groundwater levels in the project area as evidenced by annual groundwater elevation hydrographs prepared by OCWD and reported in their *2007-2008 Engineer's Report on the Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District*. ~~A localized lowering of impaired groundwater that would not otherwise be suitable for use is therefore considered to be less than significant.~~

Page 3-42:

Construction of Well TL-1 would require daily 24-hour drilling for approximately one month. IRWD would request ~~secure~~ a waiver from the City of Tustin's noise ordinance ~~that restricts construction to the daytime hours of 7:30 a.m. to 4:00 p.m~~. If granted, the ~~The~~ waiver would exempt construction of Well TL-1 from the City's noise provisions. IRWD would require the construction contractor to set up acoustical panels to minimize noise impacts associated with well drilling if necessary and to comply with other terms and conditions of the noise waiver if granted. ~~As described below in Section 3.11(d), there are no sensitive receptors in the vicinity of well TL-1.~~

Mitigation Measure

NOISE-4: IRWD shall request and secure a waiver from the City of Tustin's noise ordinance that restricts construction to the daytime hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays, excluding City observed federal holidays, prior to initiation of construction and drilling of Well TL-1. IRWD shall require the construction contractor to set up acoustical panels to minimize noise impacts associated with well drilling if necessary and to comply with other terms and conditions of the noise waiver.

Page 3-46:

Well 22

The nearest sensitive receptors to Well 22 are single family residences located on the northwest, northeast, and southeast site boundaries, and Beswick Elementary School located at 1362 Mitchell Avenue.

Well TL-1

~~No sensitive receptors are in the vicinity of Well TL-1; therefore, construction noise levels would be less than significant.~~ The nearest receptor to Well TL-1 is a commercial building approximately 250 feet across Barranca Pkwy. If construction were to occur within 250 feet, noise levels at the nearest receptor would be approximately 75 dBA. These noise levels would be lessened by the acoustical panels surrounding the well site. Noise levels would be further reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site A

The nearest sensitive receptor to Treatment Plant Site A is the 1st Korean Baptist Church located approximately 1,450 feet from the site. Construction noise at the nearest sensitive receptor would be approximately 60 dBA. The nearest building to Treatment Plant Site A is located approximately 65 feet from the site. Construction noise at the nearest building would be approximately 87 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site D

The nearest sensitive receptor to Treatment Plant Site D is a single family residence located approximately 200 feet from the site. Construction noise at the nearest sensitive receptor would be approximately 77 dBA. The nearest building to Treatment Plant Site D is located approximately 60 feet from the site. Construction noise at the nearest building would be approximately 87 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site F

The nearest sensitive receptor to Treatment Plant Site F is the Resurrection Life Center International located approximately 180 feet from the site. Construction noise at the nearest sensitive receptor would be approximately 78 dBA. The nearest building to Treatment Plant Site F is located approximately 25 feet from the site. Construction noise at the nearest building would be approximately 95 dBA. Noise levels would be reduced

with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Treatment Plant Site G

The nearest sensitive receptor to Treatment Plant Site G is a single family residence located approximately 1,350 feet from the site. Construction noise at the nearest sensitive receptor would be approximately 60 dBA. The nearest building to Treatment Plant Site G is located approximately 25 feet from the site. Construction noise at the nearest building would be approximately 95 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Page 3-47

Treatment Plant Site I

The nearest sensitive receptor to Treatment Plant Location I is a single family residence located approximately 1,550 feet from the site. Construction noise at the nearest receptor would be approximately 59 dBA. The nearest building to Treatment Plant Site I is located approximately 190 feet from the site. Construction noise at the nearest building would be approximately 77 dBA. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. Impacts would be considered less than significant with mitigation.

Pipelines

The nearest sensitive receptors to the potential pipeline alignments are single family residences approximately 50 feet away. In addition, two schools are located along the transmission pipeline route associated with Area 1 treatment plant alternatives. W. R. Nelson Elementary School is located 14392 Browning Ave. in Tustin; Beswick Elementary School is located at 1362 Mitchell Avenue in Tustin. Construction noise associated with pipeline installation would be approximately 89 dBA at the nearest receptor. Where caisson drilling is performed, residences at 50 feet would experience noise levels of approximately 98 dBA. Pipeline construction would move at a rate of approximately 100 to 200 feet a day and therefore sensitive receptors would be exposed to pipeline construction noise for very short periods of time. Noise levels would be reduced with implementation of Mitigation Measures NOISE-2 and NOISE-3. In addition, Mitigation Measure TR-1 requires consultation and coordination of construction related activities with Tustin Unified School District, residents, and property owners along the pipeline route to ensure construction noise does not significantly affect school activities and to ensure construction does not significantly affect access to properties along the pipeline route. Pipeline construction noise would be considered less than significant with mitigation.

Page 3-49

No Impact. The project site is located throughout the City of Tustin, within various Census Tracts. According to the U.S. Census 2000 dataset, the population of the City of Tustin is predominantly white (59%) and hispanic (34%); median household income ($55,985) is slightly less than that of Orange County ($58,820) but greater than the State of California ($47,493) (U.S. Census Bureau, 2009).[2] ~~within a community that is predominantly Caucasian and generally considered to have a higher economic level than other communities in the County (City of Tustin, 2004). However, there~~There are no industries or contaminated sites in or around the project area that this project would comprise a new hazard and additional hazard to a particular population. Wells 21 and 22 are existing facilities already located in a residential area. The proposed project would temporarily impact those residents along the pipeline routes ~~and in the vicinity of the treatment plant~~, but it has no potential to adversely impact any low income or ethnic communities in the long term. The proposed treatment plant would not be located in a residential area. Furthermore, the locations of the project facilities were not based on socio-economic characteristics of communities such as income level or race/ethnicity. ~~Therefore, the~~ The project itself would be an improvement to area services that would benefit the population of Tustin and other communities within IRWD's service area.

Page 3-52

The following modification has been made to **Mitigation Measure TR-1**:

TR-1: The construction contractors shall prepare and implement a Traffic Control/Traffic Management Plan subject to approval by the cities and Caltrans prior to construction.

The following item has been added to **Mitigation Measure TR-1**:

- Include a plan to coordinate all construction activities with the Tustin Unified School District at least two months in advance. The School District shall be notified of the timing, location, and duration of construction activities. The implementing agencies shall require its contractor to maintain vehicle, pedestrian, and school bus service during construction through inclusion of such provisions in the construction contract. The assignment of temporary crossing guards at designated intersections may be needed to enhance pedestrian safety during project construction. Also the following provisions shall be met:
  - Pipeline construction near schools shall occur when school is not in session (i.e., summer or holiday breaks). If this is not feasible, a minimum of two months prior to project construction, the implementing agencies shall coordinate with the Tustin Unified School District to identify peak circulation periods at schools along the alignment(s) (i.e., the arrival and departure of

[2] U.S. Census Bureau, State and County QuickFacts; 2000 Census of Population and Housing; Summary File 1 (SF1) and Summary File 3 (SF3); available online at http://www.census.gov/main/www/cen2000.html, accessed February 1, 2010.

students), and require their contractor to avoid construction and lane closures during those periods;

– A minimum of two months prior to project construction, the implementing agencies shall coordinate with the Tustin Unified School District to identify alternatives to their Safe Routes to School program, alternatives for the school busing routes and stop locations, and other circulation provisions, as part of the Traffic Control/Traffic Management Plan.

Page 3-53

Less than Significant with Mitigation. The closest fire station to the project components is ~~Santa Ana Fire Station 9, located 1.2 miles west at 1320 East Warner in Santa Ana~~OCFA Fire Station #37, located at 14901 Red Hill Avenue in Tustin.

Page 3-58

With incorporation of Mitigation Measures NOISE-2 and ~~NOISE-2~~ Noise 3, the temporary impacts associated with construction noise would be reduced to less than significant levels and would not adversely affect human sensitive receptors.

Chapter 4: Summary of Mitigation Measures

Page 4-3

The following modification has been made to **Mitigation Measure CUL-1**

f. The qualified archaeologist shall prepare monthly progress reports to be filed with the client and the lead agencies and property owners if applicable.

h. Upon completion of all ground-disturbing activities associated with this project, an Archaeological Resources Monitoring and Mitigation Report shall be prepared documenting construction activities observed, including copies of all daily archaeological monitoring logs. If discoveries are made during ground-disturbing activities, the report shall also document the archaeological materials and the methods of treatment as determined appropriate by the qualified archaeologist. The report shall be filed with the client, the lead agencies, the property owners if applicable, and the appropriate repositories

Page 4-3 to 4-4

The following modification has been made to **Mitigation Measure CUL-2**

d. The OCC Paleontologist shall prepare monthly progress reports to be filed with the client and the lead agencies and property owners if applicable.

h. The OCC Paleontologist shall prepare a final mitigation report to be filed with the client, the lead agencies, property owners if applicable, and the repository.

Page 4-4

The following modification has been made to **Mitigation Measure CUL-3**

> "If human skeletal remains are uncovered during project construction, the project proponent shall immediately halt work, contact the lead agency, property owner, and the Orange County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines…"

Page 4-5

The following Mitigation Measure has been added:

> **HAZ-1:** In the event that the project requires construction of transmission pipelines across MCAS Tustin, IRWD shall coordinate with the U.S. Department of the Navy (DON) and the City of Tustin regarding the pipeline alignment. IRWD shall require the construction contractor to conduct a geotechnical study that includes soil testing. If soil testing confirms the presence of contaminated soils at the depth of excavation for the proposed pipeline then IRWD shall consult with the DON and City of Tustin to determine if special construction techniques, handling techniques, and disposal requirements and procedures are requirements. IRWD shall require the construction contractor to abide by such requirements, if necessary.

Page 4-5

The following Mitigation Measures have been added:

> **HYDRO-1:** IRWD shall require the construction contractor to include the following BMPs in the SWPPP that would prevent the accidental release of hazardous materials. The plan shall include, but not be limited to, the following BMPs:
>
> - Follow manufacturers' recommendations and regulatory requirements for use, storage, and disposal of chemical products and hazardous materials used in construction.
> - During routine maintenance of construction equipment, properly contain and remove grease and oils.
> - Properly dispose of discarded containers of fuels and other chemicals.
> - In the event of a petroleum product spill (including pipeline rupture), the contractor will contain the spill and clean up the contaminated area in compliance with regulations with DTSC and RWQCB approval. Contaminated soils will be removed and disposed of in accordance with applicable regulations

HYDRO-2: IRWD shall ensure that the treatment plant design includes BMPs to minimize contaminated storm water runoff from the site, such as biofiltration swale, detention basins, and limitations on impervious surfaces

NOISE-4: IRWD shall request and secure a waiver from the City of Tustin's noise ordinance that restricts construction to the daytime hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays, excluding City observed federal holidays, prior to initiation of construction and drilling of Well TL-1. IRWD shall require the construction contractor to set up acoustical panels to minimize noise impacts associated with well drilling if necessary and to comply with other terms and conditions of the noise waiver

Page 4-6

The following modification has been made to **Mitigation Measure TR-1**:

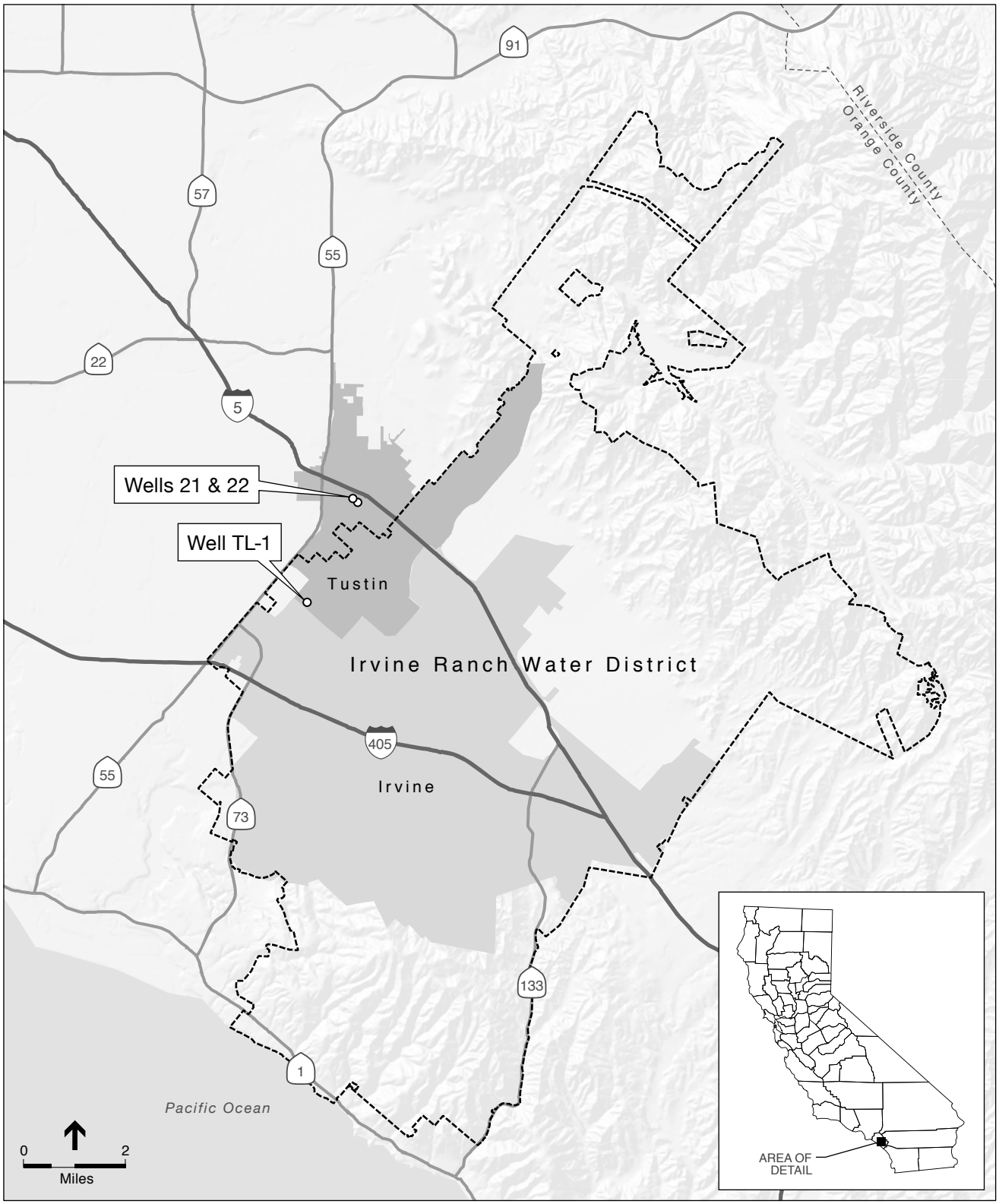
TR-1: The construction contractors shall prepare and implement a Traffic Control/Traffic Management Plan subject to approval by the cities and Caltrans prior to construction.

