

Orange County Water District Groundwater Replenishment System Water Conveyance Facilities Project

***Final Initial Study/Mitigated Negative Declaration &
CEQA-Plus Federal Consultation Review***

Prepared By

**Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708
Contact: Daniel Bott**

April 2018





Section	Page
SECTION 1.0 INTRODUCTION	1-1
1.1 Purpose of Environmental Review.....	1-1
1.2 Statutory Authority and Requirements.....	1-1
1.3 Technical Information and Studies	1-2
SECTION 2.0 PROJECT DESCRIPTION	2-1
2.1 Background	2-1
2.2 Study Area.....	2-1
2.3 Existing Project Site Setting	2-3
2.4 GWRS Conveyance Facilities Project	2-3
2.5 Construction Phasing Plan	2-6
2.6 Permits and Approvals	2-8
SECTION 3.0 ENVIRONMENTAL CHECKLIST EVALUATIONS	3-1
SECTION 4.0 ENVIRONMENTAL ANALYSIS	4-1
4.1 Aesthetics.....	4-1
4.2 Agricultural Resources/Forest Resources	4-13
4.3 Air Quality.....	4-14
4.4 Biological Resources.....	4-33
4.5 Cultural Resources.....	4-41
4.6 Geology/Soils	4-58
4.7 Greenhouse Gas Emissions.....	4-63
4.8 Hazards/Hazardous Materials	4-70
4.9 Hydrology/Water Quality.....	4-74
4.10 Land Use/Planning	4-84
4.11 Mineral Resources.....	4-86
4.12 Noise	4-86
4.13 Population/Housing	4-103
4.14 Public Services.....	4-103
4.15 Recreation	4-104

Table of Contents

4.16	Transportation/Traffic	4-105
4.17	Tribal Resources	4-108
4.18	Utilities/Service Systems	4-112
SECTION 5.0 CEQA-Plus Federal Consultation Review.....		5-1
5.1	Purpose	5-1
5.2	Federal Endangered Species Act (ESA), Section 7.....	5-1
5.3	Magnuson-Stevens Fishery Conservation and Management Act, Essential Fish Habitat:	5-6
5.4	National Historic Preservation Act, Section 106	5-6
5.5	Federal Clean Air.....	5-13
5.6	Coastal Zone Management Act.....	5-15
5.7	Coastal Barriers Resources Act.....	5-15
5.8	Farmland Protection Policy Act.....	5-16
5.9	Flood Plain Management.....	5-16
5.10	Migratory Bird Treaty Act.....	5-16
5.11	Protection of Wetlands	5-17
5.12	Wild and Scenic Rivers Act	5-18
5.13	Safe Drinking Water Act, Sole Source Aquifer Protection	5-18
5.14	Environmental Justice	5-18
SECTION 6.0 REFERENCES		6-1

Figure

Figure 1 Regional Location Map	2-2
Figure 2 Existing Site Conditions	2-4
Figure 3 Site Plan.....	2-5
Figure 4 Santa Ana River trail Views.....	4-2
Figure 5 Pacific Coast Highway and Talbert Marsh Views	4-3
Figure 6 Western Property Line Tree Line	4-5
Figure 7 North property Line tree Line.....	4-6
Figure 8 Santa Ana River Trail Viewshed Impacts	4-8
Figure 9 Pacific Coast Highway Viewshed Impacts	4-10

Table of Contents

Figure 10 Brookhurst Street Viewshed impacts	4-11
Figure 11 North Property Line Viewshed Impacts	4-12
Figure 12 Area Potential effects	4-50

Table

Table 1 Phase 1 Construction Equipment Mix	2-7
Table 2 Phase 2 Construction Equipment Mix	2-7
Table 3 Phase 3 Construction Equipment Mix	2-8
Table 4 Phase 4 Construction Equipment Mix	2-8
Table 5 Existing Ambient Air Quality	4-16
Table 6 South Coast Air Basin Attainment Status	4-19
Table 7 Maximum Daily Unmitigated Regional Construction Emissions (pounds per day) a	4-28
Table 8 Maximum Unmitigated Localized Construction Emissions (Pounds Per Day) ... 4- 29	
Table 9: Special Status Plant Species.....	4-35
Table 10: Special Status Wildlife Species	4-36
Table 11: Beneficial Uses.....	4-76
Table 12: Beneficial Uses Santa Ana River/Orange County Groundwater Basin.....	4-77
Table 13: Water Quality Objectives (mg/L).....	4-78
Table 14: Noise Levels and Human Response	4-88
Table 15 Huntington Beach Exterior Noise Standards	4-90
Table 16 Summary of ambient noise measurement.....	4-92
Table 17 Construction Equipment Noise Levels.....	4-93
Table 18 Estimated Construction Noise Levels at Offsite Sensitive Uses.....	4-94
Table 19 Construction Vibration Damage Criteria	4-98
Table 20 Groundborne Vibration Impact Criteria for General Assessment.....	4-99
Table 21 Caltrans Vibration Damage Potential Threshold Criteria	4-100
Table 22 Caltrans Vibration Annoyance Potential Criteria.....	4-100
Table 23 Vibration Source Levels for Construction Equipment	4-101
Table 24 Groundborne Vibration Levels at Offsite Sensitive Uses Compared to Caltrans' and FTA Vibration Damage Potential Threshold.....	4-102
Table 25: Project Construction Traffic Trips	4-106
Table 26: Capacity Orange County Landfills	4-113
Table 27 Special Status Plant Species.....	5-2
Table 28 Special Status Wildlife Species	5-3
Table 29: De Minimis Levels	5-14
Table 30: SIP Conformity Evaluation.....	5-15

Table of Contents

Appendices

Appendix A: OCWD Water Conveyance Facilities Project Air Quality and Greenhouse Gas Emissions Technical Report January 2018

Appendix B: OCWD Water Conveyance Facilities Production Project - Biological Assessment January 2018

Appendix C: OCWD Groundwater Replenishment System Final Expansion Project and Water Production Enhancement Project – Phase I Cultural Resources Study August 2016 and OCWD Water Conveyance Facilities Production Project Supplemental Cultural Resource Letter Report, February 2018.

Appendix D: OCWD Water Conveyance Facilities Project – Noise and Vibration Technical Report January 2018

Appendix E: Response to Comments/Mitigation Monitoring Program

SECTION 1.0 INTRODUCTION

1.1 Purpose of Environmental Review

The California Environmental Quality Act (CEQA) requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. This Initial Study has been prepared to disclose and evaluate short-term construction related impacts and long-term operational impacts associated with the implementation of the Orange County Water District Water Groundwater Replenishment System (GWRS) Water Conveyance Facilities Project. Pursuant to Section 15367 of the State CEQA guidelines, the Orange County Water District (OCWD) is the Lead Agency and has the principal responsibility for approving and implementing the project. As the Lead Agency, OCWD is required to ensure that the project complies with CEQA and that the appropriate level of CEQA documentation is prepared. Through preparation of an Initial Study as the Lead Agency, OCWD would determine whether to prepare an Environmental Impact Report (EIR), Negative Declaration or Mitigated Negative Declaration (MND) for the project. If the Lead Agency finds that there is no evidence that the project, either as proposed or as modified to include mitigation measures identified in the Initial Study prior to its public circulation, would not cause a significant effect on the environment, the Lead Agency shall prepare a Negative Declaration or Mitigated Negative Declaration for the project. Section 15382 of CEQA Guidelines defines a “significant effect on the environment” as a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air water, mineral, flora, fauna, ambient noise, aesthetic environment and objects of cultural significance. Based on the conclusions of this Initial Study, OCWD has determined that the appropriate level of environmental documentation for the GWRS Water Conveyance Facilities Project.

1.2 Statutory Authority and Requirements

This Initial Study/Mitigated Negative Declaration has been prepared in accordance with the CEQA, Public Resources Code Section 21000 et seq., State CEQA Guidelines, and the OCWD CEQA Environmental Procedures. The environmental analysis for the proposed project is based on OCWD Environmental Checklist Form. The Checklist Form is consistent with Initial Study requirements provided in Section 15063 of the State CEQA Guidelines.

1.3 Technical Information and Studies

The following Technical Studies have been and incorporated into the Orange County Water District Water Production Enhancement Project Initial Study evaluation.

- Appendix A: OCWD Water Conveyance Facilities Project - Air Quality and Greenhouse Gas Emissions Technical Report January 2018
- Appendix B: OCWD Water Conveyance Facilities Project - Biological Assessment January 2018
- Appendix C: Groundwater Replenishment System Final Expansion Project and Water Production Enhancement Project – Phase I Cultural Resources Study August 2016 and OCWD Water Conveyance Facilities Project Supplemental Cultural Resources Letter Report
- Appendix D: OCWD Water Conveyance Project – Noise and Vibration Technical Report January 2018

SECTION 2.0 PROJECT DESCRIPTION

2.1 Background

The Groundwater Replenishment System (GWRS) is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier.

The GWRS has been designed to be implemented in three construction phases. Phase I was implemented and produced approximately 70,000 acre feet per year (AFY) of new water supplies from 2008 through 2014. Phase 2 is currently operational and produces with Phase 1, approximately 103,000 AFY new water supplies. The Phase 3 final expansion would produce approximately 25,000 AF of water per year. Together Phase 1 through Phase 3 would produce up to 128,000 AFY of new water supplies to help replenish the Orange County Groundwater Basin.

The GWRS Phase 3 Final Expansion was evaluated in two previously approved CEQA environmental documents. Addendum No. 6 to Final Program Environmental Impact Report Tier 1 Environmental Impact Statement (SCH 98111030) evaluated potential impacts associated with expansion of the existing water treatment facility on OCWD's GWRS water treatment site and construction of a effluent pump station, headworks facility and bypass pipeline on OCSD's Plant No. 2 wastewater treatment site and the slip-lining of an existing pipeline along OCSD's easement corridor between OCSD's Plant No. 1 and OCSD's Plant No.2. Final Mitigated Negative Declaration (SCH 2016081067) evaluated construction of a 6 million gallon flow equalization tank, pump station, conveyance pipeline and flow meter fault on the OCSD Plant No. 2 wastewater treatment site. During the design process, the proposed flow equalization tank was redesigned to consist of two 3 million flow equalization tanks and the construction footprint was shifted north from the previously proposed location. The redesigned project is referred to as the GWRS Water Conveyance Facilities Project.

2.2 Study Area

The GWRS Water Conveyance Facilities Project would be constructed at the north end of OCSD Plant No. 2 at 22212 Brookhurst Street within the City of Huntington Beach. OCSD Plant No. 2 Site is composed of 110 acres and is developed with wastewater treatment structures, offices, and paved parking areas and roadways. As shown in Figure 1, OCSD Plant No.2 Site is bounded by Hamilton Avenue to the north, Brookhurst Street to the west, Talbert Marsh and Talbert Marsh Bike Trail to the south



Path: I:\SSR\GWRs_Expansion\2018\F1_RegionalMap.mxd



0 1,000 2,000
Feet

**GWRs Conveyance Facility Project
Regional Location Map**

Figure 1

and the Santa Ana River and the Santa Ana River Trail to the east. Primary regional access to plant No.2 would be from Interstate 405 from the Brookhurst Street exit. Primary local access would be from Brookhurst Street and Pacific Coast Highway.

2.3 Existing Project Site Setting

As shown in Figure 2, the proposed project would be constructed on undeveloped lands located at the northern end of the OCSD Plant No. 2. The site is framed with landscaping to the west and tree line of eucalyptus trees to the north and west. Existing land uses surrounding the site include; single family residential uses to the west, multiple family residential uses to the north, Santa Ana River Bike Trail to the west and wastewater treatment facilities to the south.

2.4 GWRS Conveyance Facilities Project

The GWRS Water Conveyance Facilities Project consists of a pump station, two secondary effluent flow equalization tanks, and associated piping, valving and metering connections. The GWRS Conveyance Project would be located at OCSD's Plant No. 2 and would allow OCWD to receive maximum water production at the GWRS facility. The secondary treated wastewater from OCSD's Plant No. 2 would be fed via gravity from an 84-inch pump station feed pipeline to the pump station wet wells. The proposed pump station would pump this secondary effluent into 1) the flow equalization tanks, or 2) through a 54-inch pump discharge into an existing 66-inch pipeline that would bring the effluent to GWRS. The 54-inch pump station discharge line would have an in-line meter/valve vault. The two 3 million gallon (MG) flow equalization tanks would capture peak wastewater flows during the day and would drain these flows at night to maintain a steady flowrate to GWRS. Without the flow equalization tanks, the wastewater treatment plant peak flows would not be able to be pumped to the GWRS facility due to the conveyance capacities of the pump station and pipeline. This GWRS Conveyance Project would allow OCWD to store and use these peak flows which would have otherwise been discharged to the ocean. The tanks are expected to allow for an additional 6 MG per day of secondary effluent to be treated at the GWRS facility. The entire GWRS Conveyance Project will have the ability to pump between 40 million gallons per day (MGD) to 60 MGD to GWRS for treatment. The proposed facilities for the GWRS Conveyance Project are shown in Figure 3.

OCSD Plant No. 2 Pump Station, Flow Equalization Tank, and Pipeline/Meter Vault

The proposed pump station would be a 25-foot tall concrete building (from grade) with five 350-hp pumps located within the building. The five pumps would be configured as four active duty pumps and one standby pump. The five pumps would be installed within individual 30-inch diameter wet wells. Each of the wet wells would be drilled to 25-feet below grade. In addition to the pumps, the pump station building (95-feet x 40-feet x 25-feet tall) would have a portioned off electrical room within it. The pump station discharge

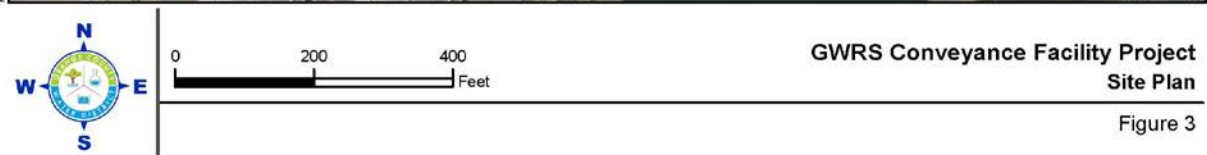


Public: I:\GIS\Bldg\GWRs_Expansion\2018\Draw1.mxd



GWRs Conveyance Facility Project
Study Area Views
Existing Site Condition

Figure 2



pipeline (54-inches in diameter) splits into two 36-inch diameter steel pipes which would feed each of the two 3-MG flow equalization tanks.

The tanks would be circular pre-stressed concrete storage tanks approximately 135-feet in diameter and 28-feet tall from existing grade. The 84-inch pump station feed pipeline would connect to an existing 108-inch diameter trickling filter effluent line with a diversion box to bring the secondary effluent to the pump station. The 84-inch pump station feed pipeline would be approximately 800-linear feet. The 54-inch pump station discharge pipeline would have a valve and meter vault (15-ft x 20-ft x 10-ft deep) which would measure and control the flows from the pump station. In addition, each tank would have separate piping and control valves for filling and draining each tank. The two flow equalization tanks would be partially buried at 4-feet below existing grade. There would be a concrete tank pad approximately 2-feet thick under each of the flow equalization tanks.

2.5 Construction Phasing Plan

The GWRS Water Conveyance Facilities Project would involve the construction of three types of facilities. These three main facilities would include construction of a pump station, two flow equalization tanks, and associated piping with a valving/metering vault. The project would be implemented in four construction phases beginning in August 2020 and concluding in December of 2022. The sequence of construction activities is described below and detailed in Tables 1, 2, and 3.

Phase 1- Excavation for Pump Station, Tanks, Pipelines, Valve/Meter Vault

The first phase of work would be to excavate for the underground facilities. Excavation of dirt would be required for the pump station wet wells, tank piles, tank pads, 84-inch pump station feed pipeline, valve/meter vault, and associated tank feed/drain piping. For the pump station, the underground work involves drilling the five 30-inch diameter and 25-feet deep wet wells. Approximately 35 cubic yards (CY) of dirt would be removed by this operation. The flow equalization tanks would most likely be constructed on 12-inch diameter concrete piles drilled to 50-feet below the ground surface. Approximately 15-piles are required for supporting each of the equalization tanks (a total of 30 piles). The 12-inch diameter pile holes would be drilled into the ground with a drill rig. Approximately, 45 CY of dirt would be removed with this operation. The tanks would be resting on 2-feet thick concrete pads partially buried 6-feet below ground surface. The amount of dirt excavated would be approximately 3200 CY. Excavation for the 84-inch pump station feed pipeline and diversion box, 54-inch pump station discharge pipeline and 66-inch pipe connection, and valve/meter vault would result in the removal of approximately 3800 CY of dirt. The excavation work for the underground components of all these facilities would involve excavating and hauling a total of approximately 7,200 CY of soil. During Phase 1 a total of 30 daily haul trips would occur over an 18 day

period for a total of 540 haul trips. The construction mix for the Phase 1 construction activities is shown in Table 1.

Table 1 Phase 1 Construction Equipment Mix

Equipment	Quantity	Hours/Day	Total Days	Total Hours	Horsepower Rating
Bull Dozer	2	6	30	360	250
Compactor	1	6	10	60	200
Excavator	2	6	20	240	200
Dump Trucks	6	6	18	648	350
Water Trucks	1	8	45	360	350

Phase 2 - Construction of Pump Station Wet Wells, Tank Piles, Piping

The second phase of work would be to build the pump station wet wells, the concrete support piles for the flow equalization tanks, and install the pump station feed/drain piping. The piles would be constructed by setting rebar support cages for the piles into the drilled holes with a crane. Lastly, 40 CY of concrete would be filled into the holes with the rebar and cured. The piles would be supporting a 2-foot thick concrete pad matching the diameter of the tank. This equates to 2120 CY of concrete for the tank pad. During Phase 2 a total of 18 daily haul trips would occur over a 3 day period for a total of 230 haul trips. The construction mix for the Phase 1 construction activities is shown in Table 2.

Table 2 Phase 2 Construction Equipment Mix

Equipment	Quantity	Hours/Day	Total Days	Total Hours	Horsepower Rating
Drill Rig	1	6	20	120	500
backhoe	1	6	20	120	150
Concrete Trucks	4	6	14	336	350
Dump Trucks	2	5	3	30	350
Water Truck	2	4	25	200	350

Phase 3 - Construction of Tank, Pump Station Building, Valve/Meter Vault

The third phase of work would be to build the concrete pump station, the tank walls/roof, and the valve/meter vault. Once the piles and concrete pad have been constructed, the pre-stressed concrete tanks would be constructed. The pre-stressed concrete tanks would have seismic base restraint cables developed into the perimeter footing to account for site specific seismic loading. In addition, for this site, the pre-stressed concrete tanks would have an anchored flexible base connection between the floor and wall of the tanks to enhance ductility and reduces bending moments from hydrostatic, thermal, and seismic forces, allowing these structural elements to act independently. The thickness of the tank walls would be approximately 10-inches thick uniformly. The

tank walls and roof would require approximately 2500 CY of concrete to be poured. Construction of the tanks would involve the use of a crane, installation of reinforcing steel and concrete pumping trucks to build up the walls and roof. The roof of the tanks would be a flat roof supported by interior concrete beams to minimize visibility. The pump station and valve/meter vault would also be constructed with concrete. To construct the floors, walls, and roofs of these facilities approximately 400 CY of concrete would be required. During Phase 2 there would be 16 haul trips over a 19 day period for a total of 304 haul trips. The construction mix for the Phase 2 construction activities is shown in Table 3.

Table 3 Phase 3 Construction Equipment Mix

Equipment	Quantity	Hours/Day	Total Days	Total Hours	Horsepower Rating
Crane	1	6	10	60	300
Forklift	4	6	30	720	120
Concrete Trucks	4	6	19	456	350
Man Lift	5	6	15	450	75

Phase 4 - Equipping of Pump Station, Tanks, Valve/Meter Vault

The fourth phase of work would be to equip the pump station, tanks and valve/meter vault with the use of laborers, fork lifts and cranes. The construction equipment for the pump station, tanks, and valve/meter vault would include; an excavator, crane, pile driller, bull dozer, backhoe, compactor, dump trucks, concrete trucks, water truck, man lifts and fork lifts. The construction mix for the Phase 2 construction activities is shown in Table 4.

Table 4 Phase 4 Construction Equipment Mix

Equipment	Quantity	Hours/Day	Total Days	Total Hours	Horsepower Rating
Crane	1	6	10	60	300
Forklift	4	6	30	720	120
Man Lift	5	6	15	450	75

2.6 Permits and Approvals

The Initial Study/Mitigated Negative Declaration prepared for the GWRS Conveyance Facility Project would be used as the supporting CEQA environmental documentation for the following approvals and permits.

Agency	Approvals/Discretionary Actions
Orange County Water District	<ul style="list-style-type: none"> • Project Approval • Approval for Agreements Construction Contracts

State Regional Water Quality Control Board, Santa Ana Region	Approval of amendment to Regional Water Control Board Producer/User Water Recycling Permit Orange County Water District Groundwater Replenishment System (R8-2008-0058)
City Huntington Beach	Coastal Development Permit

SECTION 3.0 ENVIRONMENTAL CHECKLIST EVALUATIONS

The following is the OCWD Environmental Checklist Form that was prepared for the GWRS Water Conveyance Facility Project. The Environmental Checklist Form is consistent with Environmental Checklist form provided in Appendix G of the CEQA Guidelines.

Project Title: Orange County Water District Water Enhancement Project

Lead Agency Name and Address: Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Project Contact: Daniel Bott

Location: 22212 Brookhurst Street Huntington Beach, California

Environmental Determination On the basis of this initial evaluation, I find that:

- a) ☐ The Water Production Enhancement Project could not have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
- b) ☒ Although the Water Production Enhancement Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.
- c) ☐ The Water Production Enhancement Project may have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.
- d) ☐ Although the Water Production Enhancement Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR (EIR No. -) pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the project, nothing further is required.
- e) ☐ Pursuant to Section 15164 of the CEQA Guidelines, an EIR (EIR No. -) has been prepared earlier and only minor technical changes or additions are necessary to make the previous EIR adequate and these changes do not raise important new issues about the significant effects on the environment. An ADDENDUM to the EIR shall be prepared.
- f) ☐ Pursuant to Section 15162 of the CEQA Guidelines, an EIR (EIR No. -) has been prepared earlier; however, subsequent proposed changes in the project and/or new information of substantial importance will cause one or more significant effects not previously discussed. A SUBSEQUENT EIR shall be prepared.

Signature

Date

Printed Name: Daniel Bott

V. Issues & Supporting Information Sources		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics – Would the project:					
a)	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Damage scenic resources, including but not limited to, trees, rock outpourings and historic buildings within a state highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II. AGRICULTURAL AND FOREST 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 prepared by the California Department of Conservation as an optional model to use in assessing impacts on agricultural farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:					
a)	Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland) to non-agricultural use? (The Farmland Mapping and Monitoring Program in the California Resources Agency, Department of Conservation, maintain detailed maps of these and other categories of farmland.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Conflict with existing zoning for agricultural use or a Williamson Contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

V. Issues & Supporting Information Sources				
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality – Where available, the significance criteria established by the applicable air quality management or pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of applicable Air Quality Attainment Plan or Congestion Management Plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any stationary source air quality standard or contribute to an existing or proposed air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IV. Biological Resources – Would the project:				
a) Have a substantial adverse impact, 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 Services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse impact on any riparian habitat or natural community identified in local or regional plans, policies, and regulations or by the California Department of fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Adversely impact 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Issues & Supporting Information Sources					
protecting biological resources, such as 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V. Cultural Resources – Would the project:					
a)	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to define Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Directly or indirectly disturb or destroy a unique paleontological resource or site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VI. Geology and Soils – Would the project:					
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.	Rupture of a known earthquake fault, as delineated on the most recent 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.	Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Would the project result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as result of the project, and potentially result in on-or-off site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Be located on expansive soil, as defined in table 18-1-B of the uniform Building Code creating	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Issues & Supporting Information Sources				
substantial risks to life or property?				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VII. GREENHOUSE GAS EMISSIONS — Would the project?				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VIII. HAZARDOUS 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substance or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is located on a list of hazardous materials sites compiled pursuant to Government Code Section 659662.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or where such a plan has not been adopted, within two miles where 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Issues & Supporting Information Sources					
emergency evacuation plan?					
h)	Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VIX.	HYDROLOGY AND WATER QUALITY – Would the project:				
a)	Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f)	Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i)	Expose people or structures to a significant risk of loss, injury, or death involving flooding,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Issues & Supporting Information Sources including flooding as a result of the failure of a levee or dam?					
	(j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
X.	LAND USE AND PLANNING – Would the project:				
	a) Physically divide an established community?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI.	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII.	NOISE – Would the project result in:				
	a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	f) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	b) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d) For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Issues & Supporting Information Sources				
people residing or working in the project area to excessive noise levels?				
e) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIII. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public service:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
XV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Issues & Supporting Information Sources require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?					
XVI.	TRANSPORTATION/TRAFFIC Would the project:				
a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Conflict with an applicable congestion management program, including but limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Substantially increase hazards to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>
e)	Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
XVII TRIBAL RESOURCES					
a)	Would the project cause a substantial adverse change in the significance of a tribal cultural resource as a site, feature, place, cultural landscape, sacred place, or object with value to a California Native American Tribes and that is listed or eligible for listing in the California Register or Historical resource, or in a local register of historical resources.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Issues & Supporting Information Sources				
b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource as either a site, feature, place, cultural landscape, sacred place, or object with value to a California Native American Tribe and that is a resource determined by the lead agency in its discretion and supported by substantial evidence to be significant and which the lead agency considers the significance of the resource to a California Native American Tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

XVIII. UTILITIES AND SERVICE SYSTEMS – Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Are sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in the determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Is the project served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

V. Issues & Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--	--------------------------------------	--	------------------------------------	--------------

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE –

- | | | | | | |
|----|---|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a) | Does the project 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) | Does the project have impacts that are individually limited but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects and the effects of probable future projects). | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) | Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Note: Authority cited: Sections 21083, 21083.05, Public Resources Code. Reference: Section 65088.4

SECTION 4.0 ENVIRONMENTAL ANALYSIS

The following analysis responds to the environmental issues listed on the OCWD CEQA Checklist Form. The analysis identifies the level of anticipated impact and where needed includes the incorporation of mitigation measures to reduce potentially significant impacts to the environment to a less than significant level.

4.1 Aesthetics

Existing Setting

The project site within OCSD Plant No. 2 Site is located within the southeast area of the City of Huntington Beach. The OCSD Plant No. 2 Site is surrounded by the Santa Ana River Trail to the east, Talbert Park to the northeast, Brookhurst Street and single family residential uses to the west, multiple family residential uses to the north and the Talbert Marsh to the south. OCSD Plant No. 2 Site is currently developed with numerous structures that vary in height, mass and function. The tallest onsite structure would be the surge tower at a height of 86 feet, located at the southwestern end of the site. Other notably sized structures include the existing sludge storage silos at approximately 50 feet in height and trickling filters at a height of 40 feet.

The OCSD Plant No. 2 Site is situated within urbanized area and is impacted from a variety lighting sources from the surrounding the area. The lighting from these surrounding sources generally diminishes the quality of the nighttime sky. The OCSD Plant No. 2 Site has controlled onsite security lighting which has been designed to minimize spill-over light and glare impacts to the surrounding area.

Scenic vistas within the study area include; the Santa Ana River, Banning Ranch Wetlands, Talbert Marsh and the Pacific Ocean. Public vistas providing view of scenic resources within the study area include the Santa Ana River Trail, Talbert Marsh Trail, and along Pacific Coast Highway. Additionally, there are private views into OCSD Plant No.2 from single family residential uses located west of Brookhurst Street and from multiple family residential uses located north of OCSD Plant No. 2.

The Santa Ana River Trail extends along the eastern boundary of the OSCD Plant No. 2 Site. A shown in Figure 4, along the Santa Ana River Trail there are intermittent views of the OCSD Plant No. 2 Site. The views are partially obstructed by existing landscaping and topography.

The Talbert Marsh Trail is located along the southern boundary OCSD Plant No. 2. As shown in Figure 5, along the Talbert Marsh Trail is there is an existing landscaped wall that provides a visual barrier between the trail and the wastewater treatment facilities at OCSD Plant No. 2.

Pacific Coast Highway is located south of OCSD Plant No. 2. As shown in Figure 5, from along Pacific Coast Highway there are sweeping views of the Santa Ana River and



Existing view of study area from Santa Ana River Trail



View South from North Property Line

Path: I:\SS\BartGWRS_Expansion\2018\SARTViews.mxd



GWRS Conveyance Facility Project
Study Area Views from
Santa Ana River Trail

Figure 4



Existing view of study area from Pacific Coast Highway



Existing view from Talbert Marsh Trail

Path: I:\SS\BofG\GWRs_Expansion\2018\TalbertMarsh.mxd



GWRs Conveyance Facility Project
Study Area Views from
PCH & Talbert Marsh

Figure 5

Plant No. 2. The dominant visual structure on Plant No. 2 would be the 86-foot surge towers.

The area west of Brookhurst Street consists predominately of single family homes, many of which are two stories. As shown in Figure 6, existing views into OCSD Plant No. 2 Site along Brookhurst Street are visually screened by a tree line of towering eucalyptus trees. The height of the eucalyptus trees screens both close and distant views into OCSD Plant No. 2

North of OCSD Plant No. 2 is existing two story multiple-family residential uses. As shown in Figure 7, an existing eucalyptus tree line screens views into OCSD Plant No. 2.

Regulatory Framework

State

State Scenic Highways Program

The Scenic Highway Program was created in 1963 by the California legislature and was established to protect scenic highway corridors from changes that would diminish the aesthetic value of adjacent lands. The segment of Pacific Coast Highway that extends near OCSD Plant No. 2 is not officially designated as State Scenic Highway, but is designated as eligible for the Scenic Highways Program.

California Coastal Act

The California Coastal Act defines the coastal zone and establishes land use controls for the designated zone. The California Coastal Act; (1) sets specific uses, including restoration, in which wetlands may be permitted in the coastal zone; (2) provides for additional review and approvals for proposed actions located within designated sensitive coastal areas; and (3) requires cities or counties located within the coastal zone to prepare a Local Coastal Program. The California Coastal Act has also identified and requires the protection of important scenic and visual qualities of the coastal areas. All of OCSD Plant No.2 is located within the Coastal Zone.

Regional/Local

County of Orange General Plan

The Orange County Master Plan of Scenic Highways designates the segment of Pacific Coast Highway near OCSD Plant No.2 a County Scenic Highway and a View Scape Corridor.



Path: I:\S\Bot\GWRS_Expansion\2016\zone2.mxd



GWRS Conveyance Facility Project
Study Area Views
Existing Treeline Along Brookhurst St

Figure 6



Path: \\S0101\GWS_Expansion\2018\raw\3.mxd



GWRS Conveyance Facility Project
Study Area Views
North Property Line

Figure 7

City of Huntington Beach General Plan Coastal Element

The purpose of the Coastal Element is to meet the requirements of the Coastal Act and guide civic decisions regarding growth, development, enhancement and preservation of the City's Coastal Zone and its resources. The Coastal Element identifies the segment of Pacific Coast Highway near OCSD Plant No. 2 as a Major Urban Scenic Corridor and Landscape Corridor. The Coastal Element further identifies visual resources within the coastal zone which includes; Huntington State Beach, Pacific Ocean, Talbert Marsh, and the Santa Ana River.

City of Newport Beach Local Coastal Program

Although the study area is not located in the City of Newport Beach, it is located in proximity to the City of Newport Beach's city limit. The City of Newport Beach Local Coastal Program identifies Pacific Coast Highway as a Coastal View Road.

A: Would the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact: Within the vicinity of the study area scenic resource public views are provided from the Santa Ana River Trail, Talbert Marsh Trail, and Pacific Coast Highway. Additionally, within the study area there are private views into OCSD Plant No. 2 along Brookhurst Street and north of the OCSD Plant No. 2.

The proposed project involves the construction of two 28 foot high flow equalization tanks and a 25 foot flow pump station. The construction operations would be confined to the project site and would not result in the removal of the existing landscaping along the eastern boundary or the removal of the existing eucalyptus tree line along western and northern property boundaries.

Public Vista Impacts

Santa Ana River Trail

The Santa Ana River Trail extends along the eastern boundary of OCSD Plant No 2. Along the bike trail there are public views of the Santa Ana River, Banning Ranch Wetlands and the Pacific Ocean. The visual presence of the proposed flow equalization tank and pump station structure would not obstruct views of the Pacific Ocean or the Banning Ranch Wetlands. As shown in Figure 8, the proposed flow equalization tank and pump station would be within the view shed of trail users along segments of the Santa Ana River Trail. Presently, along most of the Santa Ana River Trail there are existing views of the OCSD Plant No. 2 structures. Views along the Santa Ana River Trail into Plant No. 2 would not be substantially different from current views and would not have an adverse impact on any scenic vistas.



- Location Tank Visible from Bike Path
- Visible Area from Bike Path

0 500 1,000 Feet

**GWRS Conveyance Facility Project
Project Viewsheds
Santa Ana River Trail**

Figure 8

Talbert Marsh Trail

The Talbert Marsh provides public views of the Talbert Marsh and the Pacific Ocean. The visual presence of the proposed flow equalization tank and pump station structure would not obstruct views of the Talbert Marsh or the Pacific Ocean. As shown in Figure 5, along the Talbert Marsh Trail is there is an existing landscaped wall that provides a visual barrier between the trail and Plant No. 2. The existing landscaped wall would also visually screen the proposed flow equalization tank and pump station structure. Existing scenic views from the Talbert Marsh Trail would not change from the current condition.

Pacific Coast Highway

Pacific Coast Highway (PCH) is located approximately ¼ mile south from the OCSD Plant No. 2 Site. Situated between Pacific Coast Highway and Plant No. 2 is the Talbert Wetlands which provides an open space visual buffer for motorist and bicyclist along PCH. As shown in Figure 9, the presence of the proposed flow equalization tank and pump station structure would not encroach into the view shed along the Pacific Coast Highway. Existing views from Pacific Coast Highway would not change from the current condition.

Private Views into OCSD Plant No. 2

Views from Brookhurst Street

Presently, views of Plant No. 2 along Brookhurst Street are screened by perimeter block wall and row of eucalyptus trees. As shown in Figure 10, the row of eucalyptus would also visually screen the proposed flow equalization tank and pump station structure. Existing views along Brookhurst Street would not significantly change from the current condition.

Views North of OCSD Plant No. 2

Presently, views of Plant No. 2 along Brookhurst Street are screened by a tree line of eucalyptus trees. As shown in Figure 11, the row of eucalyptus would also visually screen the proposed flow equalization tank and pump station structure. Existing views from the northern property line would not significantly change from the current condition. Potential view impacts would be less than significant.

B. Would the project damage scenic resources, including but limited to, trees, rock outpourings, and historic buildings within a State Highway?

No Impact: According to the California Department of Transportation Scenic Highways Program, the closest State Scenic Highway to the OCSD Plant No. 2 Site would be Pacific Coast Highway. The proposed flow equalization tanks and pump station structure would be located over 1 mile from Pacific Coast Highway and would be visually screened by several existing structures located in the foreground. As shown in



Visible Area from Bike Path

Observation Point

0 500 1,000 Feet

**GWRs Conveyance Facility Project
Project Viewsheds
Pacific Coast Highway**

Figure 9



Visible Area from Bike Path

Observation Point

0 500 1,000 Feet

GWRs Conveyance Facility Project
Project Viewsheds
Brookhurst St

Figure 10



GWRS Conveyance Facility Project
Project Viewsheds
North of Project Site

Figure 11

Figure 9, existing views along Pacific Coast Highway would not change from their current condition. No potential impacts to scenic resources along a State Highway would occur. No mitigation measures are required.

C. Would the project substantially degrade the existing visual character or quality of the site and its surrounding?

No Impact: The proposed equalization tanks and pump station structure would be similar in scale and mass compared to several other existing structures located on Plant No. 2 and would be visually compatible. The presence of the flow equalization tanks and pump station structure would not substantially degrade the existing visual character of the study area. No mitigation measures are required.

D. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Less than Significant Impact with Mitigation: Implementation of the proposed project would not involve the construction of any new structures that would permanently introduce substantial amounts of new sources of light and glare into the study area. Similar to the existing buildings on OCSD Plant No. 2 Site, the proposed new structures would have some low voltage outdoor security lighting. The outdoor lighting would be confined to the immediate area and would not spill over into adjacent areas. With the implementation Mitigation Measures A-1 and A-2 potential light and glare impacts associated with the operation of the proposed project would be less than significant.

Construction operations for the proposed project would occur during the day. Therefore, no nighttime construction lighting would be required. Some glare impacts could occur from construction equipment during the day. However, the impacts would be confined to the study area and would not have any significant offsite light and glare impacts.

Mitigation Measure

A-1: All onsite lighting shall be directed away from adjacent residential, business uses and away from the Santa Ana River right-of-way.

A-2: During operation of the project the onsite lighting creates a light or glare issues for sensitive receptor properties, OCWD will implement corrective measures to resolve the issue. Such corrective measures may include providing additional shielding on light fixtures, relocating lighting fixtures and reducing the intensity of lighting.

4.2 Agricultural Resources/Forest Resources

A. Would the project convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance to non-agriculture uses?

No impact. According to the State of California Farmland Mapping and Monitoring Program, the OCSD Plant No. 2 Site does not contain any Prime Farmland, Unique

Farmland, or Farmland of Statewide Importance. Therefore, no adverse impacts to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would occur from the implementation of the proposed project. No mitigation measures are required.

B. Would the project be in conflict with existing zoning for agriculture use or a Williamson Contract?

No Impact. According to the City of Huntington Beach Zoning Code, the OCSD Plant No. 2 site is not zoned for agriculture uses. Additionally, the City's General Plan does not identify that there are any existing Williamson Contracts on the property. Therefore, implementation of the proposed project will not be in conflict with any existing agriculture zoning. No mitigation measures are required.

C. Would the project be in conflict with existing zoning for, or cause rezoning of forest land or timberland.

No Impact. According to the City of Huntington Beach Zoning Code, the OCSD Plant No. 2 Site is not zoned for forest land or timberland. Therefore, implementation of the proposed project would not cause change of zone of existing forest or timberland to other land uses. No mitigation measures are required.

D. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact: Presently, the OCSD Plant No. 2 Site does not contain forest lands. Therefore, the implementation of the proposed project would not convert existing forest land to non-forest land. No mitigation measures are required.

E. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agriculture use or conversion of forest land to non-forest use?

No Impact. The study area is not located on forest land. Therefore, the implementation of the proposed project will not directly or indirectly result in the loss of any forest land or result in the conversion forest lands to non-forest lands. Additionally, the implementation of the proposed project would not convert existing farmlands within the study area to non-agriculture land uses. No mitigation measures are required.

4.3 Air Quality

The following analysis is based on an Air Quality and Greenhouse Gas Report prepared for the GWRS Water Conveyance Facility Project by Environmental Science Associates, in January of 2018. The Air Quality and Greenhouse Gas Report are presented in Appendix A.

Setting

The study area is located in the City of Huntington Beach within the South Coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB is a 6,600-square-mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SCAB includes the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The topography and climate of southern California combine to make the SCAB an area of high air pollution potential. The SCAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is disrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation. Furthermore, sunlight triggers the photochemical reactions that produce ozone.

Existing Ambient Air Quality Standards

The SCAQMD maintains a network of air quality monitoring stations located throughout the SCAB to measure ambient pollutant concentrations. The monitoring station nearest to and most representative of the program area is the Costa Mesa Monitoring Station. Criteria pollutants monitored at this station include ozone, NO₂, CO, and SO₂. The nearest monitoring station to the program area that monitors data for PM₁₀, PM_{2.5} and lead is the Long Beach Monitoring Station. The most recent data reported to the USEPA and CARB for these monitoring stations are from calendar years 2012 to 2016.¹ The pollutant concentration data for these years are summarized in Table 5.

Sensitive Receptors

Land uses such as residences, schools, hospitals, and convalescent homes are considered sensitive to poor air quality conditions because infants, children, the elderly, and people with health afflictions (especially respiratory ailments) are more susceptible to respiratory infections and other air-quality-related health problems than the general public. Residential areas are also considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Recreational land uses

¹ South Coast Air Quality Management District, Historical Data by Year, <http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year>. Accessed December 2017.

are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short.

The nearest sensitive receptors to Plant No. 2 include the single-family residences located approximately 120 feet west of Plant No. 2 and multi-family residences located approximately immediately adjacent to the northern boundary of Plant No. 2 along Brookhurst Street.

All other air quality sensitive receptors are located at greater distances from the project site, and would be less impacted by project emissions.

Table 5 Existing Ambient Air Quality

Pollutant/Standard ^a	2012	2013	2014	2015	2016
O ₃ (1-hour)					
Maximum Concentration (ppm)	0.090	0.095	0.096	0.099	0.090
Days > CAAQS (0.09 ppm)	2	1	1	1	0
O ₃ (8-hour)					
Maximum Concentration (ppm)	0.076	0.083	0.079	0.079	0.069
4 th High 8-hour Concentration (ppm)	0.060	0.065	0.076	0.068	0.065
Days > CAAQS (0.070 ppm)	1	2	6	2	0
Days > NAAQS (0.070 ppm)	1	2	6	2	0
NO ₂ (1-hour)					
Maximum Concentration (ppm)	0.074	0.076	0.061	0.052	0.060
98 th Percentile Concentration (ppm)	0.051	0.053	0.054	0.048	0.051
NO ₂ (Annual)					
Annual Arithmetic Mean (0.030 ppm)	0.010	0.012	0.011	0.012	0.010
CO (1-hour)					
Maximum Concentration (ppm)		2.4	3.0	3.0	2.1
CO (8-hour)					
Maximum Concentration (ppm)	2.11.7	2.0	1.9	2.2	1.7
SO ₂ (1-hour)					
Maximum Concentration (ppm)	0.006	0.004	0.009	0.005	0.003
99 th Percentile Concentration (ppm)	0.002	0.003	0.004	0.003	0.002
PM ₁₀ (24-hour)					
Maximum Concentration (µg/m ³)	54.0	54.0	59.0	62.0	56
Est. Days > CAAQS (50 µg/m ³)	1	1	2	2	3
Est. Days > NAAQS (150 µg/m ³)	0	0	0	0	0
PM ₁₀ (Annual Average)					
Annual Arithmetic Mean (20 µg/m ³)	25.5	27.3	26.6	26.5	27.8
PM _{2.5} (24-hour)					
Maximum Concentration (µg/m ³)	46.7	42.9	52.2	48.3	28.93
98 th Percentile Concentration (µg/m ³)	25.1	24.6	27.2	31.2	22.05
Est. Days > NAAQS (35 µg/m ³)	4	1	2	4	1
PM _{2.5} (Annual)					
Annual Arithmetic Mean (12 µg/m ³)	10.57	10.97	10.72	10.26	9.62
Lead					
Maximum 30-day average (µg/m ³)	0.007	0.012	0.012	0.010	0.008

^a ppm = parts per million; µg/m³ = micrograms per cubic meter

SOURCES: SCAQMD, 2017.

Regulatory Setting

Federal

The principal air quality regulatory mechanism at the federal level is the Clean Air Act (CAA) and in particular, the 1990 amendments to the CAA and the National Ambient Air Quality Standard (NAAQS) that it establishes. These standards identify the maximum ambient (background) concentration levels of criteria pollutants that are considered to be safe, with an adequate margin of safety, to protect public health and welfare. As discussed previously, the criteria pollutants include ozone, CO, NO₂ (which is a form of NO_x), SO₂ (which is a form of SO_x), PM₁₀, PM_{2.5}, and lead.