The following item has been added to **Mitigation Measure TR-1**:

- Include a plan to coordinate all construction activities with the Tustin Unified School District at least two months in advance. The School District shall be notified of the timing, location, and duration of construction activities. The implementing agencies shall require its contractor to maintain vehicle, pedestrian, and school bus service during construction through inclusion of such provisions in the construction contract. The assignment of temporary crossing guards at designated intersections may be needed to enhance pedestrian safety during project construction. Also the following provisions shall be met:
  - Pipeline construction near schools shall occur when school is not in session (i.e., summer or holiday breaks). If this is not feasible, a minimum of two months prior to project construction, the implementing agencies shall coordinate with the Tustin Unified School District to identify peak circulation periods at schools along the alignment(s) (i.e., the arrival and departure of students), and require their contractor to avoid construction and lane closures during those periods;
  - A minimum of two months prior to project construction, the implementing agencies shall coordinate with the Tustin Unified School District to identify alternatives to their Safe Routes to School program, alternatives for the school busing routes and stop locations, and other circulation provisions, as part of the Traffic Control/Traffic Management Plan.

Revised or Modified Figures

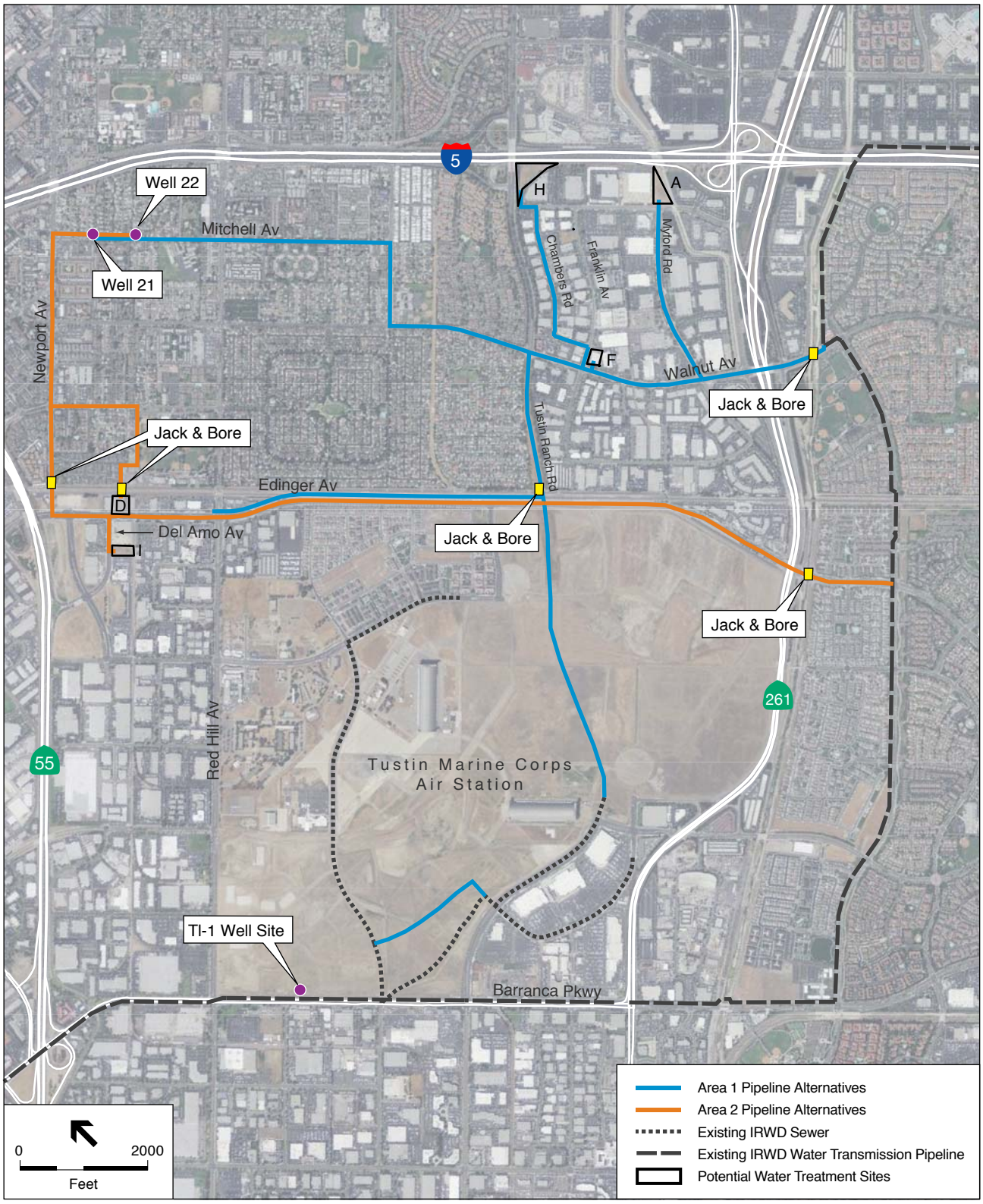
The revised Figures 1 and 2 and new Figures 3 and 4 are included as the final pages of this chapter.



IRWD - Tustin Wells . 209247.01

SOURCE: GlobeXplorer, 2009; RBF Consulting, 2009.

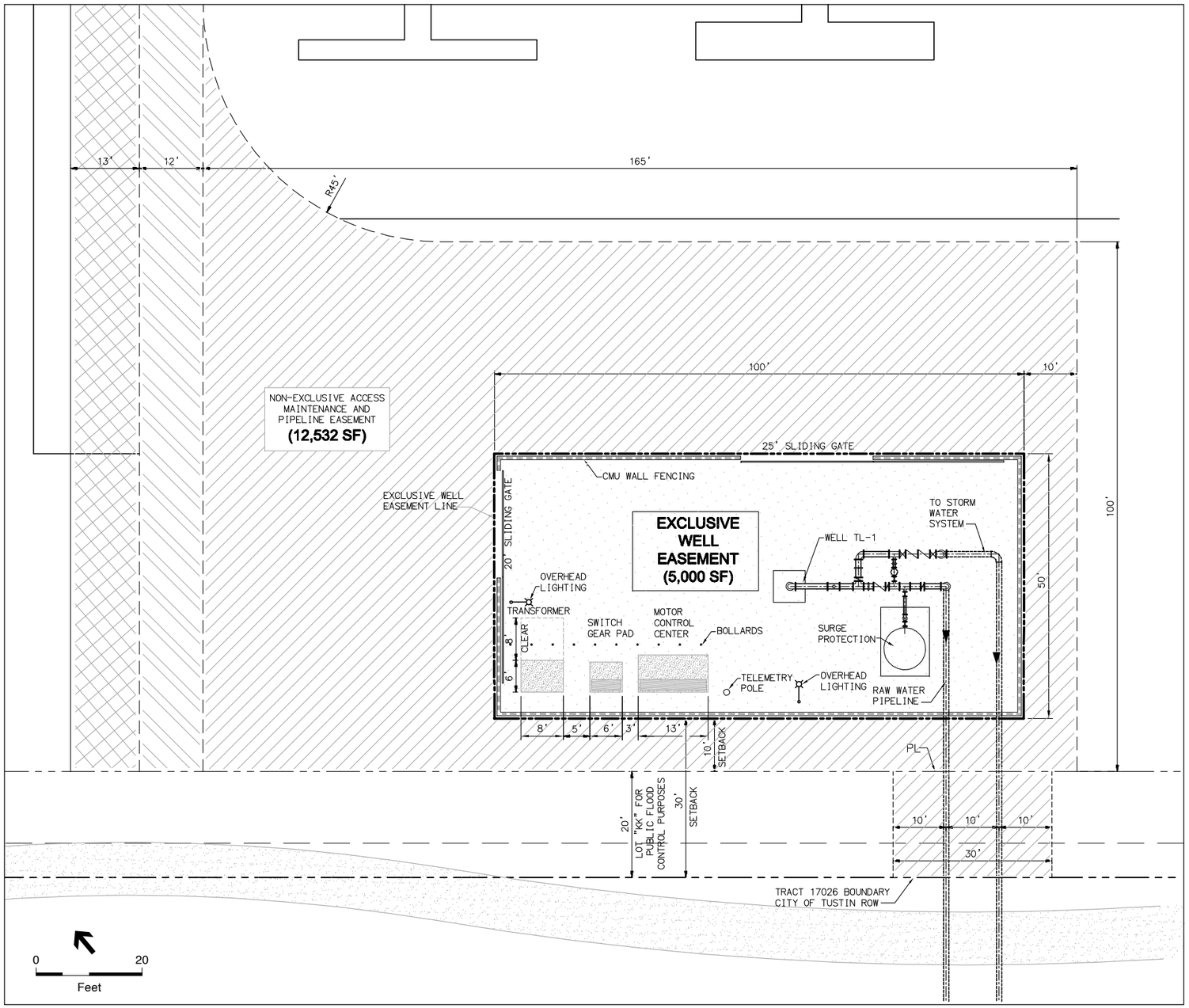
Figure 1
Local Vicinity / Service Area

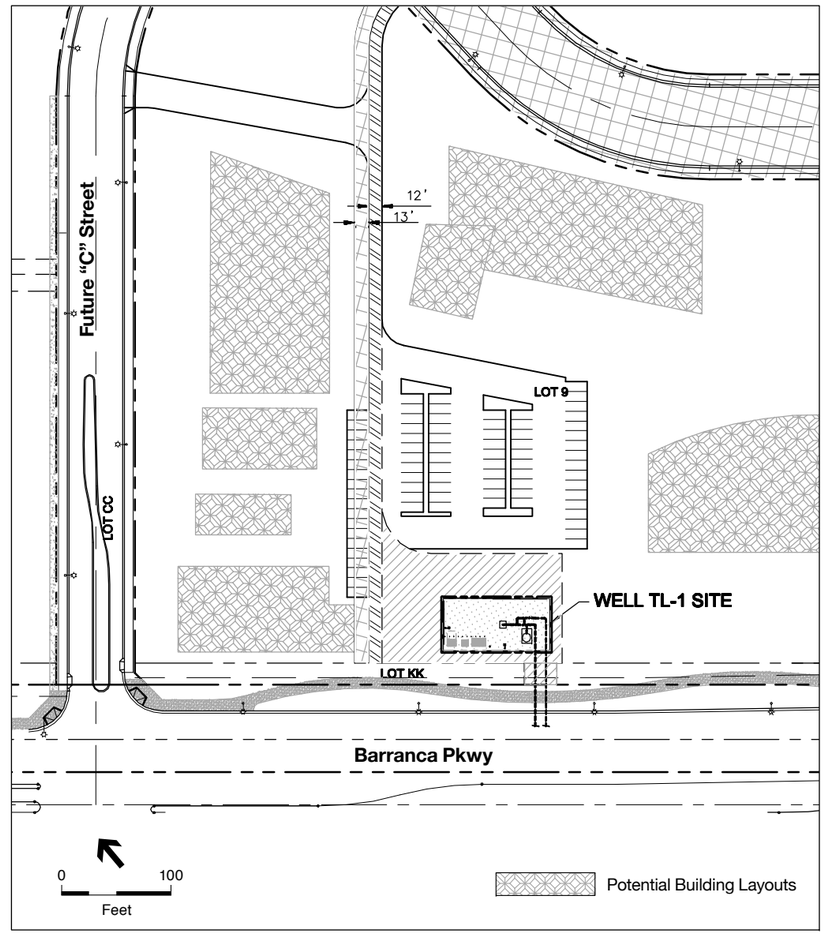


SOURCE: GlobeXplorer, 2009; RBF Consulting, 2009.

IRWD - Tustin Wells . 209247.01

Figure 2
Proposed Project





Easement Symbology

- Non-exclusive Floating Access Easement
- Non-exclusive Access Maintenance and Pipeline Easement
- Exclusive Well Easement (Portion of Lot 22, Tract 17026)
- Access for License to Easement Parcels

SOURCE: RBF Consulting, 2010.

IRWD - Tustin Wells . 209247.01

Figure 3
TL-1 Exploratory Well
Preliminary Site Plan

Area 1

Site A

Site F

Site H

Area 2

Site D

Site I

SOURCE: ESA, 2010.

IRWD - Tustin Wells . 209247.01

Figure 4
Alternative Treatment Sites,
Existing Conditions

CHAPTER 11
Mitigation Monitoring and Reporting Program

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
Aesthetics					
AES-1: Following construction activities, IRWD shall restore disturbed areas by reestablishing pre-existing conditions including topography and repaving roadways.	• Include mitigation measure in construction contractor specifications. • IRWD shall appoint a construction monitor to perform post-construction site inspections to verify contractor compliance with mitigation measure. • Inspection records shall be retained in the project file.	IRWD		X	X
AES-2: The exterior lighting installed around the project facilities shall be of a minimum standard required to ensure safe visibility. Lighting shall be shielded and directed downward, away from neighboring land uses to minimize impacts of light and glare.	• IRWD shall require the design engineer to incorporate exterior lighting requirements into the project construction plans and drawings. • IRWD shall ensure the lighting requirements are included in construction contractor specifications.	IRWD	X	X	

WELLS 21, 22, AND TL-1 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM (continued)

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
Biological Resources					
BIO-1: Conduct brush removal, tree trimming, building demolition, or grading activities outside of the nesting season when feasible. The California Department of Fish and Game has defined the nesting season as February 1st through August 15th. If construction or site preparation activities occur during the nesting season then the following measures shall be implemented: • The applicant and/or its contractors shall retain a qualified biologist to conduct nest surveys in potential nesting habitat within and adjacent to the Project Site prior to commencement of construction or site preparation activities. • At least one survey shall be conducted within 30 days of ground disturbance activities associated with construction or grading. A survey shall also be conducted no more than five days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, additional pre-construction surveys shall be conducted such that no more than five days shall have elapsed between the last survey and the commencement of ground disturbance activities. • Surveys shall include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known to occur in the area are shrub or ground nesters. • If active nests are found, construction activity within 300 feet, or a distance otherwise determined by a qualified biologist, of an active nest should be delayed until the nest is no longer active and there is no evidence of a second attempt at nesting during the same year, as determined by the biologist. • Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers; and construction	• Include mitigation measure in construction contractor specifications • If project construction is initiated during the nesting season, then prior to construction, IRWD shall retain a qualified biologist to conduct nesting season protocol surveys within 30 days of ground disturbance activities and to serve as a biological monitor if necessary. • Retain survey reports and monitoring reports in the project file.	IRWD	X	X	

WELLS 21, 22, AND TL-1 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM (continued)

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
personnel shall be instructed on the sensitivity of nest areas. • The biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts to these nests occur. • The results of the survey and monitoring, and any avoidance measures taken, shall be submitted to the Irvine Ranch Water District within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native and migratory birds.					
Cultural Resources					
CUL-1: A qualified archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (qualified archaeologist) shall be retained by the applicant to develop an Archaeological Resources Monitoring and Mitigation Plan. Areas that require monitoring, monitoring procedures, and reporting requirements shall be described in the plan. The plan shall follow the procedures outlined below, at a minimum. These procedures are in accordance with the recommendations provided in the Archaeological Resources Technical Report (Ehringer, 2009) for this project. The plan shall also establish emergency procedures applicable to the discovery of unanticipated significant archaeological resources (e.g., large, complex sites as determined by the qualified archaeologist). During all construction activities that involve soil disturbance, the following policies shall be implemented: A. A qualified archaeologist shall be retained to supervise monitoring of construction excavations. All archaeological resources monitoring shall be conducted under the supervision of the qualified archaeologist. Archaeological monitoring shall be conducted for all ground-disturbing activities including, but not limited to,	• Include mitigation measure in construction contractor specifications • Prior to construction, IRWD shall retain a qualified Archaeologist to develop an Archaeological Resources Monitoring and Mitigation Plan describing the monitoring procedures and emergency measures taken in the event that significant archaeological resources are found. • Prior to construction, IRWD shall retain a qualified Archaeologist to perform construction monitoring as described in the Plan. • In the event of inadvertent discovery of subsurface cultural resources, the qualified archaeologist shall halt work and coordinate with IRWD to follow all applicable laws and regulations set forth in the mitigation measure. • Retain Archaeological Resources Monitoring and Mitigation Report in the	IRWD	X	X	

WELLS 21, 22, AND TL-1 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM (continued)

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
pavement/asphalt removal, grubbing, brush removal, boring, trenching, grading, excavating, and the demolition of building foundations. B. Archaeological monitors shall have the authority to temporarily halt or redirect work to permit the exploration, identification, evaluation, and/or recovery of archaeological materials. If archaeological resources are encountered by construction personnel in portions of the area of potential effect (APE) where a monitor is not present, work in the immediate vicinity shall be suspended until the archaeological monitor investigates the discovery and determines appropriate treatment. C. The duration and timing of monitoring shall be determined by the qualified archaeologist in consultation with the lead agencies. D. The qualified archaeologist shall be present at the pre-construction meeting to explain the established procedures to the construction contractors. E. Monitoring of archaeologically sensitive soils, as defined in the Archaeological Resources Monitoring and Mitigation Plan, shall be conducted on a full-time basis, unless the qualified archaeologist determines otherwise. F. The qualified archaeologist shall prepare monthly progress reports to be filed with the client and the lead agencies and the property owners if applicable. g. If archaeological materials are uncovered, appropriate field data forms shall be used to record the location and document the find. The qualified archaeologist may provide recommendations for further treatment of the resources. Archaeological materials shall be transported to a facility meeting the Secretary of Interior's Standards. h. Upon completion of all ground-disturbing activities associated with this project, an Archaeological Resources Monitoring and Mitigation Report shall be prepared documenting construction activities observed, including copies of all daily archaeological monitoring logs. If discoveries are made during ground-disturbing	project file and distribute to entities as described in the mitigation measures.				

WELLS 21, 22, AND TL-1 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM (continued)

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
activities, the report shall also document the archaeological materials and the methods of treatment as determined appropriate by the qualified archaeologist. The report shall be filed with the client, the lead agencies, the property owners if applicable, and the appropriate repositories.					
CUL-2: Prior to the start of any earth moving activities, an Orange County Certified (OCC) Paleontologist shall be retained. The OCC Paleontologist shall review all geotechnical investigations and construction design plans related to the APE. Based on geotechnical findings and the construction design plans, the OCC Paleontologist shall determine areas that shall be subject to excavations in excess of 10 feet below ground surface (bgs). The OCC Paleontologist shall then develop a Paleontological Resources Mitigation and Monitoring Plan. The plan shall follow the procedures outlined below, at a minimum. These procedures are in accordance with the recommendations described in the Paleontological Resources Technical Report (Aron, 2009) for this project. The plan shall also establish emergency procedures applicable to the discovery of unanticipated significant paleontological resources (e.g., large specimens or significant concentrations of specimens as determined by the OCC Paleontologist). During all construction activities that involve soil disturbance at 10 feet bgs or deeper, the following policies shall be implemented: a. An OCC Paleontologist shall be retained to supervise monitoring of construction excavations. Paleontological monitoring shall include inspection of exposed rock units and microscopic examination of matrix to determine if fossils are present. The monitor shall have the authority to temporarily halt or redirect work to permit sampling, identification, evaluation, and/or recovery of fossils specimens. An emphasis shall be placed on thorough fossil locality documentation and stratigraphic data collection. All required paleontological resources monitoring shall be performed by qualified paleontological monitors.	• Include mitigation measure in construction contractor specifications • IRWD shall retain a qualified OCC Paleontologist to evaluate geotechnical investigations and construction design plans and develop a Paleontological Resources Mitigation and Monitoring Plan. • IRWD shall retain a qualified OCC Paleontologist to conduct construction monitoring in accordance with the Plan. • Retain monthly survey reports in the project file. • Retain final mitigation report in the project file and distribute to entities as described in the mitigation measures.	IRWD	X	X	

WELLS 21, 22, AND TL-1 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM (continued)

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
b. The OCC Paleontologist shall be present at the pre-construction meeting to explain the established procedures to the construction contractors. c. Monitoring of paleontologically sensitive soils, as defined in the Paleontological Mitigation and Monitoring Plan, shall be conducted on a full-time basis, unless the OCC Paleontologist determines otherwise. d. The OCC Paleontologist shall prepare monthly progress reports to be filed with the client and the lead agencies and property owners if applicable. e. If fossils are uncovered, field data forms shall be used to record the locality, stratigraphic columns shall be measured, and appropriate scientific samples submitted for analysis. f. If microfossils are present, the monitor shall collect matrix for processing. In order to expedite removal of fossilerous matrix, the monitor may request heavy machinery assistance to move large quantities of matrix out of the path of construction to designated stockpile areas. Testing of stockpiles shall consist of screen washing small samples (approximately 90 kilograms, or 200 pounds) to determine if significant fossils are present. Productive tests shall result in screen washing of additional matrix from the stockpiles to a maximum of 2,700 kilograms (6,000 pounds) per locality to ensure recovery of a scientifically significant sample. g. Recovered fossils shall be prepared to the point of identification, identified by qualified experts, entered in a database to facilitate inventory, analyzed for significance, and deposited in a designated repository such as a County of Orange curation facility, which shall have the first right-of-refusal of the collection. If the fossil collection is not accepted by the County of Orange, then other Southern California accredited facilities shall be sought out to accept the collection, such as the Natural History					

WELLS 21, 22, AND TL-1 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM (continued)

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
Museum of Los Angeles County or San Diego Natural History Museum. If further denied, the fossils may be used for educational purposes. h. The OCC Paleontologist shall prepare a final mitigation report to be filed with the client, the lead agencies, property owners if applicable, and the repository.					
CUL-3: If human skeletal remains are uncovered during project construction, the project proponent shall immediately halt work, contact the lead agency, property owner, and the Orange County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the project proponent shall contact the Native American Heritage Commission (NAHC), in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC shall designate a Most Likely Descendent (MLD) for the remains Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.	• Include mitigation measure in construction contractor specifications • Retain copies of all data and reports regarding significant cultural finds in the project file.	IRWD		X	
Geology, Soils and Seismicity					
GEO-1: Prior to approval of construction plans for the proposed project, a design-level geotechnical investigation, including collection of site-specific subsurface data shall be completed by IRWD for all project components. The geotechnical investigation shall be conducted by a certified engineering geologist or registered geotechnical engineer. The geotechnical investigation shall identify appropriate engineering	• IRWD shall retain a qualified geotechnical engineer to conduct pre-construction design-level geotechnical investigation as described in the mitigation measures. • IRWD shall ensure the design engineer incorporates design criteria	IRWD	X		

WELLS 21, 22, AND TL-1 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM (continued)

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
considerations, including density profiles, approximate maximum shallow groundwater level, vertical and lateral extent of the saturated sand/silt layers that could undergo liquefaction, and potential presence of expansive soils. The geotechnical investigation shall recommend site-specific design criteria to mitigate potential risks due to liquefaction, lateral spreading, subsidence, and expansive soils. Recommended design criteria shall become part of the proposed project.	recommended in the geotechnical investigation into the project design. • Retain the geotechnical investigation report in the project file				
Hazards and Hazardous Materials					
HAZ-1: In the event that the project requires construction of transmission pipelines across MCAS Tustin, IRWD shall coordinate with the U.S. Department of the Navy (DON) and the City of Tustin regarding the pipeline alignment. IRWD shall require the construction contractor to conduct a geotechnical study that includes soil testing. If soil testing confirms the presence of contaminated soils at the depth of excavation for the proposed pipeline then IRWD shall consult with the DON and City of Tustin to determine if special construction techniques, handling techniques, and disposal requirements and procedures are requirements. IRWD shall require the construction contractor to abide by such requirements, if necessary.	• Include mitigation measure in construction contractor specifications • IRWD shall require the construction contractor to conduct a soil test and adhere to all appropriate handling and construction techniques in the event hazardous materials are found. • IRWD shall coordinate with the US Department of the Navy and the City of Tustin. • Retain the soil testing results in the project file.	IRWD	X	X	
Hydrology and Water Quality					
HYDRO-1: IRWD shall require the construction contractor to include the following BMPs in the SWPPP that would prevent the accidental release of hazardous materials. The plan shall include, but not be limited to, the following BMPs: • Follow manufacturers' recommendations and regulatory requirements for use, storage, and disposal of chemical products and hazardous materials used in construction. • During routine maintenance of construction equipment, properly contain and remove grease and oils.	• Include mitigation measure in construction contractor specifications • IRWD shall appoint a construction monitor to perform site inspections to verify contractor compliance with the SWPPP	IRWD	X	X	

WELLS 21, 22, AND TL-1 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM (continued)

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
• Properly dispose of discarded containers of fuels and other chemicals. • In the event of a petroleum product spill (including pipeline rupture), the contractor will contain the spill and clean up the contaminated area in compliance with regulations with DTSC and RWQCB approval. Contaminated soils will be removed and disposed of in accordance with applicable regulations.					
HYDRO-2: IRWD shall ensure that the treatment plant design includes BMPs to minimize contaminated storm water runoff from the site, such as biofiltration swale, detention basins, and limitations on impervious surfaces.	• IRWD shall ensure the design engineer incorporates BMPs for storm water runoff into the construction drawings and specifications. • Include design-level BMPs in construction contractor specifications	IRWD	X	X	
Noise					
NOISE-1: During the design phase of the proposed project, once the treatment plant location is selected, the closest sensitive receptor(s) shall be identified. The treatment plant shall be designed to ensure that operational noise levels at the property line of neighboring receptors would be in compliance with the City of Tustin's noise ordinance.	• IRWD shall require the design engineer to identify in the construction drawings and specifications sensitive receptors susceptible to nuisance construction and operation noise • IRWD shall require the design engineer to design the proposed facilities to operate in compliance with all property-line noise standards.	IRWD	X		
NOISE-2: In order to avoid noise-sensitive hours of the day and night, construction contractors shall comply with the following: • Construction shall be limited to between the hours of 7:00 am and 6:00 pm Monday through Friday and the hours of 9:00 am and 5:00 pm on Saturdays, and exclude city observed federal holidays	• Include mitigation measure in construction contractor specifications. • IRWD shall appoint a construction monitor to perform site inspections to verify contractor compliance with the mitigation measures.	IRWD		X	
NOISE-3: To reduce noise impacts due to construction, the applicant shall require construction contractors to implement the following measures:	• Include mitigation measure in construction contractor specifications			X	