The CAA also requires each state to prepare an air quality control plan, referred to as a state implementation plan (SIP). The CAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. USEPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and to determine whether implementing the SIPs would achieve air quality goals.

The USEPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf), and those that are under the exclusive authority of the Federal government, such as aircraft, locomotives, and interstate trucking. USEPA's primary role at the state level is to oversee the state air quality programs. USEPA sets federal vehicle and stationary source emissions standards and provides research and guidance in air pollution programs.

State

California Air Resources Board (CARB)

CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets state ambient air quality standards (California Ambient Air Quality Standards [CAAQS]), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's SIP, for which it works closely with the federal government and the local air districts. The SIP is required for the State to take over implementation of the federal CAA from the USEPA.

In 2004, CARB adopted an Airborne Toxic Control Measure (ACTM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other toxic air contaminants (Title 13 California Code of Regulations [CCR], Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure generally does not allow diesel-fueled commercial vehicles to idle for more than five (5) minutes at any given location with certain exemptions for equipment in which idling is a necessary function such as concrete trucks. While this measure primarily targets diesel particulate matter emissions, it has co-benefits of minimizing GHG emissions from unnecessary truck idling.

In 2008, CARB approved the Truck and Bus regulation to reduce particulate matter and nitrogen oxide emissions from existing diesel vehicles operating in California (13 CCR, Section 2025, subsection (h)). CARB has also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models. While these regulations primarily target reductions in criteria air pollutant emission, they have co-benefits of minimizing GHG emissions due to improved engine efficiencies.

California Clean Air Act

The California Clean Air Act, signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practical date. The CAAQS apply to the same criteria pollutants as the federal Clean Air Act but also include State-identified criteria pollutants, which include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. CARB has primary responsibility for ensuring the implementation of the California Clean Air Act, responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state. The CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. Table 6 provides a summary of the attainment status of the Orange County portion of the Air Basin with respect to the state standards. The Air Basin is designated as attainment for the California standards for sulfates, hydrogen sulfide, and vinyl chloride. As shown in Table 6, the Air Basin is currently in nonattainment for ozone, PM₁₀, and PM_{2.5} under the CAAQS.

Table 6 South Coast Air Basin Attainment Status

Pollutant	National Standards	California Standards
Ozone (1-hour standard)	N/A	Non-attainment
Ozone (8-hour standard)	Non-attainment – Extreme	Non-attainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
PM10	Attainment	Non-attainment
PM2.5	Non-attainment – Serious	Non-attainment
Lead	Non-attainment (Partial) ^b	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Attainment
Vinyl Chloride	N/A	N/A ^c

NOTES:

N/A = not applicable

^a The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.

^b Partial Nonattainment designation – Los Angeles County portion of the Air Basin only for near-source monitors.

^c In 1990 the California Air Resources Board identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the California Air Resources Board does not monitor or make status designations for this pollutant.

SOURCE: United States Environmental Protection Agency, The Green Book Non-attainment Areas for Criteria Pollutants, <https://www.epa.gov/green-book>. Accessed November 2017; California Air Resources Board, Area Designations Maps/State and National, <http://www.arb.ca.gov/design/adm/adm.htm>. Accessed December 2017.

Regional

South Coast Air Quality Management District (SCAQMD)

The SCAQMD has jurisdiction over an area of approximately 10,743 square miles. This area includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Air Basin is a sub-region of the SCAQMD jurisdiction. While air quality in this area has improved, the Air Basin requires continued diligence to meet air quality standards.

Air Quality Management Plan

The SCAQMD has adopted a series of Air Quality Management Plans (AQMP) to meet the CAAQS and NAAQS. The SCAQMD and CARB have adopted the 2016 AQMP, which incorporates scientific and technological information and planning assumptions regarding air quality, including the Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and emission inventory methodologies for various source categories.² The 2016 AQMP was adopted by the AQMD Governing Board on March 3, 2017.³

² South Coast Air Quality Management District, Air Quality Management Plan (AQMP), Final 2016 AQMP, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>. Accessed November 2017.

³ South Coast Air Quality Management District, Air Quality Management Plan (AQMP), Final 2016 AQMP, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>. Accessed November 2017.

The purpose of the 2016 AQMP is to bring the Air Basin into attainment with NAAQS for 24-hour PM_{2.5}. SCAQMD has since determined that this deadline as impractical due to drought conditions in the region.⁴ In 2016, USEPA approved reclassification of the Air Basin from “moderate” to “serious” non-attainment for the 24-hour PM_{2.5} standard, which has a new attainment deadline of December 31, 2019. The 2016 AQMP demonstrates that the 24-hour standard will be met by 2019 with no additional reductions beyond already adopted and implemented measures. The 2016 AQMP also intensifies the scope and pace of continued air quality improvement efforts toward meeting the 2024 and 2032 8-hour ozone standard deadline with new measures designed to reduce reliance on the CAA Section 182(e)(5) long-term measures for NO_x and VOC reductions. SCAQMD expects exposure reductions to be achieved through implementation of new and advanced control technologies as well as improvement of existing technologies.

The control measures in the 2016 AQMP consist of 8-hour ozone control measures and PM_{2.5} control measures designed to achieve the ozone and PM_{2.5} NAAQS by statutory deadlines. The AQMP includes ten PM_{2.5} control measures, 15 stationary source 8-hour ozone measures and 15 early action measures for mobile sources. In general, the SCAQMD’s control strategy for stationary and mobile sources is based on the following approaches: (1) available cleaner technologies; (2) best management practices; (3) incentive programs; (4) development and implementation of near-zero technologies and vehicles and control methods; and (5) emission reductions from mobile sources. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities associated with the Project include strategies denoted in the AQMP as MOB-08 and MOB-10, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment. Descriptions of measures MOB-08 and MOB-10 are provided below:

MOB-08 – Accelerated Retirement of Older On-Road Heavy-Duty Vehicles: This proposed measure seeks to replace heavy-duty vehicles with newer or new vehicles that at a minimum, meet the 2010 on-road heavy-duty NO_x exhaust emissions standard of 0.2 grams per brake horsepower-hour (g/bhp-hr). Given that exceedances of the 24-hour PM_{2.5} air quality standard occur in the state, priority will be placed on replacing older diesel trucks that operate primarily at the warehouse and distribution centers. Funding assistance of up to \$50,000 per vehicle is proposed and the level of funding will depend upon the NO_x emissions certification level of the replacement vehicle. In addition, a provision similar to the Surplus Off-Road Option for NO_x (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation will be sought to ensure that additional NO_x emission reduction benefits are achieved.

⁴ South Coast Air Quality Management District, Air Quality Management Plan (AQMP), Final 2016 AQMP, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>. Accessed November 2017.

MOB-10 – Extension of the SOON Provision for Construction/Industrial

Equipment: This measure seeks to continue the (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation beyond 2023 through the 2031 timeframe. To implement the SOON program in this timeframe, funding of at least \$10 million per year would be sought to help fund the repower or replacement of older Tier 0 and Tier 1 equipment, with reductions that are considered surplus to the statewide regulation with Tier 4 or cleaner engines.

The SCAQMD released the Draft 2016 AQMP on June 30, 2016 for public review and comment. A revised Draft 2016 AQMP was released in October 2016 and the SCAQMD Governing Board adopted the 2016 AQMP on March 3, 2017.⁵ CARB approved the 2016 AQMP on March 23, 2017. USEPA approval is pending, but is a necessary requirement before the 2016 AQMP can be incorporated into the State Implementation Plan. Key elements of the 2016 AQMP include implementing fair-share emissions reductions strategies at the federal, state, and local levels; establishing partnerships, funding, and incentives to accelerate deployment of zero and near-zero-emissions technologies; and taking credit from co-benefits from greenhouse gas, energy, transportation and other planning efforts.⁶ The strategies included in the 2016 AQMP are intended to demonstrate attainment of the NAAQS for the federal non-attainment pollutants O₃ and PM_{2.5}.⁷ Provisions of the 2016 AQMP do not appear to affect the proposed project.

Several SCAQMD rules adopted to implement portions of the AQMP may apply to construction or operation of the project. The project may be subject to the following SCAQMD rules and regulations:

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules which may apply to the project:

- **Rule 401 – Visible Emissions:** This rule states that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view.

5 South Coast Air Quality Management District, Air Quality Management Plan (AQMP), Final 2016 AQMP, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>. Accessed November 2017.

6 South Coast Air Quality Management District, Air Quality Management Plan (AQMP), Final 2016 AQMP, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>. Accessed November 2017.

7 South Coast Air Quality Management District, NAAQS/CAAQS and Attainment Status for South Coast Air Basin, (2016), <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2>. Accessed November 2017.

- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM10 emissions to less than 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for different specific sources. The following is a list of rules which may apply to the Project:

- **Rule 1113 – Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1186 – PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations:** This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM10 emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also **Rule 403**).

Regulation XIV – Toxics and Other Non-Criteria Pollutants: Regulation XIV sets requirements for new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants or other non-criteria pollutants. The following is a list of rules which may apply to the project:

Local

City of Huntington Beach

The City's General Plan Air Quality Element includes City-wide goals, objectives, and policies related to air quality resources. A number of these goals and policies are relevant to the proposed program and are related to traffic mobility, reducing private and government employee work trips, promoting increased work and non-work related public transit use, discouraging single-occupancy vehicle trips, managing traffic

congestion during peak hours, improving jobs/housing balance to reduce vehicle miles traveled (VMT), reducing pollution through waste reduction and lowered energy consumption, and increasing energy efficiency in existing and new commercial and industrial developments. In addition, the City of Huntington Beach Air Quality Element addresses several factors to help achieve the goals of the SCAQMD's AQMP.

Significant Impact Threshold

Construction Emissions

The SCAQMD has established numerical emission indicators of significance for construction. The numerical emission indicators are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.⁸ Given that construction impacts are temporary and limited to the construction phase, the SCAQMD has established numeric indicators of significance specific to construction activity. Based on the indicators in the SCAQMD CEQA Air Quality Handbook, the Project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur:

- Regional construction emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed daily regional emissions criteria:⁹
 - 75 pounds a day for VOC;
 - 100 pounds per day for NO_x;
 - 550 pounds per day for CO;
 - 150 pounds per day for SO₂;
 - 150 pounds per day for PM₁₀; or
 - 55 pounds per day for PM_{2.5}.

In addition, the SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards or ambient concentration limits. Impacts would be considered significant if the following would occur:

- Maximum daily localized emissions of NO_x and/or CO during construction are greater than the applicable localized significance thresholds, resulting in predicted

⁸ South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.

⁹ South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (March 2015), <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed October 2017.

ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for NO₂ and/or CO.¹⁰

- Maximum daily localized emissions of PM₁₀ and/or PM_{2.5} during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the project site to exceed 10.4 µg/m³ over 24 hours (SCAQMD Rule 403 control requirement).

Operation Emissions

The SCAQMD has established numerical emission indicators of significance for operations. The numerical emission indicators are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.¹¹ The SCAQMD has established numeric indicators of significance in part based on Section 182(e) of the Clean Air Act which identifies 10 tons per year of VOC as a significance level for stationary source emissions in extreme non-attainment areas for ozone.¹² The Air Basin is designated as extreme non-attainment for ozone. The SCAQMD converted this significance level to pounds per day for ozone precursor emissions (10 tons per year × 2,000 pounds per ton ÷ 365 days per year = 55 pounds per day). The numeric indicators for other pollutants are also based on federal stationary source significance levels. Based on the indicators in the SCAQMD CEQA Air Quality Handbook, the Project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur:

- Regional operational emissions exceed any of the following SCAQMD prescribed daily regional emissions criteria:¹³
 - 55 pounds a day for VOC;
 - 55 pounds per day for NOX;
 - 550 pounds per day for CO;
 - 150 pounds per day for SO₂;
 - 150 pounds per day for PM₁₀; or
 - 55 pounds per day for PM_{2.5}.

10 South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008). Available: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed October 2017.

11 South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.

12 South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-1.

13 South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (March 2015), <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed October 2017.

In addition, the SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards. Impacts would be considered significant if the following were to occur:

- Maximum daily localized emissions of NO_x and/or CO during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for NO₂ and/or CO.¹⁴
- Maximum daily localized emissions of PM₁₀ and/or PM_{2.5} during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the project site to exceed 2.5 µg/m³ over 24 hours (SCAQMD Rule 1303 allowable change in concentration).
- Carbon Monoxide Hotspots

With respect to the formation of CO hotspots, the project would be considered significant if the following would occur:

- The project would cause or contribute to an exceedance of the CAAQS one-hour or eight-hour CO standards of 20 or 9.0 parts per million (ppm), respectively. As discussed below, the Project uses a daily vehicle count of 100,000 per intersection as a screening level thresholds. Projects that are below the 1000,000 vehicles per day would not be anticipated to exceed the CAAQS.

Toxic Air Contaminants

Based on criteria set forth by the SCAQMD, the project would expose sensitive receptors to substantial concentrations of toxic air contaminants if any of the following were to occur:¹⁵

- The project would emit carcinogenic materials or TACs that exceed the maximum incremental cancer risk of ten in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or
- An acute or chronic hazard index of 1.0.

14 South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (March 2015), <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed October 2017.

15 South Coast Air Quality Management District, CEQA Air Quality Handbook, Chapter 6 (Determining the Air Quality Significance of a Project) and Chapter 10 (Assessing Toxic Air Pollutants), (1993); SCAQMD Air Quality Significance Thresholds, (March 2011), <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed October 2017.

Odors

Based on the criteria in Appendix G of the State *CEQA Guidelines*, the Project would be considered potentially significant for odors if the Project would create objectionable odors affecting a substantial number of people.

Project Impacts

A. Would the project be in conflict with or obstruct implementation of the applicable air quality plan or congestion management plan?

Less than Significant Impact: The project site is located within the South Coast Air Basin. The SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment (i.e., ozone, PM10, and PM2.5). The project would be subject to the SCAQMD's Air Quality Management Plan (AQMP), which contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. A project is consistent with the AQMP if it is consistent with the population, housing and employment assumptions that were used in the development of the AQMP. The implementation of the conveyance facilities would not affect the regional growth projections made by the SCAG and used by the SCAQMD in formulating its AQMP.

Construction

Under this criterion, the SCAQMD recommends that lead agencies demonstrate that a project would not directly obstruct implementation of an applicable air quality plan and that a project be consistent with the assumptions (typically land-use related, such as resultant employment or residential units) upon which the air quality plan is based. The proposed project would result in an increase in short-term employment compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs under the project would not conflict with the long-term employment projections upon which the AQMP is based. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. The project would not conflict with implementation of these strategies as the construction contractor hired would be in compliance with the current requirements for fleet emissions. Additionally, the project would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment. The project would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403.

Compliance with these requirements would be consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Because the proposed project would not conflict

with the control strategies intended to reduce emissions from construction equipment, the project would not conflict with or obstruct implementation of the AQMP. Additionally, the proposed projected emissions from the proposed project would not exceed the SCAQMD's regional significance thresholds. Thus, the proposed project would not be considered by SCAQMD to be a substantial source of air pollutant emissions, and would not conflict or obstruct implementation of the AQMP. Therefore, impacts would be less than significant with respect to construction activities.

Operation

The 2016 AQMP was prepared to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP.

The proposed project is the construction and operation of a conveyance facility at an existing treatment plant. The land use would stay the same and thus be consistent with the AQMP. Additionally, the proposed Project would not increase vehicle trips to the project site or result in new population sources. As a result, the proposed project would not result in long-term operational population or employment growth that exceeds planned growth projections in the RTP/SCS or the AQMP or result in employment growth that would substantially add to traffic congestion. As the proposed project would not conflict with the growth projections in the AQMP, impacts would be less than significant.

B. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Regional Construction Emissions

Less than Significant Impact: The worst-case daily emissions were calculated as maximum daily construction emissions for each phase. Detailed emissions calculations are provided in Appendix A. Results of the criteria pollutant calculations are presented in Table 7. As shown therein, construction-related daily emissions for the criteria and precursor pollutants (VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}) would be below the SCAQMD numeric indicators. These calculations include appropriate dust control measures required to be implemented during each phase of development, as required by SCAQMD Rule 403 (Control of Fugitive Dust). Therefore, with respect to regional emissions from construction activities, impacts would be less than significant.

Table 7 Maximum Daily Unmitigated Regional Construction Emissions (pounds per day) ^a

Phase	Source	VOC	NO _x	CO	SO ₂	PM10 ^b	PM2.5 ^b
Phase 1		6	72	35	<1	5	2
Phase 2		4	46	27	<1	2	1
Phase 3		9	24	18	<1	2	1
Phase 4		1	13	13	<1	1	1
Maximum Daily Emissions		9	72	35	<1	5	2
SCAQMD Significance Thresholds		75	100	550	150	150	55
Exceeds Threshold?		No	No	No	No	No	No
NOTE: Detailed emissions calculations are provided in Appendix A.							
^a Totals may not add up exactly due to rounding in the modeling calculations Detailed emissions calculations are provided in Appendix A.							
^b Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.							
Source: ESA 2018							

Operational Emissions

The proposed project will involve the operation of three types of facilities. The three main facilities associated with the proposed project is a pump station, two flow equalization tanks, and associated piping with a valving/metering vault. As stated previously, the only emissions from operational activities related to air quality are associated with the use of consumer products and the re-application of architectural coatings. With respect to operational criteria pollutants, the only emissions would be associated with ROG and CO and resulting in less than 1 lb. /day for each pollutant. Therefore, there would be an insignificant net increase in regional emissions and this impact would be less than significant.

C. Would the project result in 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?

Less than Significant Impact: Short-term pollutants would be generated by construction of the proposed project. The Project site currently operates as a wastewater treatment facility and would continue does so after construction. The proposed project would introduce negligible new long-term pollutants when operational.

Construction

The proposed project would result in the emission of criteria pollutants for which the area is in non-attainment during construction. A significant impact could occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. The Air Basin is currently in non-attainment for O₃, PM10, and PM2.5.

The emissions from construction of the proposed project would not be predicted to exceed the SCAQMD regional or localized impact thresholds and therefore, would not be expected to cause or substantially contribute to ground level concentrations that

exceed the NAAQS or CAAQS. Therefore, the project would not result in a cumulatively considerable net increase for non-attainment pollutants or O₃ precursors and would result in a less than significant impact for construction emissions.

Operation

Future operations would generate ozone precursors (VOC, NO_x) as well as emissions of CO, PM₁₀, and PM_{2.5}. Under the 2023 proposed project scenario, representing the actual anticipated Project buildout year, operational emissions would not exceed the SCAQMD regional or local thresholds and would not be expected to result in ground level concentrations that exceed the NAAQS or CAAQS. Since the proposed project would not introduce any substantial stationary sources of emissions, CO is the benchmark pollutant for assessing local area air quality impacts from post-construction motor vehicle operations. As indicated earlier, no new vehicle trips would occur and therefore, no violations of the state and federal carbon monoxide standards are projected to occur for the Project. Therefore, operation of the proposed project would not result in a cumulatively considerable net increase for non-attainment of criteria pollutants or ozone precursors and the proposed project would result in a less than significant impact for operational emissions.

D. Would the project expose sensitive receptors to substantial pollutant concentrations?

Localized Construction Emissions

Less than Significant Impact: The localized construction air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology* (June 2003, revised July 2008).¹⁶ The screening criteria provided in the *Localized Significance Threshold Methodology* were used to determine localized construction emissions thresholds for the proposed project. The maximum daily localized emissions for each of the construction phases and localized significance thresholds are presented in Table 8. As shown in Table 8, maximum localized construction emissions for sensitive receptors would not exceed the localized thresholds for NO_x, CO, PM₁₀, and PM_{2.5}. Therefore, with respect to localized construction emissions, impacts would be less than significant.

Table 8 Maximum Unmitigated Localized Construction Emissions (Pounds Per Day)

Phase	Source	NO _x	CO	PM ₁₀ ^b	PM _{2.5}
Phase 1		54	28	4	2
Phase 2		35	23	1	1
Phase 3		14	15	1	1
Phase 4		13	13	1	1

¹⁶ South Coast Air Quality Management District, Localized Significance Thresholds, (2003, revised 2008), <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed November 2017.

Maximum Daily Emissions	54	28	4	2
SCAQMD Significance Thresholds	73	962	7	5
Exceeds Threshold?	No	No	No	No

NOTE: Detailed emissions calculations are provided in Appendix A.

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A.

^b Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

Source: FSA 2018.

Carbon Monoxide Hotspots

Less than Significant Impact: The proposed project is the operation of a pump station associated with the new OCSD conveyance facilities. There would be no new vehicle trips generated by this Project. Therefore, the Project would not result in traffic exceeding more than 100,000 vehicles per day with respect to any area intersection. CO hotspot impacts would be less than significant.

Toxic Air Contaminant

Construction

Less than Significant Impact with Mitigation: The proposed project would expose sensitive receptors to substantial concentrations of toxic air contaminants if the project would emit carcinogenic materials or TACs that exceed the maximum incremental cancer risk of ten in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or an acute or chronic hazard index of 1.0. Construction-related cancer risk and acute/chronic hazards were estimated and compared to this threshold.

The resulting health risk calculations were performed using a spreadsheet tool consistent with the OEHHA guidance. The spreadsheet tool incorporates the algorithms, equations, and a variable described above as well as in the OEHHA guidance, and incorporates the results of the AERMOD dispersion model.

For carcinogenic exposures, the cancer risk from DPM emissions from construction of the proposed project is estimated to result in a maximum carcinogenic risk of 47 per one million. The maximum impact would occur at sensitive land uses (residences) directly north of the project site. As discussed previously, the lifetime exposure under the OEHHA Guidance takes into account early life (infant and children) exposure. It should be noted that the calculated cancer risk conservatively assumes that exposure of sensitive receptors (residential uses) would not have any mitigation, such as mechanical filtration. As the maximum impact would be greater than the risk threshold of 10.0 in one million, impacts would be considered potentially significant.

Incorporation of Mitigation Measure AQ-1 would reduce carcinogenic exposures at the maximum impact receptor to approximately 3 per one million. As the maximum impact would be less than the risk threshold of 10.0 in one million, impacts would be mitigated to less than significant.

The process of assessing health risks and impacts includes a degree of uncertainty. The level of uncertainty is dependent on the availability of data and the extent to which assumptions are relied upon in cases where the data are incomplete or unknown. All HRAs rely upon scientific studies in order to reduce the level of uncertainty; however, it is not possible to completely eliminate uncertainty from the analysis. Where assumptions are used to substitute for incomplete or unknown data, it is standard practice in performing HRAs to err on the side of health protection in order to avoid underestimating or underreporting the risk to the public by assessing risk on the most sensitive populations, such as children and the elderly. As shown, cancer risk for nearby sensitive receptors would be mitigated to below significance thresholds. These short-term emissions would not substantially contribute to a significant construction health risk. No residual emissions and corresponding individual cancer risk are anticipated after construction. Therefore, the proposed project would result in a less than significant impact related to construction TAC emissions.

Potential non-cancer effects of chronic (i.e., long term) DPM exposures were evaluated using the Hazard Index approach as described in the OEHHA Guidance. A hazard index equal to or greater than 1.0 represents a significant chronic health hazard. Nearby off-site sensitive receptors would be exposed to chronic impacts that would equal 0.4 before mitigation and would not exceed the threshold of 1.0. With implementation of Mitigation Measure MM-AQ-1, the chronic impact would be further reduced to 0.03. Health risk impacts would be less than significant with the implementation of mitigation.

Operation

The SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions. The proposed project would not generate any new vehicle or stationary source emissions. Based on the lack of new TAC sources, the proposed project would not warrant the need for a health risk assessment associated with onsite operational activities, and potential TAC impacts are expected to be less than significant. In addition, project operations would only result in minimal emissions of air toxics from maintenance or other ongoing activities, such as from the use of architectural coatings and other products. Based on the nature of the conveyance facilities, potential long-term operational impacts associated with the release of TACs would be minimal and would not be expected to exceed the SCAQMD thresholds of significance. Therefore, impacts would be less than significant.

Localized Operational Emissions

As discussed previously, the only new criteria pollutant emissions from the operation of the proposed project would be the emission of ROG and CO. Only CO is evaluated in the localized analysis and would result in less than 1 lb. /day of localized emissions.

This is well below the SCAQMD's significance threshold of 1,089 lbs. /day. Therefore, the impact to sensitive receptors would be less than significant.

Mitigation Measure

AQ-1: Mobile off-road construction equipment (wheeled or tracked) used during construction of the conveyance facilities of the proposed Project shall meet the USEPA Tier 4 interim standards, either as original equipment or equipment retrofitted to meet the Tier 4 interim standards. A copy of each unit's certified tier specification or model year specification shall be available upon request at the time of mobilization of each applicable unit of equipment.

E. Would the project create objectionable odors affecting a substantial number of people?

Construction

Less than Significant Impact: Potential activities that may emit odors during construction activities include the use of architectural coatings and solvents and the combustion of diesel fuel in on-and off-road equipment. As discussed in the Regulatory Setting, Section 2, of this technical report, SCAQMD Rule 1113 would limit the amount of VOCs in architectural coatings and solvents. In addition, the proposed project would comply with the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks. Through mandatory compliance with SCAQMD Rules, no construction activities or materials are expected to create objectionable odors affecting a substantial number of people. Therefore, construction of the project would result in less than significant impacts.

Operation

Construction

Less than Significant Impact 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. The proposed project only implements conveyance facilities and does not introduce a new odor source to the existing waste water treatment plant. does not include any uses identified by the SCAQMD as being associated with substantial odors.

Additionally, the OCSD has prepared a comprehensive Odor Control Master Plan (OCMP) (SP-166) covering both treatment plants. The OCMP analyzes odor data from the both Plants, determines which odorants actually cause odor complaints, assesses the level of nuisance for those odorants, runs air dispersion models to determine the extent of odorous impacts, and analyzes foul air scrubbing technologies and appropriate combinations of technologies in order to mitigate odor impacts in the vicinity of the

Plants (CH2M HILL Engineers, Inc. 2016). Currently, OCSD has SCAQMD permits for the operation of the foul air scrubbers. OCSD also maintains records of H₂S concentration in the discharge of the foul air scrubbers as well as other process information, such as pH and differential pressure across each scrubber. Odor complaints received at Plant No. 1 and Plant No. 2 have been logged since 1981.

The updated 2016 OCMP addresses nuisance odors at Plant No. 1 and Plant No. 2 from a more comprehensive perspective when compared to traditional OCMP efforts that historically have focused primarily on H₂S or dilutions-to-threshold (D/T) alone.

Based on the nature of the conveyance facilities, the Project is not expected to discharge new contaminants into the air in quantities that would cause a nuisance, injury, or annoyance to the public or property pursuant to SCAQMD Rule 402.

Therefore, the project would not create adverse odors affecting a substantial number of people and impacts would be less than significant.

4.4 Biological Resources

The following Analysis is based on a Biological Assessment prepared for the Water Conveyance Facilities Project by the Orange County Water District Natural Resources Department in January of 2018. The Biological Assessment is presented in Appendix B

Biological Setting

The OCSD Plant No.2 Site is located within USGS Newport Beach Quadrangle at Township 6 South, Range 10 West, and Section 20. The site is developed with wastewater treatment structures, offices, and paved parking areas and roadways. A row of eucalyptus trees extends along the western and northern property boundary of Plant No. 2. Additionally, native landscaping is provided along the eastern property boundary adjacent to the Santa Ana River Trail. A site survey of the study area did not identify any sensitive biological resources on Plant No. 2. However, within close vicinity to Plant No.2 are two sensitive biological resources; the Talbert Marsh and California Least Tern Colony.

Talbert Marsh is a tidal marsh that has been restored to full tidal action. The water within Talbert Marsh is seawater from the ocean inlet located south of the marsh property that fluctuates in height up to 8 feet from tidal flows. Talbert Marsh provides habitat for both migratory and resident bird species.

South of Pacific Coast Highway is the location the California Least Tern Natural Preserve Area at Huntington State Beach. The California Least Tern Natural Preserve Area was first established under the Huntington State Beach General Development Plan in 1976. It was originally dedicated on 2.5 acres and was fenced off with a cyclone fence (a heavy-duty, chain-link fence topped with barbed wire) to prevent predators from harassing the birds. Over the years, the California least tern's nesting area has expanded beyond the fenced area, State Parks has erected additional picket fencing to

protect the birds. Currently, the cyclone fence area covers approximately 8.9 acres and the picket fence “front-yard” area is 3.8 acres. California State Parks protects the nesting area by limiting access, conducting trash removal, grooming the sand periodically, and conducting predator management.

On Site Sensitive Vegetation Communities

Brookhurst Street Fence Line

The Brookhurst Street fence line is dominated by a mature stand of Eucalyptus trees over story and a small number of assorted shrubs. The landscaping along the fence line acts as a visual barrier to views into OCSD Plant No. 2. . The fence tree line runs roughly north and south and consists of Red Box Eucalyptus (*Eucalyptus polyanthemos*). The shrub species’ present include Pink Melaleuca (*Melaleuca nesophila*), Bottlebrush (*Callistemon citrinus*), and Purple-leafed Hopbush (*Dodonaea viscosa*). No groundcover species were documented in this area. The size of the Eucalyptus trees were 40 to 50 feet in height with most trees falling into the trunk diameter size range of 6-20inches (dbh). Most of the trees surveyed appeared to be over 20 years of age.

Santa Ana River Bike Trail Levee

This area is composed of two parts separated by the fence line, the bike trail levee and the inside of the fence. The adjacent public bike trail is landscaped with a mixture of native and drought tolerant selections. The levee is sparsely vegetated consisting mostly of rip rap rocks. The dominant native species in this area is Fourwing Saltbush (*Atriplex canescens*) with a lesser representation by the non-native Canary Island Pine (*Pinus canariensis*).

The inside of the fence line is dominated by the non-native, ornamental Iceplant (*Carpobrotus edulis*) ground cover and an over story of Cajeput Tree (*Melaleuca quiquenervia*). The bike trail levee is not expected to be impacted by this project as a pipeline runs adjacent to the levee.

Tank Placement Location

The area proposed for the circular tank placement is mostly composed of bare ground. The western part of this area consists of a small slope that descends down to an access road. This slope is composed of two non-native Iceplant species’ Hottentot Fig (*Carpobrotus edulis*) and Chrystalline Iceplant (*Mesembryanthemum crystallinum*). Also on this slope is a significant number of recruited, young Eucalyptus from the adjacent tree line. This open area appears to be on a rigorous weed abatement program as weedy species’ were largely absent.

Special Status Plant Species

To determine the potential for special status plant species to be present within the study area, a database search with the United States Fish and Wildlife information and Planning Database and the California Department Fish and Wildlife (CDFW) Natural Diversity Database was conducted. A listing of special status plant species with potential to occur within the Newport Beach USGS Quadrangle is shown in Table 9. Subsequent to the database search, OCWD conducted a survey of the study area to determine the potential for the species to present within the study area. The determination on the potential for the special status plant species to occur within the study area was based on the following criteria:

- **Present:** Species was observed within the study area within the last year.
- **High:** The study area supports suitable habitat and the species has been observed within the last year.
- **Moderate:** The study area supports suitable and the species has not been observed within last two years.
- **Low:** The study area lacks suitable habitat for the species.

Table 9: Special Status Plant Species

Species	Federal	State	CNPS	General Habitat/Recent Occurrence	Potential for Occurrence Study Area
Ventura Marsh Milk-vetch (<i>Astragalus pycnostachy</i> var. <i>Lanosissimus</i>)	E	NL		Marshes, Swamps, Coastal Dunes, Coastal Scrub	Low Study Area lacks suitable habitat
Salt Marsh Birds-beak (<i>Chloropyron maritimum</i> ssp. <i>Maritimum</i>)	E	E	1B.2	Coastal Salt marsh, Coastal Dunes	Low Study Area lacks suitable habitat.
San Diego Button-Celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>)	E	E	1B.1	Vernal pools, Coastal Scrub, Valley and Foothill Grasslands	Low Study Area lacks suitable habitat
Gambels Water Cress (<i>Nasturtium gambelii</i>)	E	T	1B.1	Marshes and swamps	Low Study Area lacks suitable habitat
California Orcutt grass (<i>Orcuttia californica</i>)	E	E	1B.1	Wetlands, Vernal Pools	Low Study Area lacks suitable habitat

<u>Federal</u> E- Endangered T- Threatened SSC- Special Species of Concern C- Candidate for Listing NL- Not Listed	<u>State Listing (California Endangered Species Act, CDFG)</u> FP- Fully Protected E- Endangered T- Threatened S- Sensitive SSC- Special Species of Concern WL- Watch List NL- Not Listed	<u>California Native Plant Society CNPS</u> 1A- Plants presumed extinct in California 1B- Plants rare, threatened, or endangered in California and elsewhere 2- Plants rare, threatened, or endangered in California but more common elsewhere 3- Plants about which we need more review 4- Plants of limited distribution CNPS Threat Rank .1 Seriously Endangered .2 Fairly Endangered .3 Not Very Endangered
---	--	--

Special Status Wildlife Species

To determine the potential for special status wildlife species to be present within the study area, a database search with the United States Fish and Wildlife Service (USFWS) information and Planning Database and the Department of California Fish and Wildlife Natural Diversity Database was conducted. A listing of special status plant species with potential to occur within the Newport Beach USGS Quadrangle is shown in Table 10. Subsequent to the database search, OCWD conducted a survey of the study area to determine the potential for the species to be present within the study area. The determination on the potential for the special status wildlife species to occur within the study area was based on the following criteria:

- **Present:** Species was observed within the study area within the last year.
- **High:** The study area supports suitable habitat and the species has been observed within the last year.
- **Moderate:** The study area supports suitable and the species has not been observed within last two years.
- **Low:** The study area lacks suitable habitat for the species.

Table 10: Special Status Wildlife Species

Species	Federal	State	General Habitat/Recent Occurrence	Potential Occurrence Study Area
San Diego Fairy Shrimp (<i>Branchinecta sandiegonensis</i>)	E	SSC	Vernal pools	Low Study Area lacks suitable habitat
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>)	T	SSC	Sandy Beaches	Low Study Area lacks suitable habitat
Southwestern Willow Flycatcher (<i>Empidonax traillii extimus</i>)	E	E	Riparian woodlands	Low Study Area lacks suitable habitat
Pacific Pocket Mouse (<i>perognathus</i>)	E	SSC	Coastal Plains	Low Study Area lacks suitable habitat

<i>longimembris pacifus</i>)				
Coastal California Gnatcatcher (<i>Poliophtila californica californica</i>)	T	SSC	Coastal sage scrub	Low Study Area lacks suitable habitat
Light-footed Ridgway rail (<i>Rallus longirostris levipes</i>)	E	E	Salt marshes	Low Study Area lacks suitable habitat
California Least Tern (<i>Sterna antillarum</i>)	E	E	Sandy Beaches	Low Study Area lacks suitable habitat
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	E	E	Low growing riparian habitats	Low Study Area lacks suitable habitat
Western Yellow Billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	T	E	Riparian Woodlands	Low Study Area lacks suitable habitat
Legend Federal Endangered Species Act E- Endangered T-Threatened SSC- Special Species of Concern C-Candidate for Listing California Endangered Species Act/California Department Fish Game FP-Fully Protected E-Endangered T-Threatened S-Sensitive SSC-Special Species of Concern WL-Watch List				

Critical Habitat

The Federal Endangered Species Act requires the federal government to designate Critical Habitat for any species it lists under the Federal Endangered Species Act. Critical Habitat is defined as 1) specific areas within the geographical area occupied by the specie at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection and 2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. According to the of USFWS Information, Planning, and Conservation System Database and the California Department of Fish and Wildlife Natural Diversity Database, the study area is not located on lands that are designated as Critical Habitat.

Waters of the United States

A water body is considered Waters of the U.S. if it is: (1) traditional navigable water (TNW); (2) wetlands adjacent to a TNW; (3) non-navigable tributaries of TNW that have perennial or seasonal flow of water; and (4) wetlands that are adjacent to non-navigable

tributaries of TNW that have perennial or seasonal flow of water. The nearest Waters of the U.S. to the study area is the Santa Ana River. The Federal jurisdiction along the Santa Ana River extends to the ordinary high water mark and to any adjacent wetland vegetation.

Waters of the State of California

According to the State Water Code, Waters of the State are defined as any surface water, groundwater or wetlands within the boundary of the state. The nearest Waters of the State to the study area is the Santa Ana River. The State jurisdiction along the Santa Ana River extends to the top of the slope to adjacent wetland vegetation.

Wetland Waters of the United States and State California

Wetland Waters are a subset of jurisdictional Waters of the U.S. and the State. Generally, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands generally include swamps, freshwater marshes, brackish water and saltwater marshes, bogs, vernal pools, periodically inundated salt flats, intertidal mudflats, wet meadows, wet pastures, springs and seeps, portions of lakes, ponds, rivers and streams and all areas which are periodically or permanently covered by shallow water, or dominated by hydrophilic vegetation, or in which the soils are predominantly hydric in nature. Presently, there is no single definition for wetlands. However, all resource agencies recognize that wetlands must demonstrate the following three essential elements: (1) the site periodically supports hydrophytes vegetation, (2) the site contains hydric soil and (3) the site periodically contains water or the soil is saturated with water at some time during the growing season of each year.

Project Impacts

A. Would the project have a substantial adverse impact, 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 Services?

Onsite Impacts

No Impact: Based on a review of databases from United State Fish and Wildlife Service and California Department of Fish and Wildlife and biological surveys conducted on the project site, it has been determined that there would be low potential for special status plant species or special status wildlife species to be present on OCS Plant No. 2. As shown in Table 9 and Table 10 Plant No. 2 lacks suitable habitat to support special status plant species or special status wildlife species that were identified in the database search. Additionally, no indications were found that any special status species

were ever present. Therefore, implementation of the proposed project would not result in adverse impacts to any special status plant species or special status wildlife species.

Offsite Impacts

Less Than Significant Impact: Located south of OCSD Plant No. 2 is the Talbert Marsh and south of Pacific Coast Highway is the California Least Tern Colony. Both of these biological resources could provide suitable nesting habitat for special status bird species. The construction operations for the proposed project would be confined to OCSD Plant No. 2. No construction activities would occur at the Talbert Marsh or at the California Least Tern Colony. Therefore, no direct impacts to special status plant or wildlife species would occur.

The construction activities for the proposed project would involve the operation of heavy construction equipment that could operate during nesting season. If the construction activity was to occur in close proximity to nesting birds there would be the potential that breeding patterns could be disturbed. The United States Fish and Wildlife Service as established a noise impact threshold of 60 dBA to identify potential adverse impacts to nesting birds. The Talbert Marsh is located approximately 3,300 feet from where the construction activities would occur and the California Least Tern Colony is located approximately 4,400 feet from the construction would occur. Based on the noisiest piece of construction equipment that would be used, the noise estimated level at the Talbert Marsh and at the California Least Tern Colony would be below 49 dBA. Additionally, with the presence of the block wall around Plant No. 2 and the traffic noise along Pacific Coast Highway, it would be very unlikely that construction noise would be heard at either location. Potential indirect noise impacts to special status wildlife species would be less than significant. No mitigation measures are required.

B. Would the project have a substantial adverse impact on any riparian habitat or natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact: The location where the proposed flow equalization tanks and pump station structure would be constructed is currently paved or in a disturbed condition. A survey conducted at the location where the flow equalization tanks and pump station structure would be constructed did not identify any sensitive vegetation communities. Therefore, implementation of the proposed project would not result in adverse impacts to sensitive natural communities. No mitigation measures required.

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

No Impact: The location where the proposed project would be constructed is paved or in a disturbed condition. A preliminary site survey conducted on the study area did not identify any required parameters that define Wetland Waters of the U.S. or State. Therefore, the implementation of the proposed project would not adversely impact Wetland Waters of the U.S or State. No mitigation measures required.

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

Onsite Impacts

Less than Significant Impact with Mitigation: Along the perimeter of Plant No.2 there are a row of large eucalyptus trees. Large Eucalyptus trees commonly harbor nesting raptors. At the time of the survey no evidence of a nest was found in any of the trees. Additionally, there was no sign of historical nesting.

The construction activities for the proposed project would not involve the removal of any trees. Therefore, potential direct impacts to nesting migratory raptor bird species would be avoided. The proposed construction activities would occur in close proximity to the Eucalyptus tree grove along the perimeter of the site and there would be the potential that construction noise equipment could disrupt the breeding patterns of nesting migratory birds. It is recommended that the project should not take place between February 15 and August 15. Raptors typically begin exhibiting nesting behavior in the winter months, and project commencement beyond February 15 runs the risk of resulting in noise impacts to nesting raptors and other tree inhabiting species'. All tree nesting species' including raptors should have completed nesting by August 15. In event construction activities are proposed before the completion of nesting season, a biologist would examine the site one week prior to initiating any activities to ensure that all nesting has been completed. Ground nesting species would also be taken into account. If this project continues into another season the biologist would continue to monitor and work with all parties to ensure remaining activities are not harmful to nesting birds. With the implementation of Mitigation Measure BIO-1 potential impacts to migratory birds would be less than significant.

Offsite Impacts

No Impact: The Talbert Marsh is located approximately 3,300 feet and the California Least tern Colony is located 4,400 feet from the proposed construction activities. At this distance the construction noise levels would be minimal and would not pose a potential disruption to nesting birds. The implementation of the proposed project would not result in significant impacts to both species.

Mitigation Measure

BIO-1: Construction activities should not take place between February 15 and August 15. In the event construction activities are proposed before the completing of nesting season, a biologist would examine the site one week prior to initiating any activities to ensure that all nesting has completed. Ground nesting species would also be taken into account.

E. Would the project conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

No Impact: The City of Huntington Beach does not have any local policies or ordinances that provide for the protection of management of biological resources that would apply to the study area. Therefore, implementation of the proposed project would not be in conflict with local policies or ordinances that provide for the protection of biological resources. No mitigation measures are required.

F. Would the project be in conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact: The OCSD Plant No. 2 Site is not included within adopted Habitat Conservation Plan. Therefore, implementation of the proposed project would not be in conflict with any approved Habitat Management Plan or Natural Community Conservation Plan. No mitigation measures are required.

4.5 Cultural Resources

The following analysis is based on a Phase 1 Cultural Resources Report prepared for the GWRS Final Expansion Project in August of 2016 and GWRS Water Conveyance Facilities Project Supplemental Cultural Resources Letter Report by Environmental Science Associates in February and Letter Report of 2018. The Phase 1 Cultural Resources Report and Supplemental Letter Report are presented in Appendix C.

Existing Setting

The study area is located in the cities of Huntington Beach and Fountain Valley, Orange County, in southern California. The topography of Orange County includes a combination of mountains, hills, flatlands, and shorelines. Urbanized Orange County is predominantly within an alluvial plain, 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 Santa Ana River is located adjacent to and just east of the study area.

Prehistoric Setting

The prehistory of the region has been summarized within four major horizons or cultural periods: Early [10,000 to 8,000 before present (B.P.)], Millingstone (8,000 to 3,000 B.P.), Intermediate (3,000 to 1,500 B.P.), and Late Prehistoric (1,500 B.P. to A.D. 1769) (Wallace, 1955; Warren, 1968).

Early Period (10,000 to 8,000 B.P.)

The southern California coast may have been settled as early as 10,000 years ago (Jones, 1992). These early inhabitants were likely maritime adapted groups exploiting shellfish and other marine resources found along the coastline (Dixon, 1999; Erlandson, 1994; Vellanoweth and Altschul, 2002). One site located in Newport Bay, Orange County (CA-ORA-64) dates to approximately 9,500 years B.P. and suggests early intensive utilization of shellfish, fish, and bird resources (Drover et al., 1983; Macko, 1998).

Millingstone Period (8,000 to 3,000 B.P.)