WELLS 21, 22, AND TL-1 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM (continued)

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
• During construction, the contractor shall outfit all equipment, fixed or mobile, with properly operating and maintained exhaust and intake mufflers, consistent with manufacturers' standards. • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. External jackets on the tools themselves shall be used where feasible. Quieter procedures, such as use of drills rather than impact tools, shall be used whenever feasible. • Stationary noise sources that could affect adjacent receptors shall be located as far from adjacent receptors as possible	• IRWD shall require the construction contractor to submit periodically equipment maintenance and operation records to demonstrate compliance with noise mitigation measures. Maintenance and operation records shall be retained in the project file. • IRWD shall appoint a construction monitor to perform site inspections to verify contractor compliance with noise mitigation measures.				
NOISE-4: IRWD shall request and secure a waiver from the City of Tustin's noise ordinance that restricts construction to the daytime hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays, excluding City observed federal holidays, prior to initiation of construction and drilling of Well TL-1. IRWD shall require the construction contractor to set up acoustical panels to minimize noise impacts associated with well drilling if necessary and to comply with other terms and conditions of the noise waiver.	• Include mitigation measure in construction contractor specifications • Retain noise waiver in project file. • IRWD shall appoint a construction monitor to perform site inspections to verify contractor compliance with terms and conditions of the noise waiver. • Inspection records shall be retained in the project file.	IRWD	X	X	

WELLS 21, 22, AND TL-1 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM (continued)

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
Traffic and Transportation					
TR-1: The construction contractors shall prepare and implement a Traffic Control/Traffic Management Plan subject to approval by the cities and Caltrans prior to construction. The plan shall: • Identify hours of construction and hours for deliveries; • Include a discussion of haul routes, limits on the length of open trench, work area delineation, traffic control and flagging; • Identify all access and parking restrictions, pavement markings and signage requirements (e.g., speed limit, temporary loading zones); • Maintain access to residence and business driveways, public facilities, and recreational resources at all times to the extent feasible; Minimize access disruptions to businesses and residences; • Layout a plan for notifications and a process for communication with affected residents, businesses, and public transit agencies prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints; • Include a plan to coordinate all construction activities with emergency service providers in the area at least one month in advance. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times.	• Include mitigation measure in construction contractor specifications. • IRWD shall ensure Traffic Control Plan is approved by the City of Tustin, City of Irvine, and Caltrans. • IRWD shall appoint a construction monitor to perform site inspections to verify contractor compliance with the Traffic Control Plan. • Retain inspection records in the project file.	IRWD	X	X	

WELLS 21, 22, AND TL-1 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM (continued)

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule		
			Before Construction	During Construction	After Construction
• Include a plan to coordinate all construction activities with the Tustin Unified School District at least two months in advance. The School District shall be notified of the timing, location, and duration of construction activities. The implementing agencies shall require its contractor to maintain vehicle, pedestrian, and school bus service during construction through inclusion of such provisions in the construction contract. The assignment of temporary crossing guards at designated intersections may be needed to enhance pedestrian safety during project construction. Also the following provisions shall be met: – Pipeline construction near schools shall occur when school is not in session (i.e., summer or holiday breaks). If this is not feasible, a minimum of two months prior to project construction, the implementing agencies shall coordinate with the Tustin Unified School District to identify peak circulation periods at schools along the alignment(s) (i.e., the arrival and departure of students), and require their contractor to avoid construction and lane closures during those periods; – A minimum of two months prior to project construction, the implementing agencies shall coordinate with the Tustin Unified School District to identify alternatives to their Safe Routes to School program, alternatives for the school busing routes and stop locations, and other circulation provisions, as part of the Traffic Control/Traffic Management Plan.					

Appendix A
Air Quality Appendix

ESA

Page: 1

12/21/2009 12:15:16 PM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\Tustin Wells 11 17 09.urb924

Project Name: Tustin Wells

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
010 TOTALS (lbs/day unmitigated)	3.32	28.68	14.90	0.01	10.02	1.40	11.42	2.10	1.29	3.38	2,865.54
011 TOTALS (lbs/day unmitigated)	20.65	52.72	31.93	0.01	10.02	2.92	11.33	2.10	2.69	3.30	7,738.98
012 TOTALS (lbs/day unmitigated)	4.34	32.97	20.51	0.00	0.02	1.88	1.90	0.01	1.73	1.74	4,710.06

12/21/2009 12:15:55 PM

Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\Tustin Wells 11 17 09.urb924

Project Name: Tustin Wells

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 6/1/2010-7/1/2010 Active Days: 23	1.18	7.74	5.73	0.00	0.01	0.59	0.60	0.00	0.54	0.54	824.70
Demolition 06/01/2010-07/01/2010	1.18	7.74	5.73	0.00	0.01	0.59	0.60	0.00	0.54	0.54	824.70
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	1.14	7.68	4.68	0.00	0.00	0.59	0.59	0.00	0.54	0.54	700.30
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39
Time Slice 7/2/2010-9/1/2010 Active Days: 44	3.04	25.05	13.51	0.00	10.01	1.25	11.26	2.09	1.15	3.24	2,371.71
Fine Grading 07/02/2010-09/01/2010	3.04	25.05	13.51	0.00	10.01	1.25	11.26	2.09	1.15	3.24	2,371.71
Fine Grading Dust	0.00	0.00	0.00	0.00	10.00	0.00	10.00	2.09	0.00	2.09	0.00
Fine Grading Off Road Diesel	3.00	24.99	12.46	0.00	0.00	1.25	1.25	0.00	1.15	1.15	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39

12/21/2009 12:15:55 PM

Time Slice 9/2/2010-12/31/2010 Active Days: 87	3.32	28.68	14.90	0.01	10.02	1.40	11.42	2.10	1.29	3.38	2,865.54
Mass Grading 09/02/2010-02/01/2011	3.32	28.68	14.90	0.01	10.02	1.40	11.42	2.10	1.29	3.38	2,865.54
Mass Grading Dust	0.00	0.00	0.00	0.00	10.00	0.00	10.00	2.09	0.00	2.09	0.00
Mass Grading Off Road Diesel	3.00	24.99	12.46	0.00	0.00	1.25	1.25	0.00	1.15	1.15	2,247.32
Mass Grading On Road Diesel	0.28	3.63	1.39	0.00	0.02	0.15	0.17	0.01	0.14	0.14	493.83
Mass Grading Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39
Time Slice 1/3/2011-2/1/2011 Active Days: 22	3.11	26.76	14.19	0.01	10.02	1.31	11.33	2.10	1.20	3.30	2,865.52
Mass Grading 09/02/2010-02/01/2011	3.11	26.76	14.19	0.01	10.02	1.31	11.33	2.10	1.20	3.30	2,865.52
Mass Grading Dust	0.00	0.00	0.00	0.00	10.00	0.00	10.00	2.09	0.00	2.09	0.00
Mass Grading Off Road Diesel	2.83	23.44	11.96	0.00	0.00	1.17	1.17	0.00	1.08	1.08	2,247.32
Mass Grading On Road Diesel	0.26	3.27	1.26	0.00	0.02	0.13	0.15	0.01	0.12	0.13	493.83
Mass Grading Worker Trips	0.03	0.06	0.98	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.37
Time Slice 2/2/2011-8/1/2011 Active Days: 129	6.58	52.72	31.93	0.01	0.04	2.92	2.96	0.01	2.69	2.70	7,738.98
Asphalt 02/02/2011-06/01/2012	1.88	11.37	8.62	0.00	0.01	0.98	0.99	0.00	0.90	0.91	1,199.36
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.83	11.26	6.91	0.00	0.00	0.98	0.98	0.00	0.90	0.90	979.23
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49
Paving Worker Trips	0.05	0.10	1.71	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.64
Building 02/02/2011-08/01/2011	1.98	17.01	11.09	0.01	0.02	0.84	0.87	0.01	0.77	0.78	3,028.86
Building Off Road Diesel	1.84	16.35	7.60	0.00	0.00	0.81	0.81	0.00	0.75	0.75	2,534.05
Building Vendor Trips	0.04	0.48	0.41	0.00	0.00	0.02	0.02	0.00	0.02	0.02	101.29
Building Worker Trips	0.10	0.18	3.09	0.00	0.02	0.01	0.03	0.01	0.01	0.02	393.52
Trenching 02/02/2011-06/01/2012	2.72	24.34	12.22	0.00	0.01	1.09	1.10	0.00	1.01	1.01	3,510.76
Trenching Off Road Diesel	2.68	24.27	11.00	0.00	0.00	1.09	1.09	0.00	1.00	1.00	3,355.30
Trenching Worker Trips	0.04	0.07	1.22	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.46

12/21/2009 12:15:55 PM

Time Slice 8/2/2011-11/1/2011 Active Days: 66	20.65	35.72	21.02	0.00	0.02	2.08	2.10	0.01	1.91	1.92	4,733.41
Asphalt 02/02/2011-06/01/2012	1.88	11.37	8.62	0.00	0.01	0.98	0.99	0.00	0.90	0.91	1,199.36
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.83	11.26	6.91	0.00	0.00	0.98	0.98	0.00	0.90	0.90	979.23
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49
Paving Worker Trips	0.05	0.10	1.71	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.64
Coating 08/02/2011-11/01/2011	16.05	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.29
Architectural Coating	16.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.29
Trenching 02/02/2011-06/01/2012	2.72	24.34	12.22	0.00	0.01	1.09	1.10	0.00	1.01	1.01	3,510.76
Trenching Off Road Diesel	2.68	24.27	11.00	0.00	0.00	1.09	1.09	0.00	1.00	1.00	3,355.30
Trenching Worker Trips	0.04	0.07	1.22	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.46
Time Slice 11/2/2011-12/30/2011 Active Days: 43	4.60	35.71	20.84	0.00	0.02	2.08	2.10	0.01	1.91	1.92	4,710.12
Asphalt 02/02/2011-06/01/2012	1.88	11.37	8.62	0.00	0.01	0.98	0.99	0.00	0.90	0.91	1,199.36
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.83	11.26	6.91	0.00	0.00	0.98	0.98	0.00	0.90	0.90	979.23
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49
Paving Worker Trips	0.05	0.10	1.71	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.64
Trenching 02/02/2011-06/01/2012	2.72	24.34	12.22	0.00	0.01	1.09	1.10	0.00	1.01	1.01	3,510.76
Trenching Off Road Diesel	2.68	24.27	11.00	0.00	0.00	1.09	1.09	0.00	1.00	1.00	3,355.30
Trenching Worker Trips	0.04	0.07	1.22	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.46

12/21/2009 12:15:55 PM

Time Slice 1/2/2012-6/1/2012 Active Days: 110	4.34	32.97	20.51	0.00	0.02	1.88	1.90	0.01	1.73	1.74	4,710.06
Asphalt 02/02/2011-06/01/2012	1.77	10.74	8.44	0.00	0.01	0.92	0.93	0.00	0.84	0.85	1,199.32
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49
Paving Worker Trips	0.05	0.09	1.59	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.61
Trenching 02/02/2011-06/01/2012	2.57	22.23	12.07	0.00	0.01	0.97	0.97	0.00	0.89	0.89	3,510.73
Trenching Off Road Diesel	2.54	22.16	10.93	0.00	0.00	0.96	0.96	0.00	0.89	0.89	3,355.30
Trenching Worker Trips	0.03	0.06	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.43

Phase Assumptions

Phase: Demolition 6/1/2010 - 7/1/2010 - Default Demolition Description

Building Volume Total (cubic feet): 50000

Building Volume Daily (cubic feet): 0

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 7/2/2010 - 9/1/2010 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 1.13

Maximum Daily Acreage Disturbed: 0.5

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

12/21/2009 12:15:55 PM

Phase: Mass Grading 9/2/2010 - 2/1/2011 - Default Mass Site Grading/Excavation Description
Total Acres Disturbed: 1.3
Maximum Daily Acreage Disturbed: 0.5
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 116.51
Off-Road Equipment:
1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 2/2/2011 - 6/1/2012 - Default Trenching Description
Off-Road Equipment:
1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 8 hours per day
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 2/2/2011 - 6/1/2012 - Default Paving Description
Acres to be Paved: 0.57
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 2/2/2011 - 8/1/2011 - Default Building Construction Description
Off-Road Equipment:
1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 8 hours per day
1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day
2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 8/2/2011 - 11/1/2011 - Default Architectural Coating Description

12/21/2009 12:15:55 PM

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Page: 1

12/21/2009 12:16:23 PM

Urbemis 2007 Version 9.2.4

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\Tustin Wells 11 17 09.urb924

Project Name: Tustin Wells

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (tons/year unmitigated)	0.22	1.89	1.01	0.00	0.66	0.10	0.75	0.14	0.09	0.22	186.31
2011 TOTALS (tons/year unmitigated)	1.24	5.64	3.36	0.00	0.11	0.32	0.43	0.02	0.29	0.31	788.16
2012 TOTALS (tons/year unmitigated)	0.24	1.81	1.13	0.00	0.00	0.10	0.10	0.00	0.10	0.10	259.05

Greenhouse Gas (GHG) Emissions Calculations

Project Name: Tustin Wells

Indirect Greenhouse Gas (GHG) Emissions from Project use of Electricity (Power Plant Emissions)

Estimated Project Annual Electrical Use: 7,260,000 kWh (kilowatt hours)/year
7,260 mWh (megawatt hours)/year

Indirect GHG gases	Emission Factor lb/mWh	Annual Project Electricity mWh	Annual GHGs metric tons	CO2 Equivalent Factor	Annual CO2 Equivalent Emissions (metric tons)
Carbon Dioxide (CO2)	650	7,260	2,141	1	2141
Nitrous Oxide (N2O)	0.0037	7,260	0.0	296	4
Methane (CH4)	0.0067	7,260	0.0	23	1
	Total Indirect GHG Emissions from Project Electricity Use=				**2145**

Total Annual Greenhouse Gas (GHG) Emission from Project Operations -- All Sources (CO2 equivalent Metric Tons)

Electrical Use	**2145**	100.0%
Total=	**2,145**	100.0%

Notes and References:

Total Emissions from Indirect Electricity Use
Formula and Emission Factor from The California Climate Action Regiustry Report Protocol 2006

Pg. 32 (CCARRP) gives Equations

Pg. 36 (CCARRP - April 2008 update) gives CO2 output emission rate (lbs/mWh)
878.71 (lbs/mWh)

Pg. 85 (CCARRP) gives CO2 equivalency factors

Pg. 87 (CCARRP) gives Methane and Nitrous Oxide electricity emission factors (lbs/mWh)
Methane - 0.0067 (lbs/mWh)
Nitrous Oxide - 0.0037 (lbs/mWh)

Southern California Edison gives CO2 output emission rate (lbs/mWh)
650 lbs/mWh

lbs/metric ton = 2204.62

	Sum of Tons from URBEMIS	Metric Tons
Construction CO2	1233.52	1119

Amortized over 30 years

Appendix B
Hydrology Appendix

ESA

From: Kellie Welch [Welch@irwd.com]
Sent: Monday, December 07, 2009 7:47 AM
To: Jennifer Jacobus
Subject: Fwd: OCWD modeling for Wells 21/22

Attachments: IRWD 21 & 22 model pumping.xls; T3ANX02B-T3ANX01B.ppt

>>> "Herndon, Roy" <RHerndon@ocwd.com> 12/4/2009 3:27 PM >>>

Mike -

Here are the results of the modeling runs for proposed wells 21 and 22 using the assumptions stated below. I trust that this information is useful for your CEQA analyses, and I'm happy to discuss if you have questions.

Assumptions:

1. Well 21 pumping at a constant flow year-round totaling 4,000 af

2. Well 22 pumping at a constant flow year-round totaling 2,000 af

3. Basin accumulated overdraft of approx. 500,000 af

4. Pumping for rest of basin was reduced (BPP lowered approx. 1%) an equivalent amount to offset the 6,000 afy of Wells 21/22 pumping. In other words, recharge was not increased to offset the Wells 21/22 pumping. The reduction of the BPP required us to reduce pumping of IRWD Well 53 by about 750 af.

5. The attached spreadsheet shows the distribution of IRWD pumping in the baseline and Well 21/22 scenario, based on discussions with you and Tim.

6. Basin inflows and outflows for both baseline and Well 21/22 pumping scenario were essentially equal, so no annual basin storage change occurs.

The results of the modeling are shown in the attached Powerpoint file, as follows:

1. Groundwater level change maps for model layers 1, 2, and 3, representing the Shallow, Principal, and Deep aquifer systems. These change maps represent the change in groundwater levels between the baseline condition and the condition with Wells 21/22 pumping.

2. No significant water level change was noted in the layer 1 map (Shallow aquifer).

3. The greatest change (20-30 feet) is noted in the layer 2 map in the immediate vicinity of wells 21/22. This is consistent with the fact that Wells 21/22 are screened primarily in the Principal aquifer. About 2% of the pumping from Wells 21/22 was applied to the underlying Deep aquifer based on their screened intervals partially penetrating this aquifer and the lower transmissivity of this aquifer compared to the Principal aquifer. This is also consistent with the spinner logs of

these wells.

4. A 5-feet or greater water level change in the Principal aquifer occurs within a distance of approximately 3 miles of Wells 21/22.

5. Groundwater elevation contour maps for model layers 1, 2, and 3 for the baseline scenario.

6. Groundwater elevation contour maps for model layers 1, 2, and 3 for the Wells 21/22 pumping scenario.

7. No significant change was noted in the hydraulic gradient in the Shallow aquifer. This indicates that the direction of groundwater flow and rate of movement within the Shallow aquifer do not appear to be significantly affected by Wells 21/22 pumping.

8. The hydraulic gradient in the Principal aquifer appears to be changed within approximately one mile of Wells 21/22. Specifically, under baseline conditions the groundwater flow direction in the vicinity of Wells 21/22 is west-southwesterly under a gradient of approximately 0.005. With Wells 21/22 pumping, the gradient, northeast or upgradient of the wells, steepens to approximately 0.007. Within 1 mile northwest and southeast of Wells 21/22, the gradient changes toward Wells 21/22, as a hydraulic capture zone is formed around these wells. Downgradient (southwest) of Wells 21/22, the gradient is flatter, meaning a slower groundwater rate of flow, than under the baseline condition.

9. No significant change in the hydraulic gradient east of Culver Drive (i.e., vicinity of TCE plume emanating from former MCAS El Toro).

IRWD Future Pumping Projections
2035 Basin Model Runs

Existing and Future IRWD Wells	Baseline (afy)	Wells 21&22 (afy)
Above BPP……		
DATS	8,000	8,000
IDP Potable	4,093	4,093
IDP Non-Potable	3,900	3,900
IDP SGU	600	600
IDP-1 Re-Injection	0	0
Well 21	0	4,000
Well 22	0	2,000
Subtotal:	16,593	22,593
BPP Pumping……	***51.7771%***	***50.6295%***
DRWF	28,000	28,000
Well OPWC	1,300	1,300
Well 115	900	900
Well 106	1,300	1,300
Well 72	0	
Well 51	0	
Well 52	0	
Well 53	1,804	1,066
Tustin Legacy No.1	0	
Tustin Legacy No.2	0	
Tustin Legacy No.3	0	
Tustin Legacy No.4	0	
Well 109	0	
Well 112	0	
Well 114	0	
Anaheim Well Field	0	
Subtotal:	33,304	32,566
Grand Total:	49,897	55,159

Assumes 500,000 acre feet overdraft as per OCWD Groundwater Management Plan.

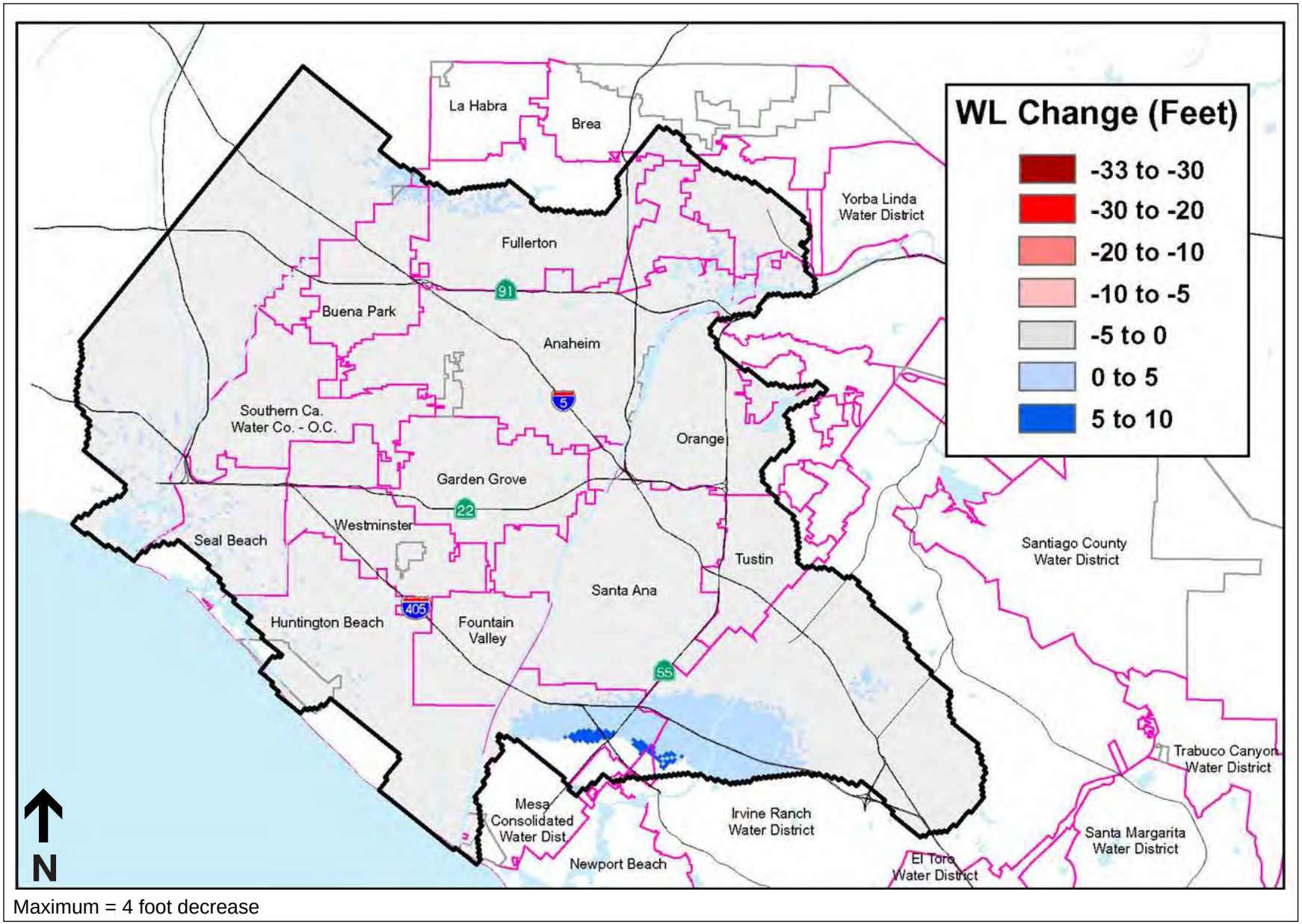
2010 and 2025 IRWD Pumping Scenarios

Well or Well Field	2010 Baseline Prod. (afy)	2010 Scenario Prod. (afy)	2010 Scenario Prod. (afy)	2010 Scenario Prod. (afy)	2010 Scenario Prod. (afy)	2010 Scenario Prod. (afy)	2010 Scenario Prod. (afy)	2025 Scenario Prod. (afy)	2025 Scenario Prod. (afy)	2025 Scenario Prod. (afy)	2025 Scenario Prod. (afy)	2025 Scenario Prod. (afy)	2025 Scenario Prod. (afy)	2025 Scenario Prod. (afy)	2025 Scenario Prod. (afy)
	200k, 500k 1AA, 1BB	*200k 11A, 12A*	*200k 13A, 14A*	*200k 15A*	*500k 13B*	*500k 15B*	*200k 06A, 07A*	*200k 25A, 26A*	*200k 27A*	*200k 28A*	*500k 25B, 26B*	*500k 27B*	*500k 28B*	*500k 30B*	*200k 31A*
Above BPP……..															
DATS	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
IDP Potable	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620
IDP Non-Potable	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900
IDP SGU	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
IDP-1 Injection	-600	-600	-600	-600	-600	-600	-600	-600	-600	-600	-600	-600	-600	-600	-600
Subtotal:	16,520	16,520	16,520	16,520	16,520	16,520	16,520	16,520	16,520	16,520	16,520	16,520	16,520	16,520	16,520
Below BPP……..															
DRWF	24,000	24,000	32,000	24,000	32,000	24,000	24,000	24,000	32,000	24,000	24,000	32,000	24,000	32,000	24,000
Well 75 (Future IDP)	462	462	462	462	462	462	462	462	462	462	462	462	462	462	462
Well 106 (Future IDP)	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Well 115 (Future IDP)	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Well 72	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Westside Well Field:															
Well 51	2,400	3,800	3,800	3,800	3,800	3,800	2,400	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800
Well 52	2,100	3,200	3,200	3,200	3,200	3,200	2,100	2,038	3,200	3,200	3,200	3,200	3,200	3,200	3,200
Well 53	0	3,200	3,200	3,200	3,200	3,200	0	0	3,200	3,200	487	3,200	3,200	3,200	487
Well 21	0	3,122	3,122	3,122	3,122	3,122	0	0	3,122	3,122	0	3,122	3,122	3,122	0
Well 22	0	1,600	1,600	1,600	1,600	1,600	0	0	1,600	1,600	0	1,600	1,600	1,600	0
Tustin Legacy:															
TL-1	0	2,000	0	0	2,000	2,000	0	0	1,739	1,739	0	2,000	2,000	2,000	0
TL-2	0	2,000	0	0	2,000	2,000	0	0	0	0	0	2,000	2,000	2,000	0
TL-3	0	2,000	0	0	1,398	1,398	0	0	0	0	0	2,000	2,000	2,000	0
TL-4	0	2,000	0	0	0	0	0	0	0	0	0	1,130	1,130	562	0
TL-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TL-6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anaheim Well Field:															
3 wells on South St.	0	0	0	8,000	0	8,000	0	0	0	8,000	0	0	8,000	0	0
Subtotal:	32,462	50,884	50,884	50,884	56,282	56,282	32,462	33,800	52,623	52,623	35,449	58,014	58,014	57,446	35,449
Grand Total:	48,982	67,404	67,404	67,404	72,802	72,802	48,982	50,320	69,143	69,143	51,969	74,534	74,534	73,966	51,969