The Millingstone Period dates to about 8,000 to 3,000 B.P. The transition from the Early Period to the Millingstone Period is marked by an increased emphasis on the processing of seeds and edible plants. The increased utilization of seeds is evident by the high frequencies of handstones (manos) and milling slabs (metates). Around 5,000 B.P., mortar and pestles appear in the archaeological record. Mortars and pestles suggest the exploitation of acorns (Vellanoweth and Altschul, 2002). Millingstone Period sites in Orange County generally date to between 8,000 and 4,000 B.P. Archaeological evidence suggests a low, stable population centered on semi-permanent residential bases. These sites are located along coastal marine terraces, near the shoreline, bays, or estuaries. Satellite camps were used to take advantage of seasonally available resources. Marine resources were supplemented by seeds and small terrestrial mammals. Later Millingstone Period sites indicate a growing reliance on shellfish (Cleland et al., 2007).

Intermediate Period (3,000 to 1,500 B.P.)

The Intermediate Period dates to between 3,000 to 1,500 B.P. Archaeological sites indicate a broader economic base, with increased reliance on hunting and marine resources. An expanded inventory of milling equipment is found at sites dated to this period. Intermediate Period sites are characterized by the rise of the mortar and pestle and small projectile points (Cleland et al., 2007). The number of Intermediate Period sites in Orange County declined over time, particularly around Newport Bay. Climate changes and drier conditions led to the congregation of populations near freshwater sources. Settlement patterns indicate greater sedentism, with reduced exploitation of seasonal resources and a lack of satellite camps. Coastal terrace sites are not reoccupied during this time period. These shifts in settlement and subsistence

strategies led to growing population densities, resource intensification, higher reliance on labor-intensive technologies, such as the circular fishhook, and more abundant and diverse hunting equipment. Rises in disease and inter-personal violence, visible in the archaeological record, may be due to the increased population densities (Cleland et al., 2007; Raab et al., 1995).

Late Prehistoric Period (1,500 B.P. to A.D. 1769)

The Late Prehistoric Period began around 1,500 B.P. and lasted until Spanish contact in 1769. The Late Prehistoric Period resulted in concentration of larger populations in settlements and communities, greater utilization of the available food resources, and the development of regional subcultures (Cleland et al., 2007). Artifacts from this period include milling implements, as well as bone and shell tools and ornaments. Newport Bay and San Joaquin Hills, abandoned during the Intermediate Period, were reoccupied during the Late Prehistoric Period. These settlements were smaller than in the Intermediate. Village sites were located in areas with a multitude of resources. Small collector groups moved between a small number of these permanent settlements (Cleland et al., 2007).

Historic Setting

The historic setting for the study area is divided into three primary periods: the Spanish Period (A.D. 1769-1821), the Mexican Period (A.D. 1821-1846), and the American Period (A.D. 1846 to present).

Spanish Period (A.D. 1769-1821)

The first European exploration of Orange County began in 1769 when the Gaspar de Portola expedition passed through on its way from Mexico to Monterey. A permanent Spanish presence was established with the founding of Mission San Juan Capistrano in 1776 (Hoover et al., 2002). The mission was founded to break the long journey from Mission San Diego to Mission San Gabriel (near Los Angeles). A large, ornate church was constructed at the mission from 1797 to 1806, but was destroyed only six years later in an earthquake. The church was not rebuilt.

In an effort to promote Spanish settlement of Alta California, Spain granted several large land concessions from 1784 to 1821. At this time, Spain retained title to the land; individual ownership of lands in Alta California was not granted. The parts of Orange County that would become the City of Huntington Beach and the City of Fountain Valley began as a Spanish land concession, known as Rancho Los Nietos. A grant of 300,000 acres was given to Manuel Nieto in 1784 in consideration of his military service (City of Huntington Beach, 2000; Logan, 1990).

Mexican Period (A.D. 1821-1846)

In 1821, Mexico won its independence from Spain. Mexico continued to promote settlement of California with the issuance of land grants. In 1833, Mexico secularized the missions, reclaiming the majority of mission lands and redistributing them as land grants. During this time, Rancho Los Nietos was divided into five smaller ranchos. The area of Huntington Beach became part of Rancho Las Bolsas, a 33,460-acre rancho granted to Maria Catarina Ruiz in 1834 (County of Orange, 2011). Maria was the widow of Jose Antonio Nieto, Manuel Nieto's son.

Many ranchos continued to be used for cattle grazing by settlers during the Mexican Period. Hides and tallow from cattle became a major export for California's (Hispanic Californians), many of whom became wealthy and prominent members of society. These Californians led generally easy lives, leaving the hard work to vaqueros (Hispanic cowhands) and Indian laborers. California's lives centered primarily around enjoying the fruits of their labors, throwing parties and feasting on Catholic holidays (Pitt, 1994; Starr, 2007).

American Period (A.D. 1846 to present)

Mexico ceded California to the United States as part of the Treaty of Guadalupe Hidalgo, which ended the Mexican-American War (1846-1848). The treaty also recognized right of Mexican citizens to retain ownership of land granted to them by Spanish or Mexican authorities. However, the claimant was required to prove their right to the land before a patent was given. The process was lengthy and costly, and generally resulted in the claimant losing at least a portion of their land to attorney's fees and other costs associated with proving ownership (Starr, 2007).

The Gold Rush (1849-1855) saw the first big influx of American settlers to California. Most of these settlers were men hoping to strike it rich in the gold fields. The increasing population provided an additional outlet for California's cattle (Bancroft, 1890). As demand increased, the price of beef skyrocketed and California's reaped the benefits.

The culmination of the Gold Rush, followed by devastating floods in 1861 and 1862 and droughts in 1863 and 1864, led to the rapid decline of the cattle industry (Bancroft, 1890). Many Californians lost their lands during this period, and former ranchos were subsequently divided and sold for agriculture and residential settlement.

Following the admission of California into the United States in 1850, the region of modern day Orange County was originally part of Los Angeles County. Orange County was established in 1889, with the City of Santa Ana as County Seat (Armor, 1921).

History of the Study Area

The study area was once part of a 300,000-acre Spanish land grant, Rancho Los Nietos, a part of which became Rancho Las Bolsas during the Mexican Period. Abel

Stearns later acquired the land for ranching and cultivation of barley. During the land boom of the 1880s, the area was subdivided for agricultural and residential development (County of Orange, 2011; Milkovich, 1986).

Previously called Shell Beach and later Pacific City, the town changed its name to Huntington Beach in 1904 when Henry E. Huntington extended Pacific Electric Railway service to the little community (Carlberg and Epting, 2009; Milkovich, 1986). Discovery of oil in the 1920s led to a population explosion in the town. In one month, the population of Huntington Beach went from 1,500 to 6,000.

History of OCSD Plant No. 2

In 1921, the cities of Santa Ana and Anaheim agreed to construct a sewer outfall extending into the Pacific Ocean, thus forming the Orange County Joint Outfall Sewer (JOS), and marking the beginning of the OCSD. In 1924, JOS construction was completed and the first sewage from member cities was discharged into the system. Three years later, the outfall was extended to a distance of 3,000 feet from shore, and a new screening plant and pumping station was constructed. In 1941, the first units of the Primary Treatment Plant, now referred to as Plant No. 1) were constructed. In 1954, OCSD assumed the duties of JOS and officially commenced operations. Over the next 50 years, additional services and facilities were constructed at OCSD Plant No. 1. The portion of the existing facility where the proposed OCSD pipe connection would connect was constructed within the last 10 years. In 1954, Plant No. 2 was constructed near the ocean and adjoining Santa Ana River and the second ocean outfall was constructed. OCSD is currently a public agency that provides wastewater collection, treatment, and disposal services for approximately 2.5 million people in central and northwest Orange County. OCSD is a special district that is governed by a Board of Directors consisting of 25 board members appointed from 20 cities, 4 sanitary districts, and one representative from the Orange County Board of Supervisors. OCSD has two operating facilities (Plants 1 and 2) that treat wastewater from residential, commercial and industrial sources (ocsd.com).

Federal Regulatory Framework

Section 106 of the National Historic Preservation Act

Archaeological resources are protected through the NHPA of 1966, as amended (54 United States Code of Laws [USC] 300101 et seq.), and its implementing regulation, Protection of Historic Properties (36 CFR Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an “undertaking” (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any

undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (National Register). As indicated in Section 101(d) (6) (A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the National Register. Under the NHPA, a resource is considered significant if it meets the National Register listing criteria at 36 CFR 60.4.

National Register of Historic Places

The National Register was established by the NHPA of 1966, as “an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment” (36 CFR 60.2). The National Register recognizes both historic-period and prehistoric archaeological properties that are significant at the national, state, and local levels.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (U.S. Department of the Interior, 2002):

- Are associated with events that have made a significant contribution to the broad patterns of our history;
- Are associated with the lives of persons significant in our past;
- Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or,
- Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for National Register listing (U.S. Department of the Interior, 2002). In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance” (U.S. Department of the Interior, 2002). The National Register recognizes seven qualities that, in various combinations, define integrity. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.

State Regulatory Framework

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the state and is codified at Public Resources Code (PRC) Section 21000 et seq. CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or unique archaeological resources. Under CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. An archaeological resource may qualify as an “historical resource” under CEQA. The CEQA Guidelines (Title 14 California Code of Regulations [CCR] Section 15064.5) recognize that an historical resource includes: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (California Register); (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

California Register of Historical Resources

The California Register is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from Register are based upon National Register criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register. To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, state, and/or federal level under one or more of the following four criteria:

- Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

- Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 require that in the event human remains are discovered, the County Coroner be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin, the Coroner is required to contact the California Native American Heritage Commission (NAHC) within 24 hours to relinquish jurisdiction.

California Public Resources Code Section 5097.98

California PRC Section 5097.98, as amended by Assembly Bill 2641, provides procedures in the event human remains of Native American origin are discovered during project implementation. PRC Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. PRC Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

California Public Resources Code Section 21080.3.1

California PRC Section 21080.3.1, as amended by Assembly Bill (AB) 52, requires lead agencies to consider the effects of projects on tribal cultural resources and to conduct consultation with federally and non-federally recognized Native American Tribes early in the environmental planning process and applies specifically to projects for which a Notice of Preparation (NOP) or a notice of Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The goal is to include California

Tribes in determining whether a project may result in a significant impact to tribal cultural resources that may be undocumented or known only to the Tribe and its members and specifies that a project that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. Tribal cultural resources are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources (PRC Section 21074 (a)(1)).

Archival Research

Area of Potential Effects

An Area of Potential Effects (APE) was established for the project according to Section 106 of the NHPA in coordination with the OCWD. The APE is shown in Figure 12 and is defined as:

...the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (36 Code of Federal Regulations [CFR] 800.16[d]). The horizontal APE encompasses the two flow equalization tanks, pump station, conveyance piping, valving and metering connections and contractor laydown and equipment staging area. The vertical APE includes the anticipated maximum depth of ground disturbance of 25 feet below ground surface and the maximum height of the flow equalization tank of 28 feet above ground surface.

Previous Cultural Resources Investigations

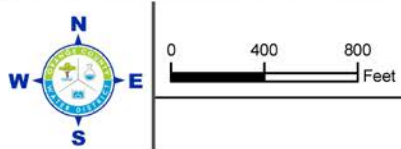
In 2016, ESA prepared a Phase I Cultural Resources Study for improvements within the Project area (Ehringer et al., 2016). This study included a records search at the California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC), Sacred Lands File search at the California Native American Heritage Commission (NAHC), Native American outreach, historic map and aerial photography review, geo-archaeological review, paleontological records search at the Natural History Museum of Los Angeles County (LACM), and pedestrian survey. In 2017, ESA also conducted a Historic Resources Assessment of Plant No. 2 for OCSD (Taylor, 2017), which is available under separate cover.

South Central Coastal Information Center Records Search

A records search was conducted on June 21, 2016 at the SCCIC, located at California State University, Fullerton, which included the APE. The records search included a review of all recorded cultural resources within a 0.5-mile radius, as well as a review of



Path: I:\SS\BofGWRs_Expansion\2018\AreaOfImpacts.mxd



**GWRs Conveyance Facility Project
Area of Potential Effects**

Figure 12

cultural resource reports on file. The results of the SCCIC records search indicated that the APE had not been previously surveyed for cultural resources. The results also indicated that two cultural resources (CA-ORA-845 and CA-ORA-906) had been previously documented within a 0.5-mile radius of the APE. Both resources are prehistoric archaeological sites located on the eastern bluffs of the Santa Ana River, approximately 0.5-miles east of the APE.

Historic Map and Aerial Review

Historic maps and aerial photographs were examined in order to provide historical information about the APE and to contribute to an assessment of the APE's archaeological sensitivity. Available maps include: the 1868 U.S. Surveyor General's survey plat map of Townships 5 and 6 South, Range 10 West the 1895 and 1901 Santa Ana 1:62,500 topographic quadrangles; the 1902 Corona 1:125,000 topographic quadrangle; and the 1935 Newport Beach 1:31,600 topographic quadrangles; and 1965 and 1975 Newport Beach 7.5-minute topographic quadrangle. Historic aerial photographs of the APE from 1938, 1953, 1963, 1972, 1994, 2002, 2003, 2004, 2005, 2009, and 2010 were also examined (historicaerials.com, 2016).

The 1868 U.S. Surveyor General's survey plat map shows the APE as being located within Rancho Las Bolsas. The plat map indicates salt marshes within the current location of OCSD Plant No. 2. The available historic maps and aerial photographs indicate that the APE and surrounding area was largely used for agricultural purposes throughout the 20th century, and did not become urbanized until the latter half of the century. The Santa Ana River is shown confined with artificial levees in the 1938 historic aerial photograph. The OCSD Plant No. 2 is not shown on the 1953 aerial. The OCSD Plant No. 2 facility is shown on the 1965 Newport Beach 7.5-minute topographic quadrangle. Based on a detailed review of the 1972 and 2016 aerials of the OCSD Plant No.2, there are structures shown on the 1972 aerial that remain visible on the 2016 aerial photograph.

OCSD Plant No.2 Historical Assessment

A Historic Resources Assessment of OCSD Plant No. 2 was prepared by Environmental Science Associates in October of 2017. The assessment included a records search at the California Historical Resources Information System (CHRIS) – South Central Coastal Information Center (SCCIC) was conducted on August 16, 2017. One previous historical resources study included the subject property (OR-04313). The study consisted of a survey of historical resources in the City Huntington Beach for inclusions in the City's general plan. The study was conducted in November of 2013 and identified multiple historical resources, including districts, throughout the Hunting Beach city limits. However, the majority of the resources identified by the survey are located near the Huntington Beach Pier and original downtown area, located approximately three miles

northwest of OCSD Plant No. 2. The survey did not identify any historical resources within the subject property.

The historical assessment also included an intensive pedestrian survey of OCSD plant No.2, which resulted in the documentation 33 buildings, structures, and features that meet the 45-year old age threshold for historical resources prescribed by the California Register of Historical Resources (California Register). The historical assessment determined that the individual buildings, structures, and features lack distinction but together, reflect Plant No. 2's initial construction in 1954 and expansion in the following decades in response to growing needs for wastewater treatment. Therefore, Plant No. 2 was evaluated as a potential historic district and was recommended not eligible for listing in the California Register. While Plant No. 2 was associated with the post-war development of Orange County and Huntington Beach, these communities had been well established by the date of its construction in 1954. Furthermore, Plant No. 2 was one of many municipal services constructed in the area to support the growing population and suburban development. The Plant is a common example of the activated sludge treatment plant popular among growing suburban communities during the post-war era. As such, Plant No. 2 does not qualify as a historical resource under the California Environmental Quality Act (CEQA). No historical resources have been identified in the surrounding area. Since Plant No. 2 was not found eligible as a historical resource and no historical resources have been identified in the surrounding area.

Geoarchaeological Review

Chris Lockwood, Ph.D., R.P.A., conducted a desktop geoarchaeological review of the project APE and vicinity in order to evaluate the potential for buried archaeological resources within the APE. The following section presents the results of Dr. Lockwood's analysis.

Geology and Geomorphology

The APE is on the distal portion of an alluvial fan. During the late Pleistocene, the APE was approximately 5.5 miles (9.0 km) inland. Historically, the area consisted largely of salt marsh, which would have been at or just above sea level, and was divided by small channels. The area was used for celery agriculture in historic times. OCSD Plant No. 2 was initially developed for sanitation in 1954, but the parcel, including the APE, was progressively developed towards the north over the next five decades. The APE is covered with a paved surface that is at elevation 3-4 meters above mean sea level (amsl), suggesting the APE contains several meters of fill overlying the native salt marsh deposits. Some of the fill material may have originated as dredge spoils from channelization of the Santa Ana River. Near surface geology of the APE is mapped as late Holocene to latest Pleistocene alluvial fan deposits (Morton, 2004; Morton and Miller, 2006). These deposits consist of gravel, sand, and silt transported and deposited

by the Santa Ana River. To the south of the APE, the OCSD Plant No. 2 site contains unconsolidated eolian dune deposits.

Soils

Soils within the portion of the APE at OCSD Plant No. 2 are mapped primarily as Bolsa silt loam (NRCS 2016). Bolsa series soils are deep, somewhat poorly drained soils developed in mixed alluvium parent material on flood plains and basins. The typical soil pedon consists of a plowed A-horizon (Ap1, Ap2) developed at the top of relatively unaltered alluvial parent material (C1 through C6) extending more than 69 inches deep. The absence of a B-horizon is likely due to the short geological time that has passed since deposition of the parent material, although agricultural activity has the potential to have disrupted the development of a recognizable B-horizon as well. The A-horizon in Bolsa soils ranges from sandy loam to silty clay loam, while the C-horizon is mainly silt loam and silty clay loam but may contain thin strata of sandier material (USDA 1997).

Significantly, many Bolsa soil pedons contain buried A-horizons (paleosols). These buried A-horizons represent periods of time in the past during which landform conditions were relatively stable, and during which deposition and erosion were sufficiently balanced to allow for development and retention of a soil weathering profile. From an archaeological perspective, periods of landform stability, such as those signified by buried A-horizons, should be correlated with the accumulation and preservation of cultural remains. Therefore, Bolsa soils are considered to have a high sensitivity for buried archaeological resources.

Cultural Resources Survey and Results

A cultural resources pedestrian survey was conducted for the Project on June 16, 2016 by Arabesque Said-Abdelwahed, which included the APE. The purpose of the survey was to identify the presence of surface archaeological materials. Intensive-level survey was conducted of areas with greater surface visibility with intervals spaced at 10 meter. No archaeological or historic built resources were observed within or adjacent to the APE.

Archaeological Potential

Although paved and filled, the portion of the APE at the OCSD Plant No. 2 appears to retain high sensitivity for buried archeological resources. During the latest Pleistocene and Holocene, the geomorphic setting of the portion of the APE at the OCSD Plant No. 2 changed from inland to coastal, and rising sea level resulted in fluvial deposition capable of burying archaeological resources. The portion of the APE at the OCSD Plant No. 2 was largely salt marsh into the early 20th century, but this is an area that would have offered important resources. Owing to its marshy environment, this area may not have been favored for any substantial occupation, but nonetheless is likely to have been visited for resource procurement and could contain artifacts associated with those

activities. Additionally, the saturated conditions offered within this setting may have aided in the preservation of relatively rare organic artifacts.

Project Impacts

A. Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines?

No Impact: Plant No. 2 was evaluated as a potential historic district and was recommended not eligible for listing in the California Register. Plant No. 2 is a common example of the activated sludge treatment plant popular among growing suburban communities during the post-war era. As such, Plant No. 2 does not qualify as a historical resource under the California Environmental Quality Act (CEQA). No historical resources have been identified in the surrounding area. Since Plant No. 2 was not found eligible as a historical resource and no historical resources have been identified in the surrounding area, no further work or mitigation is recommended for the subject property.

B. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines?

Less than Significant with Mitigation: No archaeological or historic built resources are located within or adjacent to the APE. However, the APE should be considered highly sensitive for subsurface archaeological resources. Native American respondents indicated sensitivity for archaeological resources in the APE and surrounding area given the proximity to the Santa Ana River corridor. In addition, the geoarchaeological review indicates that the APE was largely salt marsh into the early 20th century and would have offered important resources to prehistoric inhabitants. Owing to its marshy environment, this area may not have been favored for any substantial occupation, but nonetheless is likely to have been visited for resource procurement and could contain artifacts associated with those activities. Additionally, the saturated conditions offered within this setting may have aided in the preservation of relatively rare organic artifacts. Since the Project includes ground-disturbing activities, there is a potential for discovery of subsurface archaeological deposits that could qualify as historic properties under Section 106 and/or historical or unique archaeological resources under CEQA. This potential impact to unknown archaeological resources is considered significant. Mitigation Measures CR-1, CR-2, and CR-3 are recommended to ensure that the project would result in No Historic Properties Affected under Section 106 of the NHPA and less than significant impacts to historical or unique archaeological resources under CEQA.

Mitigation Measures

CR-1: Prior to earth moving activities, a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of

the Interior, 2008) will conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of cultural resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. OCWD will ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

CR-2: Prior to the start of any ground-disturbing activities, OCWD will retain an archaeological monitor to observe all ground-disturbing activities. Archaeological monitoring will be conducted by a monitor familiar with the types of archaeological resources that could be encountered and shall work under the direct supervision of the qualified archaeologist. Monitoring may be reduced or discontinued by the qualified archaeologist, in coordination with OCWD, based on observations of subsurface soil stratigraphy and/or the presence of older C-horizon deposits. The monitor will be empowered to halt or redirect ground-disturbing activities away from the vicinity of a discovery until the qualified archaeologist has evaluated the discovery and determined appropriate treatment. The monitor will keep daily logs detailing the types of activities and soils observed, and any discoveries. After monitoring has been completed, the qualified archaeologist shall prepare a monitoring report that details the results of monitoring. The report shall be submitted to OCWD, SCCIC, and any Native American groups who request a copy.

CR-3: In the event of the discovery of archaeological materials, OCWD or its contractor shall immediately cease all work activities in the area (within approximately 100 feet) of the discovery until it can be evaluated by the qualified archaeologist. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone or concrete footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Construction shall not resume until the qualified archaeologist has conferred with OCWD on the significance of the resource. SWRCB shall be afforded the opportunity to determine whether the discovery requires addressing under Section 106 Post-Review Discoveries provisions provided in 36 CFR 800.13.

If it is determined that the discovered archaeological resource constitutes a historic property under Section 106 of the NHPA or a historical resource under CEQA, avoidance and preservation in place shall be the preferred manner of mitigation. Preservation in place maintains the important relationship between artifacts and their archaeological context and also serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource. Preservation in place may

be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, an Archaeological Resources Treatment Plan that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource shall be prepared and implemented by the qualified archaeologist in consultation with OCWD. The appropriate Native American representatives shall be consulted in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond that which is scientifically important, are considered.

C. Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant impact with Mitigation: No human remains or cemeteries are known to exist within or near the project area. Therefore, it would be highly unlikely that human remains would be encountered when well drilling and levees repair activities are occurring. In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and Section 5097.98 must be followed. With the implementation of Mitigation Measure CR-4 potential impacts to human remains would be less than significant.

Mitigation Measure

CR-4: Project-related earth disturbance has the potential to unearth previously undiscovered human remains, resulting in a potentially significant impact. If human remains are encountered during excavation activities, all work will halt and the County Coroner will be notified (*California Public Resources Code* §5097.98). The Coroner will determine whether the remains are of forensic interest. If the Coroner determines that the remains are prehistoric, s/he will contact the Native American Heritage Commission (NAHC). The NAHC will be responsible for designating the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the *California Health and Safety Code*. The MLD will make his/her recommendation within 48 hours of being granted access to the site. The MLD's recommendation will be followed if feasible, and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials (*California Health and Safety Code* §7050.5). If the landowner rejects the MLD's recommendations, the landowner will rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (*California Public Resources Code* §5097.98).

D. Would the project directly or indirectly disturb or destroy a unique paleontological resource or site?

Less Than Significant Impact with Mitigation: Dr. Samuel A. McLeod, Ph.D., of the Natural History Museum of Los Angeles County, Vertebrate Paleontology Section, conducted a thorough search on June 16, 2016 of the paleontology collection records for the locality and specimen data for the proposed project. No vertebrate fossil localities lie within the project APE; however, there are localities nearby from the same sedimentary units that may occur subsurface in the project APE. The closest vertebrate fossil locality from Quaternary Terrace deposits is LACM 7366, approximately 2.6 miles west at Huntington Drive and north of PCH. LACM 7366 produced specimens of marine, freshwater, and terrestrial specimens including leopard shark, *Triakis*, three-spined stickleback, *Gasterosteus*, garter snake, *Thamnophis*, desert shrew, *Notiosorex*, and most prominently, pocket gopher, *Thomomys*. A series of fossil localities, LACM 7422-7425, are located a few hundred feet north-northwest of LACM 7366. These localities produced fossil specimens of mammoth, *Mammuthus*, bison, *Bison*, and horse, *Equus*, from Alluvium or dune deposits. The closest vertebrate fossil locality from Quaternary deposits is LACM 6370 located approximately 1.6 miles southeast at the Hoag Hospital lower campus parcel near the intersection of Superior Avenue and PCH. LACM 6370 produced a specimen of a fossil horse, *Equus*. Fossil locality LACM 3267 located approximately 2 miles northeast, near the intersection of 19th Street and Anaheim Avenue, produced a specimen of a fossil elephant, *Proboscidea* in Quaternary deposits. Fossil locality LACM 4219, located approximately 3.3 miles along the Newport Freeway (State Route 55) near Santa Isabel Avenue, produced fossil specimens of turtle, *Chelonia*, and camel, *Camelidae*. Towards the northern portion of the APE, east of the Santa Ana River near the top of the mesa bluffs along Adams Avenue, vertebrate fossil locality LACM 1339 produced fossil specimens of mammoth, *Mammuthus*, and camel, *Camelidae*, bones from sands approximately 15 feet below the top of the mesa that is overlain by shell bearing silts and sands.

The entire APE has surface deposits of younger Quaternary Alluvium, derived as fluvial deposits from the Santa Ana River to the east of the project APE. No fossil vertebrate localities are located nearby these deposits, and they are unlikely to contain significant vertebrate fossils, at least in the uppermost layers. Small hills and bluffs both east and west of the project APE, however, define the Santa Ana River floodplain drainage and are mapped as having exposures of marine Quaternary Terrace deposits. These or other older Quaternary deposits may occur in the project APE at unknown depth. There is a low potential to uncover significant vertebrate fossil remains during surface grading or shallow excavations in the APE. However, excavations that extend down into the older Quaternary deposits may encounter significant fossil vertebrate specimens. Since the project includes ground-disturbing activities, there is a potential for discovery of fossils that may be considered significant paleontological resources. This potential impact to unknown paleontological resources would be considered significant. The following mitigation measures CR-5, CR-6 and CR-7 are recommended to ensure that

the project would result in less than significant impacts to unique paleontological resources under CEQA.

Mitigation Measures

CR-5: Prior to the start of any ground-disturbing activities, OCWD shall retain a qualified paleontologist meeting the Society of Vertebrate Paleontology (SVP) Standards (SVP, 2010). The qualified paleontologist shall contribute to any construction worker cultural resources sensitivity training either in person or via a training module provided to the qualified archaeologist. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the project site and the procedures to be followed if they are found. The qualified paleontologist shall also conduct periodic spot checks in order to ascertain when older deposits are encountered and where monitoring shall be required.

CR-6: Prior to the start of any ground-disturbing activities, OCWD shall retain a paleontological monitor to observe all ground-disturbing activities within older Quaternary deposits. Paleontological resources monitoring shall be performed by a qualified paleontological monitor, or cross-trained archaeological/paleontological monitor, under the direction of the qualified paleontologist. The monitor shall have the authority to temporarily halt or divert work away from exposed fossils in order to recover the fossil specimens. Monitoring may be reduced or discontinued by the qualified paleontologist, in coordination with OCWD, based on observations of subsurface soil stratigraphy and/or other factors and if the qualified paleontologist determines that the possibility of encountering fossiliferous deposits is low. The monitor shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring report to be submitted to OCWD and filed with the local repository. Any recovered significant fossils shall be curated at an accredited facility with retrievable storage.

CR-7: If construction or other project personnel discover any potential fossils during construction, regardless of the depth or presence of a monitor, work in the vicinity (within 100 feet) of the find shall cease until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment.

4.6 Geology/Soils

Existing Setting

Regional Geology

The study area is located in the Peninsular Ranges Geomorphic Province. The province traverses the southwestern end of California and is bounded by the Transverse Range province to the north, the Colorado Desert province to the east, and the Pacific Ocean to the west. The topography of the province is characterized as alternating northwest trending ridges and valleys with the bedrock geology most closely resembling the Sierra

Nevada with granitic intrusions into-older metamorphic rocks. Near surface geologic units within the study area include well-sorted, fine grained sand and silt, medium to fine grained sand deposit in the late Holocene by the Santa Ana River, sandy, silty and clayey organic-rich estuarine deposits and modern sandy wash deposits confined within the Santa Ana River channel.

Local Topography

Elevations within the study area range from sea level to 25 feet. Due to minor elevation changes across the study area, the slope gradients within the study area are relatively flat.

Faulting and Seismicity

There are no active faults traversing the study area. However, the study area is located within a seismic active region and would be susceptible to ground shaking from several active and potentially active faults in the region, including the Newport Inglewood Fault, San Joaquin Hills Fault, Elsinore Fault, Palos Verdes Fault and the San Andreas Fault.

Liquefaction Hazards

According to the California Department of Geologic Survey Seismic Hazard Zone Map, the study area is located within an area that would be susceptible to the occurrence of liquefaction.

Landslide Hazards

According to the California Department of Geologic Survey Landslide Hazard Map, the study area is not located within an area that would be susceptible to landslides.

Soils

The predominate soil association within the study area is the Heuneme-Bolsa Association, a nearly level, excessively drained fine sand loams located on alluvial fans and floodplains. The soils are characterized as having a moderate-to-high shrink-swell potential.

Project Impacts

A1. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving rupture of an unknown earthquake fault, as delineated on the most Alquist-Priolo Earthquake Fault Zoning Map?

No Impact: According to the California Geologic Survey Seismic Hazard Zone Map, the study area is not located within a designated Fault-Rupture Hazard Zone. Therefore, the potential for surface rupture impacts would be unlikely. No mitigation measures are required.

A2. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving strong seismic ground shaking?

Less Than Significant Impact with Mitigation: The study area is located in a seismically active region that could be subject to seismic shaking during earthquakes generated from several surrounding active faults in the region. An active fault is one that has historically produced earthquakes or shown evidence of movement within the past 11,000 years. The closest active fault would be the Newport Inglewood fault system. The Newport-Inglewood Fault Zone has a probability of approximately 1 percent of producing an earthquake larger than magnitude 6.7 in the next 30 years (USGS, 2008). An earthquake of this magnitude could subject the study area to periodic shaking, possibly of considerable intensity. The degree of shaking felt would depend on the distance from the earthquake source and size of earthquake and type of subsurface material on which the site is situated.

The proposed project would not involve the construction of any habitable buildings that would pose risk to people during an earthquake. The risk for seismic shaking impacts at the study area would be similar to other areas in the southern California region. The proposed project would be designed to meet the Essential Facilities Standards of the California Uniform Building Code to withstand anticipated ground shaking caused by an earthquake within an acceptable level of risk. With the implementation of Mitigation Measure GEO-1 the potential risk of seismic shaking impacts resulting in loss, injury or death would be less than significant.

Mitigation Measure

GEO-1: The OCWD will ensure that all structures for the proposed project are designed and constructed in compliance with current engineering practices, including the California Uniform Building Code and all applicable seismic engineering guidelines.

A3. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving liquefaction?

Less than Significant Impact with Mitigation: The California Geologic Survey Seismic Hazard Zone Map indicates that the study area lies within a Liquefaction Hazard Zone. The proposed project would be designed and constructed in compliance with current engineering practices, including the California Uniform Building Code and all applicable seismic engineering guidelines. With the implementation of Mitigation Measure GEO-1 the potential risk of liquefaction impacts resulting in loss, injury or death would be less than significant.

Mitigation Measure

Mitigation Measure GEO-1 required.

A4. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving landslides?

No Impact: The California Geologic Survey Hazard Zone Map indicates that the study area does not lie within a Landslide Hazard Zone. No mitigation measures are required.

B. Would the project result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact with Mitigation: Erosion can occur by varying processes and may occur where bare soil is exposed to wind or moving water. The processes of erosion are generally a function of material type, terrain steepness, rainfall or irrigation levels, and surface water drainage conditions. The excavation and grading activities associated with the proposed project would uncover soils which could increase the potential for erosion impacts to occur. Additionally, construction equipment mobilization/demobilization and construction worker traffic could transport soil to streets and into local and regional drainage systems and wind erosion occurring on unprotected soils could blow dust particles offsite onto adjacent streets and drainage systems.

The proposed project would disturb and uncover over one of soils in OCSD Plant No. 2, increasing the potential for erosion impacts. To minimize erosion impacts OCWD would file a Notice of Intent (NOI) with the State Water Resources Control Board and would prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would contain a map showing the building site, onsite and adjacent roadways, storm water collection points and drainage patterns across the site. The SWPPP would also provide a list of Best Management Practices (BMP) that would be used to minimize sediment and wind erosion impacts. With implementation Mitigation Measure GEO-2 potential erosion impacts would be less than significant.

Mitigation Measure

GEO-2: Prior to the start of construction OCWD will file a Notice of Intent (NOI) with the State Water Resources Control Board and prepare and implement Storm Water Pollution Prevention Plan to minimize potential erosion impacts.

C. Would the project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in on or off site landslide, lateral spreading, subsidence, liquefaction or collapse?

Liquefaction

Less Than Significant Impact with Mitigation: The California Geologic Survey Seismic Hazard Zone Map indicates that the study area lies within a Liquefaction Hazard Zone. The proposed project would be designed to meet Essential Facilities Standards of the California Uniform Building Code to withstand potential liquefaction impacts caused by an earthquake within an acceptable level of risk. With the

implementation of Mitigation Measure GEO-1 the potential risk of liquefaction impacts would be less than significant.

Subsidence

Less than Significant Impact: Subsidence is characterized as a sinking of the ground surface relative to surrounding areas and can generally occur where deep alluvial soil deposits are present in valley and basin areas. Subsidence could potentially result in ground fractures that could cause damage to surface improvements. Subsidence is typically associated with groundwater withdrawal. No subsidence has been documented in the study area and the proposed project does not involve the extraction of groundwater. Therefore, potential subsidence impacts associated with the proposed project would be less than significant. No mitigation measures are required.

Landslide

According to the California Department of Geologic Survey Landslide Hazard Map, the study area is not located within an area that would be susceptible to landslides. No mitigation measures are required.

Mitigation Measure

Mitigation Measure GEO-1 required.

D. Would the project be located on expansive soil, as defined in Table 18-1-B of the uniform Building Code, creating substantial risks to life or property?

Less than Significant Impact with Mitigation: Expansive soils are characterized as specific clay materials with the capacity to shrink, swell or otherwise significantly change volume due to variations in moisture content. Expansive soils could cause excessive cracking and heaving of structures with shallow foundations and concrete. The soils within the study area are characterized as having a moderate-to-high shrink-swell potential. All earthwork activities conducted for the proposed project would be in compliance with geotechnical requirements identified in site specific geotechnical studies and the California Uniform Building Code. With the implementation of Mitigation Measure GEO-3 potential soil constraints associated with construction of the proposed project would be less than significant.

Mitigation Measure

GEO-3: The OCWD will ensure that all structures for the proposed project are designed and constructed in compliance with building site specific geotechnical studies and the California Uniform Building Code.

E. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems where sewers are not available for the disposal of wastewater?

No Impact: The proposed project does not involve the construction of septic tanks or alternative disposal systems. Therefore, the construction and operation of the proposed project would not result in adverse impacts in regards to the use of septic tanks or alternative disposal systems.

4.7 Greenhouse Gas Emissions

The following analysis is based on the Air Quality and Greenhouse Gas Analysis Report prepared for GWRS Water Conveyance project by Environmental Science Associates in January 2018. The Air Quality and Greenhouse Gas Analysis Report are presented in its entirety in Appendix A.

Setting

Gases that trap heat in the atmosphere are called GHGs. The major concern with GHGs is that increases in their concentrations are causing global climate change. 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 rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long term global temperature increases.

The Federal Government and State of California recognized that anthropogenic (human-caused) GHG emissions are contributing to changes in the global climate and that such changes are having and will have adverse effects on the environment, the economy, and public health. While worldwide contributions of GHG emissions are expected to have widespread consequences, it is not possible to link particular changes to the environment of California or elsewhere to GHGs emitted from a particular source or location. In other words, emissions of GHGs have the potential to cause global impacts rather than local impacts. Increased concentrations of GHGs in the Earth's atmosphere have been linked to global climate change and such conditions as rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increased frequency and magnitude of severe weather conditions. Existing climate change models also show that climate warming portends a variety of impacts on agriculture, including loss of microclimates that support specific crops, increased pressure from invasive weeds and diseases, and loss of productivity due to changes in water reliability and availability. In addition, rising temperatures and shifts in microclimates associated with global climate change are expected to increase the frequency and intensity of wildfires.

The Federal Government and State of California recognized that anthropogenic (human-caused) GHG emissions are contributing to changes in the global climate and that such changes are having and will have adverse effects on the environment, the

economy, and public health. While worldwide contributions of GHG emissions are expected to have widespread consequences, it is not possible to link particular changes to the environment of California or elsewhere to GHGs emitted from a particular source or location. In other words, emissions of GHGs have the potential to cause global impacts rather than local impacts. Increased concentrations of GHGs in the Earth's atmosphere have been linked to global climate change and such conditions as rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increased frequency and magnitude of severe weather conditions. Existing climate change models also show that climate warming portends a variety of impacts on agriculture, including loss of microclimates that support specific crops, increased pressure from invasive weeds and diseases, and loss of productivity due to changes in water reliability and availability. In addition, rising temperatures and shifts in microclimates associated with global climate change are expected to increase the frequency and intensity of wildfires.

State law defines GHGs to include the following compounds: CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).¹⁷ The most common GHG that results from human activity is CO₂, which represents 76 percent of total anthropogenic GHG emissions in the atmosphere (as of 2010 data),¹⁸ followed by CH₄ and N₂O. Scientists have established a Global Warming Potential (GWP) to gauge the potency of each GHG's ability to absorb and re-emit long-wave radiation. The GWP of a gas is determined using CO₂ as the reference gas with a GWP of 1 over 100 years. For example, a gas with a GWP of 10 is 10 times more potent than CO₂ over 100 years. The sum of each GHG multiplied by its associated GWP is referred to as carbon dioxide equivalents (CO₂e). The measurement unit CO₂e is used to report the combined potency of GHG emissions. Compounds that are regulated as GHGs are discussed below.

Carbon Dioxide (CO₂): CO₂ is the most abundant GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO₂ is the reference gas (GWP of 1) for determining the GWPs of other GHGs.

Methane (CH₄): CH₄ is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The GWP of CH₄ is 25 in the IPCC AR4, and 28 in the IPCC AR5.

Nitrous Oxide (N₂O): N₂O produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and

17 CEQA Guidelines Section 15364.5; Health and Safety Code, Section 38505(g).

18 Intergovernmental Panel on Climate Change, Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, 2014, https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_All_Topics.pdf. Accessed December 2017.

stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N₂O is 298 in the IPCC AR4, and 265 in the IPCC AR5.

California Greenhouse Gas Reduction Targets

The Governor announced on June 1, 2005, through Executive Order S-3-05,¹⁹ the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

In accordance with Executive Order S-3-05, the Secretary of CalEPA is required to coordinate efforts of various agencies, which comprise the California Climate Action Team (CAT), in order to collectively and efficiently reduce GHGs. These agencies include CARB, the Secretary of the Business, Transportation and Housing Agency, Department of Food and Agriculture, the Resources Agency, the California Energy Commission, and the Public Utilities Commission. The CAT provides periodic reports to the Governor and Legislature on the state of GHG reductions in the state as well as strategies for mitigating and adapting to climate change. The first CAT Report to the Governor and the Legislature in 2006 contained recommendations and strategies to help meet the targets in Executive Order S-3-05. The 2010 CAT Report, finalized in December 2010, expands on the policies in the 2006 assessment.²⁰ The new information detailed in the CAT Report includes development of revised climate and sea-level projections using new information and tools that became available and an evaluation of climate change within the context of broader social changes, such as land-use changes and demographic shifts.

On April 29, 2015, Governor Brown issued Executive Order B-30-15. Therein, the Governor directed the following:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

¹⁹ California Office of the Governor, Executive Order S-3-05, <https://www.gov.ca.gov/news.php?id=1861>. Accessed March 2017.

²⁰ California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, 2010, <http://www.energy.ca.gov/2010publications/CAT-1000-2010-005/CAT-1000-2010-005.PDF>. Accessed March 2017.

In response to the 2030 GHG reduction target, CARB released the 2017 Climate Change Scoping Plan Update in January 2017 and the proposed Final 2017 Climate Change Scoping Plan Update in December 2017.²¹ The Scoping Plan Update outlines the strategies the State will implement to achieve the 2030 GHG reduction target, which build on the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, improved vehicle, truck and freight movement emissions standards, increasing renewable energy, and strategies to reduce methane emissions from agricultural and other wastes by using it to meet our energy needs. The Scoping Plan Update also comprehensively addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. The Scoping Plan Update considers the following scenarios:

- Scoping Plan Scenario: Continuing the Cap-and-Trade Program.
- Alternative 1: Direct regulations on a wide variety of sectors, such as specific required reductions for all large GHG sources, more renewables, etc.
- Alternative 2: A carbon tax to put a price on carbon, instead of the Cap-and-Trade Program.
- Alternative 3: All Cap-and-Trade. This would remove the refinery measure and keep the LCFS at 10 percent reduction in carbon intensity past 2020.
- Alternative 4: Cap-and-Tax. This would place a declining cap on industry, and natural gas and fuel suppliers, while also requiring them to pay a tax on each ton of GHG emitted.

California Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines GHGs as CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020. In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amends HSC Division 25.5 and establishes a new climate pollution reduction target of 40 percent

²¹ California Air Resources Board, The 2017 Climate Change Scoping Plan Update, January 2017 https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf. Accessed March 2017.

below 1990 levels by 2030 and includes provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (Health and Safety Code section 38561 (h)). CARB developed an AB 32 Scoping Plan that contains strategies to achieve the 2020 emissions cap.²² The initial scoping plan was approved in 2008, and contained a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives.²³ The first update to the Scoping Plan was approved by CARB in May 2014 and built upon the initial Scoping Plan with new strategies and recommendations.²⁴

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was originally set at 427 MMTCO₂e using the GWP values from the IPCC SAR. CARB also projected the state's 2020 GHG emissions under business-as-usual (BAU) conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 MMTCO₂e (using GWP values from the IPCC SAR). Therefore, under the original projections, the state must reduce its projected 2020 emissions by 28.4 percent in order to meet the 1990 target of 427 MMTCO₂e. In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 MMTCO₂e. CARB also updated the State's projected 2020 emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were recently adopted for motor vehicles and renewable energy. CARB's projected statewide 2020 emissions estimate using the GWP values from the IPCC AR4 is 509.4 MMTCO₂e. Therefore, the emission reductions necessary to achieve the 2020 emissions target of 431 MMTCO₂e would be 78.4 MMTCO₂e, or a reduction of GHG emissions by approximately 15.4 percent. In the 2017 Climate Change Scoping Plan Update, CARB provides the estimated projected statewide 2030 emissions and the level of reductions necessary to achieve the 2030 target of 40 percent below 1990 levels.