Notes:

1. For Westside Well Field: assumed 80% annual utilization factor to calc annual yield.

2. For DRWF: 36,000 afy project yield less 4,000 afy In-Lieu participation.

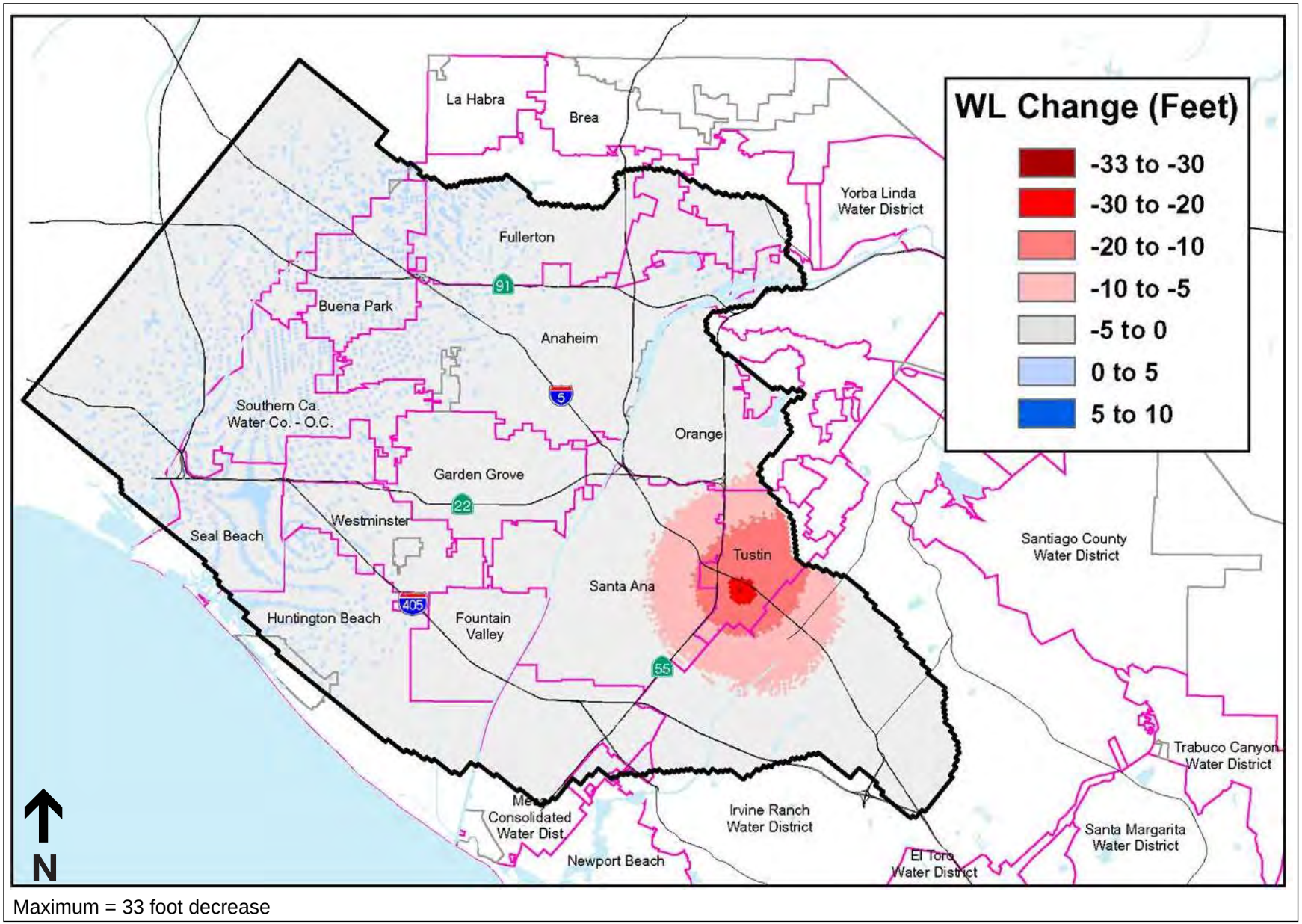


Maximum = 4 foot decrease

SOURCE: Herndon, 2009.

IRWD Tustin Wells. 209247.01

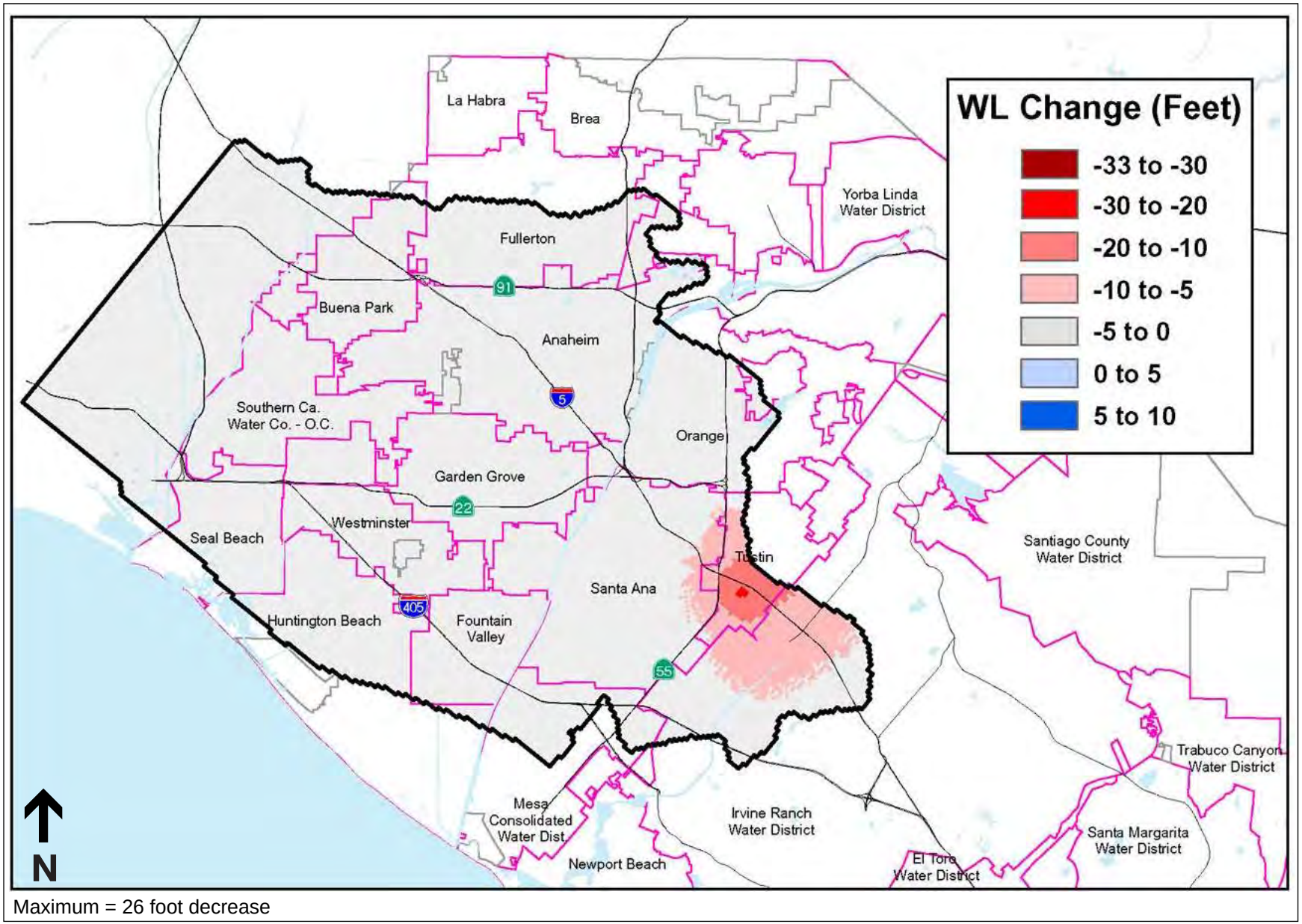
Figure 1
Shallow Aquifer - Water Level Change
Wells 21/22 vs. Baseline
Orange County, California



IRWD Tustin Wells. 209247.01

SOURCE: Herndon, 2009.

Figure 2
Principal Aquifer - Water Level Change
Wells 21/22 vs. Baseline
Orange County, California

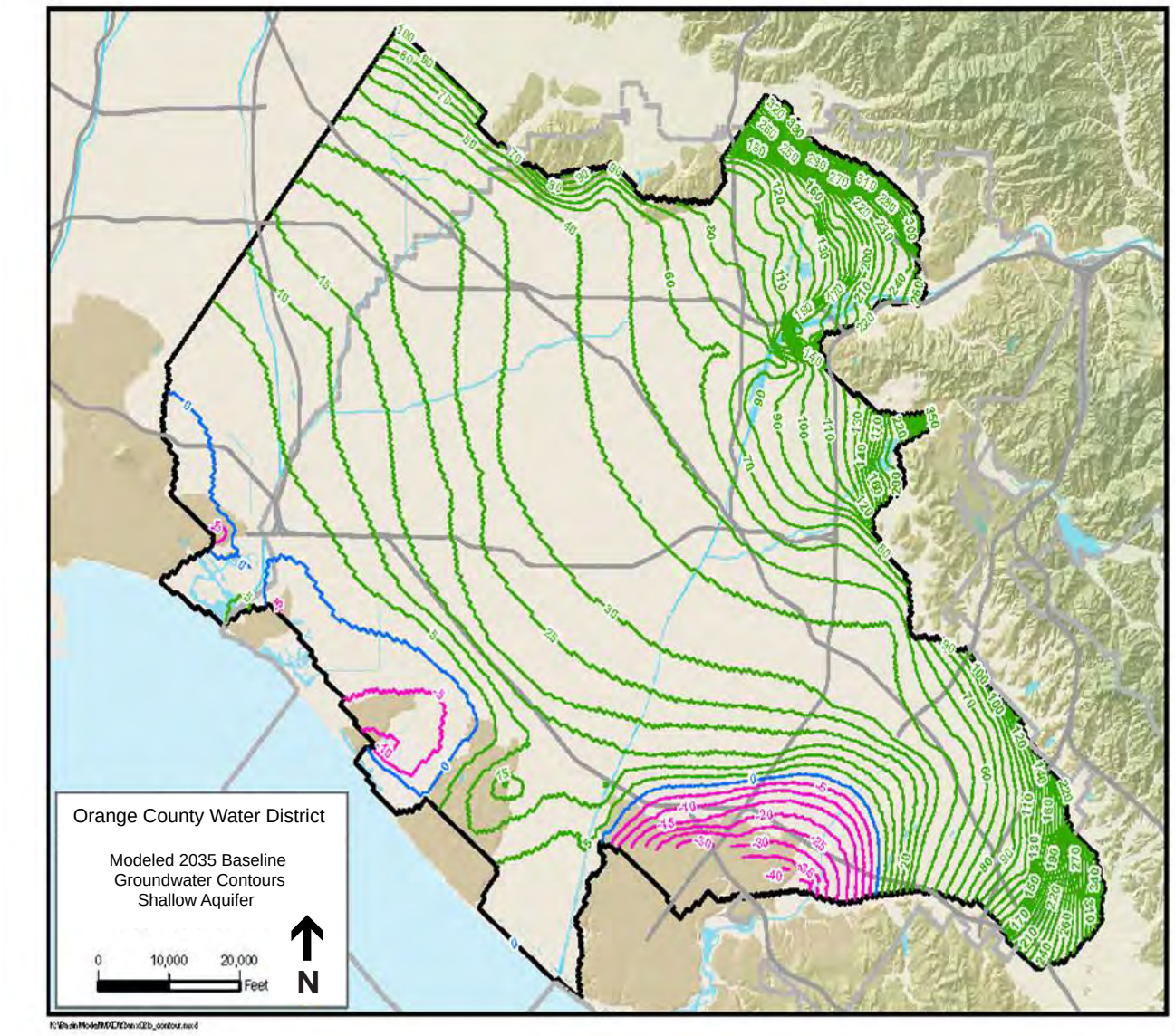


Maximum = 26 foot decrease

SOURCE: Herndon, 2009.

IRWD Tustin Wells. 209247.01

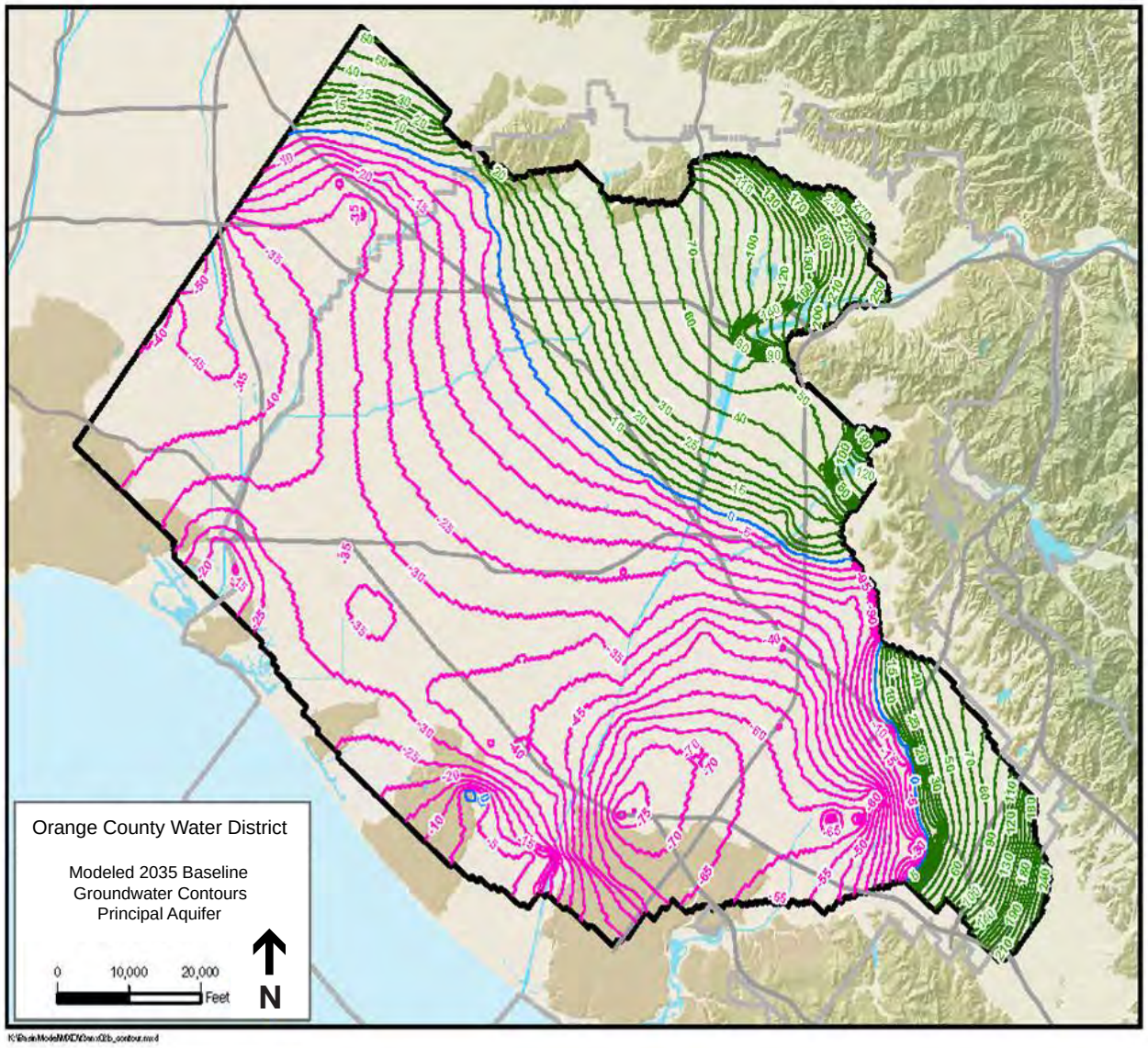
Figure 3
Deep Aquifer - Water Level Change
Wells 21/22 vs. Baseline
Orange County, California



IRWD Tustin Wells. 209247.01

SOURCE: Herndon, 2009.

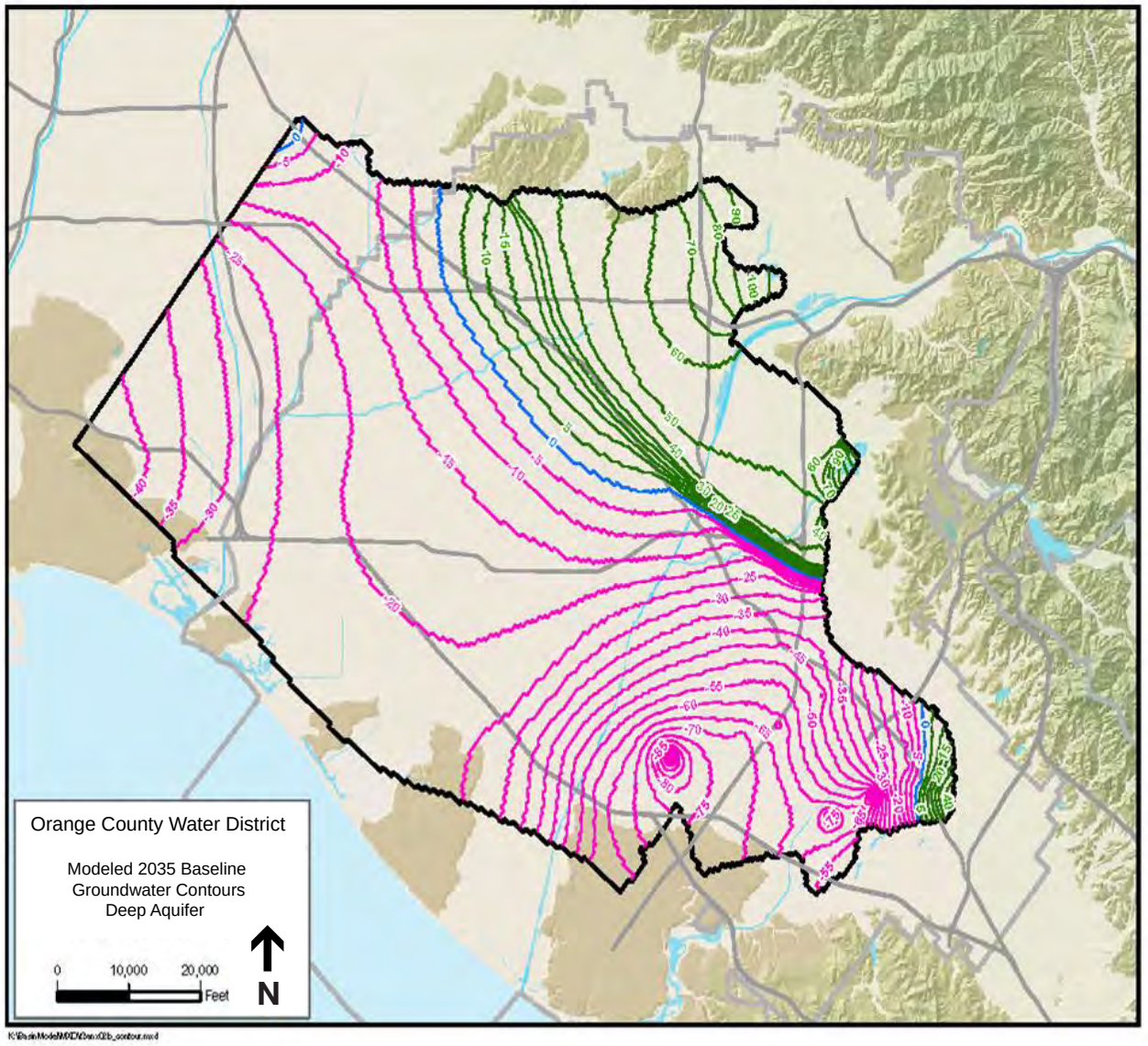
Figure 4
Modeled 2035 Baseline Groundwater Contours
Shallow Aquifer
Orange County, California



IRWD Tustin Wells. 209247.01

SOURCE: Herndon, 2009.

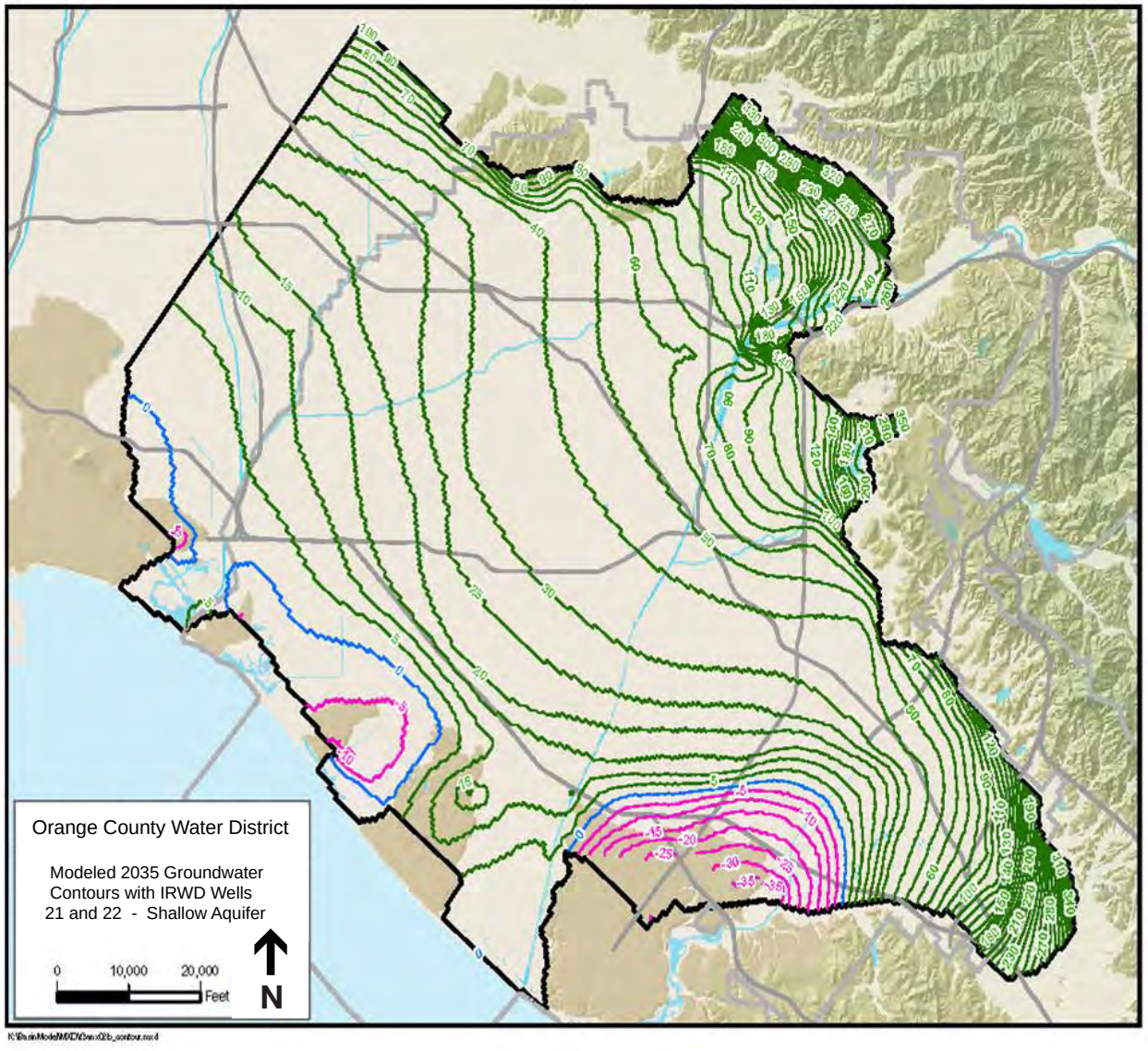
Figure 5
Modeled 2035 Baseline Groundwater Contours
Principal Aquifer
Orange County, California



IRWD Tustin Wells. 209247.01

SOURCE: Herndon, 2009.

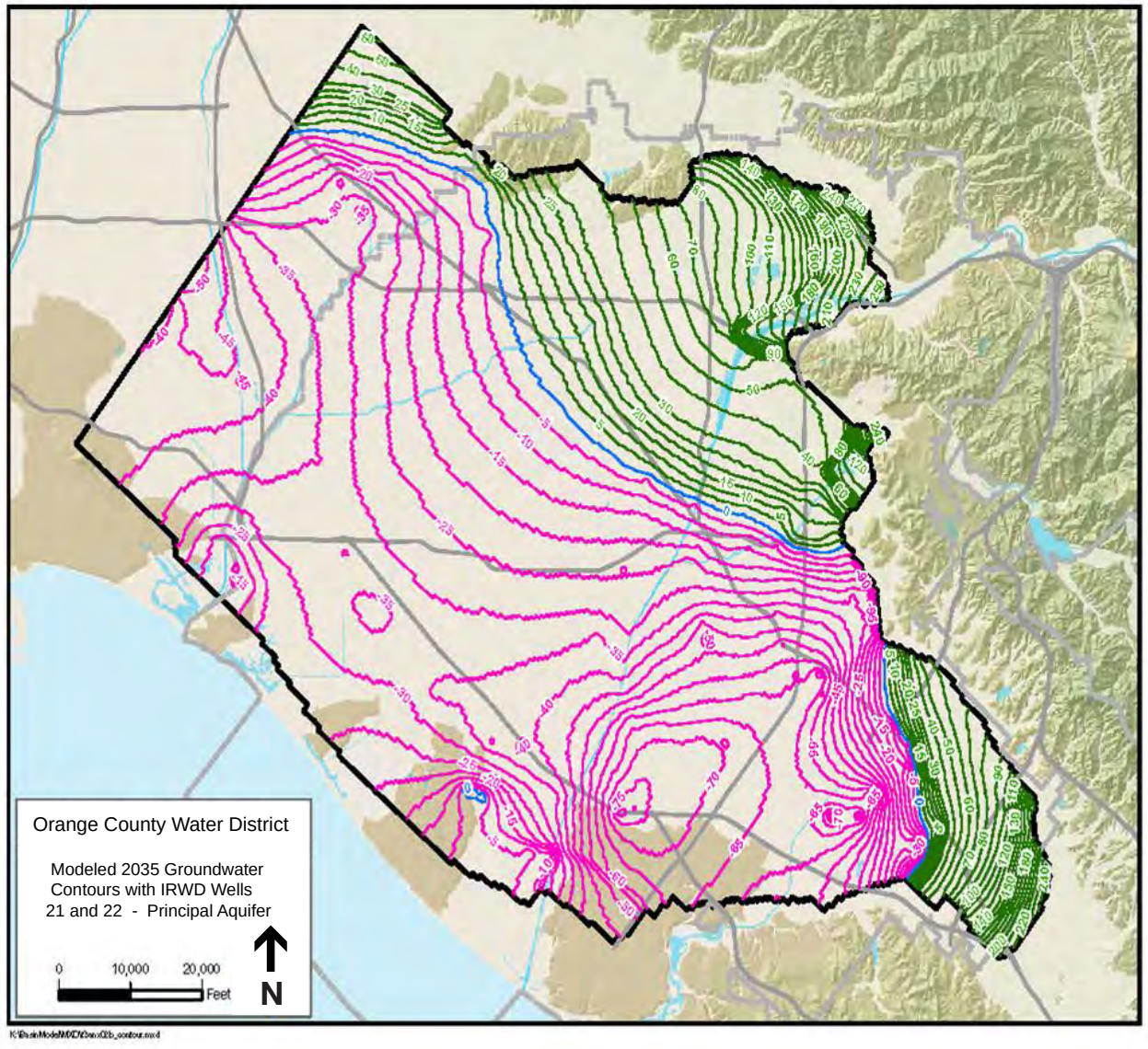
Figure 6
Modeled 2035 Baseline Groundwater Contours
Deep Aquifer
Orange County, California



IRWD Tustin Wells. 209247.01

SOURCE: Herndon, 2009.