22 California Air Resources Board, Initial AB 32 Climate Change Scoping Plan Document, <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed December 2017

23 California Air Resources Board, Initial AB 32 Climate Change Scoping Plan Document, <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed December 2017.

24 California Air Resources Board, First Update to the AB 32 Scoping Plan, <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed December 2017.

CARB's projected statewide 2030 emissions takes into account 2020 GHG reduction policies and programs.

In its Climate Change Scoping Plan, CARB has acknowledged that land use-driven emissions are highly complex: "While it is possible to illustrate the [GHG] inventory many different ways, no chart or graph can fully display how diverse economic sectors fit together. California's economy is a web of activity where seemingly independent sectors and subsectors operate interdependently and often synergistically."²⁵ GHG emissions and reductions in the land use sector are complicated to assess given that emissions are influenced by reduction measures separate from the land use sector, such as the LCFS, vehicle emissions standards, and entities regulated under the Cap-and-Trade program including refineries and utility providers. These measures will impact other sectors of the economy and will also impact existing development in addition to new land use development. In its report, *California Environmental Quality Act Guidelines Update Proposed Thresholds of Significance*, the Bay Area Air Quality Management District (BAAQMD) evaluated the reduction in land use emissions needed in order to be consistent with AB 32.²⁶ CARB included the following sectors for land use emissions: Transportation (on-road passenger vehicles; on-road heavy-duty), electric power (electricity; cogeneration), commercial and residential (residential fuel use; commercial fuel use) and recycling and waste (domestic wastewater treatment). Table 2 of the BAAQMD document presents the results of this analysis, which shows that the 26.2 percent reduction from statewide land-use driven GHG emissions would be necessary to meet the AB 32 goal of returning to the 1990 emission levels by 2020, which is lower than the statewide reduction of 28.5 percent required based on the original 2008 Climate Change Scoping Plan projections.

State Bill 97

SB 97, enacted in 2007, directed the State Office of Planning and Research (OPR) to develop California Environmental Quality Act (CEQA) Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions." In December 2009, OPR adopted amendments to the CEQA Guidelines, Appendix G Environmental Checklist, which created a new resource section for GHG emissions and indicated criteria that may be used to establish significance of GHG emissions. Appendix F of the CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a

25 California Air Resources Board, Climate Change Scoping Plan, December 2008, https://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed May 2017.

26 Bay Area Air Quality Management District, California Environmental Quality Act Guidelines Update Proposed Thresholds of Significance, May 2010, http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/proposed_thresholds_report_-may_3_2010_final.pdf?la=en. Accessed: May 2017.

project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable.

Thresholds of Significance

The California Supreme Court recently considered the CEQA issue of determining the significance of GHG emissions in its decision, *Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming* (Newhall Land Farming Company) (2d Dist. 2014) 224 Cal.App.4th 1105 (Supreme Ct., Case No. S217763).

Under the Court's guidance, since neither the City of Fountain Valley nor the City of Huntington Beach have adopted a CEQA-qualified Climate Action Plan, compliance with a Climate Action Plan is not an applicable threshold. The City of Huntington Beach has a Draft GGRP, but it has not yet been adopted. Therefore, although no formal significance threshold for GHG emissions associated with development typical of the proposed program has been adopted by the State or SCAQMD at this juncture, Section 15064.7(c) of the CEQA Guidelines states "when adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies..." In December 2008, SCAQMD adopted a 10,000 MTCO₂e/year for industrial facilities, but only with respect to industrial projects where SCAQMD is the lead agency. Additionally, SCAQMD has proposed, but not adopted, a 3,000 MT/year CO₂e threshold for mixed use developments. While the proposed Project does not fit neatly into either category, the more stringent of the two thresholds is used to determine significance.

Project Impacts

A. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction

Less than Significant Impact: The proposed project would involve the operation of three types of facilities. The three main facilities include a pump station, two flow equalization tanks, and associated piping with a valving/metering vault. Although construction activities would increase GHG emissions, those emissions would be relatively minor and would cease after completion of construction. The total anticipated construction-related emissions associated with the proposed project would be 297 MTCO₂e. Typically, GHG construction emissions are amortized over 30 years and added to operational emissions. The total project GHG emissions amortized over 30 years would be the equivalent of 10 MTCO₂e over the course of a 30-year period.

Operation

Less than Significant Impact: As discussed previously, the major sources of GHG emissions associated with the project are related to be operations (consumer product use) and electric consumption. Emissions from the operation of the proposed project would result in approximately 1,751 MTCO₂e annually. With the inclusion of the amortized construction emissions, annual emissions of greenhouse gases would be approximately 1,761 MTCO₂e. The 1,761 MTCO₂e is well below the SCAQMD's interim threshold of 3,000 MTCO₂e and therefore the cumulative contribution to GHG emissions would be less than significant.

B. Would the project be in conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact: The construction and operation of the proposed project would not result in the increase in transportation related emissions, and therefore, the proposed project would not conflict with the SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), California Assembly Bill 32, California Air Resources Board Scoping Plan, and other statewide strategies to reduce GHG emissions.²⁷ Additionally, although electrical consumption would be increased by the project, the new building and equipment would need to meet the requirements of the SCAQMD equipment standards. Therefore, the proposed Project would not be inconsistent with any of the plans policy strategies to reduce GHG emissions. Because the project would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions, impacts would be less than significant. No mitigation or further study is required.

4.8 Hazards/Hazardous Materials

Existing Setting

Exposure Hazardous Materials

Title 22 of the California Code of Regulations (CCR), Division 4.5, Chapter 11, Article 3 classifies hazardous materials into the following four categories based on their properties: toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), and reactive (causes explosions or generates toxic gases). Hazardous materials have been and are commonly used in commercial, agricultural and industrial applications as well as in residential areas to a limited extent. Hazardous wastes are hazardous materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. The health impacts of hazardous materials exposure are based on the frequency of exposure, the exposure pathway, and individual susceptibility. The proposed project would be constructed and operated on the OCSD Plant No. 2 Site. Presently, Plant No. 2 involves the handling

²⁷ Ibid. Pgs 5.7-18 to 5.7-19.

and storage of limited amounts hazardous materials as part of the treatment system processes and maintenance activities.

Fire Hazard

According to the City of Huntington Beach General Plan the study area is not located in a high fire hazard zone.

Contaminated Soils

Regulatory databases provided by federal, State, and local agencies provide information of past and present usage, storage and disposal of hazardous materials. A database search of hazardous materials sites was performed to identify potential contaminated sites in the study area using the online State Water Resources Control Board (SWRCB) GeoTracker Database and Department of Toxic Substances Control (DTSC) EnviroStor Database. The only reported hazardous site identified on OCSD Plant No. 2 Site was two closed leaking underground storage tanks. Both sites were determined to not pose significant risks to human health or the environment.

Airport Hazards

The Airport Land Use Commission (ALUC) of Orange County assists local agencies to ensure that there are no direct conflicts with land uses, noise or other issues that will impact the functionality and safety of airport and heliport operations. The ALUC requires that local jurisdictions general plans and zoning ordinances are consistent with Airport Environs Land Use Plans (AELUP's), which contain noise contours, restrictions for types of construction and building heights in navigable air space, as well as requirements impacting the establishment or construction of sensitive uses within close proximity to airports. There are no private airport facilities within the vicinity of the study area. The closest public airport is John Wayne Airport located approximately 5 miles from the study area.

State Emergency Response Act

The State Emergency Response Act requires local jurisdictions establish a Standardize Emergency Management System Multi-Hazard Functional Plan. Accordingly, the Office of Emergency Services, in coordination with all interested State and local agencies, jointly establish a standardized emergency management system for use by all emergency response agencies.

A. Would the project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Less than Significant Impact with Mitigation: The OCSD Plant No. 2 Site currently involves the handling and storage of limited amounts hazardous materials as part of the treatment system processes and maintenance activities. The implementation of the

proposed project would not substantially increase the handling and storage of hazardous materials.

The construction operations associated with the proposed project would involve the handling of incidental amounts of hazardous materials, such as fuels and oil. The proposed project would be required to comply with local, state and federal laws and regulations regarding the handling and storage of hazardous materials. Additionally, during construction operations Best Management Practices would be implemented as part of the implementation of the Storm Water Pollution Prevent Plan, that would include hazardous material spill prevention and management practices. With the implementation of Mitigation Measure HZ-1 potential hazardous material safety impacts would be less than significant.

Mitigation Measure

HZ-1: Any use of hazardous materials involved with the proposed project must be conducted in accordance with applicable federal, state and local regulations.

B. Would the project create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact with Mitigation: During construction, limited quantities of hazardous materials would be required to operate equipment and vehicles. To avoid the release hazardous materials into the environment, the handling, storage and transportation of hazardous materials would be done in compliance local, state and federal laws and regulations. Additionally, OCSD Plant No. 2 Site has emergency procedures and evacuation plans to address the onsite storage and handling of hazardous materials and corrective measures in the event of the inadvertent release of hazardous materials into the environment occurs. With the implementation of Mitigation Measure HZ-1 the potential impact associated with the accidental release of hazardous materials into the environment would be less than significant.

Mitigation Measure

Mitigation Measure HZ-1 required.

C. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substance or waste within one-quarter mile of an existing or proposed school.

No Impact: The closest school to the OCSD Plant No. 2 Site would Eder Elementary school located approximately ½ mile to the west. The long-term operation of the proposed project would not emit hazardous emissions, or involve the handling of acutely hazardous substances. No mitigation measures required.

D. Would the project be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and as a result, would create significant hazard to the public or the environment?

No Impact: There is no known hazardous material sites, pursuant to Government Code Section 65962.5 located on the OCSD Plant No. 2 Site that would create a significant hazard to the public.

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 the result in a safety hazard for people residing or working within the project area?

No Impact: The closest public airport facility to the project site is John Wayne Airport. According to the Airport Environs Land Use Plan for John Wayne Airport, the OCSD Plant No. 2 Site is not located within a Clear Zone or Accident Potential Zone. Therefore, implementation of the proposed project would not result in airport related safety hazards to people residing and/or working within the project area. No mitigation measures are required.

F. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact: There are not private air strips within the vicinity of the study area. Therefore no potential safety hazards associated with the private air strip would occur. No mitigation measures are required.

G. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact: The proposed project would be constructed and operated on the OCSD Plant No. 2 Site. The construction activities for the proposed project would not require any offsite road closures that could adversely interfere with adopted emergency plans or result in delays to emergency response times. No mitigation measures are required.

H. Would the project expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact: According to the City of Huntington Beach General Plan, the OCSD Plant No. 2 Site is not subject to wild land fire risks. Additionally, the study area is not adjacent to or intermixed with wild lands. Therefore, implementation of the proposed project would not expose people or structures to wild land fire risks. No mitigation measures are required.

4.9 Hydrology/Water Quality

Existing Setting

The study area is located in the lower Santa Ana River Watershed. The Santa Ana River Watershed is the largest watershed in coastal Southern California, consisting of over 2,800 square miles and encompassing parts of Riverside, San Bernardino and Orange Counties. The primary surface water body within the study area is the Santa Ana River. The study area also overlies the Orange County Groundwater Basin.

Santa Ana River

The Santa Ana River is the most prominent hydrologic feature within the watershed. The Santa Ana River is over 100 miles in length and has over 50 contributing tributaries. The headwaters for the Santa Ana River are in the San Bernardino Mountains to the north. The river extends westerly through the Santa Ana Valley to the Prado Basin where it is joined by several tributaries near Prado Dam. Downstream of Prado Dam, the Santa Ana River flows through the Santa Ana Mountain Canyon into Orange County before discharging into the Pacific Ocean. The flows of the Santa Ana River consist of storm flows and perennial flow (base flow) that increases in the winter and decreases in the summer. The base flow of the Santa Ana River consists almost entirely of treated wastewater discharged from upstream waste water treatment plants. The base flow of the Santa Ana River is the primary source of water to recharge the Orange County Groundwater Basin. Since 1933, OCWD has been diverting water from the Santa Ana River for groundwater recharge. Surface water flows of the Santa Ana River are diverted into a series of recharge basins to replenish the groundwater basin. Virtually all of the base flow of the Santa Ana River is captured by OCWD for groundwater recharge and only a portion of the total storm flow of the Santa Ana River is captured by OCWD for groundwater recharge. The storm water that is not captured by OCWD is lost to the ocean.

Orange County Groundwater Basin

The Orange County Groundwater Basin underlies central and northern Orange County and is bordered by the Santa Ana Mountains to the east, the Pacific Ocean to the west, the Newport-Inglewood Fault to the southwest and Coyote Hills to the north. The basin is contiguous and directly connected with the Central Basin of Los Angeles County to the northwest. The basin reaches depths of over 2,000 feet and is comprised of a complex series of interconnected sand and gravel deposits. The aquifer is divided into three sections, shallow, principal and deep. Most of the water in the basin is extracted from the principal aquifer.

Flood Hazards

As shown in Figure 13, the OCSD Plant No. 2 Site is located in Flood Zone X. This area is protected from the one-percent-annual-chance flood by levee, dike, or other structures subject to possible failure or overtopping during larger floods.

Seiche, Tsunami and Mudflow Hazards

Earthquakes can cause flooding due to tsunamis, seiches, or dam failure. Tsunamis are a potential hazard at this site due to the close proximity of the coast and low elevation.

According to the City of Huntington Beach General Plan, the OCSD Plant No. 2 Site is classified as a Moderate Tsunami Run-Up Area.

Seiches are earthquake-induced waves in an enclosed or partially enclosed body of water, which may produce flooding in local areas. The study area is not located near a body of water that could experience seiches.

Water Quality Regulations

The following is discussion of Federal, State and local water resource programs that would be applicable to the proposed project.

Federal

Clean Water Act

The objectives of the Clean Water Act are to restore and maintain the chemical, physical, and biological integrity of Waters of the United States. The Clean Water Act establishes basic guidelines for regulating discharges of pollutants into the Waters of the United States and requires states to adopt water quality standards to protect health, enhance the quality of water resources and to develop plans and programs to implement the Act. Below is a discussion of sections of the Clean Water Act that would be relevant to the proposed project.

Clean Water Act Section 303 (d)

Under Section 303 (d) of the Clean Water Act, the SWRCB is required to develop a list of impaired water bodies. Each RWQCB is responsible for establishing priority rankings and developing action plans, referred to as total maximum daily loads (TMDLs) to improve water quality of water bodies included in the 303(d) list.

Within Orange County, there are two reaches of the Santa Ana River. Reach 1 extends from the Tidal prism to 17th Street in the City of Santa Ana and Reach 2 extends from 17th Street to Prado Dam. Presently, Santa Ana River Reach 2 (17th Street in Santa Ana to Prado Dam) has been listed as impairment for indicator bacteria. The TMDLs for the Santa Ana River Reach 2 is required to be prepared before 2025. The Santa Ana River Reach 1 (Pacific Ocean to 17th Street in Santa Ana) is not listed as impaired.

State

Porter Cologne California Water Quality Control Act

The Porter Cologne Water Quality Act of 1967 requires the SWRCB and the nine RWQCBs to adopt water quality criteria for the protection and enhancement of Waters of the State of California, including both surface waters and groundwater. The SWRCB sets statewide policy and together with the RWQCB, implements state and federal water quality laws and regulations. Each of the nine regional boards adopts a Water Quality Control Plan. The applicable Water Control Plan for the study area would be the Santa Ana Region Basin Plan.

Regional Water Quality Control Board

Beneficial Uses

The Santa Ana Region Basin Plan designates beneficial uses for waters in the Santa Ana River watershed and provides quantitative and narrative criteria for a range of water quality objectives to certain receiving water bodies in order to protect beneficial uses. Table 11 describes the beneficial uses established in the Santa Ana Region Basin Plan.

Table 11: Beneficial Uses

Abbreviation	Beneficial Use
GWR	Groundwater Recharge waters are used for natural or artificial recharge of groundwater for purposes that may include, but are not limited to, future extraction, maintaining water quality or halting saltwater intrusion into freshwater aquifers.
REC 1	Water Contact Recreation waters are used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses may include, but are not limited to swimming, wading, water skiing, skin and scuba diving, surfing, whitewater activities, fishing and use of natural hot springs.
REC 2	Non-Contact Water Recreation waters are used for recreational activities involving proximity to water, but not normally body contact with water where ingestion of water would be reasonably possible. These uses may include, but are not limited to picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing and aesthetic enjoyment in-conjunction with the above activities.
WARM	Warm waters support warm water ecosystems that may include but are not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.
LWARM	Limited Warm Freshwater Habitat waters support warm water ecosystems which are severely limited in diversity and abundance.
COLD	Cold Freshwater habitat waters support coldwater ecosystems.
BIOL	Preservation of Biological Habitats of Special Significance waters support designated areas of habitats.
WILD	Wildlife Habitat waters support wildlife habitats that may include, but are not limited to the preservation and enhancement of vegetation and prey species used by waterfowl and

	other wildlife.
RARE	Rare, Threatened or Endangered Species (RARE) waters support habitats necessary for the survival and successful maintenance of plant or animal species designated under state or federal law as rare, threatened or endangered.
MUN	Municipal and Domestic Supply waters are used for community, military, municipal or individual water supply systems. These uses may include, but are not limited to drinking water supply.
AGR	Agricultural Supply waters are used for farming, horticulture or ranching. These uses may include, but are not limited to irrigation, stock watering, and support of vegetation for range grazing.
IND	Industrial Service Supply waters are used for industrial activities that do not depend primarily on water quality. These uses may include, but are not limited to mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection and oil well depressurization.
PROC	Industrial Process Supply waters are used for industrial activities that depend primarily on water quality. These uses may include, but are not limited to, process water supply and all uses of water related to product manufacture or food preparation.
NAV	Navigation waters are used for shipping, travel, or other transportation by private, commercial or military vessels.
POW	Hydropower Generation waters are used for hydroelectric power generation.
COMM	Commercial and Sportfishing waters are used for commercial or recreational collection of fish or other organisms
EST	Uses of water that support estuarine ecosystems including, but not limited to preservation or enhancement of estuarine habitats, vegetation, fish, shell fish or wildlife.
MAR	Use of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shell fish or wildlife.
SPWN	Use of water that support high quality aquatic habitats suitable for reproduction and early development of fish.
SHELL	Use of water that support habitats suitable for the collection of filter-feeding shellfish for human consumption, commercial or sports purposes.

As shown in Table 12, the Santa Ana Region Basin Plan establishes the following beneficial uses for Reach 1 and Reach 2 of the Santa Ana River and for the Orange County Groundwater Basin.

Table 12: Beneficial Uses Santa Ana River/Orange County Groundwater Basin

Reach 1	Reach 2	Orange County Groundwater Basin
Recreation 2	Agriculture	Municipal Supply Waters
Recreation 1	Groundwater Recharge Recreation 1	Agriculture Supply Waters
Warm Water Habitat	Recreation 2	Industrial Process Supply Waters
Wild Water Habitat	Warm Water Habitat	Industrial Service Supply Waters
	Wild Water Habitat	
	Rare Waters	

Water Quality Objectives

The Santa Ana Region Basin Plan establishes Water Quality Objectives for water bodies within the study area to ensure the protection of Beneficial Uses. As shown in Table 13 the Santa Ana Region Basin Plan establishes water quality objectives for Reach 1 and Reach 2 of the Santa Ana River and for the Orange County Groundwater Basin.

Table 13: Water Quality Objectives (mg/L)

Reach	TDS	HARD	Na	Cl	TIN	SO4	COD	B
Santa Ana River Reach 1	NL	NL	NL	NL	NL	NL	NL	NL
Santa Ana River Reach 2	650(1)	NL	NL	NL	NL	NL	NL	NL
Orange County Groundwater Basin	580	NL	NL	NL	NL	NL	NL	NL
(1)- Five year moving average, NL-Not Listed								

Regional

OCSD Individual NPDES Permit

Presently, OCSD Plant No. 1 and Plant No. 2 have a National Pollutant Discharge Elimination System (NPDES) Individual Permit for discharges of storm water associated with their industrial activities. The Individual Permit regulates activities that may affect storm water runoff quality at certain types of industrial facilities, including publicly owned wastewater treatment plants with design flows greater than 1.0 MGD, such as the OCSD. Under the Individual Permit, facilities which discharge storm water to municipal sanitary sewer systems instead of to waters of the United States are not required to obtain a General Construction Permits or Industrial Permit providing an onsite storm water management plan is prepared and implement that contains BMPs to ensure that construction site surface water runoff and long term surface water runoff is retained onsite and incorporated into existing wastewater treatment processes.

Project Impacts

A. Would the project violate Regional Water Quality Control Board Water Quality standards or waste discharge standards?

Recycled Water Requirements

No Impact: The proposed project would increase the amount wastewater flows to the OCWD GWRS, where it would be advanced treated to drinking water standards. The GWRS water would be used to replenish the Orange County Groundwater Basin. The use of GWRS recycled water for groundwater replenishment is permitted under RWQCB Order R-8-2004-0002 and subsequent amendment R8-2008-0058. These two permits specify water recycling requirements for the GWRS. The GWRS water produced by the additional wastewater flows from OCSD Plant No. 2 Site would be

subject to the same permit conditions. Compliance with RWQCB permit requirements would ensure that the use of GWRS water to replenish the Orange County Groundwater Basin would not violate RWQCB recycled water quality standards.

Beneficial Uses

No Impact: All of the recycled water produced from the proposed project would be used to replenish the Orange County Groundwater Basin. The recycled water would be used for Municipal Water Supply, Agriculture, Industrial and Industrial Processes beneficial uses. The implementation of the proposed project would not be in conflict with beneficial uses identified in the Santa Ana Region Basin Plan.

Water Quality Objectives

No Impact: The GWRS RWQCB permit requires that the GWRS recycled water meet all water quality objectives in the Santa Ana Region Basin Plan. Therefore, the use of GWRS water to replenish the Orange County Groundwater Basin would not be in conflict with water quality objectives identified in the Santa Ana Region Basin Plan.

Section 303 (d) Impaired Water Bodies

No Impact: Reach 2 of the Santa Ana River has been listed as impairment for indicator bacteria. The wastewater flows from the OCSD Plant No. 2 Site would be highly treated and disinfected for bacterial as part of the OCWD GWRS water treatment process. The implementation of the proposed project would not introduce elevated levels of bacteria and would not further impair any Section 303 (d) listed water body.

B. Would the project 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?

No Impact: The implementation of the proposed project would generate additional wastewater supplies for OCWD's GWRS, which would produce an additional 68,000 acre feet of new water supplies to replenish the Orange County Groundwater Basin. Current State of California's regulations regarding Groundwater Replenishment Reuse Projects (GRRPs), such as OCWD GWRS, were made final by the California Department of Public Health and formally adopted in 2014. Immediately thereafter, the Drinking Water Division (DDW) responsible for developing the GRRP regulations was transferred from CDPH to the State Water Resources Control Board (SWRCB). The GRRP regulations require a minimum subsurface response retention time (RRT) of two months for Full Advanced Treatment (FAT) projects, along with pathogen log-removal standards that could require additional subsurface residence time. These RRT requirements call for establishing both primary and secondary boundaries (i.e., buffer areas); the primary boundary is the traditional area in which the construction of new drinking water wells would be restricted, while the secondary boundary is a zone of potential controlled potable well construction, within which the operation of future new

well could extend otherwise materially affect the primary boundary, thereby requiring further study and potential mitigating activities prior to potable well construction. The water produced from the proposed project would be conveyed to existing OCWD groundwater replenishment basins or facilities at locations that would meet the travel time requirement. The operation of the proposed project would increase groundwater supplies and would have a beneficial impact on the Orange County Groundwater Basin. No mitigation measures are required.

C. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?

Less than Significant impact with Mitigation: Excavation and grading activities involved with the proposed project would uncover soils and potentially expose them to water and erosion impacts. Additionally construction equipment entering and exiting the work areas could track sediment onto local streets and into local and regional drainage systems. To minimize erosion impacts OCWD would file a Notice of Intent (NOI) with the State Water Resources Control Board and prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would contain a map showing the building site, onsite and adjacent roadways, storm water collection points and drainage patterns across the site. The SWPPP would also provide a list of Best Management Practices (BMP) that would be used to minimize sediment and wind erosion impacts. With implementation Mitigation Measure GEO-2 potential erosion impacts would be less than significant.

Mitigation Measure

Mitigation Measure GEO-2 required.

D. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite?

Less than Significant impact: The proposed project would construct 66,900 square feet of new impervious surfaces on the OCSD Plant No. 2 Site. The amount of new impervious surfaces would increase the existing rates of surface water runoff generated from the Plant No. 2 Site. The additional surface water runoff generated from the proposed project would be incorporated into onsite existing drainage systems and would not increase onsite flood risks or offsite flood risks. To ensure that adequate drainage facilities would be available, OCWD would implement Mitigation Measure HWQ-1, which requires OCWD to coordinate with OCSD on the capacity of existing drainage systems and the ability of those drainage systems to accommodate surface water runoff generated by the proposed project.

HWQ-1: OCWD will coordinate with OCSD on the capacity of existing drainage systems to receive surface water runoff generated from the proposed project and would participate in any drainage improvements required accommodate the surface water runoff flows.

E. Would the project create or contribute runoff which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact: The construction and operation of the proposed project would generate short-term constructions related surface runoff impacts and long-term surface runoff impacts.

Construction Surface Water Runoff Management

The proposed project construction activities would disturb over one acre of area. To minimize adverse construction site surface water runoff water quality impacts, OCWD would file a Notice of Intent to disturb soils (NOI) and prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would also provide a list of Best Management Practices (BMP) to retain construction site runoff onsite for onsite treatment. With implementation Mitigation Measure GEO-2 potential adverse surface water runoff water quality impacts would be less than significant.

Long Term Surface Water Runoff Management

The GWRS Final Expansion Project would construct 66,900 sq. ft. of new impervious surfaces at the OCSD Plant No. 2 Site. The long term operation surface water runoff flows would be conveyed into existing drainage systems and incorporated into existing onsite wastewater treatment processes. By retaining and incorporating the surface water flows into the existing treatment processes potential long storm surface water runoff water quality impacts would be less than significant. To ensure that adequate drainage facilities would be available, OCWD would implement Mitigation Measure HWQ-1, which requires OCWD to coordinate with OCSD on the capacity of existing drainage systems and the ability of those drainage systems to accommodate surface water runoff generated by the proposed project.

Mitigation Measures

Mitigation Measure GEO-2 and HWQ-1 required.

F. Would the project otherwise degrade water quality?

Less than Significant Impact with Mitigation: The use of GWRS recycled water for ground water replenishment is permitted under RWQCB Order R-8-2004-002 and subsequent amendment R-2008-0058. These two permits specify water recycling requirements for the GWRS. Compliance with RWQCB permit requirements would

ensure that use of GRWS recycled water for ground water replenishment would not degrade groundwater water quality.

The long term operation of the proposed project would have beneficial impacts on groundwater supplies in Orange County and would support beneficial uses designated for Reach 2 of the Santa Ana River and for the Orange County Groundwater Basin.

The project would not result in conflicts in achieving water quality objectives established in the Santa Ana Region Basin Plan.

Both construction site surface water runoff and long term surface water runoffs flows would be retained onsite and incorporated into existing wastewater treatment processes to avoid adverse water quality impacts.

Mitigation Measures

Mitigation Measure GEO-2 and HWQ-1 required.

G. Would the project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood insurance Rate map or other flood hazard delineation map?

No Impact: The proposed project does not involve construction of residential housing. Therefore, implementation of the proposed project would not subject any housing to potential flood risks. No mitigation measures are required.

H. Would the project place within a 100-year floodplain structures which impedes or redirect flows?

No Impact: As shown in Figure 13 the study area is not located within a 100-year flood plain. Flood improvements along the Santa Ana River have been designed to provide flood control protection up to a 190 year storm event. The proposed project would not construct any structures or conduct any activities within a 100 year flood area that would impede or re-direct flood flows.

I. Would the project 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?

No Impact: The OCSD Plant No. 2 Site is located downstream of Prado Dam. Improvements implemented at Prado Dam and at Seven Oaks Dam and along the Santa Ana River have been designed to provide flood control protection up to a 190 year storm event. The proposed project would not involve the construction of any structures or involve any facilities that would adversely impact the flood control capacity or increase flood risks at Prado Dam or along the Santa Ana River. Therefore, no potential impacts in regards to risk levee failure would occur.



0 200 400 Feet

GWRS Conveyance Facility Project
FEMA Flood Hazard Areas

Figure 13

J. Could the project site be inundated by a seiche, tsunami, or mudflow?

Less than Significant Impact: The OCSD Plant No. 2 Site is located in a Moderate Tsunami Run-Up Area. The likelihood that a tsunami would be large enough to inundate the site would be low and the potential impact for the study area to exposed tsunami impacts would be less than significant.

The study area and surrounding area does not contain any slopes, hillsides or mountains that pose the threat for mudflow impacts. Therefore, potential mudflow impacts would be less than significant. No mitigation measures are required.

4.10 Land Use/Planning

Existing Setting

Existing Land Uses

The OCSD Plant No. 2 Site is currently developed with wastewater treatment facilities, administrative buildings, parking areas onsite roadways. Plant No. 2 Site is situated within the urbanized environment and surrounded by the Santa Ana River to the east, Brookhurst Street and residential uses to the west and north and the Talbert Marsh to the south. The study area is predominantly built out.

Relevant Planning Programs

The following are relevant planning programs that would apply to the proposed project.

City of Huntington Beach General Plan

The City of Huntington Beach General Plan designates the OCSD Plant No. 2 Site Public. The Public designation allows governmental administrative and related facilities, such as public utilities, schools, public parking lots and infrastructure.

City of Huntington Beach General Plan Coastal Element

The OCSD Plant No. 2 Site is located within Coastal Zone and subject to the California Coastal Act. The California Coastal Act is implemented by the City of Huntington Beach General Plan Coastal Element. The Coastal Element includes a land use plan and policies to guide land use decisions within the coastal zone. The OCSD Plant No. 2 Site is located in Zone 5, which extends from Beach Boulevard to the Santa Ana River. The Coastal Element designates OCSD Plant No. 2 4G-Edison Plant. Permitted uses include public uses and open space conservation. Any development activity occurring in the Coastal Zone would be required to obtain a Coastal Development Permit approved by the City of Huntington Beach.

City of Huntington Beach Zoning Code

The portion of the OCSD Plant No. 2 Site where the proposed project would be constructed is zoned IG (Industrial General). The Industrial General zoning designation

allows for full range of manufacturing, industrial processing, resource and energy production, general services and distribution land uses and establishes a maximum height restriction of 40 feet.

A. Would the project physically divide an established community?

Less than Significant Impact with Mitigation: The long term operation of the proposed project would be compatible with existing uses on the OCSD Plant No. 2 Site. All construction activities would occur on OCSD Plant No. 2 Site and would not physically impact any offsite existing residential communities, businesses or industries within the study area. Potential long term land use impacts to established communities within the study area would be less than significant. To minimize construction impacts to surrounding land uses within the study area, OCWD would coordinate with the public on upcoming construction activities. With the implementation of Mitigation Measure LU-1 potential construction impacts to existing land uses would be less than significant.

Mitigation Measure

LU-1: OCWD will provide residents and business owners with notifications of upcoming construction activities.

B. Would the project be in conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant Impact with Mitigation: The City of Huntington Beach General Plan land Use Element designates the OCSD Plant No. 2 Site Public. According to General Plan public utilities are a permitted land use under the Public land use category. The proposed flow equalization tanks and pump station improvements would be consistent with the Public land use designation in that the proposed improvements would be an expansion of the existing public utility uses occurring on the OCSD Plant No. 2 Site.

The City of Huntington Beach Coastal Element designates the OCSD Plant No. 2 Site 4G-Edison Plant and identifies public uses and open space conservation as permitted land uses, subject to approval of a Coastal Development Permit. The proposed flow equalization tanks and pump station improvements would be consistent with the Coastal Element in that the proposed improvements would be a continuation of existing public uses occurring on the site. The proposed project with approval of Coastal Development Permit would not be in conflict with the City of Huntington Beach General Plan Coastal Element.

The northern portion of the OCSD Plant No. 2 Site where the flow equalization tank and pump station would be constructed is zoned Industrial General. The Industrial General zoning designation allows for full range of manufacturing, industrial processing, resource and energy production land uses. The proposed flow equalization tank and

pump station improvements would be consistent with the Industrial General Zoning District in that the proposed improvements would be an expansion of the existing industrial land uses occurring on the site. The Industrial General Zoning District establishes a maximum height of 40 feet. The tallest structure proposed would be flow equalization tank at a height of 28 feet. The proposed project would not be in conflict with the City of Huntington Beach Zoning Code.

Mitigation Measure

LU-2: Prior to construction of the Flow Equalization Tank OCWD will obtain approval of Coastal Development Permit from the City of Huntington Beach.

C. Would the project be in conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact: The OCSD Plant No. 2 Site is situated within an urban setting. There are no habitat management plans or natural community conservation plans established on the site. Therefore, implementation of the proposed project would not be in conflict with any habitat conservation plan or natural community conservation plan.

4.11 Mineral Resources

Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact: According to the City of Huntington Beach General Plan, the OCSD Plant No. 2 Site is not identified as containing mineral resources of regional significance. Additionally, the Plant No. 2 Site is currently not used for mineral extraction. Therefore, no impacts on regional minerals or minerals of state importance would occur.

B. Would the project 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?

No Impact: According to the City of Huntington Beach General Plan, the OCSD Plant No. 2 Site is not identified as containing mineral resources of regional significance. Additionally, the Plant No. 2 Site is currently not used for mineral extraction. Therefore, no impacts on regional minerals or minerals of regional importance would occur.

4.12 Noise

The following noise impact analysis is based on GWRS Water Conveyance Facilities Project Noise Impact Analysis prepared Environmental Science Associates in January of 2018. The reported is presented in Appendix D.

Existing Setting

Noise is defined as unwanted sound. Sound becomes unwanted when it creates a nuisance that interferes with normal activities, or when it causes physical harm and

adversely affects human health. The standard unit of measurement of the loudness of sound is the decibel (dB). The zero point on the dB scale is based on the lowest sound level that a healthy, unimpaired human ear can detect. Changes of 3 dB or fewer are only perceptible in laboratory environments. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10-dB increase in sound level is perceived as approximately a doubling of loudness.

Numerous methods have been developed to measure sound over a period of time, including: Equivalent Sound Level (L_{eq}), Community Noise Equivalent Level (CNEL), Day/Night Average Sound Level (L_{dn}) and Maximum Noise event (L_{max}). Noise level can vary depending on the noise source and duration. Below is description of the units of measure used in this analysis to describe the noise environment.

- L_{eq} : Time variations in noise exposure are typically expressed as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period (called L_{eq}). For example, the noise levels exceeded on 10 percent of readings is called L_{10} , the median (50th percentile) reading is called L_{50} , etc.
- CNEL: Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment penalty be added to quiet-time noise levels in a 24-hour noise descriptor called CNEL.
- L_{dn} : Another commonly used method is the day/night average level or L_{dn} .
- L_{dn} is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure.
- L_{max} : The maximum noise level recorded during a noise event is typically expressed as L_{max} .

Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Extended periods of noise exposure above 90 dBA could result in permanent hearing damage. When the noise level reaches 120 dBA, a ticking sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 190 dBA will rupture the eardrum and permanently the inner ear. Table 14 summarizes typical noise sources, levels, and responses.

Table 14: Noise Levels and Human Response

Noise Source	Noise Level dBA	Response
Library	30	Very quiet
Refrigerator humming	40	Quiet
Quiet office	50	Quiet
Normal conversation	60	Intrusive
Vacuum cleaner	70	Telephone use difficult
Freight train at 50 feet	80	Interferes with conversation
Heavy-duty truck at 50 feet	90	Annoying
Jet takeoff at 2,000 feet	100	Very annoying; hearing damage at sustained exposure levels
Unmuffled motorcycle	110	Maximum vocal effect; physical discomfort
Jet takeoff at 200 feet	120	Regular exposure over one minute risks permanent hearing loss
Shotgun firing	130	Pain threshold
Carrier jet operation	140	Harmfully loud
Source: Melville C. Branch and R. Dale Beland, 1970.		

Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in noise models, soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/ for each doubling of distance from the point source is typically observed over soft ground with landscaping, as compared with a 6.0 dBA/for each doubling of distance over hard ground such as asphalt, concrete, stone and very hard packed earth

Noise Barrier Attenuation

For a noise barrier to work, it must be high enough and long enough to block the view of the noise source. A noise barrier is most effective when placed close to the noise source or receiver. A noise barrier can achieve a 5 dBA noise level reduction when it is tall enough to break the line-of-sight and greater heights increase the noise reduction. When the noise barrier is a berm instead of a wall, the noise attenuation can be increased by another 3 dBA.

Applicable Noise Standards

Federal

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR)

that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, the USEPA issued guidance levels for the protection of public health and welfare in residential land use areas²⁸ of an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA. These guidance levels are not considered as standards or regulations and were developed without consideration of technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the project.

Under the Occupational Safety and Health Act of 1970 (29 U.S.C. §1919 et seq.), the Occupational Safety and Health Administration (OSHA) has adopted regulations designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring the noise to which workers are exposed, ensuring that workers are made aware of overexposure to noise, and periodically testing the workers' hearing to detect any degradation.

State

The State of California does not have statewide standards for environmental noise, but the California Department of Health Services (DHS) has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The purpose of these guidelines is to maintain acceptable noise levels in a community setting for different land use types. Noise compatibility by different land use types is categorized into four general levels: "normally acceptable," "conditionally acceptable," "normally unacceptable," and "clearly unacceptable." For instance, a noise environment ranging from 50 dBA CNEL to 65 dBA CNEL is considered to be "normally acceptable" for multi-family residential uses, while a noise environment of 75 dBA CNEL or above for multi-family residential uses is considered to be "clearly unacceptable." In addition, California Government Code Section 65302(f) requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(g) requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community; (2) recognize Office of Noise Control guidelines; and (3) analyze and quantify current and projected noise levels.

The state has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (Title 24, California Code of Regulations). The

²⁸ USEPA, *EPA Identifies Noise Levels Affecting Health and Welfare*. April 1974.

noise insulation standards set forth an interior standard of 45 dBA CNEL in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dBA CNEL. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

City Huntington Beach

The Noise Element of the General Plan acknowledges that a number of residential, commercial, and industrial land uses in the City of Huntington Beach, particularly along arterial roadways, are impacted by vehicular noise levels that exceed city noise/land use compatibility standards. For residential land uses, the normally acceptable interior and exterior noise standards are 45 and 60 L_{dn} , respectively.

Relevant noise policies from the Noise Element include:

Policy N 1.2.2 – Require new industrial and commercial land uses or the major expansion of existing land uses to demonstrate that the new or expanded use would not be directly responsible for causing exterior noise levels to exceed 65 L_{dn} in areas containing noise sensitive land uses.

Policy N 1.2.5 – Require development that generates increased traffic and subsequent increases in ambient noise levels adjacent to noise sensitive land uses to provide for appropriate mitigation measures in accordance with acceptable limits of the City's Noise Ordinance.

Policy N 1.6.1 – Ensure that construction activities be regulated to establish hours of operation, to prevent and/or mitigate the generation of excessive or adverse noise impacts through implementation of the City's Noise Ordinance.

Policy N 1.12.1 – Require detailed and independent acoustical studies be completed for any new or renovated land uses or structures determined to be potential major stationary noise sources.

Municipal Code

Chapter 8.40 of the Huntington Beach Municipal Code (HBMC) serves as the City's Noise Ordinance, which establishes noise standards to control unnecessary, excessive, and annoying noise levels in the City. Table 15 shows the applicable exterior noise standards for the designated noise zones established in the City's Noise Ordinance.

Table 15 Huntington Beach Exterior Noise Standards

Noise Zone	Exterior Noise Standards	Time Period
1 – All residential properties.	55 db(A) 50 db(A)	7:00 a.m. – 10:00 p.m. 10:00 p.m. – 7:00 a.m.
2 – All professional office & public institution properties.	55 db(A)	Anytime

3 – All commercial properties with the exception of professional office properties.	60 db(A)	Anytime
4 – All industrial properties.	70 db(A)	Anytime

SOURCE: City of Huntington Beach Municipal Code Section 8.40.050

The exterior noise levels shown in Table 15 are meant to be further applied as noise standards based on the duration of the noise; i.e., the louder the noise, the shorter the time it can last. According to Section 8.40.060 of the City Noise Ordinance, it is unlawful for any person at any location within the incorporated area of the City to create noise levels that, when measured on any residential, public institutional, professional, commercial, or industrial property, to exceed the exterior noise standards shown in Table 15:

- a) For a cumulative period of more than thirty (30) minutes in any hour;
- b) Plus 5 dB(A) for a cumulative period of more than fifteen (15) minutes in any hour;
- c) Plus 10 dB(A) for a cumulative period of more than five (5) minutes in any hour;
- d) Plus 15 dB(A) for a cumulative period of more than one (1) minute in any hour; or
- e) Plus 20 dB(A) for any period of time.

Section 8.40.060 further states that in the event the ambient noise level exceeds any of the first four noise limit categories provided above, the cumulative period noise level applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

According to Section 8.40.090(D) of the City Noise Ordinance, construction noise is among one of the noise sources that are exempt from the City's established noise standards. Provided that a permit has been obtained from the City, noise sources associated with construction, repair, remodeling, or grading of any real property are deemed to be exempt from the City's noise standards as long as such activities are not conducted between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a federal holiday.

Existing Noise Setting

Some land uses are considered more sensitive to ambient noise levels than others are, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. According to the General Plan, residential areas are to be the most sensitive type of land use to noise and

industrial/commercial areas are considered to be the least sensitive. Existing noise sensitive uses in the vicinity of the project site include the following:

- Residential Uses: single-family residences and multi-family residential uses are located to the west and north of the project site along Brookhurst Street.

Ambient Noise Levels

The predominant existing noise source surrounding the project site is roadway noise from Brookhurst Street to the west. Ambient noise measurements were conducted at two locations, representing the nearby land uses in the vicinity of the project site to establish conservative ambient noise levels. Long-term (24-hour) measurements were conducted at locations R1 and R2. Ambient sound measurements were conducted on Wednesday, July 13, 2016, to characterize the existing noise environment in the project vicinity. The ambient noise measurements were conducted using the Larson-Davis 820 Precision Integrated Sound Level Meter (“SLM”). The Larson-Davis 820 SLM is a Type 1 standard instrument as defined in the American National Standard Institute S1.4. All instruments were calibrated and operated according to the applicable manufacturer specification. The microphone was placed at a height of 5 feet above the local grade, at the following locations.

- Measurement Location R1: represents the existing noise environment of single-family residential uses west of the project site along Brookhurst Street across from Ocean Breeze Street. The SLM was placed on the west of the project site along Brookhurst Street.
- Measurement Location R2: represents the existing noise environment of multi-family residential uses north of the project site along Brookhurst Street. The SLM was placed on the southwestern boundary of the multi-family residential uses along Brookhurst Street.

Table 16 Summary of ambient noise measurement

Location, Duration, Existing Land Uses and, Date of Measurements	Daytime (7 A.M. to 10 P.M.) Hourly L_{eq}	Daytime Average Hourly L_{eq}	Nighttime (10 P.M. to 7 A.M.) Hourly L_{eq}	Nighttime Average Hourly L_{eq}	24-Hour Average, CNEL
R1 – Single-family Residential Uses 7/13/16 (24 hour)/Wednesday	66 – 69	67	56 – 67	61	69
R2 – Multi-family Residential Uses 7/13/16 (24 hour)/Wednesday	68 – 70	69	58 – 66	62	71

SOURCE: ESA, 2016

A summary of noise measurement data is provided in Table 16. As shown in Table 16, the existing ambient daytime noise levels ranged from 66 dBA to 69 dBA L_{eq} , at R1 and

from 68 dBA to 70 dBA L_{eq} at R2. The existing ambient nighttime noise levels ranged from 56 dBA to 67 dBA L_{eq} at R1 and from 58 dBA to 66 dBA L_{eq} at R2.

Project Impacts

A. Would the project expose 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?

Onsite Construction Noise

Less Than Significant Impact: Construction of the proposed project would require the use of heavy equipment during the grading, and excavation activities at the project site. During each stage of development, there would be a different mix of equipment. As such, construction activity noise levels at and near the project site would fluctuate depending on the particular type, number, and duration of use of the various pieces of construction equipment.

Individual pieces of construction equipment anticipated during proposed project construction could produce maximum noise levels of 60 dBA to 82 dBA L_{max} at a reference distance of 50 feet from the noise source, as shown in Table 9. These maximum noise levels would occur when equipment is operating at full power. The estimated usage factor for the equipment is also shown in Table 17. The usage factors are based on FHWA's RCNM User's Guide.²⁹

Table 17 Construction Equipment Noise Levels

Construction Equipment	Noise Level at 50 Feet (dBA, L_{max})	Estimated Usage Factor, %
Backhoe ²	69	50
Bull Dozer ¹	82	40
Concrete Truck ²	75	25
Crane ¹	81	40
Dump Truck ¹	76	20
Drill Rig Truck ²	76	50
Excavator ¹	81	40
Forklift ²	60	50
Man Lift ²	68	25
Water Truck ¹	80	10

¹ Obtained from FHWA Roadway Construction Noise Model, 2006.

² Obtained from Noise Abatement Plan Mid-Basin Monitoring Well SAR-11, prepared by Vista Environmental, August 11, 2011.

During project construction, the nearest and most notable offsite sensitive receptors that would be exposed to increased noise levels would be the existing single-family residential uses located in proximity to the project site. Specifically, the nearest offsite noise sensitive receptors include the following:

²⁹ Federal Highway Administration, Roadway Construction Noise Model User's Guide, 2006.

- Single-family residences along Brookhurst Street approximately 170 feet west of the project site; and
- Multi-family residences along Brookhurst Street approximately 90 feet north of the project site.

Over the course of a construction day, the highest noise levels would be generated when multiple pieces of construction equipment are being operated concurrently. As discussed previously, the project's estimated construction noise levels were calculated for a scenario in which all construction equipment was assumed to be operating simultaneously and some of them located at the construction area nearest to the affected receptors to present a conservative impact analysis. The estimated noise levels at the offsite sensitive receptors were calculated using the FHWA's RCNM, and were based on the concurrent operation of 14 pieces of equipment (i.e., drill rig truck, backhoe, concrete truck, dump truck, water truck, etc.) which is considered a worst-case evaluation because the project would use less overall equipment on a daily basis, and as such would generate lower noise levels. Table 18, shows the estimated construction noise levels that would occur at the nearest offsite sensitive uses during a peak day of construction activity at the project site.

Table 18 Estimated Construction Noise Levels at Offsite Sensitive Uses

Offsite Sensitive Land Uses	Location	Approximate Distance to Project site (ft.) ¹	Estimated Maximum Construction Noise Levels (dBA L _{eq})	Significance Threshold (dBA L _{eq}) ³	Exceeds Threshold?
Single-family residential uses	West of the project site along Brookhurst Street	170	66 ²	71	No
Multi-family residential uses	North of the project site Brookhurst Street	90	69 ²	73	No

¹ The distance represents the nearest construction area on the project site to the property line of the offsite receptor.

² Receptors are partially shielded from the construction site by existing walls; and such shielding is included in the analyses representing a 5 dBA reduction in noise levels.

³ The significance thresholds are the lowest daytime ambient noise levels as shown in Table 3 plus 5 dBA.

SOURCE: ESA, 2016.

As shown in Table 18, the peak day construction noise levels experienced by the offsite sensitive receptors would range from 66 dBA L_{eq} at the single-family residential uses located west of the project site to 69 dBA L_{eq} at the multi-family residential uses located north of the project site. Thus, construction activities associated with the project would generate episodic noise levels below the significance thresholds of 71 dBA (the lowest daytime ambient noise level of 66 dBA as shown in Table 3 plus 5 dBA) and 73 dBA (the lowest daytime ambient noise level of 68 dBA as shown in Table 3 plus 5 dBA) at the residential uses west and north of the project site, respectively. Because construction noise levels associated with the proposed project would not exceed the significance thresholds at the offsite sensitive locations, construction activities associated with the proposed project would not expose persons to, or generate noise levels in excess of standards established in the local general plan or noise ordinance, or

applicable standards of other agencies, Therefore, impacts would be less than significant, and no mitigation measures would be required.

Offsite Construction Noise

Less Than Significant Impact: Delivery truck and haul truck trips would occur throughout the construction period. Trucks traveling to and from the project site would be required to travel along Brookhurst Street. An estimated maximum of approximately 10 worker's vehicle trips, 1 vendor truck trip, and 30 haul truck trips would occur per day.

The project's truck trips would generate noise levels of approximately 50 dBA CNEL at 25 feet distance along Brookhurst Street. As shown in Table 16, the existing noise levels along Brookhurst Street ranged from 69 dBA to 71 dBA CNEL. Noise levels of 50 dBA CNEL generated by construction-related traffic would not increase the ambient noise levels of 69 dBA to 71 dBA CNEL along Brookhurst Street when combining the ambient noise levels and noise from project construction traffic. Because construction traffic would not increase ambient noise levels along Brookhurst Street, the 5 dBA ambient noise increase threshold would not be exceeded. Therefore, off-site construction traffic noise impacts would be less than significant.

Operational Noise Impacts

Less Than Significant Impact: Once the proposed pump station is operational, noise levels generated at the project site would mainly occur from the pump station. The pump station would be a 25-foot tall concrete building (from grade) with five 350-hp pumps located within the building. The five pumps will be configured as four active duty pumps and one standby pump. The five pumps will be installed within individual 30-inch diameter wet wells. Each of the wet wells will be drilled to 25-feet below grade.

The analysis of the pump station-related noise is based upon reference noise measurement conducted on July 15, 2016 at a pump station located in the OCWD facility at 18700 Ward Street, Fountain Valley, CA. Pump station-related noise levels were measured inside of the pump station and outside of the pump station at 5 feet from a louver. A noise level of 80 dBA was measured inside of the pump station and a noise level of 66 dBA was measured at 5 feet from the louver outside of the pump station. The pump station structure with louvers would provide approximately a 14 dBA noise reduction.

The single-family residential uses (R1) west of the project site would be located approximately 330 feet from the proposed pump station. Based on a noise level source strength of 66 dBA at a reference distance of 5 feet, and accounting for distance attenuation (minimum 36 dBA insertion loss) and barrier insertion loss by block walls (minimum 5 dBA insertion loss), pump station related noise would be reduced to 25 dBA at the single-family residential uses (R1). As such, pump station related noise would not

exceed the significance threshold of 61 dBA (the lowest nighttime ambient noise level of 56 dBA as shown in Table 16 plus 5 dBA).

The multi-family residential uses (R2) north of the project site would be located approximately 360 feet from the proposed pump station. Based on a noise level source strength of 66 dBA at a reference distance of 5 feet, and accounting for distance attenuation (minimum 37 dBA insertion loss) and barrier insertion loss by block walls (minimum 5 dBA insertion loss), pump station related noise would be reduced to 24 dBA at the nearest noise sensitive uses (R2). As such, pump station related noise would not exceed the significance threshold of 63 dBA (the lowest nighttime ambient noise level of 58 dBA as shown in Table 16 plus 5 dBA). Operation of the project would not expose persons to, or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, Therefore, impacts would be less than significant.

B. Would the project result in a permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact: As discussed previously under Impact 1, due to the proximity of the existing offsite sensitive uses to the project site, project operations would not expose sensitive receptors to increased exterior noise levels. As set forth in Section 4.2 above, a project would normally have a significant impact on noise levels from operation if the project would exceed the nighttime average ambient noise levels in Table 3 at a noise-sensitive use. Based on the measured noise levels at the nearest offsite sensitive receptors to the project site, it was determined that the pump station-related noise levels would not exceed the nighttime average ambient noise levels at the offsite sensitive receptors. As such, there would not be a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, and impacts would be less than significant. No mitigation measures are required.

C. Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact: As discussed previously under Impact 1, due to the distances of the existing offsite sensitive uses to the project site, the proposed project's construction activities would not expose sensitive receptors to a substantial increased exterior noise levels. A project would normally have a significant impact on noise levels from construction if the project would exceed the ambient noise levels by 5 dBA or more at a noise-sensitive use. Based on the estimated construction noise levels at the nearest offsite sensitive receptors to the project site that are shown in Table 18, it was determined that construction noise levels would not exceed the ambient noise levels by

5 dBA at offsite sensitive receptors. Thus, short-term noise impacts from construction would be less than significant.

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

No Impact: The nearest airport to the project area is the John Wayne Airport, located approximately 5 miles to the northeast. Therefore, the proposed project is not located within an airport land use plan or within 2 miles of a public airport or public use airport. No impact would occur. No mitigation measures are required.

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

No Impact: There are no private airstrips within the study area. Therefore, the study area would not be adversely impacted from aircraft noise from a private air strip.

F. Would the project expose persons to or generation of excessive groundborne vibration or groundborne noise levels?

Background

Less Than Significant Impact: Vibration can be interpreted as energy transmitted in waves through the ground or man-made structures. These energy waves generally dissipate with distance from the vibration source. Because energy is lost during the transfer of energy from one particle to another, vibration becomes less perceptible with increasing distance from the source.

As described in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment*, ground-borne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard.³⁰ In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, heavy trucks traveling on rough roads, and construction activities such as blasting, pile-driving, and operation of heavy earth-moving equipment.

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 effect of

³⁰ FTA, 2006. *Transit Noise and Vibration Impact Assessment*. May.

vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The relationship of PPV to RMS velocity is expressed in terms of the “crest factor,” defined as the ratio of the PPV amplitude to the RMS amplitude. PPV is typically a factor of 1.7 to 6 times greater than RMS vibration velocity.³¹ The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration sensitive equipment.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration levels exceed the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 in/sec PPV.³²

In residential areas, the background vibration velocity level is usually around 50 VdB (approximately 0.0013 in/sec PPV). This level is well below the vibration velocity level threshold of perception for humans, which is approximately 65 VdB. A vibration velocity level of 75 VdB is considered to be the approximate dividing line between barely perceptible and distinctly perceptible levels for many people.³³

Regulatory Standards

The FTA has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. The vibration damage criteria adopted by the FTA are shown in Table 19.

Table 19 Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2

³¹ Ibid.

³² Ibid.

³³ Ibid.

Building Category	PPV (in/sec)
IV. Buildings extremely susceptible to vibration damage	0.12
SOURCE: FTA, 2006. Transit Noise and Vibration Impact Assessment. May.	

In addition, the FTA has also adopted standards associated with human annoyance for groundborne vibration impacts for the following three land-use categories: Vibration Category 1 – High Sensitivity, Vibration Category 2 – Residential, and Vibration Category 3 – Institutional. The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference. The vibration thresholds associated with human annoyance for these three land-use categories are shown in Table 20. No vibration thresholds have been adopted or recommended for commercial and office uses.

Table 20 Groundborne Vibration Impact Criteria for General Assessment

Land Use Category	Frequent Events ^a	Occasional Events ^b	Infrequent Events
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB ^d	65 VdB ^d	65 VdB ^d
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

There are no state vibration standards. Moreover, according to the California Department of Transportation's (Caltrans) *Transportation and Construction Vibration Guidance Manual*, there are no official Caltrans standards for vibration.³⁴ However, this manual provides guidelines that can be used as screening tools for assessing the potential for adverse vibration effects related to structural damage and human perception. The manual is meant to provide practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. The vibration criteria

³⁴ Caltrans, *Transportation and Construction Vibration Guidance Manual*. September 2013.

established by Caltrans for assessing structural damage and human perception are shown in Table 21 and Table 22.

Table 21 Caltrans Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

NOTE: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

SOURCE: Caltrans, 2013. Transportation and Construction Vibration Guidance Manual. September.

Table 22 Caltrans Vibration Annoyance Potential Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

NOTE: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

SOURCE: Caltrans, 2013. Transportation and Construction Vibration Guidance Manual. September.

Project Impacts

Construction activities at the project site have the potential to generate low levels of groundborne vibration as the operation of heavy equipment (i.e., compactor, backhoe, dozer, excavators, haul trucks, etc.) generates vibrations that propagate through the ground and diminish in intensity with distance from the source. No high-impact activities,

such as pile driving or blasting, would be used during project construction. The nearest offsite receptors to the project site that could be exposed to vibration levels generated from project construction include single-family residential uses west and north of the project site. Groundborne vibrations from construction activities very rarely reach the levels that can damage structures, but they may be perceived in buildings very close to a construction site.

The PPV vibration velocities for several types of construction equipment, along with their corresponding RMS velocities (in VdB), that can generate perceptible vibration levels are identified in Table 23. Based on the information presented in Table 23, vibration velocities could range from 0.003 to 0.089 in/sec PPV at 25 feet from the source of activity.

Table 23 Vibration Source Levels for Construction Equipment

Equipment	Approximate PPV (in/sec)					Approximate RMS (VdB)				
	25 Feet	50 Feet	60 Feet	75 Feet	100 Feet	25 Feet	50 Feet	60 Feet	75 Feet	100 Feet
Large Bulldozer	0.089	0.031	0.024	0.017	0.011	87	78	76	73	69
Caisson Drilling	0.089	0.031	0.024	0.017	0.011	87	78	76	73	69
Loaded Trucks	0.076	0.027	0.020	0.015	0.010	86	77	75	72	68
Jackhammer	0.035	0.012	0.009	0.007	0.004	79	70	68	65	61
Small Bulldozer	0.003	0.001	0.0008	0.0006	0.0004	58	49	47	44	40

SOURCE: FTA, 2006. Transit Noise and Vibration Impact Assessment. May.

Table 24 shows the estimated construction-related groundborne vibration levels that could occur at the nearest offsite structures during construction at the project site and a comparison to the identified significance threshold. As shown in Table 24, the vibration velocities forecasted to occur at the offsite sensitive receptors could potentially be up to 0.013 in/sec PPV (or 70 VdB) at the nearest single-family residential uses.

Table 24 Groundborne Vibration Levels at Offsite Sensitive Uses Compared to Caltrans' and FTA Vibration Damage Potential Threshold

Offsite Sensitive Land Use	Approximate Distance to Project Site (ft.) ^a	Estimated PPV (in/sec)/V dB	Caltrans' Vibration Damage Potential Threshold, PPV (in/sec) ^b	FTA Vibration Damage Potential Threshold, PPV (in/sec) ^c	Exceed Caltrans' or FTA Vibration Threshold? (Yes or No)
Multi-family residential uses north of the project site along Brookhurst Street	90	0.013/70	0.5	0.5	No

ft. = feet

in/sec = inches per second.

^a Approximate distances are measured from the nearest construction area within the project site where vibration levels would be generated to the nearest offsite structure.

^b Caltrans' Vibration Damage Potential Thresholds were taken from Table 6.

^c FTA Vibration Damage Potential Thresholds were taken from Table 4.

SOURCE: ESA, 2016.

Under the FTA construction vibration damaged criteria, the existing residential structures are considered “reinforce-concrete, steel or timber (no plaster)”. With respect to the vibration sources associated with project construction, it is anticipated that continuous/frequent intermittent sources of vibration, as defined under Caltrans' criteria, would occur from compaction activities at the project site, although no pile-driving would be required. As such, the vibration level criteria for continuous/frequent intermittent sources are used in this analysis.

Based on the information shown in Table 24, which shows an estimated PPV of 0.013, none of the existing offsite residential structures (considered as “new residential structures” and “reinforced-concrete, steel or timber” under the Caltrans' and FTA construction vibration damage criteria, respectively) located to the north of the project site would be exposed to PPV groundborne vibration levels exceeding the FTA and Caltrans' 0.5 inches per second criteria as shown in Tables 21 and 22, respectively. As such, the vibration impacts at these residential structures would be less than significant.

With respect to human annoyance, the City Noise Element identifies residential areas as noise-sensitive land uses. Currently, these types of sensitive uses that are located nearest to the project site include the multiple-family uses that are located immediately north of the project site. Under the Caltrans' vibration annoyance potential criteria (refer to Table 7), vibration levels exceeding 0.04 inches per second PPV for continuous/frequent intermittent sources would be considered distinctly perceptible. In addition, under the FTA vibration impact criteria for general assessment, residential receptors are considered to be a Category 2 land use (refer to Table 5). Land uses under this FTA category exposed to vibration levels exceeding 80 VdB for infrequent events would be considered an impact. As shown in Table 24, the multiple-family residential receptors located immediately north of the project site would be exposed to vibration levels of 0.013 in/sec PPV (or 70 VdB) which is well below the Caltrans' 0.04

in/sec PPV distinctly perceptible threshold and the FTA's 80 VdB impact threshold. Thus, vibration impacts related to human annoyance would be less than significant.

4.13 Population/Housing

A. Would the project induce substantial population growth in an area, either directly or indirectly?

No Impact: The proposed project would provide additional wastewater flows to OCWD GWRS water treatment facility to produce additional water supplies to help replenish the Orange County Groundwater Basin. The proposed project would help to meet planned water supply needs and would reduce the demand for imported water supplies. The proposed project would not involve the extension of any new infrastructure or provide new water supplies to any undeveloped areas that would facilitate new growth. The proposed project would assist in accommodating planned growth in OCSD and OCWD service area and would not induce more growth than what has been planned for by local and regional planning agencies.

B. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact: The proposed project would be operated and constructed at an existing wastewater treatment facility. The implementation of the proposed project would not displace any existing housing. The construction of the proposed project would generate short-term construction job opportunities. The majority of the employment opportunities would be expected to be filled by the local employed and unemployed labor force and would not increase population levels that would increase housing demand in the study area.

C. Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact: The implementation of the proposed project would not displace any households or individuals for any period of time.

4.14 Public Services

A. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection police protection, schools, parks or other public facilities.

Police and Fire Protection Services

No Impact: Police and fire protection service is currently provided to the study area by the City of Huntington Beach Police Department and the City of Huntington Beach Fire

Department. The construction and operation of the proposed project would not increase the demand for additional fire protection services and police protection services beyond the current level of demand within the study area. Additionally the construction of the proposed project would not require any road closures or activities that would increase response times to the study area. No adverse impacts to fire protection services and police protection services would occur.

School Facilities

No Impact: The closest school facilities to OCSD Plant No. 2 would be John Eader Elementary, Isaac Sowers Middle School and Edison High School. The implementation of the proposed project would not generate a substantial need for new school facilities. Any new full time employees that could result from the proposed project are expected to be minimal. In the event new households do relocate into the study area the existing schools within study area would be expected to meet school facility needs for all grades. No adverse impacts to school facilities would occur.

Parks

No Impact: The implementation of the proposed project would not generate a need for new park facilities. Any new full time employees that could result from the proposed project are expected to be minimal. In the event new households do relocate into the study area existing park facilities within the study area would be expected to meet parkland needs. No adverse impacts to park facilities would occur.

4.15 Recreation

Project Impacts

A. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less than Significant Impact: The proposed project would not generate new households or a substantial amount of new employees that would increase the use of existing neighborhood and regional parks within the study area. Additionally, the construction operations associated with the proposed project would not require temporary closure of the Santa Ana River Trail. During construction operations there trail users along the Santa Ana River Trail could experience elevated levels of construction noise. However, the impact would be for a short-period of time and would only be experienced along segments of the trail that would be near where construction activity would be occurring. Potential impacts to existing recreation facilities would be less than significant

B. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

No Impact. The proposed project does not propose new recreation facilities or proposes to expand existing recreation facilities. Therefore, there will not be any adverse impacts associated with the construction of new recreation facilities or the expansion of existing facilities. No mitigation measures are required.

4.16 Transportation/Traffic

Existing Setting

Study Area Circulation System

Regional access to the study area is provided by the I-405 Freeway via the Brookhurst Street exits. Primary local access is provided by Brookhurst Street.

Congestion Management Program

The Orange County Transportation Agency is responsible for the implementation of the County of Orange Congestion Management Program (CMP). The CMP is designed to reduce traffic congestion and to provide a mechanism for the coordination of land use and transportation decisions. When a project generates more than 100 peak trips along a CMP highway or 51 or more trips through a CMP intersection, the project would be required to prepare a traffic impact study to evaluate the impacts on the CMP highway and intersection.

Existing Truck Routes

The City of Huntington Beach General Plan Circulation Element identifies the following study area roadways as designated truck routes.

- Brookhurst Street,
- Pacific Coast Highway
- Hamilton Avenue

Public Transportation

The City of Huntington Beach is served by the OCTA bus service. Currently, the OCTA operates 19 bus routes throughout the City, a demand response service through the “Dial-a-Ride” program, and two park-and-ride facilities. Most major streets within the City have bus service available.

Bicycle and Pedestrian Facilities

The City of Huntington Beach has an extensive trail system that includes pedestrian and bike trails. Additionally, the County of Orange maintains a coordinated system of trails, including bikeways, hiking trails throughout Orange County. Within the study area the

most widely used off-street bike trails would be the Santa Ana River Trail and the Talbert Marsh Bike Trail. Additionally, along the study area roadways are on-street bike ways.

Project Impacts

A. Would the project be in conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrians and bicycle paths.

Less than Significant Impact: The implementation of the proposed project would not increase long term operation trips within the study area where it would reduce the level of service of study area intersections and roadway segments. Therefore, no long term adverse traffic impacts would occur.

The construction operations for the proposed project would generate short-term traffic trips which would include, hauling trips, worker traffic trips, delivery traffic trips, and traffic trips. Additionally, construction traffic would be generated from the mobilization and demobilization of construction equipment. A listing of construction traffic trips generated by the proposed project is shown in Table 28.

Table 25: Project Construction Traffic Trips

Activity	Worker	Vendor	Daily Haul Trips	Total Haul Trips
Pump Station, Tanks, Pipeline/Meter vault Excavation	10	1	30	540
Construction of Pump Station Wet Wells, Tank Piles, Piping	10	2	18	230
Construction of Flow Tanks,/Pump Station/Meter Vault	10	2	16	304
Construction Flow Tanks Walls/Roof Construction	10	2	9	72
Equipping Flow Pump Station/Meter Vault	5	4	0	0

The majority of construction traffic trips generated from the proposed project would be hauling trips. As shown in Table 25 a maximum of 30 hauling trips would occur each day during Phase 1 when the majority of the excavation and hauling activities would occur. The hauling truck trips would occur during non-peak hours and would not reduce the level of service of any intersection or roadway segment within the study area.

During the construction operations a maximum of up to 10 worker daily vehicle trips and 2 vendor vehicle trips could occur during peak traffic periods. This amount of traffic trips

would have a less than significant impact on the study area circulation system. No mitigation measures are required.

B. Would the project be in conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards and travel demand measures, or other standards established by County congestion management agency for designated roads and highways.

No Impact: The closest CMP Highway within the study area would Pacific Coast Highway. Pacific Coast Highway is a designated truck route. Therefore, no construction traffic generated from the proposed project would be using Pacific Coast Highway to access the study area. There is the potential that some workers could utilize Pacific Coast Highway or other CMP Highways to travel to the study area. As shown in Table 25 the short term traffic generated from the proposed project would not exceed 100 peak trips or 51 or more trips through an intersection. No potential conflicts with the County of Orange Congestion Management Program would occur.

C. Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. According to the John Wayne Airport Land Use Consistency Plan, the study area is not within a clear zone or accidental potential zone. Implementation of the proposed project would not increase the level of air traffic within the regional area. The maximum height of the tallest structure proposed on OSCD Plant No. 2 Site would be 28 feet. There would be no component of the proposed project that would encroach into navigable air space causing a change to air traffic patterns. No mitigation measures are required.

D. Would the project increase hazards to a design feature or incompatible uses or equipment?

Less than Significant Impact with Mitigation: The construction and operation of the proposed project would occur on the OCSD Plant No. 2 Site. The proposed project would not involve any construction activities along a public roadway that would increase traffic hazards.

The proposed project would require the movement of heavy construction equipment within the study area during mobilization and demobilization periods. The weight of the heavy construction could potentially damage the surfaces of study area roadways. All heavy truck traffic generated from the proposed project would be required to use a designated truck route for access to and from the project site. By directing truck traffic to specifically designated truck routes potential damage to study area roadway surfaces would be minimized.

During mobilization and demobilization of heavy construction equipment, turning movements into the OCSD Plant No. 2 Site could require temporary lane closures. The lane closure would occur during non-peak traffic periods and if needed a flag men would be provided to safely direct traffic. With the implementation of Mitigation Measure T-1, potential hazards associated with the mobilization and demobilization of construction equipment would be reduced to less than significant.

Mitigation Measure

T-1: OCWD will be responsible for preparing adequate detour and access plans to ensure the safe movement of vehicles and pedestrians during the construction period.

E. Would the project result in inadequate emergency access?

No Impact: The construction and operation of the proposed project would not cause any road closures that would adversely impact emergency access routes and emergency response times to the study area.

F. Would the project be in conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities?

Less than Significant Impact: The construction and operation of the proposed project would not require the long term closure of public transportation, bicycle or pedestrian circulation systems. The mobilization and demobilization of construction equipment onto the OCSD Plant No. 2 Site could require temporary closures of onsite street bike lanes near the Plant entrance. The closures would be limited to the time of the mobilization and demobilization activity which in most cases would be less than 30 minutes and if needed flag men would be provided to safely direct traffic. With the implementation of Mitigation Measure T-1 potential conflicts with public transportation systems would be less than significant.

Mitigation Measure

Mitigation Measure T-1 required.

4.17 Tribal Resources

A. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with value to a California Native American Tribe and that is listed or eligible for listing in the California Register or Historical Resources, or in a local register of historical resources.

Ethnographic Setting

The study area is located at the southern extent of Gabrielino-Tongva territory, near the boundary with the Juaneño, or more properly Acjachemen, to the south. Traditionally, the boundary between the two is identified as either Aliso Creek or the drainage divide to the north of the creek, roughly 20 miles south of the study area. Both are included here.

Gabrielino-Tongva

Prior to European colonization, the Gabrielino-Tongva, a Takic-speaking group, occupied a diverse area that included: the watersheds of the Los Angeles, San Gabriel, and Santa Ana rivers; the Los Angeles basin; and the islands of San Clemente, San Nicolas, and Santa Catalina (Kroeber, 1925). The Gabrielino-Tongva is reported to have been second only to the Chumash in terms of population size and regional influence (Bean and Smith, 1978).

The Gabrielino-Tongva was hunter-gatherers and lived in permanent communities located near the presence of a stable food supply. Community populations generally ranged from 50-100 inhabitants, although larger settlements may have existed. The Gabrielino-Tongva are estimated to have had a population numbering around 5,000 in the pre-contact period, with many recorded villages along the drainages mentioned above and in the Los Angeles basin proper (Kroeber, 1925).

Beginning with the Spanish Period and the establishment of Mission San Gabriel Arcángel, Native Americans throughout the Los Angeles area suffered severe depopulation and their traditional culture was radically altered. Nonetheless, Gabrielino-Tongva descendants still reside in the greater Los Angeles and Orange County areas and maintain an active interest in their heritage.

Juaneño-Acjachemen

The Juaneño or Acjachemen, also Takic-speaking, occupied a more restricted area extending across southern Orange County and northern San Diego County. Juaneño territory extended along the Pacific coast from midway between Arroyo San Onofre and Las Pulgas Canyon in the south to Aliso Creek in the north, and continued east into the Santa Ana Mountains from Santiago Peak in the northwest to the headwaters of Arroyo San Mateo in the southeast (Kroeber 1925). The Juaneño were bounded by the Gabrielino-Tongva to the north, and the Luiseño to the east and south.

The Juaneño-Acjachemen, like the Gabrielino-Tongva, subsisted on small game, coastal marine resources, and a wide variety of plant foods such as grass seeds and acorns. Their houses were conical thatched reed, brush, or bark structures. The Juaneño inhabited permanent villages centered around patrilineal clans, with each village headed by a chief, known as a *nu* (Kroeber 1925; Sparkman 1908). Seasonal camps associated with villages were also used. Each village or clan had an associated

territory and hunting, collecting, and fishing areas. Villages were typically located in proximity to a food or water source, or in defensive locations, often near valley bottoms, streams, sheltered coves or canyons, or coastal strands (Bean and Shipek 1978).

The Juaneño-Acjachemen population was estimated to have numbered approximately 1,000 at the time of European contact. Beginning with the Spanish Period and the establishment of Mission San Juan Capistrano, the Juaneño-Acjachemen suffered severe depopulation and their traditional culture was radically altered. Nonetheless, descendants still reside in the Orange County area and maintain an active interest in their heritage.

Native American Outreach

A search of the Sacred Lands File was completed by the NAHC for the Project on June 6, 2016, which included the APE. The results indicated there were no documented Native American cultural resources within the APE. Attached to the response was a list of Native American groups and representatives who may have knowledge of Native American resources within the Project area, which included the APE. Letters were mailed on June 20, 2016 and follow-up phone calls were conducted on June 28, 2016. Three Tribes responded to express their concerns. Anthony Morales of the Gabrieleno/Tongva Band of Mission Indians indicated that the area is cultural and spiritually sensitive and recommended Native American and archaeological monitoring. Joyce Stanfield-Perry of the Juaneño Band of Mission Indians, Acjachemen Nation, recommended Native American and archaeological monitoring during all ground disturbing activities and in the event of a discovery, that the project be stopped and the mitigation plan re-evaluated. Anthony Salas of the Gabrieleno Band of Mission Indians-Kizh Nation recommended Native American and archaeological monitoring during all ground disturbing activities.

AB 52

In January 2018, OCWD notified three Native American representatives who have requested to be informed on activities conducted by the OCWD, under PRC Section 21080.3.1. The OCWD reached out to the Juaneño Band of Mission Indians, Acjachemen Nation, Gabrieleno Band of Mission Indians – Kizh Nation and Gabrieleno Tongva San Gabriel Band Mission Indians. At this time no additional information has been provided regarding the potential for Native American cultural resources to be present.

Less than Significant with Mitigation: Native American respondents indicated sensitivity for archaeological resources in the APE and surrounding area given the proximity to the Santa Ana River corridor. In addition, the geoarchaeological review indicates that the portion of the APE within OCSD Plant No. 2 was largely salt marsh into the early 20th century and would have offered important resources. Owing to its

marshy environment, this area may not have been favored for any substantial occupation, but nonetheless it is likely to have been visited for resource procurement and could contain artifacts associated with those activities. Additionally, the saturated conditions offered within this setting could have aided in the preservation of relatively rare organic artifacts. Mitigation Measures CR-5 is recommended to ensure that the project would result in No Historic Properties Affected under Section 106 of the NHPA and less than significant impacts to historical or unique archaeological resources under CEQA.

Mitigation Measure

CR-5: Prior to issuance of a grading permit and prior to start of any ground-disturbing activities, OCWD will retain a Native American monitor to observe all ground-disturbing activities. The monitor shall be obtained from a Tribe that is traditionally and culturally affiliated with the area, according to the NAHC list. The monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of a discovery until the qualified archaeologist has evaluated the discovery and determined appropriate treatment. Monitoring may be reduced or discontinued, in coordination with OCWD and the qualified archaeologist, based on observations of subsurface soil stratigraphy and/or the presence of older C-horizon deposits.

B. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with value to a California Native American Tribe and that is a resource determined by the lead agency in its discretion and supported by substantial evidence to be significant and which the lead agency considers the significance of the resource to a California Native American tribe.

Native American respondents indicated sensitivity for archaeological resources in the APE and surrounding area given the proximity to the Santa Ana River corridor. In addition, the geoarchaeological review indicates that the portion of the APE within OCSD Plant No. 2 was largely salt marsh into the early 20th century and would have offered important resources. Additionally, the saturated conditions offered within this setting could have aided in the preservation of relatively rare organic artifacts. Mitigation Measures CR-5 is recommended to ensure that the project would result in No Historic Properties Affected under Section 106 of the NHPA and less than significant impacts to historical or unique archaeological resources under CEQA.

Mitigation Measure

Mitigation Measure CR-5 is required.

4.18 Utilities/Service Systems

Environmental Setting

The study area is situated within an urbanized area and supported by existing utility service systems.

Water Service

The Huntington Beach Public Works Department would be responsible for water service within the study area, including operating and maintaining wells, reservoirs, imported water connections, and distribution pipelines.

Wastewater Service

The Orange County Sanitation District provides wastewater service to the study area. The Sanitation District provides wastewater services to approximately 2.6 million people within a 479 square mile service area in central and northwest Orange County, which includes 20 cities and four special districts. It operates the third largest wastewater system on the West Coast and consists of over 396 miles of sewers and two regional wastewater treatment plants.

Storm Drainage Systems

The Orange County Flood Control District owns, operates, and maintains the region's flood control facilities while the City of Huntington Beach is responsible for the operation

Solid Waste Management

The City's Huntington Beach Public Works Department is responsible for weekly residential and commercial trash collection services and contracts with Rainbow Disposal Company, Inc. All trash collected by the City's refuse services are sorted and processed at a Materials Recovery Facility. Rainbow Disposal Company operates a Transfer Station located at 17121 Nichols Street with a design capacity of approximately 2,800 tons per day.

The Orange County Integrated Waste Management Department (OCIWMD) owns and operates three active landfills serving the Orange County region. These include the Frank R. Bowerman Landfill (11002 Bee Canyon Access Road, Irvine); Olinda Alpha Landfill (1942 N. Valencia Avenue, Brea), and the Prima Deshecha Landfill (32250 La Pata Avenue, San Juan Capistrano). The Olinda Alpha Landfill and the Prima Deshecha Landfill are open to the public while the Frank Bowerman Landfill is for commercial use only. All three landfills are permitted as Class III landfills. Class III landfills accept only non-hazardous municipal solid waste for disposal; no hazardous or liquid waste can be accepted. The daily maximum amounts received and remaining capacity for land fill facility is shown in Table 26.

Table 26: Capacity Orange County Landfills

Landfill	Daily Maximum (Tons)	Maximum Capacity (Cubic Yards)	Remaining Capacity (Cubic Yards)
Frank Bowerman	11,500	127,000,000	59, 411,872
Olinda Alpha	8,000	76,900,000	38,578,383
Prima Deshecha	4,000	172,900,000	87,384,799

Project Impacts

A. Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The proposed project would provide additional wastewater flows to OCWD GWRS water treatment facility to produce additional water supplies to replenish the Orange County Groundwater Basin. The treated water generated from the GWRS would be subject to the permit conditions under RWQCB Order R-8-2004-002, and subsequent amendment R8-2008-0058. Compliance with the permit conditions would ensure that RWQCB requirements would not be exceeded. No mitigation measures are required.

B. Would the project 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?

No Impact: The proposed project be constructed and operated on OCSD Plant No. 2 Site and would not require the expansion or construction of any off site facilities that would result in significant impacts to the environment. No mitigation measures are required.

C. Would the project 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?

No Impact: The proposed project would slightly increase the rate of surface water runoff on OCSD Plant No. 2. Surface water flows would be conveyed into existing drainage infrastructure and onsite wastewater treatment processes. No mitigation measures are required.

D. Are sufficient water supplies available to serve the project from existing entitlements and resources or new or expanded entitlements needed?

No Impact. The water stored in the flow equalization tanks would be from existing wastewater flows conveyed to the OCSD Plant No. 2 Site. No additional water supply entitlements, or expanded water supply entitlements are needed. No mitigation measures are required.

E. Would the project result in the determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the providers existing commitments.

No Impact: The proposed project would not expand OCSD existing wastewater demands and would not have an adverse impact on the capacity of OCSD treatment facility or an adverse impact on the capacity of service lines that support the OCSD facilities. No mitigation measures are required.

F. Is the project served by a landfill with sufficient permitted capacity to accommodate the project solid waste disposal need?

Less than Significant Impact: The long term operation of the proposed project would not increase the demand for solid waste disposal over the current level of demand. Construction operations associated with the proposed project would generate limited amounts of solid waste. The closest landfill to Plant No. 2 would be the Frank R. Bowerman Landfill located at 11002 Bee Canyon Access Road in the City of Irvine. The Frank R. Bowerman Landfill has a remaining capacity of 59,411,872 cubic yards. The proposed project would comply with federal, state and local statutes and regulations related to solid waste and where possible would recycle discarded construction materials and other solid waste. The amount of construction related solid waste generate from proposed project would have a de minimize impact on the capacity of landfills that would serve the proposed project. To minimize solid waste disposal demands OCWD would investigate all available alternatives, and then select the best method of solid waste disposal and reduction of solid waste stream. With the implementation of Mitigation Measure U-1 potential solid waste disposal needs would be less than significant.

Mitigation Measure

U-1: OCWD will investigate all available alternatives, and then select the best method of solid waste disposal and reduction of solid waste stream as required in the California Integrated Waste Management Act prior to the start of construction.

G. Would the project comply with federal, state and local statutes and regulations related to solid waste?

Less than Significant Impact with Mitigation: Any solid waste generated by the proposed project would be hauled from the site, diverted and recycled, in accordance with the California Integrated Waste Management Act of 1989. If any hazardous materials are encountered, the OCWD would coordinate with the City of Huntington Beach and the Orange County Health Care Agency's Certified Unified Program Agency to ensure that all hazardous wastes would be disposed of properly in accordance with local, state and federal laws. No mitigation measures are required. With the

implementation of Mitigation Measure U-1 potential conflicts with federal, state and local statutes and regulations related to solid waste would be less than significant.

Mitigation Measure

Mitigation Measure U-1 required.

MANDATORY FINDINGS OF SIGNIFICANCE

A. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of 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.

Less than Significant with Mitigation: The construction and operation of the proposed project would occur on the OCSD Plant No. 2 Site. The location where the proposed project improvements would occur is devoid of sensitive habitat, wildlife and plant species and cultural resources. The proposed project would implement mitigation measures to avoid impacts to unknown cultural resources in the unlikely event they are encountered during construction operations. The implementation of the proposed project would not reduce the habitat of fish or wildlife to self-sustaining levels and would not impact any known cultural resources.

B. Does the project have impacts that are individually limited but cumulatively considerable?

Less than Significant Impact with Mitigation: The proposed project would comply with local and regional planning programs, applicable codes and ordinances, state and federal laws and regulations and project mitigation measures. Compliance with the applicable codes, planning programs and project mitigation measures would reduce the project's incremental contributions to cumulative impacts to a less than significant level.

C. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant with Mitigation: The proposed project would not have any substantial adverse effects on human beings. The proposed project would comply with local and regional planning programs, applicable codes and ordinances, state and federal laws and regulations and project specific mitigation measures to insure that long term operational activities and short-term construction activities associated with the proposed project would not result in direct or indirect adverse impacts to human beings.

SECTION 5.0 CEQA-Plus Federal Consultation Review

5.1 Purpose

This CEQA-Plus Federal Consultation Review analysis has been prepared to meet National Environmental Policy Act (NEPA) environmental review requirements and is supplement to the CEQA Initial Study/Mitigated Negative Declaration prepared for the Orange County Water District GWRS Water Conveyance Facility Project.

5.2 Federal Endangered Species Act (ESA), Section 7

Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may affect federally listed threatened or endangered species or their critical habitat that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

☒ No. Discuss why the Project will not impact any federally listed special status species:

The following analysis is based on the Biological Assessment that was prepared for the Orange County Water District Water Conveyance Facilities Project by the OCWD Natural Resources Department in January 2018. The Biological Assessment is presented in its entirety in Appendix B. As part of the Biological Assessment, OCWD conducted an onsite biological field survey in January of 2018 to determine the presence of Federal Listed plant species and Federal Listed wildlife species. .

The OCSD Plant No.2 Site is located within USGS Newport Beach Quadrangle at Township 6 South, Range 10 West, and Section 20. The site is developed with wastewater treatment structures, offices, and paved parking areas and roadways. A row of eucalyptus trees extends along western boundary of Plant No. 2 and scattering of native landscaping provided along the Santa Ana River Trail borders Plant No. 2 to the east. A site survey of the study area did not identify any sensitive biological resources on Plant No. 2. However, within close vicinity to OCSD Plant No.2 are two sensitive biological resources; the Talbert Marsh and California Least Tern Colony.

Talbert Marsh is a tidal marsh that has been restored to full tidal action. The water within Talbert Marsh is seawater from the ocean inlet located south of the marsh property that fluctuates in height up to 8 feet from tidal flows. Talbert Marsh provides habitat for both migratory and resident bird species.

South of Pacific Coast Highway is the location the California Least Tern Natural Preserve Area. The California Least Tern Natural Preserve Area was first established under the Huntington State Beach General Development Plan in 1976. It was originally dedicated on 2.5 acres and was fenced off with a cyclone fence (a heavy-duty, chain-link fence topped with barbed wire) to prevent predators from harassing the birds. Over the years, the California least tern's nesting area has expanded beyond the fenced

area, State Parks has erected additional picket fencing to protect the birds. Currently, the cyclone fence area covers approximately 8.9 acres and the picket fence “front-yard” area is 3.8 acres. California State Parks protects the nesting area by limiting access, conducting trash removal, grooming the sand periodically, and conducting predator management.

Federal Listed Plant Species

To determine the potential for Federal Listed plant species to be present within the study area, a database search with the United States Fish and Wildlife information and Planning Database and the California Department Fish and Wildlife (CDFW) Natural Diversity Database was conducted. A listing of Federal Listed plant species with potential to occur within the Newport Beach USGS Quadrangle is shown in Table 27. Subsequent to the database search, a survey of the study area was conducted to determine the presence of plant species identified in the database searches. The determination on the potential for the Federal Listed plant species to occur within the study area was based on the following criteria:

- **Present:** Species was observed within the study area within the last year.
- **High:** The study area supports suitable habitat and the species has been observed within the last year.
- **Moderate:** The study area supports suitable and the species has not been observed within last two years.
- **Low:** The study area lacks suitable habitat for the species.

Table 27 Special Status Plant Species

Species	Federal	State	CNPS	General Habitat/Recent Occurrence	Potential for Occurrence Study Area
Ventura Marsh Milk-vetch (<i>Astragalus pycnostachy</i> var. <i>Lanosissimus</i>)	E	NL		Marshes, Swamps, Coastal Dunes, Coastal Scrub	Low Study Area lacks suitable habitat
Salt Marsh Birds-beak (<i>Chloropyron maritimum</i> ssp. <i>Maritimum</i>)	E	E	1B.2	Coastal Salt marsh, Coastal Dunes	Low Study Area lacks suitable habitat.
San Diego Button-Celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>)	E	E	1B.1	Vernal pools, Coastal Scrub, Valley and Foothill Grasslands	Low Study Area lacks suitable habitat
Gambels Water Cress	E	T	1B.1	Marshes and swamps	Low Study Area lacks

<i>(Nasturtium gambelii)</i>					suitable habitat
California Orcutt grass (<i>Orcuttia californica</i>)	E	E	1B.1	Wetlands, Vernal Pools	Low Study Area lacks suitable habitat
<u>Federal</u> E- Endangered T- Threatened SSC- Special Species of Concern C- Candidate for Listing NL- Not Listed	<u>State Listing (California Endangered Species Act, CDFG)</u> FP- Fully Protected E- Endangered T- Threatened S- Sensitive SSC- Special Species of Concern WL- Watch List NL- Not Listed		<u>California Native Plant Society CNPS</u> 1A- Plants presumed extinct in California 1B- Plants rare, threatened, or endangered in California and elsewhere 2- Plants rare, threatened, or endangered in California but more common elsewhere 3- Plants about which we need more review 4- Plants of limited distribution CNPS Threat Rank .1 Seriously Endangered .2 Fairly Endangered .3 Not Very Endangered		

Federal Listed Wildlife Species

To determine the potential for Federal Listed wildlife species to be present within the study area, a database search with the United States Fish and Wildlife Service (USFWS) information and Planning Database and the Department of California Fish and Wildlife Natural Diversity Database was conducted. A listing of Federal Listed wildlife species with potential to occur within the Newport Beach USGS Quadrangle is shown in Table 28. Subsequent to the database search, OCWD conducted a survey of the study area to determine the potential for the Federal Listed wildlife species to be present within the study area. The determination on the potential for the Federal Listed wildlife species to occur within the study area was based on the following criteria:

- **Present:** Species was observed within the study area within the last year.
- **High:** The study area supports suitable habitat and the species has been observed within the last year.
- **Moderate:** The study area supports suitable and the species has not been observed within last two years.
- **Low:** The study area lacks suitable habitat for the species.