Figure 7
Modeled 2035 Groundwater Contours with IRWD Wells 21 and 22
Shallow Aquifer
Orange County, California



IRWD Tustin Wells. 209247.01

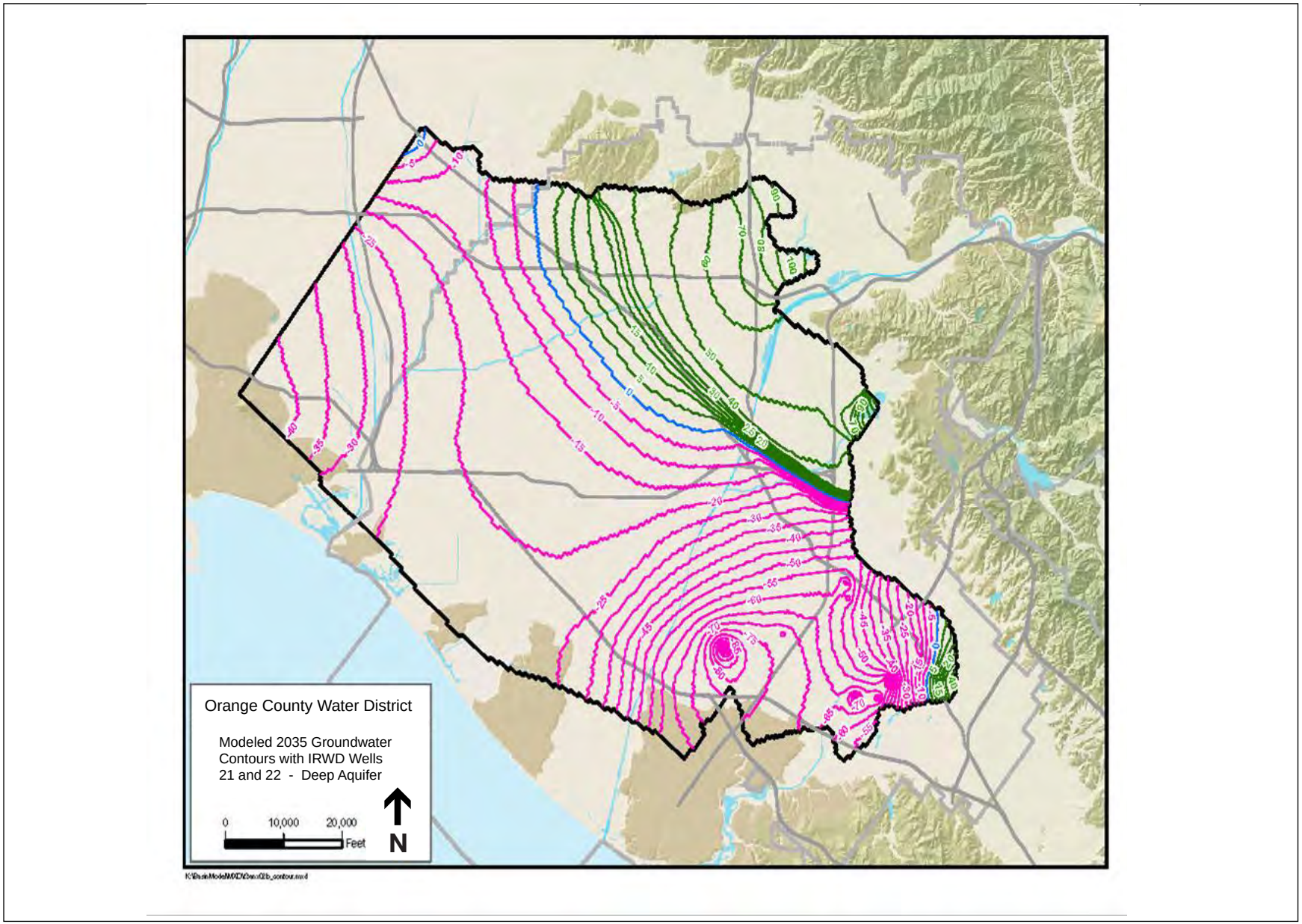
SOURCE: Herndon, 2009.

Figure 8
Modeled 2035 Groundwater Contours with IRWD Wells 21 and 22
Principal Aquifer
Orange County, California

Appendix C

Consultation and Coordination Appendix

(available upon request)



IRWD Tustin Wells. 209247.01

SOURCE: Herndon, 2009.

Figure 9
Modeled 2035 Groundwater Contours with IRWD Wells 21 and 22
Deep Aquifer
Orange County, California

POSTED
FEB 0 9 2009
TOM DALY, CLERK-RECORDER
By _____ DEPUTY

Notice of Determination

TO:

Office of Planning and Research
For U.S. Mail: P.O. Box 3044, Sacramento, CA 95812-3044
Street Address: 1400 Tenth Street, Sacramento, CA 95814

County Clerk
County of: Orange
Address: 24031 El Toro Road, Suite 150
Laguna Hills , CA 92653

FROM:

Public Agency: Irvine Ranch Water District
Address: 15600 Sand Canyon Ave.
Irvine, CA 92618
Contact: Paul Weghorst
Phone: (949) 453-5632

FILED
FEB 09 2010
TOM DALY, CLERK-RECORDER
By _____ DEPUTY

Applicant Irvine Ranch Water District: 15600 Sand Canyon Av. Irvine 92618

Subject: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2009121071

Project Title: Irvine Ranch Water District - Wells 21 and 22 and Tustin Legacy Well 1 Project

Project Location (include county): Primarily City of Tustin, with portions of the project in Irvine, Orange County CA.

Project Description: The Wells 21 and 22 and Tustin Legacy Well 1 Project (Project) proposes to recover and treat groundwater to augment local water supplies, increase water supply reliability and to drill and construct a test well that could ultimately be incorporated into a potable water supply project. The Project includes the installation of wellhead equipment at two existing groundwater wells (Wells 21 and 22), the drilling of one test well (Well TL-1), and the construction a new water treatment plant and water transmission pipelines in the cities of Tustin and Irvine.

This is to advise that the Irvine Ranch Water District (*Lead Agency*) has approved the above described project on February 8, 2010 (*Date*) and has made the following determinations regarding the above described projects.

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☒ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the Final Mitigated Negative Declaration is available to the General Public at:
Irvine Ranch Water District's website: www.irwd.com

Signature (Public Agency) Kelly A. Welker Title: Water Resource Manager

Date: 2/09/10 Date Received filing at OPR: _____

Recorded in Official Records, Orange County
Tom Daly, County Recorder
2010.25
201085000267 11:35 am 02/09/10
230 SC4 Z03
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Authority cited: Section 21083, Public Resources Code.
Reference: Section 21000-21174, Public Resources Code.

ADDENDUM TO INITIAL STUDY/ENVIRONMENTAL ASSESSMENT
WELLS 21 AND 22 PROJECT
TUSTIN LEGACY WELL 1 PROJECT

Prepared by
IRVINE RANCH WATER DISTRICT
15600 SAND CANYON AVENUE
IRVINE, CA 92618

1. Introduction:

The Wells 21, 22 and Tustin Legacy Well 1 (TL-1) Project proposes to recover and treat groundwater to augment local water supplies, increase water supply reliability and to drill and construct a test well that could ultimately be incorporated into a potable water supply project. On December 24, 2009, a Notice of Intent and Draft Initial Study/Environmental Assessment was filed, posted and circulated for public comment. On February 8, 2010, Irvine Ranch Water District Board of Directors adopted the Findings of the Final Negative Declaration for the Project and the Final Mitigated Negative Declaration. The Notice of Determination was filed on February 9, 2010.

2. Project Modification Description:

Since the approval of the original project (as described in Section 1 of this addendum), a minor project modification has occurred that needs to be addressed within the context of CEQA and the State CEQA Guidelines. Irvine Ranch Water District is proposing to obtain financial assistance for the approved project, component for Wells 21 and 22 Project only, through the competitive Local Resources Program (LRP) that is administered by The Metropolitan Water District of Southern California (Metropolitan). The LRP provides a funding mechanism to public and private water utilities to encourage local development of recycled water and recovered groundwater. This funding mechanism emphasizes cost-efficiency to Metropolitan, while timing new production according to regional water supply needs. Metropolitan provides assistance of up to $250 per acre-foot of production to its partners within Metropolitan's service area for agreement terms up to 25 years. A competitive Request for Proposal process is conducted periodically, dependent on the need to meet the targets established in the Integrated Resources Plan (IRP)[1].

Key objectives of the LRP are to:

[1] Metropolitan's Integrated Resource Plan (IRP) identifies goals for a diverse mix of local and imported water resource elements optimized to meet future supply reliability in a cost-effective manner. The IRP sets initial targets for resource development that the region must achieve for water supply reliability through the year 2020. IRP studies show reduced long-term costs to the region when local resources are developed due to downsizing or deferral of Metropolitan's capital improvements, reduction in operating costs for importation, treatment and distribution, and reduction in costs for developing alternative regional supplies. These benefits are realized by all Metropolitan member agencies through improved regional water supply reliability.

1. Assist local projects that improve regional water supply reliability and avoid or defer Metropolitan capital expenditures;
2. Emphasize cost-effective participation in developing local water resources;
3. Schedule project production to meet periodically updated IRP local resource targets; and
4. Minimize administrative cost and complexity.

As part of a consortium of agencies participating in the LRP process, Irvine Ranch Water District is proposing to partner with Metropolitan ("proposed project modification") in conjunction with the Wells 21 and 22 Project component. As the Lead Agency, Irvine Ranch Water District has prepared this addendum to the previously adopted Initial Study/Environmental Assessment in support of its discretionary action to comply with CEQA and the State CEQA Guidelines. For this proposed project modification, Metropolitan will act as a Responsible Agency.

3. Minor Technical Additions:

Since partnering in the original project would require a discretionary action by the Lead Agency's decision making body, it is necessary to clarify the text in the Initial Study/Environmental Assessment as originally prepared by the Lead Agency. This addendum has been prepared to address this minor change in the Utility and Service Systems (Water) section of the Initial Study/Environmental Assessment.

In light of the foregoing discussion in the project description, starting on page 2-11, section 2.7.1 Local Resources Program (LRP) Financial Assistance is added to the Initial Study/Environmental Assessment, to read:

On October 22, 2009, Irvine Ranch Water District submitted the proposal on the Wells 21 and 22 Project to Metropolitan. As the Responsible Agency, Metropolitan's Board of Directors will review and consider the proposal and environmental documentation prepared by Irvine Ranch Water District in determining whether or not to approve financial assistance for the project within the Local Resources Program (LRP) administrative process.

The proposed project modification (i.e., a partnership with Metropolitan in the LRP for the Wells 21 and 22 Project) would be consistent with Metropolitan's commitment to develop LRP activities that would increase water supply reliability and avoid or defer Metropolitan capital expenditures. The proposed project modification would have up to a 25-year term as negotiated between the Lead Agency and Metropolitan.

This minor technical change and further clarification to the original project does not affect water supplies or water quality within the Lead Agency's service area. Instead, the proposed project modification is an administrative and fiscal action. For Metropolitan, the proposed project modification would be beneficial in terms of being consistent with the objectives of the LRP. Accordingly, this activity would not result in a tangible change in the physical environment.

Therefore, no impact to utility and service systems would result from the implementation of the proposed project modification.

4. Basis for Preparation of Addendum:

Section 15164(b) of the State CEQA Guidelines states "An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred."

The proposed modification to the original project would not result in a tangible change in the physical environment. As the Lead Agency for the proposed project modification, Irvine Ranch Water District is issuing this addendum in accordance with the State CEQA Guidelines (Section 15164). Irvine Ranch Water District has determined that the minor textual additions provided herein will not 1) constitute a substantial change in the project as originally proposed by the Irvine Ranch Water District or result in significant environmental effects not mitigated by the previously adopted mitigation measures, 2) lead to substantial changes in the circumstances under which the project is undertaken, or 3) constitute new information of substantial importance that shows that the project will have any significant effects that were not discussed in, or that are more severe than those discussed in, the Initial Study/Environmental Assessment. Accordingly, an addendum was prepared as opposed to a negative declaration or a subsequent environmental impact report.

Signature	March 8, 2010 Date
Paul Weghorst Printed Name	Principal Water Resource Manager Title