Table 28 Special Status Wildlife Species

Species	Federal	State	General Habitat/Recent Occurrence	Potential Occurrence Study Area
San Diego Fairy Shrimp (<i>Branchinecta sandiegonensis</i>)	E	SSC	Vernal pools	Low Study Area lacks suitable habitat
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>)	T	SSC	Sandy Beaches	Low Study Area lacks suitable habitat
Southwestern	E	E	Riparian woodlands	Low

Willow Flycatcher (<i>Empidonax traillii extimus</i>)				Study Area lacks suitable habitat
Pacific Pocket Mouse (<i>perognathus longimembris pacifus</i>)	E	SSC	Coastal Plains	Low Study Area lacks suitable habitat
Coastal California Gnatcatcher (<i>Polioptila californica californica</i>)	T	SSC	Coastal sage scrub	Low Study Area lacks suitable habitat
Light-footed Ridgway rail (<i>Rallus longirostris levipes</i>)	E	E	Salt marshes	Low Study Area lacks suitable habitat
California Least Tern (<i>Sterna antillarum</i>)	E	E	Sandy Beaches	Low Study Area lacks suitable habitat
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	E	E	Low growing riparian habitats	Low Study Area lacks suitable habitat
Western Yellow Billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	T	E	Riparian Woodlands	Low Study Area lacks suitable habitat
Legend <u>Federal Endangered Species Act</u> E- Endangered T-Threatened SSC- Special Species of Concern C-Candidate for Listing <u>California Endangered Species Act/California Department Fish Game</u> FP-Fully Protected E-Endangered T-Threatened S-Sensitive SSC-Special Species of Concern WL-Watch List				

Critical Habitat

The Federal Endangered Species Act requires the federal government to designate Critical Habitat for any species it lists under the Federal Endangered Species Act. Critical Habitat is defined as 1) specific areas within the geographical area occupied by the specie at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection and 2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. According to the of USFWS Information, Planning, and Conservation System Database and the California Department of Fish and Wildlife Natural Diversity Database, the study area is not located on lands that are designated as Critical Habitat.

Project Impacts

Onsite Impacts

Less than Significant Impact: Based on a review of databases from United State Fish and Wildlife Service and California Department of Fish and Wildlife and biological surveys conducted within the study area, it has been determined that there would be low potential for special status plant species or special status wildlife species to be present on OCSD Plant No. 2 Site. As shown in Table 27 and Table 28 Plant No. 2 lacks suitable habitat to support special status plant species or special status wildlife species that were identified in the database search. Additionally, no indications were found that any special status species were ever present. Therefore, implementation of the proposed project would not result in adverse impacts to any special status plant species or special status wildlife species.

Offsite Impacts

Less than Significant Impact: Located south of OCSD Plant No. 2 is the Talbert Marsh and south of Pacific Coast Highway is the California Least Tern Colony. Both of these biological resources could provide suitable nesting habitat for special status bird species. The construction operations for the proposed project would be confined to OCSD Plant No. 2 Site. No construction activities would occur at the Talbert Marsh or at the California Least Tern Colony. Therefore, no direct impacts to special status plant or wildlife species would occur.

The construction activities for the proposed project would involve the operation of heavy construction equipment that could operate during nesting season. If the construction activity was to occur in close proximity to nesting birds there would be the potential that breeding patterns could be disturbed. The United States Fish and Wildlife Service as established a noise impact threshold of 60 dBA to identify potential adverse impacts to nesting birds. The Talbert Marsh is located approximately 3,300 feet from where the construction activities would occur and the California Least Tern Colony is located approximately 4,400 feet from the construction would occur. Based on the noisiest piece of construction equipment that would be used, the noise estimated level at the Talbert Marsh and at the California Least Tern Colony would be below 49 dBA. Additionally, with the presence of the block wall around Plant No. 2 Site and the traffic noise along Pacific Coast Highway, it would be very unlikely that construction noise would herd at either location. Potential indirect noise impacts to special status wildlife species would be less than significant. No mitigation measures are required.

5.3 Magnuson-Stevens Fishery Conservation and Management Act, Essential Fish Habitat:

Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may adversely affect essential fish habitat?

☒ No. Discuss why the project will not impact essential fish habitat:

According to review of the National Marine Fisheries Service Essential Fish Habitat Map for the Pacific Ocean, there is no essential fish habitat in the surface water bodies near the study area. Therefore, the construction and operation of the proposed project would not result in adverse impacts to any Essential Fish Habitat.

5.4 National Historic Preservation Act, Section 106

Identify the area of potential effects (APE), including construction, staging areas, and depth of any excavation. (Note: the APE is three dimensional and includes all areas that may be affected by the project, including the surface area and extending below ground to the depth of any project excavations).

The following analysis is based on a Phase 1 Cultural Resource Report prepared for the GWRS Water Production Enhancement Project and GWRS Water Conveyance Facilities Project Cultural Resources Supplemental Letter Report. The Phase 1 Cultural Resources Report and Supplemental Letter Report are presented in Appendix C.

Area of Potential Effects

An Area of Potential Effects (APE) was established for the project according to Section 106 of the NHPA in coordination with the OCWD. The APE is shown in Figure 12 and is defined as:

...the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (36 Code of Federal Regulations [CFR] 800.16[d]). The horizontal APE encompasses the two flow equalization tanks, pump station, conveyance piping, valving and metering connections and contractor laydown and equipment staging area. The vertical APE includes the anticipated maximum depth of ground disturbance of 25 feet below ground surface and the maximum height of the flow equalization tank of 28 feet above ground surface.

Previous Cultural Resources Investigations

In 2016, ESA prepared a Phase I Cultural Resources Study for improvements within the Project area (Ehringer et al., 2016). This study included a records search at the

California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC), Sacred Lands File search at the California Native American Heritage Commission (NAHC), Native American outreach, historic map and aerial photography review, geo-archaeological review, paleontological records search at the Natural History Museum of Los Angeles County (LACM), and pedestrian survey. In 2017, ESA also conducted a Historic Resources Assessment of Plant No. 2 for OCSD (Taylor, 2017), which is available under separate cover.

South Central Coastal Information Center Records Search

A records search was conducted on June 21, 2016 at the SCCIC, located at California State University, Fullerton, which included the APE. The records search included a review of all recorded cultural resources within a 0.5-mile radius, as well as a review of cultural resource reports on file. The results of the SCCIC records search indicated that the APE had not been previously surveyed for cultural resources. The results also indicated that two cultural resources (CA-ORA-845 and CA-ORA-906) had been previously documented within a 0.5-mile radius of the APE. Both resources are prehistoric archaeological sites located on the eastern bluffs of the Santa Ana River, approximately 0.5-miles east of the APE.

Historic Map and Aerial Review

Historic maps and aerial photographs were examined in order to provide historical information about the APE and to contribute to an assessment of the APE's archaeological sensitivity. Available maps include: the 1868 U.S. Surveyor General's survey plat map of Townships 5 and 6 South, Range 10 West the 1895 and 1901 Santa Ana 1:62,500 topographic quadrangles; the 1902 Corona 1:125,000 topographic quadrangle; and the 1935 Newport Beach 1:31,600 topographic quadrangles; and 1965 and 1975 Newport Beach 7.5-minute topographic quadrangle. Historic aerial photographs of the APE from 1938, 1953, 1963, 1972, 1994, 2002, 2003, 2004, 2005, 2009, and 2010 were also examined (historicaerials.com, 2016).

The 1868 U.S. Surveyor General's survey plat map shows the APE as being located within Rancho Las Bolsas. The plat map indicates salt marshes within the current location of OCSD Plant No. 2. The available historic maps and aerial photographs indicate that the APE and surrounding area was largely used for agricultural purposes throughout the 20th century, and did not become urbanized until the latter half of the century. The Santa Ana River is shown confined with artificial levees in the 1938 historic aerial photograph. The OCSD Plant No. 2 is not shown on the 1953 aerial. The OCSD Plant No. 2 facility is shown on the 1965 Newport Beach 7.5-minute topographic quadrangle. Based on a detailed review of the 1972 and 2016 aerials of the OCSD Plant No.2, there are structures shown on the 1972 aerial that remain visible on the 2016 aerial photograph.

OCSD Plant No.2 Historical Assessment

A Historic Resources Assessment of OCSD Plant No. 2 was prepared by Environmental Science Associates in October of 2017. The assessment included a records search at the California Historical Resources Information System (CHRIS) – South Central Coastal Information Center (SCCIC) was conducted on August 16, 2017. One previous historical resources study included the subject property (OR-04313). This study consisted of a survey of historical resources in the City Huntington Beach for inclusions in the City's general plan. The study was conducted in November of 2013 and identified multiple historical resources, including districts, throughout the Huntington Beach city limits. However, the majority of the resources identified by the survey are located near the Huntington Beach Pier and original downtown area, located approximately three miles northwest of OCSD Plant No. 2. The survey did not identify any historical resources within the subject property.

The historical assessment also included an intensive pedestrian survey of OCSD Plant No.2, which resulted in the documentation 33 buildings, structures, and features that meet the 45-year old age threshold for historical resources prescribed by the California Register of Historical Resources (California Register). The historical assessment determined that the individual buildings, structures, and features lack distinction but together, reflect Plant No. 2's initial construction in 1954 and expansion in the following decades in response to growing needs for wastewater treatment. Therefore, Plant No. 2 was evaluated as a potential historic district and was recommended not eligible for listing in the California Register. While Plant No. 2 was associated with the post-war development of Orange County and Huntington Beach, these communities had been well established by the date of its construction in 1954. Furthermore, Plant No.2 was one of many municipal services constructed in the area to support the growing population and suburban development. Plant No. 2 is a common example of the activated sludge treatment plant popular among growing suburban communities during the post-war era. As such, Plant No. 2 does not qualify as a historical resource under the California Environmental Quality Act (CEQA). No historical resources have been identified in the surrounding area. Since Plant No. 2 was not found eligible as a historical resource and no historical resources have been identified in the surrounding area.

Geoarchaeological Review

Chris Lockwood, Ph.D., R.P.A., conducted a desktop geoarchaeological review of the project APE and vicinity in order to evaluate the potential for buried archaeological resources within the APE. The following section presents the results of Dr. Lockwood's analysis.

Geology and Geomorphology

The APE is on the distal portion of an alluvial fan. During the late Pleistocene, the APE was approximately 5.5 miles (9.0 km) inland. Historically, the area consisted largely of salt marsh, which would have been at or just above sea level, and was divided by small channels. The area was used for celery agriculture in historic times. OCSD Plant No. 2 was initially developed for sanitation in 1954, but the parcel, including the APE, was progressively developed towards the north over the next five decades. The APE is covered with a paved surface that is at elevation 3-4 meters above mean sea level (amsl), suggesting the APE contains several meters of fill overlying the native salt marsh deposits. Some of the fill material may have originated as dredge spoils from channelization of the Santa Ana River. Near surface geology of the APE is mapped as late Holocene to latest Pleistocene alluvial fan deposits (Morton, 2004; Morton and Miller, 2006). These deposits consist of gravel, sand, and silt transported and deposited by the Santa Ana River. To the south of the APE, the OCSD Plant No. 2 site contains unconsolidated eolian dune deposits.

Soils

Soils within the portion of the APE at OCSD Plant No. 2 are mapped primarily as Bolsa silt loam (NRCS 2016). Bolsa series soils are deep, somewhat poorly drained soils developed in mixed alluvium parent material on flood plains and basins. The typical soil pedon consists of a plowed A-horizon (Ap1, Ap2) developed at the top of relatively unaltered alluvial parent material (C1 through C6) extending more than 69 inches deep. The absence of a B-horizon is likely due to the short geological time that has passed since deposition of the parent material, although agricultural activity has the potential to have disrupted the development of a recognizable B-horizon as well. The A-horizon in Bolsa soils ranges from sandy loam to silty clay loam, while the C-horizon is mainly silt loam and silty clay loam but may contain thin strata of sandier material (USDA 1997).

Significantly, many Bolsa soil pedons contain buried A-horizons (paleosols). These buried A-horizons represent periods of time in the past during which landform conditions were relatively stable, and during which deposition and erosion were sufficiently balanced to allow for development and retention of a soil weathering profile. From an archaeological perspective, periods of landform stability, such as those signified by buried A-horizons, should be correlated with the accumulation and preservation of cultural remains. Therefore, Bolsa soils are considered to have a high sensitivity for buried archaeological resources.

Cultural Resources Survey and Results

A cultural resources pedestrian survey was conducted for the Project on June 16, 2016 by Arabesque Said-Abdelwahed, which included the APE. The purpose of the survey was to identify the presence of surface archaeological materials. Intensive-level survey

was conducted of areas with greater surface visibility with intervals spaced at 10 meter. No archaeological or historic built resources were observed within or adjacent to the APE.

Archaeological Potential

Although paved and filled, the portion of the APE at the OCSD Plant No. 2 appears to retain high sensitivity for buried archeological resources. During the latest Pleistocene and Holocene, the geomorphic setting of the portion of the APE at the OCSD Plant No. 2 changed from inland to coastal, and rising sea level resulted in fluvial deposition capable of burying archaeological resources. The portion of the APE at the OCSD Plant No. 2 was largely salt marsh into the early 20th century, but this is an area that would have offered important resources. Owing to its marshy environment, this area may not have been favored for any substantial occupation, but nonetheless is likely to have been visited for resource procurement and could contain artifacts associated with those activities. Additionally, the saturated conditions offered within this setting may have aided in the preservation of relatively rare organic artifacts.

Historic Resources

Plant No. 2 was evaluated as a potential historic district and was recommended not eligible for listing in the California Register. Plant No. 2 is a common example of the activated sludge treatment plant popular among growing suburban communities during the post-war era. As such, Plant No. 2 does not qualify as a historical resource under the California Environmental Quality Act (CEQA). No historical resources have been identified in the surrounding area. Since Plant No. 2 was not found eligible as a historical resource and no historical resources have been identified in the surrounding area, no further work or mitigation is recommended for the subject property.

Archaeological Resources

No archaeological or historic built resources are located within or adjacent to the APE. However, the APE should be considered highly sensitive for subsurface archaeological resources. Native American respondents indicated sensitivity for archaeological resources in the APE and surrounding area given the proximity to the Santa Ana River corridor. In addition, the geoarchaeological review indicates that the APE was largely salt marsh into the early 20th century and would have offered important resources to prehistoric inhabitants. Owing to its marshy environment, this area may not have been favored for any substantial occupation, but nonetheless is likely to have been visited for resource procurement and could contain artifacts associated with those activities. Additionally, the saturated conditions offered within this setting may have aided in the preservation of relatively rare organic artifacts. Since the Project includes ground-disturbing activities, there is a potential for discovery of subsurface archaeological deposits that could qualify as historic properties under Section 106 and/or historical or

unique archaeological resources under CEQA. This potential impact to unknown archaeological resources is considered significant. Mitigation Measures CR-1, CR-2, and CR-3 are recommended to ensure that the project would result in No Historic Properties Affected under Section 106 of the NHPA and less than significant impacts to historical or unique archaeological resources under CEQA.

Mitigation Measures

CR-1: Prior to earth moving activities, a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior, 2008) will conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of cultural resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. OCWD will ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

CR-2: Prior to the start of any ground-disturbing activities, OCWD will retain an archaeological monitor to observe all ground-disturbing activities. Archaeological monitoring will be conducted by a monitor familiar with the types of archaeological resources that could be encountered and shall work under the direct supervision of the qualified archaeologist. Monitoring may be reduced or discontinued by the qualified archaeologist, in coordination with OCWD, based on observations of subsurface soil stratigraphy and/or the presence of older C-horizon deposits. The monitor will be empowered to halt or redirect ground-disturbing activities away from the vicinity of a discovery until the qualified archaeologist has evaluated the discovery and determined appropriate treatment. The monitor will keep daily logs detailing the types of activities and soils observed, and any discoveries. After monitoring has been completed, the qualified archaeologist shall prepare a monitoring report that details the results of monitoring. The report shall be submitted to OCWD, SCCIC, and any Native American groups who request a copy.

CR-3: In the event of the discovery of archaeological materials, OCWD or its contractor shall immediately cease all work activities in the area (within approximately 100 feet) of the discovery until it can be evaluated by the qualified archaeologist. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone or concrete footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Construction shall not resume until the qualified archaeologist has conferred with OCWD on the significance of the resource. SWRCB

shall be afforded the opportunity to determine whether the discovery requires addressing under Section 106 Post-Review Discoveries provisions provided in 36 CFR 800.13.

If it is determined that the discovered archaeological resource constitutes a historic property under Section 106 of the NHPA or a historical resource under CEQA, avoidance and preservation in place shall be the preferred manner of mitigation. Preservation in place maintains the important relationship between artifacts and their archaeological context and also serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, an Archaeological Resources Treatment Plan that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource shall be prepared and implemented by the qualified archaeologist in consultation with OCWD. The appropriate Native American representatives shall be consulted in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond that which is scientifically important, are considered.

Native American Sacred Remains

Native American respondents indicated sensitivity for archaeological resources in the APE and surrounding area given the proximity to the Santa Ana River corridor. In addition, the geoarchaeological review indicates that the portion of the APE within OCSD Plant No. 2 was largely salt marsh into the early 20th century and would have offered important resources. Owing to its marshy environment, this area may not have been favored for any substantial occupation, but nonetheless it is likely to have been visited for resource procurement and could contain artifacts associated with those activities. Additionally, the saturated conditions offered within this setting could have aided in the preservation of relatively rare organic artifacts. Mitigation Measures CR-5 is recommended to ensure that the project would result in No Historic Properties Affected under Section 106 of the NHPA and less than significant impacts to historical or unique archaeological resources under CEQA.

Mitigation Measure

CR-5: Prior to issuance of a grading permit and prior to start of any ground-disturbing activities, OCWD will retain a Native American monitor to observe all ground-disturbing activities. The monitor shall be obtained from a Tribe that is traditionally and culturally affiliated with the area, according to the NAHC list. The monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of a discovery until the qualified archaeologist has evaluated the discovery and determined appropriate

treatment. Monitoring may be reduced or discontinued, in coordination with OCWD and the qualified archaeologist, based on observations of subsurface soil stratigraphy and/or the presence of older C-horizon deposits.

5.5 Federal Clean Air

Air Basin: South Coast Air Basin

Local Air District: South Coast Air Quality Management District

Is the project subject to a State Implementation Plan (SIP) conformity determination?

☒ Yes. The project is in a non-attainment area or attainment area subject to maintenance plans for a federal criteria pollutant. Include information to indicate the non-attainment designation (e.g. moderate, serious, severe, or extreme), if applicable. If estimated emissions (below) are above the federal de Minimis levels, but the project is sized to meet only the needs of current population projections that are used in the approved SIP for air quality, then quantitatively indicate how the proposed capacity increase was calculated using population projections.

The NEPA analysis compares the proposed project's impacts with the Federal thresholds in order to determine if impacts to Clean Air Act pollutants would exceed federal thresholds. Considering the standards developed for the State of California are more restrictive than the federal thresholds, the analysis detailed above for Air Quality and Greenhouse Gasses would serve to prove compliance with the NEPA analysis.

The SCAQMD is responsible for the development of the Basin's portion of the State Implementation Plan (SIP), which is required under the federal Clean Air Act for areas that are in nonattainment for criteria pollutants. The project may obtain state funding and therefore, under the Clean Air Act, the project would be subject to a SIP conformity determination. This is because the project is in an extreme nonattainment area for 8-hour ozone, a moderate nonattainment area for PM_{2.5} and a maintenance area for CO and PM₁₀. Table 29 shows the federal thresholds and the attainment status for each of the criteria air pollutants. Under the Clean Air Act, de minimis levels for criteria pollutants have been established as a screening level to determine the potential for a proposed Project to adversely impact air emissions. Emissions are compared to these levels for the SIP conformity determination (de minimis). If the project is below the de minimis levels then the project is determined to be in conformance with the SIP. If a project exceeds the de minimis levels then a full conformity analysis must be conducted.

Thresholds of Significance

Localized Construction Emissions

40 CFR 93 153 defines de minimis levels, that is the minimum threshold for which a conformity determination must be performed, for various criteria pollutants in various

areas. As shown in Table 8, maximum localized construction emissions for sensitive receptors would not exceed the localized thresholds for NOX, CO, PM10 and PM25. Therefore, with respect to localized construction emissions, impacts would be less than significant.

Localized Operational Emissions

As discussed previously, the only new criteria pollutant emissions from the operation of the proposed project would be the emissions of ROG and CO. Only CO is evaluated in the localized analysis and would result in less than 1lb/day of localized emissions. This is well below the SCAQMD's significance threshold of 1,089 lbs/day. Therefore, the impacts to sensitive receptors would be less than significant.

Table 29: De Minimis Levels

Pollutant	Area Type	Tons/year
Ozone (VOC or NOx)	Serious nonattainment	50
	Severe nonattainment	25
	Extreme nonattainment	10
	Other areas outside an ozone transport region	100
Ozone (NOx)	Marginal and moderate nonattainment inside an ozone transportation region	100
	Maintenance	100
Ozone (VOC)	Marginal and moderate nonattainment inside an ozone transport region	50
	Maintenance within an ozone transport region	50
	Maintenance outside an ozone transport region	100
CO, SO ₂ , NO ₂	All nonattainment and maintenance	100
PM ₁₀	Serious nonattainment	70
	Moderate nonattainment and maintenance	100
PM _{2.5}	All nonattainment and maintenance	100
Source: USEPA, 2016a, USEPA 2016b		

Project Emissions

As shown in Table 30, ozone precursors are below the *de Minimis* thresholds for unmitigated construction and operational activities, and therefore, the project is consistent with the SIP. Construction emissions show only the maximum emissions for the proposed project in tons per year and are based on the maximum days of construction per subphase. Because the proposed project emissions are below the *de minimis* thresholds, a detailed conformity analysis is not warranted.

Table 30: SIP Conformity Evaluation

Pollutant	Federal Status	Nonattainment Rates	Threshold of Significance (tons/year)	Maximum Construction Emissions (tons/year)	Operational Emissions (tons/year)
Ozone (O ₃)	Non Attainment	Extreme		See (VOC & NO _x)	
Carbon Monoxide (CO)	Attainment/ Maintenance	N/A	100	1	<1
Oxides of Nitrogen (NO _x)	N/A	N/A	10	2	0.0
Volatile Organic Compounds (VOC)	N/A	N/A	10	<1	<1
Lead (Pb)	Attainment	N/A	N/A	N/A	N/A
Particulate matter less than 2.5 microns (PM _{2.5})*	Non Attainment	Moderate	100	<1	0.0
Particulate matter less than 10 microns (PM ₁₀)*	Attainment/ Maintenance	N/A	100	<1	0.0
Sulfur Dioxide (SO ₂)	Attainment	N/A	N/A	<1	0.0
Notes: N/A = Non-applicable Source: ESA 2018; USEPA, 2016a, USEPA 2016b					

As discussed previously, no growth-inducing development or land use would occur under the proposed project, and therefore, the project would not conflict with the City's General Plan. Therefore the project would be consistent with the AQMP. Additionally, as the annual emissions from the project would be well below the *de minimis* thresholds for SIP conformity, the proposed project is considered to be in conformance with the SIP. No mitigation measures are required.

5.6 Coastal Zone Management Act

Is any portion of the project site located within the coastal zone?

The OCSD Plant No. 2 Site is located within the coastal zone and is included within the City of Huntington Beach Coastal Element. The proposed project would require approval of a coastal development permit from the City of Huntington Beach. With approval of coastal development permit, the proposed project would be consistent with the City of Huntington Beach Coastal Element.

5.7 Coastal Barriers Resources Act

Will the project impact or be located within or near the Coastal Barrier Resources System or its adjacent wetlands, marshes, estuaries, inlets, and near-shore waters? Note that since there is currently no Coastal Barrier Resources System in California, projects located in California are not expected to impact the Coastal Barrier Resources System in other states. If there is a special circumstance in which the project may impact a Coastal Barrier Resource System, indicate your reasoning below.

☒ No. The Project will not impact or be located within or near the Coastal Barrier Resources System or its adjacent wetlands, marshes, estuaries, inlets, and near-shore waters.

According to the United States Fish and Wildlife Service Official Coastal Barrier Resource System Maps there are not any coastal barriers within or near the study area. Therefore, the proposed project would not be in conflict with Coastal Barrier Resources Act.

5.8 Farmland Protection Policy Act

Is any portion of the project located on important farmland?

☒ No. The project will not impact farmland.

The study area is located in a highly urbanized area. The study area doesn't contain any existing agriculture land uses. According to the California Farmland Mapping and Monitoring Program, there is no Prime Farmland, Unique Farmland or Farmland of Statewide Importance within the study area. The study area is zoned for urbanized land uses and there are no existing Williamson Act Contracts recorded within the study area. The construction and operation of the proposed project would not impact any important farmland resources.

5.9 Flood Plain Management

Is any portion of the project located within a 100-year floodplain as depicted on a floodplain map or otherwise designated by the Federal Emergency Management Agency?

☒ No. Provide a description of the project location with respect to streams and potential floodplains:

As shown in Figure 13 the OCSD Plant No. 2 Site is located in Flood Zone X. This area is protected from the one-percent-annual-chance flood by levee, dike, or other structures subject to possible failure or overtopping during larger floods.

5.10 Migratory Bird Treaty Act

Will the project affect protected migratory birds that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

☒ No. Provide an explanation below.

Onsite Impacts

Less than Significant Impact with Mitigation: The site is composed of well-maintained ornamental plant species' and there are few opportunities for nesting birds. Along the perimeter of Plant No.2 there are a row of large eucalyptus trees. Large

Eucalyptus trees commonly harbor nesting raptors. At the time of the survey no evidence of a nest was found in any of the trees. Additionally, there was no sign of historical nesting.

The, construction activities for the proposed project would not involve the removal of any trees. Therefore, potential direct impacts to nesting migratory raptor bird species would be avoided. The proposed constructions would occur in close proximity to the Eucalyptus tree grove along the perimeter of the site and there would be the potential that construction noise equipment could disrupt the breeding patterns of nesting migratory birds. It is recommended that the project should not take place between February 15 and August 15. Raptors typically begin exhibiting nesting behavior in the winter months, and project commencement beyond February 15 runs the risk of resulting in noise impacts to nesting raptors and other tree inhabiting species'. All tree nesting species' including raptors should be completed by August 15. In event construction activities are proposed before the completion of nesting season, a biologist would examine the site one week prior to initiating any activities to ensure that all nesting has completed. Ground nesting species would also be taken into account. If this project continues into another season the biologist would continue to monitor and work with all parties to ensure remaining activities are not harmful to nesting birds. With the implementation of Mitigation Measure BIO-1 potential impacts to migratory birds would be less than significant.

Offsite Impacts

No Impact: The Talbert Mash is located approximately 3,300 feet and the California Least tern Colony is located 4,400 feet from the proposed construction activities. At this distance the construction noise levels would be minimal and would not pose a potential disruption to nesting birds. The implementation of the proposed project would not result in significant impacts to both species.

Mitigation Measure

BIO-1: Construction activities should not take place between February 15 and August 15. In the event construction activities are proposed before the completing of nesting season, a biologist would examine the site one week prior to initiating any activities to ensure that all nesting has completed. Ground nesting species would also be taken into account.

5.11 Protection of Wetlands

Does any portion of the project boundaries contain areas that should be evaluated for wetland delineation or require a permit from the United States Army Corps of Engineers?

The area where the proposed project improvements would occur is located on lands that have been improved with wastewater treatment facilities. To determine the

presence of Wetland Waters, wetland delineation based on the Corps three parameter approach was conducted in the location where the proposed improvements would occur. These three parameters include; (1) the presence of wetland vegetation, (2) the presence of wetland hydrology and (3) the presence of hydric soils.

Vegetation: The locations where the proposed project improvements would occur does not contain any wetland vegetation species that would meet the wetland vegetation parameter.

Hydrology: The only source of water to the study area would be seasonal rainfall. The ground surface where the construction activities would occur consists of compacted soils or concrete that would not saturate with rainfall. The study area would not meet the wetland hydrology parameter.

Hydric Soils: The study area soils consist of compacted fill material or concrete and would not meet the hydric soil parameter.

Wetland Waters Determination

The study area lacks the required parameters that define Wetland Waters of the U.S. or State. Therefore, the implementation of the proposed project would not adversely impact Wetland Waters of the U.S or State.

5.12 Wild and Scenic Rivers Act

Is any portion of the project located within a wild and scenic river?

☒ No. The project is not located near a wild and scenic river.

The study area is located in the Santa Ana River Watershed. Within the Santa Ana River Watershed there are no Wild and Scenic Rivers. Therefore, the construction and operation of the Water Production Enhancement Project would not result in adverse impacts to any wild and scenic rivers.

5.13 Safe Drinking Water Act, Sole Source Aquifer Protection

Is the project located in an area designated by the United States Environmental Protection Agency, Region 9, as a Sole Source Aquifer?

☒ No. The project is not within the boundaries of a sole source aquifer.

The closest sole source aquifer to the study area would be Campo/Cotton Creek Aquifer in San Diego County. Therefore, the construction and operation of the proposed project would not result in adverse impacts to any sole source aquifers.

5.14 Environmental Justice

Does the project involve an activity that is likely to be of particular interest to or have particular impact upon minority, low-income, or indigenous populations, or tribes?

☒ No. Selecting “No” means that this action is not likely to be of any particular interest to or have an impact on these populations or tribes. Explain.

The purpose of the proposed project is to provide additional wastewater flows to OCWD GWRS wastewater treatment site to produce additional water supplies to replenish the Orange County Groundwater Basin to ensure that adequate amounts of groundwater are available to Orange County residents including low-income households. By maintaining adequate amounts of groundwater supplies, less water would have to be imported into Orange County which is significantly higher in costs and which could have a higher economic impact on lower income households. The implementation of the proposed project would increase groundwater supplies and would result in beneficial fiscal impacts to Orange County residents including lower income households.

SECTION 6.0 REFERENCES

California Department Fish and Game Natural Diversity Database Accessed January June 2018.

California Department of Transportation Scenic Highways Program Web Site Access, January 2018.

California Environmental Quality Act. 2018.

California Environmental Quality Act, State CEQA Guidelines, 2018.

California Farmland Mapping Monitoring Program, Web Site Access January 2018.

California Geologic Survey Seismic Hazard Zone Map Newport Quadrangle, Accessed January 2018.

California Native Plant Society Inventory of Rare and Endangered Plants Database, Accessed January 2018.

California Uniform Building Code, 2018

City of Huntington Beach, General Plan, Web Access January 2018

City of Huntington Beach Municipal Code, Web Access, January 2018

City of Huntington Beach Zoning Code, Web Site Access, June 2018

County of Orange Congestion Management Program, Web Site Access June 2018

County of Orange Model Water Quality Management Plan, 2017.

County of Orange, 4th term municipal NPDES permit for Areawide Urban Storm Water Runoff, 2014.

John Wayne Airport Environs Land Use Plan, 2014.

National Water Research Institute Santa Ana River Water Quality and Health Study, 2004.

Orange County Water District Groundwater Management Plan, 2017.

Orange County Water District Mounding Impact technical Memorandum, 2010 and 2011.

Regional Water Quality Control Board, Santa Ana River Basin Plan, January 1995.

U.S. Army Corps of Engineers List of Wetland Plants, 2008.

U.S. Army Corps of Engineers Regional Supplement to the Corps of Engineers Wetland Delineation Manual Arid West Region, September 2008.

Appendix A Final

PLANT NO. 2 GWRS CONVEYANCE FACILITIES PROJECT

Air Quality and Greenhouse Gas Emissions Technical Report

Prepared for
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

February 2018



Final

PLANT NO. 2 GWRS CONVEYANCE FACILITIES PROJECT

Air Quality and Greenhouse Gas Emissions Technical Report

Prepared for
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

February 2018

2121 Alton Parkway
Suite 100
Irvine, CA 92606
949.753.7001
www.esassoc.com



Irvine	Sacramento
Los Angeles	San Diego
Oakland	San Francisco
Orlando	Santa Monica
Pasadena	Seattle
Petaluma	Tampa
Portland	Woodland Hills

OUR COMMITMENT TO SUSTAINABILITY | ESA helps a variety of public and private sector clients plan and prepare for climate change and emerging regulations that limit GHG emissions. ESA is a registered assessor with the California Climate Action Registry, a Climate Leader, and founding reporter for the Climate Registry. ESA is also a corporate member of the U.S. Green Building Council and the Business Council on Climate Change (BC3). Internally, ESA has adopted a Sustainability Vision and Policy Statement and a plan to reduce waste and energy within our operations. This document was produced using recycled paper.

TABLE OF CONTENTS

	<u>Page</u>
Executive Summary	ES-1
Section 1. Introduction	1
1.1 Project Location	1
1.2 Project Description.....	1
1.3 Updated and Project-Specific Conditions	4
1.3.1 Regional Air Quality	4
1.3.2 Local Air Quality.....	7
Existing Ambient Air Quality in the Project Area	7
Sensitive Receptors	8
1.3.3 Existing Greenhouse Gas Environment	8
Global Climate Change.....	8
Section 2. Regulatory Setting	12
2.1 Federal	12
2.1.1 Federal Clean Air Act.....	12
2.1.2 United States Environmental Protection Agency.....	15
2.2 State	17
2.2.1 California Air Resources Board.....	17
2.2.3 Air Quality and Land Use Handbook.....	19
2.2.4 On-Road and Off-Road Vehicle Rules	19
2.2.5 California Greenhouse Gas Reduction Targets	20
2.2.6 California Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006	22
2.2.7 Transportation Sector	23
2.2.8 Land Use Transportation Planning.....	24
2.2.9 SB 97	25
2.3 Regional	25
2.3.1 South Coast Air Quality Management District	25
Air Quality Management Plan	25
Regulations and Rules.....	27
Air Quality Guidance Documents	28
Greenhouse Gases.....	29
2.3.2 Regional Comprehensive Plan and Guide and Congestion Management Plan.....	30
2.4 Local	30
2.4.1 City of Huntington Beach	30

	<u>Page</u>
Section 3. Significance Thresholds	31
3.1 Air Quality Thresholds	31
3.1.1 Construction Emissions	31
3.1.2 Operational Emissions	33
3.1.3 Carbon Monoxide Hotspots	34
3.1.4 Toxic Air Contaminants	34
3.1.5 Odors	34
3.2 Greenhouse Gas Emissions Thresholds	35
Section 4. Methodology	36
4.1 Consistency with Air Quality Plan	36
4.2 Air Quality Construction Emissions	36
4.3 Air Quality Operational Emissions	37
4.4 Substantial Criteria Pollutant Concentrations	37
4.4.1 Localized emissions	37
4.4.2 Carbon Monoxide Hotspots	38
4.4.3 Toxic Air Contaminants	38
4.5 Odors	44
4.6 GHG Emissions Estimates	44
4.6.1 Construction Emissions	45
4.6.2 Operational Emissions	46
Section 5. Environmental Impacts and Mitigation Measures	47
5.1 Consistency with Air Quality Plan	47
5.1.1 Construction	47
5.1.2 Operation	48
5.2 Regional Emissions	48
5.2.1 Construction Emissions	48
5.2.2 Operational Emissions	49
5.3 Cumulatively Considerable Non-Attainment Pollutants	49
5.3.1 Construction	49
5.3.2 Operation	50
5.4 Substantial Pollutant Concentrations	50
5.4.1 Localized Construction Emissions	50
5.4.2 Localized Operational Emissions	50
5.4.3 Carbon Monoxide Hotspots	51
5.4.4 Toxic Air Contaminants	51
5.5 Odors	53
5.5.1 Construction	53
5.5.2 Operation	53
5.6 Greenhouse Gas Emissions	54
5.6.1 Construction	54
5.6.2 Operation	54
5.6.3 Consistency with Adopted Plan, Policy or Regulation	54
5.7 Mitigation Measures	54
Section 6. Cumulative Impacts	55
6.1 Air Quality	55
6.1.1 Construction Impacts	55
6.1.2 Operational Impacts	56
6.2 Greenhouse Gas Emissions	57

	<u>Page</u>
Section 7. NEPA Conformity Analysis	59
7.1 Methodology	59
7.2 Thresholds of Significance.....	59
7.3 Project Impacts	60

Appendices

- A. Air Quality Emissions Calculation Worksheets
- B. Health Risk Modeling
- C. Greenhouse Gas Emissions Calculation Worksheets
- D. NEPA Conformity Analysis Worksheets

Figures

1	Vicinity Location Map	2
2	Site Plan	3
3	Sensitive Receptor Locations and Maximum Risk Location	41

Tables

1	Flow Equalization Tank, Pump Station, & Pipeline/Meter Vault Construction Equipment Mix	5
2	Flow Equalization Tank, Pump Station, & Pipeline/Meter Vault Worker & Daily Trip Summary	5
3	Pollutant Standards and Ambient Air Quality Data from Representative Monitoring Station	9
4	Ambient Air Quality Standards	13
5	South Coast Air Basin Attainment Status	18
6	OEHHA Recommended Residential Daily Breathing Rates, ASF, and FAH.....	43
7	Maximum Daily Unmitigated Regional Construction Emissions.....	49
8	Maximum Unmitigated Localized Construction Emissions.....	51
9	De Minimis Emission Levels	60
10	SIP Conformity Evaluation	61

EXECUTIVE SUMMARY

The purpose of this Air Quality and Greenhouse Gas Technical Report is to provide an estimate of air quality and GHG emissions for the proposed Orange County Water District's (OCWD) Groundwater Replenishment System (GWRS) Conveyance Facilities Project (Project) and predicts the potential impacts from construction and operation activities. The Project site is located at the Orange County Sanitation District (OCSD) Plant 2 wastewater treatment facility site at 22212 Brookhurst Street within the City of Huntington Beach (City). The OCSD Plant 2 wastewater treatment facility site is generally bounded by Hamilton Avenue to the north, the Santa Ana River (SAR) to the east, Pacific Coast Highway (PCH) to the south, and Brookhurst Street to the west. The OCSD Plant 2 wastewater treatment facility site is composed of 110 acres, and is developed with wastewater treatment structures, offices, paved parking areas, and roadways.

This report summarizes the potential for the Project to conflict with an applicable air quality plan, to violate an air quality standard or threshold, to result in a cumulatively net increase of criteria pollutant emissions, or to expose sensitive receptors to substantial pollutant concentrations, and to generate GHG emissions that may have a significant impact on the environment and its potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. The findings of the analyses are as follows:

- The incremental increase in emissions from construction and operation of the proposed project would not exceed the regional daily emission thresholds set forth by the South Coast Air Quality Management District (SCAQMD). Thus, the proposed project would not result in a regional violation of applicable air quality standards or jeopardize the timely attainment of such standards in the South Coast Air Basin (Air Basin).
- The incremental increase in onsite emissions from construction and operation of the proposed project would not exceed the localized significance thresholds set forth by the SCAQMD. Thus, the proposed project would not result in a localized violation of applicable air quality standards or expose off-site receptors to substantial levels of regulated air contaminants, with the exception of cancer risk associated with construction activities. With the implementation of Mitigation Measure MM-AQ-1, cancer risk would be reduced to below regulatory thresholds.
- Proposed project construction and operations would result in less than significant odors.
- The proposed project would result in a less than significant cumulative air quality impact.
- Greenhouse gas emissions associated with the project would not exceed the emissions threshold of 3,000 MT CO₂e annual emissions. Therefore, the project would result in less than significant GHG emissions based on applicable thresholds of significance as evaluated in this technical report.
- The proposed Project would be consistent with greenhouse gas reduction strategies as set for by SCAG, City of Huntington Beach, and State of California.

SECTION 1

Introduction

The OCSD provides secondary effluent to the OCWD for further treatment through the Advanced Purification Treatment Facility referred to as the GWRS. This technical report has been prepared to support the GWRS Project's environmental review process and provide information regarding potential impacts to air quality and climate change associated with the approval of the Plant No. 2 GWRS Conveyance Facilities Project (Project). The Project consists of a pump station, two secondary effluent flow equalization tanks, and associated piping, valving, and metering connections.

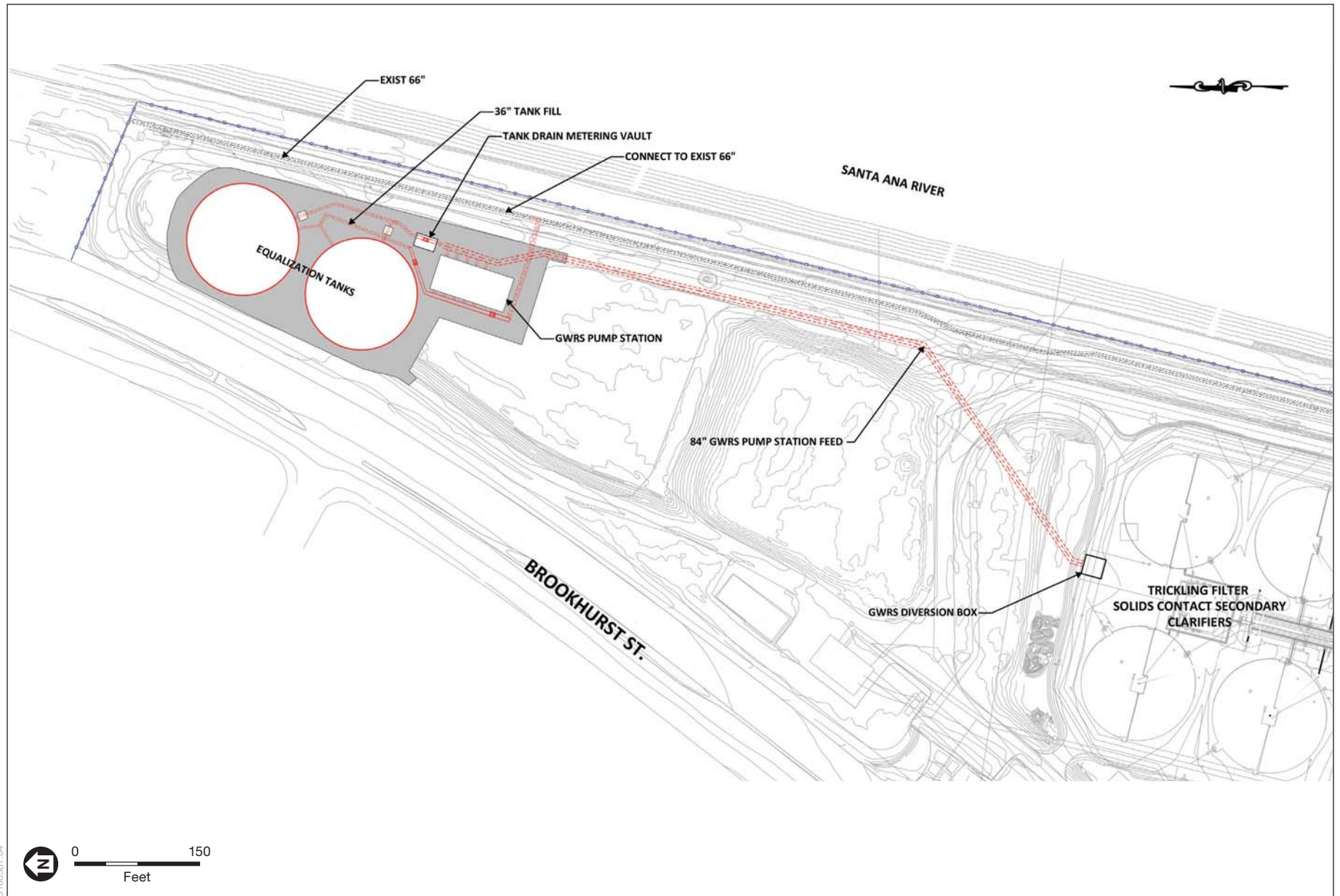
This report describes the existing ambient air quality in the project area, identifies applicable regulations, and evaluates potential short- and long-term air quality and climate change impacts associated with the build-out of the Project. Where applicable, measures to mitigate or minimize impacts associated with the Project are included. Information used to prepare this analysis was obtained from OCWD, City of Huntington Beach General Plan and Noise Ordinance, and other sources identified herein.

1.1 Project Location

The Project is located in the City of Huntington Beach as shown in **Figure 1, Vicinity Location Map**. Specifically, the OCSD Plant 2 wastewater treatment facility site is located at 22212 Brookhurst Street within the City of Huntington Beach. The OCSD Plant 2 wastewater treatment facility site is generally bounded by Hamilton Avenue to the north, the Santa Ana River (SAR) to the east, Pacific Coast Highway (PCH) to the south, and Brookhurst Street to the west. OCSD Plant 2 wastewater treatment facility site is composed of 110 acres, and is developed with wastewater treatment structures, offices, paved parking areas, and roadways.

1.2 Project Description

The Project will involve the construction of three types of facilities. The three main facilities associated with the Project is a pump station, two flow equalization tanks, and associated piping with a valving/metering vault. These proposed facilities for the Project are shown in **Figure 2, Site Plan**. The Project facilities will be constructed at the north end of OCSD Plant No. 2.



SOURCE: Black & Veatch Corporation, 2018

Plant No. 2 GWRS Conveyance Facilities Project

Figure 2
Site Plan

The pump station will be a 25-foot tall concrete building (from grade) with five 350-hp pumps located within the building. The five pumps will be configured as four active duty pumps and one standby pump. The five pumps will be installed within individual 30-inch diameter wet wells. Each of the wet wells will be drilled to 25-feet below grade. In addition to the pumps, the pump station building (95-ft x 40-ft x 25-ft tall) will have a portioned off electrical room within it. The pump station discharge pipeline (54-inches in diameter) splits into two 36-inch diameter steel pipes which will feed each of the two 3-million gallon (MG) flow equalization tanks.

The tanks will be circular pre-stressed concrete storage tanks approximately 135-feet in diameter and 28-feet tall from existing grade. The 84-inch pump station feed pipeline will connect to an existing 108-inch diameter trickling filter effluent line with a diversion box to bring the secondary effluent to the pump station. The 84-inch pump station feed pipeline alignment is shown in Figure 2 and is approximately 800-linear feet. The 54-inch pump station discharge pipeline will have a valve and meter vault (15-ft x 20-ft x 10-ft deep) which will measure and control the flows from the pump station. In addition, each tank will have separate piping and control valves for filling and draining each tank. The two flow equalization tanks will be partially buried at 4-feet below existing grade. There will be a concrete tank pad approximately 2-feet thick under each of the flow equalization tanks.

The Project would be implemented in four construction phases beginning in August 2020 and concluding in December 2022. The mix of construction equipment for each construction phase is shown in the **Table 1, Flow Equalization Tank, Pump Station, & Pipeline/Meter Vault Construction Equipment Mix** below. **Table 2, Flow Equalization Tank, Pump Station, & Pipeline/Meter Vault Worker & Daily Trip Summary** shows the daily haul trips and worker estimates.

1.3 Updated and Project-Specific Conditions

1.3.1 Regional Air Quality

The project site is located within the South Coast Air Basin (Air Basin). The distinctive climate of the Air Basin is determined primarily by its terrain and geographical location. Regional meteorology is dominated by a persistent high pressure area which commonly resides over the eastern Pacific Ocean. Seasonal variations in the strength and position of this pressure cell cause changes in the weather patterns of the area. Warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and moderate humidity characterize local climatic conditions. This normally mild climatic condition is occasionally interrupted by periods of hot weather, winter storms, and hot easterly Santa Ana winds.

The Air Basin is an area of high air pollution potential, particularly from June through September. This condition is generally attributed to the large amount of pollutant emissions, light winds and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Air Basin vary with location, season and time of day. Ozone concentrations, for example, tend to be lower along the coast, higher in the near inland valleys and lower in the far inland areas of the Air Basin and adjacent desert.

TABLE 1
FLOW EQUALIZATION TANK, PUMP STATION, & PIPELINE/METER VAULT CONSTRUCTION EQUIPMENT MIX

Activity	Equipment Description	Equipment Quantity	Time (Hrs/Day)	Total (Days)	Total (Hours)	HP Rating
Phase 1 – Pump Station, Tanks, Pipeline/Meter Vault Excavation	Bull Dozer	2	6	30	360	250
	Compactor	1	6	10	60	200
	Excavator	2	6	20	240	200
	Dump Trucks	6	6	18	648	350
	Water Trucks	1	8	45	360	350
Phase 2 – Construction of Pump Station Wet Wells, Tanks Piles, Piping	Drill Rig	1	6	20	120	500
	Backhoe	1	6	20	120	150
	Concrete Trucks	4	6	14	336	350
	Dump Trucks	2	5	3	30	350
	Water Truck	2	4	25	200	350
Phase 3 – Construction of Tank, Pump Station Building, Meter Vault	Crane	1	6	10	60	300
	Forklift	4	6	30	720	120
	Concrete Trucks	4	6	19	456	350
	Man Lift	5	6	15	450	75
Phase 4 – Equipping of Pump Station, Tanks, Valve/Meter Vault	Crane	1	6	10	60	300
	Forklift	4	6	30	720	120
	Man Lift	5	6	15	450	75

SOURCE: OCWD, 2018

TABLE 2
FLOW EQUALIZATION TANK, PUMP STATION, & PIPELINE/METER VAULT WORKER & DAILY TRIP SUMMARY

Activity Description	Worker	Vendor	Daily Haul Trips	Total Haul Trips
Phase 1 – Pump Station, Tanks, Pipeline/Meter Vault Excavation	10	1	30	540
Phase 2 – Construction of Pump Station Wet Wells, Tanks Piles, Piping	10	2	18	230
Phase 3 – Construction of Tank, Pump Station Building, Meter Vault	10	2	16	304
Phase 4 – Equipping of Pump Station, Tanks, Valve/Meter Vault	5	4	--	--

SOURCE: OCWD, 2018

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following pollutants are regulated by the United States Environmental Protection Agency (US EPA) and are subject to emissions control requirements adopted by federal, state and local regulatory agencies. These pollutants are referred to as “criteria air pollutants” as a result of the specific standards, or criteria, which have been adopted for them. A brief description of the health effects of these criteria air pollutants are provided below.

Ozone (O₃): O₃ is a secondary pollutant formed by the chemical reaction of Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NO_x) under favorable meteorological conditions such as high temperature and stagnation episodes. O₃ concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of O₃ irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower the lung efficiency.

Volatile Organic Compounds (VOCs). VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids. These are compounds comprised primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons, as are architectural coatings. Emissions of VOCs themselves are not “criteria” pollutants; however, they contribute with NO_x to formation of O₃ and are regulated as O₃ precursor emissions.

Nitrogen Dioxide (NO₂) and Nitrogen Oxides (NO_x): NO_x is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern include NO₂ and nitric oxide (NO), which can quickly oxidize in the atmosphere to form NO₂. Ambient air quality standards have been promulgated for NO₂, which is a reddish-brown, reactive gas. The principle form of NO_x produced by combustion is NO, but NO reacts quickly in the atmosphere to form NO₂, creating the mixture of NO and NO₂ referred to as NO_x. Major sources of NO_x emissions include power plants, large industrial facilities, and motor vehicles. Emissions of NO_x are a precursor to the formation of ground-level ozone. NO₂ can potentially irritate the nose and throat, aggravate lung and heart problems, and may increase susceptibility to respiratory infections, especially in people with asthma. According to the California Air Resources Board (CARB), “NO₂ is an oxidizing gas capable of damaging cells lining the respiratory tract. Exposure to NO₂ along with other traffic-related pollutants, is associated with respiratory symptoms, episodes of respiratory illness and impaired lung functioning. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO₂ above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO₂ exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.”¹ NO₂ also contributes to the formation of particulate matter. The terms “NO_x” and “NO₂” are sometimes used interchangeably. However, the term “NO_x” is primarily used when discussing emissions, usually from combustion-related activities. The term “NO₂” is primarily used when discussing ambient air quality standards. More specifically, NO₂ is regulated as a criteria air pollutant under the Clean Air Act and subject to the ambient air quality standards, whereas NO_x and NO are not. In cases where the thresholds of significance or impact analyses are discussed in the context of NO_x emissions, it is based on the conservative assumption that all NO_x emissions would oxidize in the atmosphere to form NO₂.

Carbon Monoxide (CO): Carbon monoxide is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the

1 California Air Resources Board, “Nitrogen Dioxide – Overview,” <http://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm>. Accessed December 2017.

heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

Sulfur Dioxide (SO₂): Major sources of SO₂ include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. Sulfur dioxide potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Particulate Matter (PM₁₀ and PM_{2.5}): The human body naturally prevents the entry of larger particles into the body. However, small particles including fugitive dust, with an aerodynamic diameter equal to or less than ten microns (PM₁₀) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns (PM_{2.5}), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM₁₀ and PM_{2.5}. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM₁₀ and PM_{2.5}. In children, studies have shown associations between particulate matter exposure and reduced lung function and increased respiratory symptoms and illnesses.² Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Lead (Pb): Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

1.3.2 Local Air Quality

Existing Ambient Air Quality in the Project Area

The SCAQMD maintains a network of air quality monitoring stations located throughout the SCAB to measure ambient pollutant concentrations. The monitoring station nearest to and most representative of the program area is the Costa Mesa Monitoring Station. Criteria pollutants monitored at this station include ozone, NO₂, CO, and SO₂. The nearest monitoring station to the program area that monitors data for PM₁₀, PM_{2.5} and lead is the Long Beach Monitoring

² California Air Resources Board, "Particulate Matter – Overview," <http://www.arb.ca.gov/research/aaqs/caaqs/pm/pm.htm>. Accessed December 2017.

Station. The most recent data reported to the USEPA and CARB for these monitoring stations are from calendar years 2012 to 2016.³ The pollutant concentration data for these years are summarized in **Table 3, Pollutant Standards and Ambient Air Quality Data from Representative Monitoring Station.**

Sensitive Receptors

Land uses such as residences, schools, hospitals, and convalescent homes are considered sensitive to poor air quality conditions because infants, children, the elderly, and people with health afflictions (especially respiratory ailments) are more susceptible to respiratory infections and other air-quality-related health problems than the general public. Residential areas are also considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short.

The nearest sensitive receptors to Plant No. 2 include the single-family residences located approximately 120 feet west of Plant No. 2 and multi-family residences located approximately immediately adjacent to the northern boundary of Plant No. 2 along Brookhurst Street.

All other air quality sensitive receptors are located at greater distances from the project site, and would be less impacted by project emissions.

1.3.3 Existing Greenhouse Gas Environment

Global Climate Change

Gases that trap heat in the atmosphere are called GHGs. The major concern with GHGs is that increases in their concentrations are causing global climate change. 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 rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long term global temperature increases.

3 South Coast Air Quality Management District, Historical Data by Year, <http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year>. Accessed December 2017.

TABLE 3
POLLUTANT STANDARDS AND AMBIENT AIR QUALITY DATA FROM REPRESENTATIVE MONITORING STATION

Pollutant/Standard ^a	2012	2013	2014	2015	2016
O ₃ (1-hour)					
Maximum Concentration (ppm)	0.090	0.095	0.096	0.099	0.090
Days > CAAQS (0.09 ppm)	2	1	1	1	0
O ₃ (8-hour)					
Maximum Concentration (ppm)	0.076	0.083	0.079	0.079	0.069
4 th High 8-hour Concentration (ppm)	0.060	0.065	0.076	0.068	0.065
Days > CAAQS (0.070 ppm)	1	2	6	2	0
Days > NAAQS (0.070 ppm)	1	2	6	2	0
NO ₂ (1-hour)					
Maximum Concentration (ppm)	0.074	0.076	0.061	0.052	0.060
98 th Percentile Concentration (ppm)	0.051	0.053	0.054	0.048	0.051
NO ₂ (Annual)					
Annual Arithmetic Mean (0.030 ppm)	0.010	0.012	0.011	0.012	0.010
CO (1-hour)					
Maximum Concentration (ppm)		2.4	3.0	3.0	2.1
CO (8-hour)					
Maximum Concentration (ppm)	2.11.7	2.0	1.9	2.2	1.7
SO ₂ (1-hour)					
Maximum Concentration (ppm)	0.006	0.004	0.009	0.005	0.003
99 th Percentile Concentration (ppm)	0.002	0.003	0.004	0.003	0.002
PM ₁₀ (24-hour)					
Maximum Concentration (µg/m ³)	54.0	54.0	59.0	62.0	56
Est. Days > CAAQS (50 µg/m ³)	1	1	2	2	3
Est. Days > NAAQS (150 µg/m ³)	0	0	0	0	0
PM ₁₀ (Annual Average)					
Annual Arithmetic Mean (20 µg/m ³)	25.5	27.3	26.6	26.5	27.8
PM _{2.5} (24-hour)					
Maximum Concentration (µg/m ³)	46.7	42.9	52.2	48.3	28.93
98 th Percentile Concentration (µg/m ³)	25.1	24.6	27.2	31.2	22.05
Est. Days > NAAQS (35 µg/m ³)	4	1	2	4	1
PM _{2.5} (Annual)					
Annual Arithmetic Mean (12 µg/m ³)	10.57	10.97	10.72	10.26	9.62
Lead					
Maximum 30-day average (µg/m ³)	0.007	0.012	0.012	0.010	0.008

^a ppm = parts per million; µg/m³ = micrograms per cubic meter

SOURCES: SCAQMD, 2017.

The Federal Government and State of California recognized that anthropogenic (human-caused) GHG emissions are contributing to changes in the global climate, and that such changes are having and will have adverse effects on the environment, the economy, and public health. While worldwide contributions of GHG emissions are expected to have widespread consequences, it is not possible to link particular changes to the environment of California or elsewhere to GHGs emitted from a particular source or location. In other words, emissions of GHGs have the

potential to cause global impacts rather than local impacts. Increased concentrations of GHGs in the Earth's atmosphere have been linked to global climate change and such conditions as rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increased frequency and magnitude of severe weather conditions. Existing climate change models also show that climate warming portends a variety of impacts on agriculture, including loss of microclimates that support specific crops, increased pressure from invasive weeds and diseases, and loss of productivity due to changes in water reliability and availability. In addition, rising temperatures and shifts in microclimates associated with global climate change are expected to increase the frequency and intensity of wildfires.

State law defines GHGs to include the following compounds: CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).⁴ The most common GHG that results from human activity is CO₂, which represents 76 percent of total anthropogenic GHG emissions in the atmosphere (as of 2010 data),⁵ followed by CH₄ and N₂O. Scientists have established a Global Warming Potential (GWP) to gauge the potency of each GHG's ability to absorb and re-emit long-wave radiation. The GWP of a gas is determined using CO₂ as the reference gas with a GWP of 1 over 100 years. For example, a gas with a GWP of 10 is 10 times more potent than CO₂ over 100 years. The sum of each GHG multiplied by its associated GWP is referred to as carbon dioxide equivalents (CO₂e). The measurement unit CO₂e is used to report the combined potency of GHG emissions. Compounds that are regulated as GHGs are discussed below.

Carbon Dioxide (CO₂): CO₂ is the most abundant GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO₂ is the reference gas (GWP of 1) for determining the GWPs of other GHGs.

Methane (CH₄): CH₄ is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The GWP of CH₄ is 25 in the IPCC AR4, and 28 in the IPCC AR5.

Nitrous Oxide (N₂O): N₂O produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N₂O is 298 in the IPCC AR4, and 265 in the IPCC AR5.

California produced 441.5 MMTCO₂e in 2014. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2014, accounting for approximately 37 percent of total GHG emissions in the state. This sector was followed by the

4 CEQA Guidelines Section 15364.5; Health and Safety Code, Section 38505(g).

5 Intergovernmental Panel on Climate Change, Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, 2014, https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_All_Topics.pdf. Accessed December 2017.

industrial sector (24 percent) and the electric power sector (including both in-state and out-of-state sources) (20 percent).⁶

Impacts of GHGs are borne globally, as opposed to localized air quality effects of criteria air pollutants and toxic air contaminants. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; however, it is clear that the quantity is enormous, and no single project would measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or micro climates. From the standpoint of the CEQA, GHG impacts to global climate change are inherently cumulative.

According to much of the scientific literature on this topic, emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors. As mentioned previously, in California the transportation sector is the largest emitter of GHGs, followed by industrial processes.⁷ Emissions of CO₂ are by-products of fossil fuel combustion. CH₄, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N₂O is also largely attributable to agricultural practices and soil management. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution, respectively, and are two of the most common processes of CO₂ sequestration.

In 2010, annual worldwide man-made emissions of GHGs were approximately 49,000 MMTCO₂e including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation).⁸ Emissions of CO₂ from fossil fuel use and industrial processes account for 65 percent of the total while CO₂ emissions from all sources accounts for 76 percent of the total. CH₄ emissions account for 16 percent and N₂O emissions for 6.2 percent. In 2015, the United States was the world's second largest emitter of carbon dioxide at 5,200 MMT (China was the largest emitter of carbon dioxide at 10,700 MMT).⁹

CARB compiles GHG inventories for the State of California. In 2015, California emitted 440.4 MMTCO₂e including emissions resulting from imported electrical power. Between 1990 and 2015, the population of California grew by approximately 31 percent. The California economy grew by 222 percent. Despite the population and economic growth, California's net GHG emissions only grew by approximately 2.2 percent.

⁶ CARB 2016. *California Greenhouse Gas Emission Inventory 2016 Edition*. Available at: <https://www.arb.ca.gov/cc/inventory/data/data.htm>; Accessed September 2017

⁷ CARB 2016. *California Greenhouse Gas Emission Inventory 2016 Edition*. Available at: <https://www.arb.ca.gov/cc/inventory/data/data.htm>; Accessed September 2017

⁸ Intergovernmental Panel on Climate Change, Climate Change 2014: Synthesis Report Contribution of Working Groups I, II, and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Summary for Policy Makers, 2014, <http://ipcc.ch/report/ar5/syr/>. Accessed March 2017.

⁹ PBL Netherlands Environmental Assessment Agency and the European Commission Joint Research Center, Trends in Global CO₂ Emissions 2016 Report, 2016, <http://www.pbl.nl/sites/default/files/cms/publicaties/pbl-2016-trends-in-global-co2-emissions-2016-report-2315.pdf>. Accessed March 2017.

SECTION 2

Regulatory Setting

A number of statutes, regulations, plans and policies have been adopted which address air quality and climate change concerns. The project site and vicinity is subject to regulations developed and implemented at the federal, State, and local levels. At the federal level, the USEPA is responsible for implementation of the federal Clean Air Act (CAA). Some portions of the CAA (e.g., certain mobile source requirements and other requirements) are implemented directly by the USEPA. Other portions of the CAA (e.g., stationary source requirements) are implemented through delegation of authority to State and local agencies.

2.1 Federal

2.1.1 Federal Clean Air Act

The federal Clean Air Act (CAA) was the first federal legislation regarding air pollution control. At the federal level, the USEPA is responsible for implementation of certain portions of the CAA including mobile source requirements. Other portions of the CAA, such as stationary source requirements, are implemented by state and local agencies.

Under Title I, Nonattainment Provisions, the CAA establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS), for the following criteria pollutants O₃, NO₂, CO, SO₂, PM₁₀, PM_{2.5}, and Pb. It also specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards would be met. The 1990 amendments to the CAA identify specific emission reduction goals for basins not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. **Table 4, *Ambient Air Quality Standards***, shows the NAAQS currently in effect for each criteria pollutant.

Title II of the CAA, Mobile Source Provisions, pertains to mobile sources such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for NO_x emissions have lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

TABLE 4
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards ^a		National Standards ^b		
		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g
O ₃ ^h	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
NO ₂ ⁱ	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m³)	None	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		53 ppb (100 µg/m³)	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m³)		9 ppm (10 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
SO ₂ ^j	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) ⁹
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas) ^j	—	
	Annual Arithmetic Mean	—	0.030 ppm (for certain areas) ⁱ	—		
PM10 ^k	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
PM2.5 ^k	24 Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³ ^k	15 µg/m³	
Lead ^{l,m}	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas) ^m	Same as Primary Standard	
	Rolling 3-Month Average ^m	--		0.15 µg/m³		

Pollutant	Average Time	California Standards ^a		National Standards ^b		
		Concentration ^c	Method ^d	Primary ^e	Secondary ^f	Method ^g
Visibility Reducing Particles ⁿ	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates (SO ₄)	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ^l	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

^a California standards for O₃, CO (except 8-hour Lake Tahoe), SO₂ (1 and 24 hour), NO₂nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

^b National standards (other than O₃, PM₁₀, PM_{2.5}, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

^c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

^d Any equivalent procedure which can be shown to the satisfaction of CARB to give equivalent results at or near the level of the air quality standard may be used.

^e National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

^f National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

^g Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

^h On October 1, 2015, the national 8-hour O₃ primary and secondary standards were lowered from 0.075 to 0.070 ppm.

ⁱ To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.

^j On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

^k On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³.

^l CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

^m The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

ⁿ In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

SOURCE: California Air Resources Board, Ambient Air Quality Standards (5/4/16), <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed December 2017.

2.1.2 United States Environmental Protection Agency

The United States Environmental Protection Agency (USEPA) is responsible for implementing federal policy to address global climate change. The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated by the United States. These programs focus on energy efficiency, renewable energy, methane and other non-carbon dioxide (CO₂) gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The USEPA implements several voluntary programs that substantially contribute to the reduction of GHG emissions. All of these programs play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

- The State Climate and Energy Partner Network that allows for the exchange of information between federal and state agencies regarding climate and energy,
- The Climate Leaders program for companies,
- The Energy Star labeling system for energy-efficient products, and
- The Green Power Partnership for organizations interested in buying green power.

In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), the U.S. Supreme Court held in April of 2007 that the USEPA has statutory authority under Section 202 of the federal Clean Air Act (CAA) to regulate GHGs. The court did not hold that the USEPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare.

The President signed Executive Order 13432 on May 14, 2007, directing the USEPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the Supreme Court's decision. Executive Order 13432 was codified into law by the 2009 Omnibus Appropriations Law signed on February 17, 2009. The order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation. In addition, the order requires more widespread use of Environmental Management Systems as the framework in which to manage and continually improve these sustainable practices. This Executive Order requires federal agencies to lead by example in advancing the nation's energy security and environmental performance by achieving the following goals:

- **Energy Efficiency:** Reduce energy intensity 30 percent by 2015, compared to an FY 2003 baseline.
- **Greenhouse Gases:** Reduce greenhouse gas emissions through reduction of energy intensity 30 percent by 2015, compared to an FY 2003 baseline.
- **Renewable Power:** At least 50 percent of current renewable energy purchases must come from new renewable sources (in service after January 1, 1999).
- **Building Performance:** Construct or renovate buildings in accordance with sustainability strategies, including resource conservation, reduction, and use; siting; and indoor environmental quality.

- **Water Conservation:** Reduce water consumption intensity 16 percent by 2015, compared to an FY 2007 baseline.
- **Vehicles:** Increase purchase of alternative fuel, hybrid, and plug-in hybrid vehicles when commercially available.
- **Petroleum Conservation:** Reduce petroleum consumption in fleet vehicles by 2 percent annually through 2015, compared to an FY 2005 baseline.
- **Alternative Fuel:** Increase use of alternative fuel consumption by at least 10 percent annually, compared to an FY 2005 baseline.
- **Pollution Prevention:** Reduce use of chemicals and toxic materials and purchase lower risk chemicals and toxic materials.
- **Procurement:** Expand purchases of environmentally sound goods and services, including bio-based products.
- **Electronics Management:** Annually, 95 percent of electronic products purchased must meet Electronic Product Environmental Assessment Tool standards where applicable; enable Energy Star® features on 100 percent of computers and monitors; and reuse, donate, sell, or recycle 100 percent of electronic products using environmentally sound management practices.

On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the federal CAA. The USEPA adopted a Final Endangerment Finding for the six defined GHGs CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆.¹⁰ The Endangerment Finding is required before USEPA can regulate GHG emissions under Section 202(a)(1) of the CAA in fulfillment of the U.S. Supreme Court decision. The USEPA also adopted a Cause or Contribute Finding in which the USEPA Administrator found that GHG emissions from new motor vehicle and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. These findings do not, by themselves, impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.

On May 19, 2009, the President announced a national policy for fuel efficiency and emissions standards in the U.S. auto industry. The policy is a collaboration between the U.S. Department of Transportation (USDOT) and the USEPA. The proposed federal standards apply to passenger cars and light-duty trucks built in model years 2012 through 2016. The proposed rule would surpass the prior Corporate Average Fuel Economy (CAFE) standards and require an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO₂ per mile by model year 2016, based on USEPA calculation methods.

In August 2012, the USEPA and USDOT adopted standards for model year 2017 through 2025 for passenger cars and light-duty trucks. By 2020, vehicles are required to achieve a combined standard of 41.7 mpg and 213 grams of CO₂ per mile. By 2025, vehicles are required to achieve

¹⁰ United States Environmental Protection Agency, Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act, <https://www.epa.gov/climate-change/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a>. Accessed December 2017.

54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO₂ per mile. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle.¹¹ In 2017, the USEPA recommended no change to the GHG standards for light-duty vehicles for model years 2022-2025. The USEPA intends to reconsider the final determination by April 1, 2018.

2.2 State

2.2.1 California Air Resources Board

CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets state ambient air quality standards (California Ambient Air Quality Standards [CAAQS]), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's SIP, for which it works closely with the federal government and the local air districts. The SIP is required for the State to take over implementation of the federal CAA from the USEPA.

In 2004, CARB adopted an Airborne Toxic Control Measure (ACTM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other toxic air contaminants (Title 13 California Code of Regulations [CCR], Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure generally does not allow diesel-fueled commercial vehicles to idle for more than five (5) minutes at any given location with certain exemptions for equipment in which idling is a necessary function such as concrete trucks. While this measure primarily targets diesel particulate matter emissions, it has co-benefits of minimizing GHG emissions from unnecessary truck idling.

In 2008, CARB approved the Truck and Bus regulation to reduce particulate matter and nitrogen oxide emissions from existing diesel vehicles operating in California (13 CCR, Section 2025, subsection (h)). CARB has also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models. While these regulations primarily target reductions in criteria air pollutant emission, they have co-benefits of minimizing GHG emissions due to improved engine efficiencies.

11 United States Environmental Protection Agency, EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks, August 2012, <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZ7C.PDF?Dockey=P100EZ7C.PDF>. Accessed December 2017.

2.2.2 California Clean Air Act

The California Clean Air Act, signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practical date. The CAAQS apply to the same criteria pollutants as the federal Clean Air Act but also include State-identified criteria pollutants, which include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. CARB has primary responsibility for ensuring the implementation of the California Clean Air Act, responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state. Table 4 shows the CAAQS currently in effect for each of the criteria pollutants as well as the other pollutants recognized by the state. As shown in Table 4, the CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. **Table 5, *South Coast Air Basin Attainment Status*** provides a summary of the attainment status of the Orange County portion of the Air Basin with respect to the state standards. The Air Basin is designated as attainment for the California standards for sulfates, hydrogen sulfide, and vinyl chloride. As shown in Table 5, the Air Basin is currently in nonattainment for ozone, PM10, and PM2.5 under the CAAQS.

TABLE 5
SOUTH COAST AIR BASIN ATTAINMENT STATUS

Pollutant	National Standards	California Standards
Ozone (1-hour standard)	N/A ^a	Non-attainment
Ozone (8-hour standard)	Non-attainment – Extreme	Non-attainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
PM10	Attainment	Non-attainment
PM2.5	Non-attainment – Serious	Non-attainment
Lead	Non-attainment (Partial) ^b	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Attainment
Vinyl Chloride	N/A	N/A ^c

NOTES:

N/A = not applicable

^a The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.

^b Partial Nonattainment designation – Los Angeles County portion of the Air Basin only for near-source monitors.

^c In 1990 the California Air Resources Board identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the California Air Resources Board does not monitor or make status designations for this pollutant.

SOURCE: United States Environmental Protection Agency, The Green Book Non-attainment Areas for Criteria Pollutants, <https://www.epa.gov/green-book>. Accessed November 2017; California Air Resources Board, Area Designations Maps/State and National, <http://www.arb.ca.gov/desig/adm/adm.htm>. Accessed December 2017.

The Clean Air Act also specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards would be met. The 1990 amendments to the Clean Air Act identify specific emission reduction goals for basins not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones.

Title II of the Clean Air Act pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for NO_x emissions have lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

2.2.3 Air Quality and Land Use Handbook

The CARB published the Air Quality and Land Use Handbook in April 2005 to serve as a general guide for considering impacts to sensitive receptors from facilities that emit TAC emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines and (4) avoid siting sensitive receptors within 300 feet of a large gasoline dispensing facility (3.6 million gallons per year or more) or 50 feet of a typical gasoline dispensing facility (less than 3.6 million gallons per year).¹²

2.2.4 On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter (DPM) and other TACs (Title 13 California Code of Regulations [CCR], Section 2485).¹³ The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This

12 California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective, 2005, <https://www.arb.ca.gov/ch/handbook.pdf>. Accessed December 2017.

13 California Air Resources Board, Final Regulation Order, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling, <https://www.arb.ca.gov/regact/idling/fro1.pdf>. Accessed March 2017.

measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In 2008 CARB approved the Truck and Bus regulation to reduce NO_x, PM₁₀, and PM_{2.5} emissions from existing diesel vehicles operating in California (13 CCR, Section 2025).¹⁴ The requirements were amended in December 2010 and apply to nearly all diesel fueled trucks and busses with a gross vehicle weight rating greater than 14,000 pounds. For the largest trucks in the fleet, those with a gross vehicle weight rating greater than 26,000 pounds, there are two methods to comply with the requirements. The first way is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards, or better. This is phased over eight years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this option would meet or exceed the 2010 engine emission standards for NO_x and DPM by 2023. The second option, if chosen, requires fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters achieving at least 85 percent removal efficiency, so that by January 1, 2016 their entire fleet is equipped with diesel particulate filters. However, diesel particulate filters do not typically lower NO_x emissions. Thus, fleet owners choosing the second option must still comply with the 2010 engine emission standards for their trucks and busses by 2020.

In addition to limiting exhaust from idling trucks, CARB promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The compliance schedule requires that BACT turn overs or retrofits (VDECS installation) be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

2.2.5 California Greenhouse Gas Reduction Targets

The Governor announced on June 1, 2005, through Executive Order S-3-05,¹⁵ the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

In accordance with Executive Order S-3-05, the Secretary of CalEPA is required to coordinate efforts of various agencies, which comprise the California Climate Action Team (CAT), in order to collectively and efficiently reduce GHGs. These agencies include CARB, the Secretary of the Business, Transportation and Housing Agency, Department of Food and Agriculture, the Resources Agency, the California Energy Commission, and the Public Utilities Commission. The CAT provides periodic reports to the Governor and Legislature on the state of GHG reductions in

14 California Air Resources Board, Final Regulation Order, Amendments to the Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants from In-Use On-Road Diesel-Fueled Vehicles, <http://www.arb.ca.gov/msprog/onrdiesel/documents/TBFinalReg.pdf>. Accessed March 2017.

15 California Office of the Governor, Executive Order S-3-05, <https://www.gov.ca.gov/news.php?id=1861>. Accessed March 2017.

the state as well as strategies for mitigating and adapting to climate change. The first CAT Report to the Governor and the Legislature in 2006 contained recommendations and strategies to help meet the targets in Executive Order S-3-05. The 2010 CAT Report, finalized in December 2010, expands on the policies in the 2006 assessment.¹⁶ The new information detailed in the CAT Report includes development of revised climate and sea-level projections using new information and tools that became available and an evaluation of climate change within the context of broader social changes, such as land-use changes and demographic shifts.

On April 29, 2015, Governor Brown issued Executive Order B-30-15. Therein, the Governor directed the following:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

In response to the 2030 GHG reduction target, CARB released the 2017 Climate Change Scoping Plan Update in January 2017 and the proposed Final 2017 Climate Change Scoping Plan Update in December 2017.¹⁷ The Scoping Plan Update outlines the strategies the State will implement to achieve the 2030 GHG reduction target, which build on the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, improved vehicle, truck and freight movement emissions standards, increasing renewable energy, and strategies to reduce methane emissions from agricultural and other wastes by using it to meet our energy needs. The Scoping Plan Update also comprehensively addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. The Scoping Plan Update considers the following scenarios:

- Scoping Plan Scenario: Continuing the Cap-and-Trade Program.
- Alternative 1: Direct regulations on a wide variety of sectors, such as specific required reductions for all large GHG sources, more renewables, etc.
- Alternative 2: A carbon tax to put a price on carbon, instead of the Cap-and-Trade Program.
- Alternative 3: All Cap-and-Trade. This would remove the refinery measure and keep the LCFS at 10 percent reduction in carbon intensity past 2020.
- Alternative 4: Cap-and-Tax. This would place a declining cap on industry, and natural gas and fuel suppliers, while also requiring them to pay a tax on each ton of GHG emitted.

¹⁶ California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, 2010, <http://www.energy.ca.gov/2010publications/CAT-1000-2010-005/CAT-1000-2010-005.PDF>. Accessed March 2017.

¹⁷ California Air Resources Board, The 2017 Climate Change Scoping Plan Update, January 2017 https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf. Accessed March 2017.

CARB is scheduled to consider the proposed scenario and alternatives and adopt the 2017 Climate Change Scoping Plan Update on December 17, 2017.

2.2.6 California Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines GHGs as CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020. In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amends HSC Division 25.5 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and includes provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (Health and Safety Code section 38561 (h)). CARB developed an AB 32 Scoping Plan that contains strategies to achieve the 2020 emissions cap.¹⁸ The initial scoping plan was approved in 2008, and contained a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives.¹⁹ The first update to the Scoping Plan was approved by CARB in May 2014 and built upon the initial Scoping Plan with new strategies and recommendations.²⁰

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was originally set at 427 MMTCO₂e using the GWP values from the IPCC SAR. CARB also projected the state's 2020 GHG emissions under business-as-usual (BAU) conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 MMTCO₂e (using GWP values from the IPCC SAR). Therefore, under the original projections, the state must reduce its projected 2020 emissions by 28.4 percent in order to

18 California Air Resources Board, Initial AB 32 Climate Change Scoping Plan Document, <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed December 2017

19 California Air Resources Board, Initial AB 32 Climate Change Scoping Plan Document, <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed December 2017.

20 California Air Resources Board, First Update to the AB 32 Scoping Plan, <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed December 2017.

meet the 1990 target of 427 MMTCO₂e. In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 MMTCO₂e. CARB also updated the State's projected 2020 emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were recently adopted for motor vehicles and renewable energy. CARB's projected statewide 2020 emissions estimate using the GWP values from the IPCC AR4 is 509.4 MMTCO₂e. Therefore, the emission reductions necessary to achieve the 2020 emissions target of 431 MMTCO₂e would be 78.4 MMTCO₂e, or a reduction of GHG emissions by approximately 15.4 percent. In the 2017 Climate Change Scoping Plan Update, CARB provides the estimated projected statewide 2030 emissions and the level of reductions necessary to achieve the 2030 target of 40 percent below 1990 levels. CARB's projected statewide 2030 emissions takes into account 2020 GHG reduction policies and programs.

In its Climate Change Scoping Plan, CARB has acknowledged that land use-driven emissions are highly complex: “While it is possible to illustrate the [GHG] inventory many different ways, no chart or graph can fully display how diverse economic sectors fit together. California's economy is a web of activity where seemingly independent sectors and subsectors operate interdependently and often synergistically.”²¹ GHG emissions and reductions in the land use sector are complicated to assess given that emissions are influenced by reduction measures separate from the land use sector, such as the LCFS, vehicle emissions standards, and entities regulated under the Cap-and-Trade program including refineries and utility providers. These measures will impact other sectors of the economy and will also impact existing development in addition to new land use development. In its report, *California Environmental Quality Act Guidelines Update Proposed Thresholds of Significance*, the Bay Area Air Quality Management District (BAAQMD) evaluated the reduction in land use emissions needed in order to be consistent with AB 32.²² CARB included the following sectors for land use emissions: Transportation (on-road passenger vehicles; on-road heavy-duty), electric power (electricity; cogeneration), commercial and residential (residential fuel use; commercial fuel use) and recycling and waste (domestic wastewater treatment). Table 2 of the BAAQMD document presents the results of this analysis, which shows that the 26.2 percent reduction from statewide land-use driven GHG emissions would be necessary to meet the AB 32 goal of returning to the 1990 emission levels by 2020, which is lower than the statewide reduction of 28.5 percent required based on the original 2008 Climate Change Scoping Plan projections.

2.2.7 Transportation Sector

In response to the transportation sector accounting for a large percentage of California's CO₂ emissions, AB 1493 (HSC Section 42823 and 43018.5), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after

21 California Air Resources Board, Climate Change Scoping Plan, December 2008, https://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed May 2017.

22 Bay Area Air Quality Management District, California Environmental Quality Act Guidelines Update Proposed Thresholds of Significance, May 2010, http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/proposed_thresholds_report_may_3_2010_final.pdf?la=en. Accessed: May 2017.

2009. In setting these standards, CARB must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers. The federal CAA ordinarily preempts state regulation of motor vehicle emission standards; however, California is allowed to set its own standards with a federal CAA waiver from the USEPA. In June 2009, the USEPA granted California the waiver.

However, as discussed previously, the USEPA and USDOT adopted federal standards for model year 2012 through 2016 light-duty vehicles. Also as noted above, the USEPA and USDOT have adopted GHG emission standards for model year 2017 through 2025 vehicles. These standards are slightly different from the State's model year 2017 through 2025, but the State of California has agreed not to contest these standards, in part due to the fact that while the national standard would achieve slightly less reductions in California, it would achieve greater reductions nationally and is stringent enough to meet state GHG emission reduction goals. In 2012, CARB adopted regulations that allow manufacturers to comply with the 2017 through 2025 national standards to meet state law. In April 2017, the LCFS was brought before the Court of Appeal challenging the analysis of potential nitrogen dioxide impacts from biodiesel fuels. The Court directed CARB to conduct an analysis of nitrogen dioxide impacts from biodiesel fuels and froze the carbon intensity targets for diesel and biodiesel fuel provisions at 2017 levels until CARB has completed this analysis, which CARB has indicated is expected to occur in 2018.²³

In January 2007, Governor Brown enacted Executive Order S-01-07, which mandates the following: (1) establish a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) adopt a Low Carbon Fuel Standard (LCFS) for transportation fuels in California. CARB identified the LCFS as one (1) of the nine (9) discrete early actions in the Climate Change Scoping Plan. The LCFS regulations were approved by CARB in 2009 and established a reduction in the carbon intensity of transportation fuels by 10 percent by 2020 with implementation beginning on January 1, 2011. In September 2015, CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted.

2.2.8 Land Use Transportation Planning

SB 375 (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the State on September 30, 2008. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. In February 2011, CARB adopted the final GHG emissions reduction targets for the State's Metropolitan Planning Organizations, including the Southern California Association of Governments (SCAG), which is the Metropolitan Planning Organization for the region in which the City of Los Angeles is located.²⁴ Of note, the reduction

23 Biodiesel Magazine, "Court Rules Against CARB on LCFS, Preserves 2017 Status Quo," April 17, 2017.

24 California Air Resources Board, Sustainable Communities, <https://www.arb.ca.gov/cc/sb375/sb375.htm>. Accessed December 2017.

targets explicitly exclude emission reductions expected from the AB 1493 and the low carbon fuel standard regulations.

Under SB 375, the reduction target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS.

2.2.9 SB 97

SB 97, enacted in 2007, directed the State Office of Planning and Research (OPR) to develop California Environmental Quality Act (CEQA) Guidelines “for the mitigation of GHG emissions or the effects of GHG emissions.” In December 2009, OPR adopted amendments to the CEQA Guidelines, Appendix G Environmental Checklist, which created a new resource section for GHG emissions and indicated criteria that may be used to establish significance of GHG emissions. Appendix F of the CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable.

2.3 Regional

2.3.1 South Coast Air Quality Management District

The SCAQMD has jurisdiction over an area of approximately 10,743 square miles. This area includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Air Basin is a sub-region of the SCAQMD jurisdiction. While air quality in this area has improved, the Air Basin requires continued diligence to meet air quality standards.

Air Quality Management Plan

The SCAQMD has adopted a series of Air Quality Management Plans (AQMP) to meet the CAAQS and NAAQS. The SCAQMD and CARB have adopted the 2016 AQMP, which incorporates scientific and technological information and planning assumptions regarding air quality, including the Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and emission inventory

methodologies for various source categories.²⁵ The 2016 AQMP was adopted by the AQMD Governing Board on March 3, 2017.²⁶

The purpose of the 2016 AQMP is to bring the Air Basin into attainment with NAAQS for 24-hour PM_{2.5}. SCAQMD has since determined that this deadline was impractical due to drought conditions in the region.²⁷ In 2016, USEPA approved reclassification of the Air Basin from “moderate” to “serious” non-attainment for the 24-hour PM_{2.5} standard, which has a new attainment deadline of December 31, 2019. The 2016 AQMP demonstrates that the 24-hour standard will be met by 2019 with no additional reductions beyond already adopted and implemented measures. The 2016 AQMP also intensifies the scope and pace of continued air quality improvement efforts toward meeting the 2024 and 2032 8-hour ozone standard deadline with new measures designed to reduce reliance on the CAA Section 182(e)(5) long-term measures for NO_x and VOC reductions. SCAQMD expects exposure reductions to be achieved through implementation of new and advanced control technologies as well as improvement of existing technologies.

The control measures in the 2016 AQMP consist of 8-hour ozone control measures and PM_{2.5} control measures designed to achieve the ozone and PM_{2.5} NAAQS by statutory deadlines. The AQMP includes ten PM_{2.5} control measures, 15 stationary source 8-hour ozone measures and 15 early action measures for mobile sources. In general, the SCAQMD’s control strategy for stationary and mobile sources is based on the following approaches: (1) available cleaner technologies; (2) best management practices; (3) incentive programs; (4) development and implementation of near-zero technologies and vehicles and control methods; and (5) emission reductions from mobile sources. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities associated with the Project include strategies denoted in the AQMP as MOB-08 and MOB-10, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment. Descriptions of measures MOB-08 and MOB-10 are provided below:

MOB-08 – Accelerated Retirement of Older On-Road Heavy-Duty Vehicles: This proposed measure seeks to replace heavy-duty vehicles with newer or new vehicles that at a minimum, meet the 2010 on-road heavy-duty NO_x exhaust emissions standard of 0.2 grams per brake horsepower-hour (g/bhp-hr). Given that exceedances of the 24-hour PM_{2.5} air quality standard occur in the state, priority will be placed on replacing older diesel trucks that operate primarily at the warehouse and distribution centers. Funding assistance of up to \$50,000 per vehicle is proposed and the level of funding will depend upon the NO_x emissions certification level of the replacement vehicle. In addition, a provision similar to the Surplus Off-Road Option for NO_x (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation will be sought to ensure that additional NO_x emission reduction benefits are achieved.

25 South Coast Air Quality Management District, Air Quality Management Plan (AQMP), Final 2016 AQMP, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>. Accessed November 2017.

26 South Coast Air Quality Management District, Air Quality Management Plan (AQMP), Final 2016 AQMP, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>. Accessed November 2017.

27 South Coast Air Quality Management District, Air Quality Management Plan (AQMP), Final 2016 AQMP, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>. Accessed November 2017.

MOB-10 – Extension of the SOON Provision for Construction/Industrial Equipment: This measure seeks to continue the (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation beyond 2023 through the 2031 timeframe. To implement the SOON program in this timeframe, funding of at least \$10 million per year would be sought to help fund the repower or replacement of older Tier 0 and Tier 1 equipment, with reductions that are considered surplus to the statewide regulation with Tier 4 or cleaner engines.

The SCAQMD released the Draft 2016 AQMP on June 30, 2016 for public review and comment. A revised Draft 2016 AQMP was released in October 2016 and the SCAQMD Governing Board adopted the 2016 AQMP on March 3, 2017.²⁸ CARB approved the 2016 AQMP on March 23, 2017. USEPA approval is pending, but is a necessary requirement before the 2016 AQMP can be incorporated into the State Implementation Plan. Key elements of the 2016 AQMP include implementing fair-share emissions reductions strategies at the federal, state, and local levels; establishing partnerships, funding, and incentives to accelerate deployment of zero and near-zero-emissions technologies; and taking credit from co-benefits from greenhouse gas, energy, transportation and other planning efforts.²⁹ The strategies included in the 2016 AQMP are intended to demonstrate attainment of the NAAQS for the federal non-attainment pollutants O₃ and PM_{2.5}.³⁰ Provisions of the 2016 AQMP do not appear to affect the proposed project.

Regulations and Rules

Several SCAQMD rules adopted to implement portions of the AQMP may apply to construction or operation of the project. The project may be subject to the following SCAQMD rules and regulations:

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules which may apply to the project:

- **Rule 401 – Visible Emissions:** This rule states that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view.
- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or

28 South Coast Air Quality Management District, Air Quality Management Plan (AQMP), Final 2016 AQMP, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>. Accessed November 2017.

29 South Coast Air Quality Management District, Air Quality Management Plan (AQMP), Final 2016 AQMP, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>. Accessed November 2017.

30 South Coast Air Quality Management District, NAAQS/CAAQS and Attainment Status for South Coast Air Basin, (2016), <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2>. Accessed November 2017.

which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM10 emissions to less than 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for different specific sources. The following is a list of rules which may apply to the Project:

- **Rule 1113 – Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1186 – PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations:** This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM10 emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also **Rule 403**).

Regulation XIV – Toxics and Other Non-Criteria Pollutants: Regulation XIV sets requirements for new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants or other non-criteria pollutants. The following is a list of rules which may apply to the project:

Air Quality Guidance Documents

The SCAQMD published a *CEQA Air Quality Handbook* (the Handbook) to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in CEQA documents and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the Handbook with the *Air Quality Analysis Guidance Handbook*. While this process is underway, the SCAQMD recommends using CalEEMod or another approved model to calculate emissions from land use projects.³¹

In June 2003, the SCAQMD published a document called the *Localized Significance Threshold Methodology* that is intended to provide voluntary guidance for lead agencies in analyzing

31 South Coast Air Quality Management District, CEQA Air Quality Handbook (1993), [http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)). Accessed October 2017.

localized air quality impacts from projects.³² The document was revised in July 2008 to incorporate additional guidance regarding PM_{2.5} emissions.³³ The *Localized Significance Threshold Methodology* was also used in the preparation of this assessment.

The SCAQMD has also adopted land use planning guidance in the May 2005 *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*³⁴ which, like the CARB Handbook, also considers impacts to sensitive receptors from facilities that emit TACs. SCAQMD's distance recommendations are the same as those provided by CARB (e.g., the same siting criteria for distribution centers and dry cleaning facilities). The SCAQMD's document introduces land use-related policies that rely on design and distance parameters to manage potential health risk. The guidance consists of voluntary initiatives recommended for consideration by local planning agencies.

Greenhouse Gases

The SCAQMD adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

After AB 32 was passed, SCAQMD formed a Climate Change Committee along with a Greenhouse Gases CEQA Significance Thresholds Working Group and the SoCal Climate Solutions Exchange Technical Advisory Group. On September 5, 2008, the SCAQMD Board approved the SCAQMD Climate Change Policy, which outlines actions the District will take to assist businesses and local governments in implementing climate change measures, decrease the agency's carbon emissions, and provide information to the public regarding climate change. In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance

32 South Coast Air Quality Management District, *Localized Significance Thresholds*, (2003, revised 2008), <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed October 2017.

33 South Coast Air Quality Management District, *Final Methodology to Calculate Particulate Matter (PM)_{2.5} and PM_{2.5} Significance Thresholds*, (2006), <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/pm-2-5-significance-thresholds-and-calculation-methodology>. Accessed October 2017.

34 South Coast Air Quality Management District, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, (May 2005), <http://www.aqmd.gov/prdas/aqguide/aqguide.html>. Accessed October 2017.

thresholds.³⁵ On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance thresholds for stationary source/industrial projects, and related rules, and plans where the SCAQMD is the lead agency. The GHG Significance Threshold Working Group to evaluated potential GHG significance thresholds; however, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., mixed-use/commercial projects).³⁶ The aforementioned Working Group has been inactive since 2011.

2.3.2 Regional Comprehensive Plan and Guide and Congestion Management Plan

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated metropolitan planning organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With regard to air quality planning, SCAG has prepared the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP), which address regional development and growth forecasts and form the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. The RTP, RTIP, and AQMP are based on projections originating within local jurisdictions.

2.4 Local

2.4.1 City of Huntington Beach

The City's General Plan Air Quality Element includes City-wide goals, objectives, and policies related to air quality resources. A number of these goals and policies are relevant to the proposed program and are related to traffic mobility, reducing private and government employee work trips, promoting increased work and non-work related public transit use, discouraging single-occupancy vehicle trips, managing traffic congestion during peak hours, improving jobs/housing balance to reduce vehicle miles traveled (VMT), reducing pollution through waste reduction and lowered energy consumption, and increasing energy efficiency in existing and new commercial and industrial developments. In addition, the City of Huntington Beach Air Quality Element addresses several factors to help achieve the goals of the SCAQMD's AQMP.

35 South Coast Air Quality Management District, Board Meeting, December 5, 2008, Agenda No. 31, <http://www3.aqmd.gov/hb/2008/December/0812ag.html>. Accessed December 2017.

36 South Coast Air Quality Management District, Greenhouse Gases CEQA Significance Thresholds, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds>. Accessed December 2017.

SECTION 3

Significance Thresholds

3.1 Air Quality Thresholds

Pursuant to Appendix G of the State *CEQA Guidelines*, the project would result in a significant impact related to air quality if it would:

- a) Conflict with or obstruct the 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 nonattainment 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; or
- e) Create objectionable odors affecting a substantial number of people.

Pursuant to the State CEQA Guidelines (Section 15064.7), a lead agency may consider using, when available, the significance criteria established by the applicable air quality management district or air pollution control district when making determinations of significance. The project would be under the SCAQMD's jurisdiction. SCAQMD has established air quality significance criteria in its CEQA Air Quality Handbook. These criteria are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.³⁷ The potential air quality impacts of the project are, therefore, evaluated according to the most recent criteria adopted by the SCAQMD in connection with its CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent SCAQMD guidance as discussed previously.³⁸

3.1.1 Construction Emissions

The SCAQMD has established numerical emission indicators of significance for construction. The numerical emission indicators are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have

³⁷ South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.

³⁸ While the SCAQMD CEQA Air Quality Handbook contains significance thresholds for lead, Project construction and operation would not include sources of lead emissions and would not exceed the established thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from commercial and residential land use projects such as the Project. As a result, lead emissions are not further evaluated in this Draft EIR.

been promulgated to protect public health.³⁹ Given that construction impacts are temporary and limited to the construction phase, the SCAQMD has established numeric indicators of significance specific to construction activity. Based on the indicators in the SCAQMD CEQA Air Quality Handbook, the Project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur:

- Regional construction emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed daily regional emissions criteria:⁴⁰
 - 75 pounds a day for VOC;
 - 100 pounds per day for NO_x;
 - 550 pounds per day for CO;
 - 150 pounds per day for SO₂;
 - 150 pounds per day for PM₁₀; or
 - 55 pounds per day for PM_{2.5}.

In addition, the SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards or ambient concentration limits. Impacts would be considered significant if the following would occur:

- Maximum daily localized emissions of NO_x and/or CO during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for NO₂ and/or CO.⁴¹
- Maximum daily localized emissions of PM₁₀ and/or PM_{2.5} during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the project site to exceed 10.4 µg/m³ over 24 hours (SCAQMD Rule 403 control requirement).

As discussed in detail in Section 4 *Methodology*, the SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards or ambient concentration limits without project-specific dispersion modeling. This analysis uses the screening criteria to evaluate impacts from localized emissions.

39 South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.

40 South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (March 2015), <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed October 2017.

41 South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008). Available: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed October 2017.

3.1.2 Operational Emissions

The SCAQMD has established numerical emission indicators of significance for operations. The numerical emission indicators are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.⁴² The SCAQMD has established numeric indicators of significance in part based on Section 182(e) of the Clean Air Act which identifies 10 tons per year of VOC as a significance level for stationary source emissions in extreme non-attainment areas for ozone.⁴³ The Air Basin is designated as extreme non-attainment for ozone. The SCAQMD converted this significance level to pounds per day for ozone precursor emissions ($10 \text{ tons per year} \times 2,000 \text{ pounds per ton} \div 365 \text{ days per year} = 55 \text{ pounds per day}$). The numeric indicators for other pollutants are also based on federal stationary source significance levels. Based on the indicators in the SCAQMD CEQA Air Quality Handbook, the Project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur:

- Regional operational emissions exceed any of the following SCAQMD prescribed daily regional emissions criteria:⁴⁴
 - 55 pounds a day for VOC;
 - 55 pounds per day for NO_x;
 - 550 pounds per day for CO;
 - 150 pounds per day for SO₂;
 - 150 pounds per day for PM₁₀; or
 - 55 pounds per day for PM_{2.5}.

In addition, the SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards. Impacts would be considered significant if the following were to occur:

- Maximum daily localized emissions of NO_x and/or CO during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for NO₂ and/or CO.⁴⁵
- Maximum daily localized emissions of PM₁₀ and/or PM_{2.5} during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the project site to exceed 2.5 µg/m³ over 24 hours (SCAQMD Rule 1303 allowable change in concentration).

⁴² South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.

⁴³ South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-1.

⁴⁴ South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (March 2015), <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed October 2017.

⁴⁵ South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (March 2015), <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed October 2017.

3.1.3 Carbon Monoxide Hotspots

With respect to the formation of CO hotspots, the project would be considered significant if the following would occur:

- The project would cause or contribute to an exceedance of the CAAQS one-hour or eight-hour CO standards of 20 or 9.0 parts per million (ppm), respectively. As discussed below, the Project uses a daily vehicle count of 100,000 per intersection as a screening level thresholds. Projects that are below the 1000,000 vehicles per day would not be anticipated to exceed the CAAQS.

The SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the SCAB. These include: (a) Wilshire Boulevard and Veteran Avenue; (b) Sunset Boulevard and Highland Avenue; (c) La Cienega Boulevard and Century Boulevard; (d) Long Beach Boulevard and Imperial Highway. In the 2003 AQMP, the SCAQMD notes that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County, with an average daily traffic volume of about 100,000 vehicles per day. This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The evidence provided in Table 4-10 of Appendix V of the 2003 AQMP shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (one-hour average) and 3.2 (eight-hour average) at Wilshire Boulevard and Veteran Avenue. When added to the existing background CO concentrations, the screening values would be 8.7 ppm (one-hour average) and 5.6 ppm (eight-hour average). Based on the data, more than 100,000 vehicles per day would need to pass through an intersection in order for the thresholds to be exceeded.⁴⁶

3.1.4 Toxic Air Contaminants

Based on criteria set forth by the SCAQMD, the project would expose sensitive receptors to substantial concentrations of toxic air contaminants if any of the following were to occur:⁴⁷

- The project would emit carcinogenic materials or TACs that exceed the maximum incremental cancer risk of ten in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or
- An acute or chronic hazard index of 1.0.

3.1.5 Odors

Based on the criteria in Appendix G of the State *CEQA Guidelines*, the Project would be considered potentially significant for odors if the Project would create objectionable odors affecting a substantial number of people.

⁴⁶ SCAQMD 2003. *Air Quality Management Plan*. Available at: <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/2003-aqmp>. August 2003

⁴⁷ South Coast Air Quality Management District, CEQA Air Quality Handbook, Chapter 6 (Determining the Air Quality Significance of a Project) and Chapter 10 (Assessing Toxic Air Pollutants), (1993); SCAQMD Air Quality Significance Thresholds, (March 2011), <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed October 2017.

3.2 Greenhouse Gas Emissions Thresholds

Pursuant to Appendix G of the State *CEQA Guidelines*, the project would result in a significant impact related to air quality if it would:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The California Supreme Court recently considered the CEQA issue of determining the significance of GHG emissions in its decision, *Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming* (Newhall Land Farming Company) (2d Dist. 2014) 224 Cal.App.4th 1105 (Supreme Ct., Case No. S217763).

Under the Court's guidance, since neither the City of Fountain Valley nor the City of Huntington Beach have adopted a CEQA-qualified Climate Action Plan, compliance with a Climate Action Plan is not an applicable threshold. The City of Huntington Beach has a Draft GGRP, but it has not yet been adopted. Therefore, although no formal significance threshold for GHG emissions associated with development typical of the proposed program has been adopted by the State or SCAQMD at this juncture, Section 15064.7(c) of the CEQA Guidelines states "when adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies..." In December 2008, SCAQMD adopted a 10,000 MTCO₂e/year for industrial facilities, but only with respect to industrial projects where SCAQMD is the lead agency. Additionally, SCAQMD has proposed, but not adopted, a 3,000 MT/year CO₂e threshold for mixed use developments. While the proposed Project does not fit neatly into either category, the more stringent of the two thresholds is used to determine significance.

SECTION 4

Methodology

The methodology to evaluate potential impacts to regional and local air quality and climate change that may result from the construction and long-term operations of the proposed project is conducted as follows. Detailed assumptions, modeling, and calculations are provided in **Appendix A** of this report.

4.1 Consistency with Air Quality Plan

The SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment of the NAAQS (e.g., O₃ and PM_{2.5}). The SCAQMD's AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving the NAAQS. These strategies are developed, in part, based on regional growth projections prepared by the SCAG. As part of its air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide and the RTP/SCS, which provide the basis for the land use and transportation components of the AQMP and are used in the preparation of the air quality forecasts and the consistency analysis included in the AQMP. Both the Regional Comprehensive Plan and AQMP are based, in part, on projections originating with county and city general plans.

The 2016 AQMP was prepared to accommodate growth, reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are consistent with the assumptions used in the AQMP do not interfere with attainment because the growth is included in the projections utilized in the formulation of the AQMP. Thus, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's numeric indicators.

4.2 Air Quality Construction Emissions

Construction of the proposed project has the potential to generate temporary criteria pollutant emissions through the use of heavy-duty construction equipment, such as excavators and forklifts, and through vehicle trips generated from worker trips and haul trucks traveling to and from the Project Site. In addition, fugitive dust emissions would result from demolition and various soil-handling activities. Mobile source emissions, primarily NO_x, would result from the use of construction equipment such as dozers and loaders. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and

prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Daily regional emissions during construction are forecasted by assuming conservative construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The emissions are estimated using the CalEEMod (Version 2016.3.2) software, an emissions inventory software program recommended by the SCAQMD. CalEEMod is based on outputs from OFFROAD and EMFAC, which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including on-and off-road vehicles. Default CalEEMod inputs were used for the modeling where Project specific details were not available. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis to generate criteria pollutant emissions values for each construction activity. Detailed construction equipment lists, construction scheduling, and emissions calculations are provided in Appendix A.

The Project would be implemented in four construction phases beginning in August 2020 and concluding in December of 2022. If construction is delayed, construction impacts should be less than those analyzed herein, because a more energy-efficient and cleaner burning construction equipment fleet mix are expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. Construction would occur in four phases as detailed in Table 1. Construction phases are not anticipated to overlap, meaning Phase 1 would be completed prior to the beginning of Phase 2 construction. Emissions from these activities are estimated by construction phase. The maximum daily emissions are predicted values for the worst-case day and do not necessarily represent the emissions that would occur for every day of project construction. The maximum daily emissions are compared to the SCAQMD daily regional numeric indicators.

4.3 Air Quality Operational Emissions

The Project will involve the construction of three types of facilities. The three main facilities associated with the Project is a pump station, two flow equalization tanks, and associated piping with a valving/metering vault. The Project facilities will be constructed at the north end of OCS D Plant No. 2. After construction, the only operational emissions would be from the operation of the five 350-hp pumps being located within the building as well as the emissions from building operations itself. There is no increase in employees or vendor deliveries, therefore, there would be no new emissions from mobile sources, water consumption, or waste generation. The pumps would be electric, and therefore, would not result in direct air pollutant emissions. The pump station would not be heated, and therefore, the only emissions associated with project operations from an air quality standpoint would include potential for re-application of architectural coatings.

4.4 Substantial Criteria Pollutant Concentrations

4.4.1 Localized emissions

The localized effects from the on-site portion of the emissions are evaluated at nearby sensitive receptor locations potentially impacted by the proposed project according to the SCAQMD's

Localized Significance Threshold Methodology (June 2003, revised July 2008), which relies on on-site mass emission rate screening tables and project-specific dispersion modeling, where appropriate. The localized significance thresholds are only applicable to NO_x, CO, PM₁₀, and PM_{2.5}. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without project-specific dispersion modeling. The screening criteria depend on: (1) the area in which the project is located, (2) the size of the project site, and (3) the distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals). The nearest sensitive receptors to Plant No. 2 include the single-family residences located approximately 120 feet west of Plant No. 2 and multi-family residences located approximately immediately adjacent to the northern boundary of Plant No. 2 along Brookhurst Street. Therefore, to ensure a conservative analysis, the screening criteria was applied to a 2-acre site in Source Receptor Area (SRA) 18, North Orange County Coastal with a 25-meter receptor distance. According to the SCAQMD, projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.⁴⁸

4.4.2 Carbon Monoxide Hotspots

Emissions of CO are produced in greatest quantities from motor vehicle combustion and are usually concentrated at or near ground level because they do not readily disperse into the atmosphere, particularly under cool, stable (i.e., low or no wind) atmospheric conditions. Localized areas where ambient concentrations exceed state and/or federal standards are termed CO hotspots. The potential for the project to cause or contribute to the formation of off-site CO hotspots are qualitatively evaluated.

4.4.3 Toxic Air Contaminants

The potential for the Project to cause impacts from TACs are evaluated by conducting a screening-level analysis. The screening-level analysis consists of reviewing the Project's Site plan and Project description to identify any new or modified TAC emission sources. If it is determined that the Project will introduce a new source of TACs, or modify an existing source, then downwind sensitive receptor locations are identified and a site-specific analysis is conducted.

The greatest potential for TAC emissions during construction would be related to diesel particulate matter emissions associated with heavy-duty equipment during demolition, excavation and grading activities. Construction activities associated with the Project would be sporadic, transitory, and short term in nature. OEHHA is responsible for developing and revising guidelines for performing health risk assessments (HRAs) under the State's the Air Toxics Hot Spots Program Risk Assessment (AB 2588) regulation. In March 2015, OEHHA adopted revised guidelines that update the previous guidance by incorporating advances in risk assessment with consideration of infants and children using Age Sensitivity Factors (ASF). The construction HRA

48 South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008). Available: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed November 2017.

was performed in accordance with the revised OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA Guidance).⁴⁹ The analysis incorporates the estimated construction emissions, as previously discussed, and dispersion modeling using the USEPA AMS/EPA Regulatory Model (AERMOD) model with meteorological data from the closest SCAQMD monitoring station.

During long-term operations, TACs could be emitted as part of periodic maintenance operations, cleaning, painting, etc., and from periodic visits from service vehicles. However, these uses are expected to be occasional and result in minimal exposure to off-site sensitive receptors. As the Project consists of electric pumps and no other mobile or stationary sources, the Project would not include sources of substantive TAC emissions identified by the SCAQMD or CARB siting recommendations. Thus a qualitative operational analysis is appropriate.

TAC Emissions and Concentrations – Construction

As noted above, the greatest potential for TAC emissions would be related to diesel particulate matter emissions associated with heavy equipment operations during demolition, grading and excavation, and building construction activities. In addition, incidental amounts of toxic substances such as oils, solvents, and paints would be used. These products would comply with all applicable SCAQMD rules for their manufacture and use. The Project will be subject to several SCAQMD rules designed to limit exposure to TACs during construction activities. The Project would be required to comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these would minimize emissions of TACs during construction. The Project would also comply with the requirements of SCAQMD Rule 1403 if asbestos is found during the renovation and construction activities.

The revised OEHHA Guidance take into account the sensitivity of children to TAC emissions, different breathing rates, and time spent at home. Children have a higher breathing rate compared to adults and would likely spend more time at home resulting in longer exposure durations. On June 5, 2015, SCAQMD incorporated these guidelines in to relevant rules designed for permitting of stationary sources. Although construction would be temporary, construction impacts associated with TACs are addressed quantitatively in a refined HRA. The HRA was performed in accordance with the OEHHA Guidance.

The process of assessing health risks and impacts includes a degree of uncertainty. The level of uncertainty depends on the availability of data and the extent to which assumptions are relied upon in cases where the data are incomplete or unknown. All HRAs rely upon scientific studies to reduce the level of uncertainty; however, it is not possible to completely eliminate uncertainty from the analysis. Where assumptions are used to substitute for incomplete or unknown data, it is standard practice in performing HRAs to err on the side of health protection to avoid underestimating or underreporting the risk to the public. In general, sources of uncertainty that may lead to an overestimation or an underestimation of the risk include extrapolation of toxicity

⁴⁹ Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program, Guidance Manual for Preparation of Health Risk Assessments, 2015, <http://oehha.ca.gov/air/crnrr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0>. Accessed March 2017.

data in animals to humans and uncertainty in the exposure estimates. In addition to uncertainty, there exists “a natural range or variability in measured parameters defining the exposure scenario” and that the “the greatest quantitative impact is variation among the human population in such properties as height, weight, food consumption, breathing rates, and susceptibility to chemical toxicants.”⁵⁰ As mentioned previously, it is typical to err on the side of health protection by assessing risk on the most sensitive populations, such as children and the elderly, by modeling potential impacts based on high-end breathing rates, by incorporating age sensitivity factors, and by not taking into account exposure reduction measures, such as mechanical air filtration building systems.

Dispersion Modeling

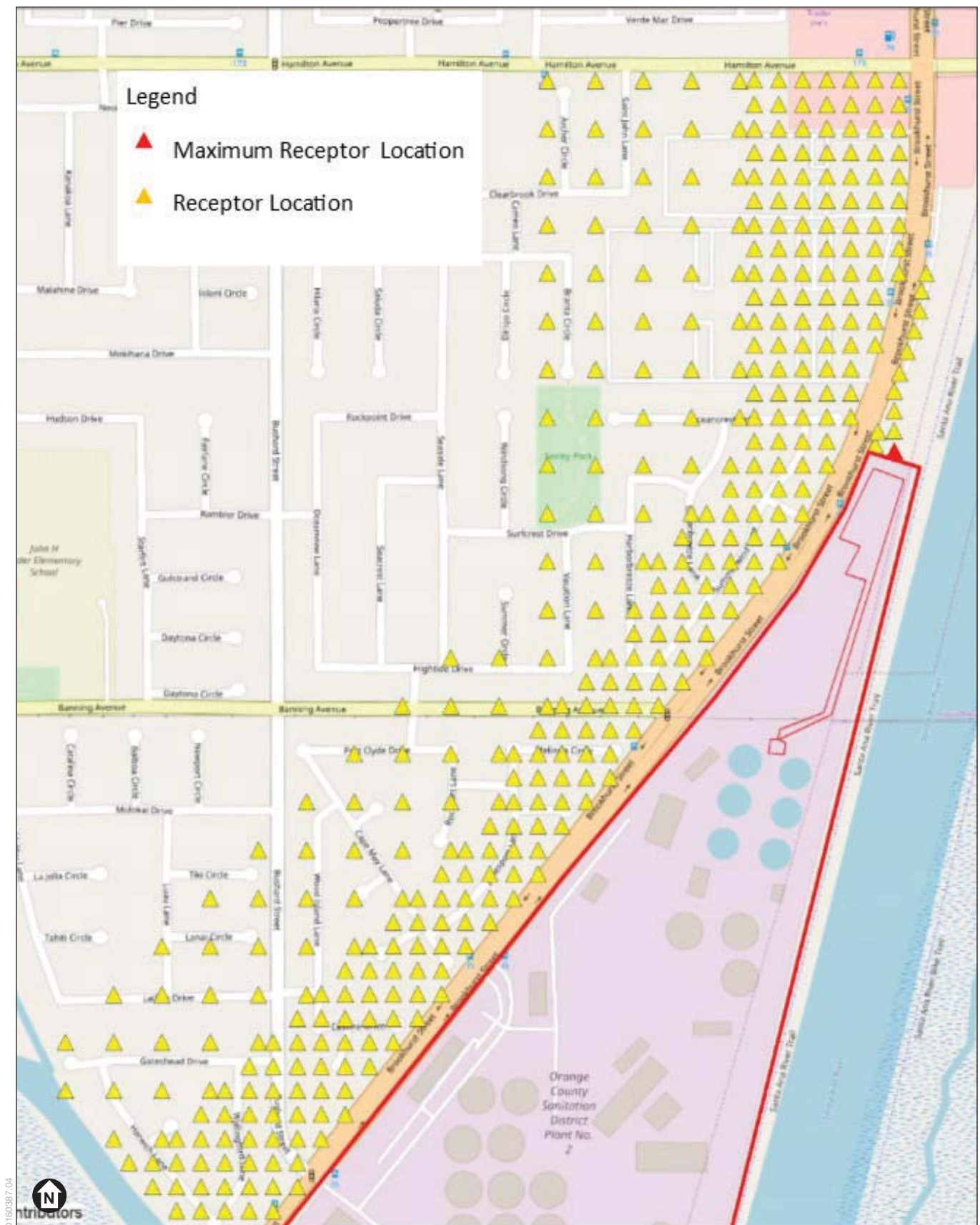
The analysis incorporates the estimated construction emissions, as previously discussed, and dispersion modeling was performed using the USEPA-approved AERMOD with meteorological data from the representative SCAQMD monitoring station located in the North Orange County Coastal area. The SCAQMD specifically recommends that projects use the nearest representative SCAQMD meteorological station for modeling, which is usually the nearest station; however, an interfering terrain feature may dictate the use of an alternate station. Emission sources were located on the project site corresponding to the areas of construction activity. Line volume sources were used to represent the construction emission sources on the project site and emissions from haul trucks from the construction area to the onsite disposal area. Construction emissions would not be generated during the nighttime hours; therefore, the dispersion modeling allocates the emissions during the active daytime construction hours. Sensitive receptors identified for modeling were placed at the location of nearby sensitive land uses, which includes residential land uses to the west within approximately 1,000 feet of the project site. **Figure 3** shows the location of the sensitive receptors used in the modeling. Health risk calculations were performed using a spreadsheet tool consistent with the OEHHA Guidance and CARB Hotspots Analysis and Reporting Program (HARP) version 2 spreadsheet methodology.

Cancer Risk

Health impacts are evaluated using a dose-response assessment, which describes the relationship between the level of exposure to a substance (i.e., the dose) and the incidence or occurrence of injury (i.e., the response).⁵¹ In order to determine the total dose to offsite sensitive receptors, the applicable pathways of exposure should be identified. The applicable exposure pathways (e.g., inhalation, soil) are identified for the emitted substances, and the receptor locations are identified. The applicable exposure pathways determine the exposure algorithms that are used to estimate dose. After the exposure pathways are identified, the applicable fate and transport algorithms are used to estimate concentrations in the applicable exposure media (e.g., air) and the exposure algorithms are used to determine the substance-specific dose.

⁵⁰ Office of Health Hazard Assessment, Air Toxics Hot Spots Program, Guidance Manual for Preparation of Health Risk Assessments, 2015 page 1-5, <http://oehha.ca.gov/air/crn/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0>. Accessed March 2017.

⁵¹ Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program, Guidance Manual for Preparation of Health Risk Assessments, 2015, <http://oehha.ca.gov/air/crn/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0>. Accessed March 2017.



SOURCE: ESA, 2018

Plant No. 2 GWRS Conveyance Facilities Project

Figure 3
Sensitive Receptor Locations
and Maximum Risk Location

In accordance with the OEHHA Guidance, the inhalation pathway was evaluated for construction related DPM. For the inhalation pathway, dose is directly proportional to the breathing rate. As a conservative (i.e., health protective) approach, maximum breathing rates were used in this analysis.

Once dose is calculated, cancer risk is calculated by accounting for cancer potency of the specific pollutant, age sensitivity, exposure duration, averaging time for lifetime cancer risk, and fraction of time spent at home (sensitive receptor). The cancer potency factor (CPF) is specific for each pollutant and is determined through peer-reviewed scientific studies. The Scientific Review Panel recommends a CPF for DPM of $1.1 \text{ (mg/kg-d)}^{-1}$.⁵² The ASFs account for greater susceptibility in early life as compared to adult exposure, starting from the third trimester of pregnancy to 16 years. The fraction of time at home (FAH) takes into account the time actually residing at the sensitive receptor location. FAH also takes into account time spent at home for various age groups. For example, newborns are expected to reside at home for longer periods of time compared to school age children, and the elderly (retirees) are expected to spend more time at home compared to people of working age. Each age group has different exposure parameters which require cancer risk to be calculated separately for each age group.

The estimation of cancer risk uses the following algorithms:

$$\text{Risk} = \text{Dose inhalation} \times \text{Inhalation CPF} \times \text{ASF} \quad (\text{Equation 1})$$

$$\begin{aligned} \text{Where: Dose inhalation} &= \text{CAIR} \times \text{DBR} \times \text{A} \times \text{EF} \times \text{ED} \times \text{FAH} / \text{AT} \quad (\text{Equation 2}) \\ \text{Inhalation CPF} &= \text{inhalation cancer potency factor} \\ \text{ASF} &= \text{age sensitivity factor} \end{aligned}$$

Where:

CAIR	=	concentration of compound in air in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)
DBR	=	breathing rate in liter per kilogram of body weight per day (L/kg-body weight/day)
A	=	inhalation absorption factor (1 for DPM)
EF	=	exposure frequency in days per year (day/year)
ED	=	exposure duration in years (year)
FAH	=	fraction of time at home
AT	=	averaging time period over which exposure is averaged in days (day)

The OEHHA recommended values for the parameters listed above were used in the HRA analysis. The daily breathing rate (DBR) used in the analysis was based on OEHHA recommendations which vary depending on age which are shown in **Table 6, OEHHA Recommended Residential Daily Breathing Rates, ASF, and FAH**. The recommended exposure

⁵² The Scientific Review Panel is charged with evaluating the risk assessments of substances proposed for identification as toxic air contaminants by CARB, OEHHA, and the Department of Pesticide Regulation (DPR), and the review of guidelines prepared by OEHHA.

frequency (EF) is 350 days per year which is equivalent to 0.96 (350 days / 365 days a year). The inhalation absorption factor (A) is assumed to be 1 for inhalation-based risk assessment.

As indicated in Equation 1 above, each age group has different exposure parameters which require cancer risk to be calculated separately for each age group. Values for fraction of time at home (FAH) and Age Sensitivity Factors (ASF) are also presented in Table 6. It should be noted that the FAH values presented in Table 6 are used for evaluating long-term exposure. Elderly receptors over age 70, would be classified in the 16–70-year age group. However, newborns and elderly would be more sensitive to acute (1-hour) or chronic (annual) exposure. As discussed previously, OEHHA has developed methodology and RELs to evaluate acute and chronic exposure which would address non-cancer health impacts to elderly and the very young. As a conservative assumption, acute and chronic health impact analyses do not take into account FAH. Cancer risk was calculated for child residential receptors.

TABLE 6
OEHHA RECOMMENDED RESIDENTIAL DAILY BREATHING RATES, ASF, AND FAH

Receptor Type	3 rd Trimester	0<2 Years	2<9 Years	16<30 Years
Daily Breathing Rate ^a	361	1090	861	290
Age Sensitive Factor	10	10	3	1
FAH	0.85	0.85	0.72	0.73

The incremental increase in cancer risk is the product of the dose and the pollutant-specific CPF values. Cancer risk is calculated by multiplying the inhalation dose by the inhalation CPF to yield the potential inhalation excess cancer risk. Detailed assumptions, risk calculations, and AERMOD output used in this analysis is included within **Appendix B** of this Technical Report.

Non-Cancer Risk

Non-cancer chronic impacts were assessed based on the Hazard Index (HI). The evaluation of chronic impacts is based on the maximum annual emissions over a 12-months period of construction activity. The chronic Hazard Index is calculated by dividing the maximum modeled annual average concentration at the maximum impacted sensitive receptor by the Reference Exposure Level (REL). The REL is the concentration at or below which no adverse health effects are anticipated. For example, OEHHA has recommended an ambient concentration of 5 µg/m³ as the chronic inhalation REL for DPM exhaust. Therefore, a sensitive receptor exposed to an annual average DPM concentration of 5 µg/m³ or less would not result in a chronic impact. Non-cancer chronic impacts affect specific target organ systems (also called toxicological endpoints), such as the eye, nervous system, reproductive system, and respiratory system. The chronic health impact with the maximum Hazard Index for the same target organ system is used for impact determination.

During long-term operations, TACs could be emitted as part of periodic maintenance operations, cleaning, painting, etc., and from periodic visits from delivery trucks and service vehicles. However, these uses are expected to be occasional and result in minimal exposure to off-site

sensitive receptors. The potential for the project to result in significant operational health risk impacts are evaluated qualitatively.

4.5 Odors

Potential odor impacts are evaluated by conducting a screening-level analysis followed by a more detailed analysis as necessary. The screening-level analysis consists of reviewing the project's site plan and project description to identify new or modified odor sources. If it is determined that the project would introduce a potentially significant new odor source, or modify an existing odor source, then downwind sensitive receptor locations are identified and a site-specific analysis is conducted to determine project impacts.

4.6 GHG Emissions Estimates

The Climate Action Registry General Reporting Protocol provides procedures and guidelines for calculating and reporting GHG emissions from general and industry-specific activities. Although no numerical thresholds of significance have been adopted, and no specific protocols are available for land use projects, the General Reporting Protocol provides a framework for calculating and reporting GHG emissions from the Project. The GHG emissions provided in this section is consistent with the General Reporting Protocol framework. This technical report provides an estimate of the GHG emissions from project construction and operation. The following Project-related emission sources have been evaluated:

1. Construction Activities – Fossil fueled on- and off-road vehicles and equipment needed for excavation, building construction, and architectural coating;
2. Direct Emission Sources – Consumption of natural gas for, space heating and water heating, combustion of fossil fuels for lawn care and maintenance activities, and motor vehicles. These operational emissions do not occur as the pump station building will not increase employment, therefore will not increase mobile sources. Additionally, the pump station building would not be heated; and
3. Indirect Emission Sources – Off-site electricity generation, wastewater treatment and water conveyance, and solid waste disposal. Because there are no new employees or restroom facilities, there are no operational emissions associated with wastewater treatment, water conveyance, or solid waste disposal associated with the operation of the pump station. Therefore, the only operational emissions associated with the project are those related to consumer product use (cleaning etc) and electrical consumption from the on-site pumps (4 operational and one stand-by) and for lighting the building itself.

CARB believes that consideration of so-called indirect emissions provides a more complete picture of the GHG footprint of a facility: “As facilities consider changes that would affect their emissions – addition of a cogeneration unit to boost overall efficiency even as it increases direct emissions, for example – the relative impact on total (direct plus indirect) emissions by the facility should be monitored. Annually reported indirect energy usage also aids the conservation awareness of the facility and provides information” to CARB to be considered for future strategies by the industrial sector. For these reasons, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the HSC Division 25.5 reporting requirements. Additionally, the Office of Planning and Research directs lead agencies to “make a

good-faith effort, based on available information, to calculate, model, or estimate...GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities.” Therefore, direct and indirect emissions have been calculated for the Project where applicable.

Since potential impacts resulting from GHG emissions are long-term rather than acute, GHG emissions are calculated on an annual basis. CalEEMod outputs GHG emissions of CO₂, CH₄, N₂O, and CO₂e. In order to report total GHG emissions using the CO₂e metric, the GWP ratios corresponding to the warming potential of CO₂ over a 100-year period is used in this analysis.

The General Reporting Protocol provides a range of basic calculation methods. However, they are typically designed for existing buildings or facilities and are not directly applicable to planning and development situations where the buildings or facilities do not yet exist. As a result, this section relies on calculation guidance from state and regional agencies with scientific expertise in quantifying GHG emissions, such as CARB and the SCAQMD. GHG emissions for the Project are estimated using the CalEEMod (Version 2016.3.2) software.

The CAPCOA has provided guidance on mitigating or reducing GHG emissions from land use development projects. In September 2010, CAPCOA released a guidance document titled *Quantifying Greenhouse Gas Mitigation Measures* which provides GHG reduction values for recommended mitigation measures.⁵³ The CAPCOA guidance document was utilized in this analysis for quantifying reductions from physical and operational Project characteristics in CalEEMod.

4.6.1 Construction Emissions

Construction of the proposed Project has the potential to generate GHG emissions through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project site. Construction emissions can vary from day to day, depending on the level of activity, the specific type of operation, and the prevailing weather conditions. The number and types of construction equipment, vendor trips (e.g., transport of building materials), and worker trips were based on relatively conservative assumptions for a project of this type and scale as provided in the CalEEMod model. A complete listing of the construction equipment by phase and construction phase duration assumptions used in this analysis is included in **Appendix C** of this Technical Report.

The CO₂e emissions are calculated for the construction period. The SCAQMD guidance, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, recognizes that construction-related GHG emissions from projects “occur over a relatively short-term period of time” and that “they contribute a relatively small portion of the overall lifetime project GHG emissions.”⁵⁴ The guidance recommends that construction project GHG emissions

⁵³ California Air Pollution Control Officers Association, *Quantifying Greenhouse Gas Mitigation Measures*, 2010.

⁵⁴ South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, 2008, page 3-9, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf). Accessed July 2017.

should be “amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies.”⁵⁵ In accordance with SCAQMD guidance, GHG emissions from construction have been amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions, and the significance threshold).

Construction of the Project would result in one-time GHG emissions of CO₂ and smaller amounts of CH₄ from heavy-duty construction equipment. Construction emissions are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the off-road emissions factors. The output values used in this analysis are adjusted to be Project-specific based on equipment types and the construction schedule. These values are applied to the construction phasing assumptions to generate GHG emissions values for each construction year.

Construction of the Project would also contribute to regional GHG emissions from haul trucks and worker vehicles. The emissions from mobile sources were calculated with the trip rates, trip lengths and emission factors for running from EMFAC2014 through CalEEMod.

4.6.2 Operational Emissions

The Project will involve the construction of three types of facilities. The three main facilities associated with the Project is a pump station, two flow equalization tanks, and associated piping with a valving/metering vault. The Project facilities will be constructed at the north end of OCSD Plant No. 2. After construction the only operational emissions would be from the operation of the five 350-hp pumps being located within the building as well as the emissions from building operations itself. There is no increase in employees or vendor deliveries therefore there would be no new emissions from mobile sources, water consumption, or waste generation. The pumps would be electric and therefore would not result in direct air pollutant emissions. The pump station would not be heated and therefore the only emissions associated with project operations from a greenhouse gas standpoint would include potential for re-application of architectural coatings, use of consumer products, and the operation of the onsite electrical pumps. Operational emissions are estimated using the CalEEMod program. All assumptions are detailed in Appendix C of this Draft PEIR.

55 South Coast Air Quality Management District, Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, 2008, page 3-9.

SECTION 5

Environmental Impacts and Mitigation Measures

5.1 Consistency with Air Quality Plan

The project site is located within the Air Basin. The SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment (i.e., ozone, PM10, and PM2.5). The project would be subject to the SCAQMD's Air Quality Management Plan (AQMP), which contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. A project is consistent with the AQMP if it is consistent with the population, housing and employment assumptions that were used in the development of the AQMP. The implementation of the conveyance facilities would not affect the regional growth projections made by the SCAG and used by the SCAQMD in formulating its AQMP.

5.1.1 Construction

Under this criterion, the SCAQMD recommends that lead agencies demonstrate that a project would not directly obstruct implementation of an applicable air quality plan and that a project be consistent with the assumptions (typically land-use related, such as resultant employment or residential units) upon which the air quality plan is based. The proposed project would result in an increase in short-term employment compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs under the project would not conflict with the long-term employment projections upon which the AQMP is based. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities include strategies denoted in the AQMP as MOB-08 and MOB-10, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. The project would not conflict with implementation of these strategies as the construction contractor hired would be in compliance with the current requirements for fleet emissions. Additionally, the project would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment. The project would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403.

Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Because the Project would not conflict with the control strategies intended to reduce emissions from construction equipment, the project would not conflict with or obstruct implementation of the AQMP. Additionally, the projected emissions from the Project would not

exceed the SCAQMD's regional significance thresholds, as discussed below in Section 5.2-1. Thus, the Project would not be considered by SCAQMD to be a substantial source of air pollutant emissions, and would not conflict or obstruct implementation of the AQMP. Therefore, impacts would be less than significant with respect to construction activities.

5.1.2 Operation

The 2016 AQMP was prepared to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP.

The proposed Project is the construction and operation of a conveyance facility at an existing treatment plant. The land use would stay the same and thus be consistent with the AQMP. Additionally, the proposed Project would not increase vehicle trips to the project site or result in new population sources. As a result, the proposed Project would not result in long-term operational population or employment growth that exceeds planned growth projections in the RTP/SCS or the AQMP or result in employment growth that would substantially add to traffic congestion. As the proposed Project would not conflict with the growth projections in the AQMP, impacts would be less than significant.

5.2 Regional Emissions

5.2.1 Construction Emissions

The worst-case daily emissions were calculated as maximum daily construction emissions for each phase. Detailed emissions calculations are provided in Appendix A. Results of the criteria pollutant calculations are presented in **Table 7, Maximum Daily Unmitigated Regional Construction Emissions**. As shown therein, construction-related daily emissions for the criteria and precursor pollutants (VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}) would be below the SCAQMD numeric indicators. These calculations include appropriate dust control measures required to be implemented during each phase of development, as required by SCAQMD Rule 403 (Control of Fugitive Dust). Therefore, with respect to regional emissions from construction activities, impacts would be less than significant.

TABLE 7
MAXIMUM DAILY UNMITIGATED REGIONAL CONSTRUCTION EMISSIONS

Phase	Pollutant (pounds per day) ^a					
	VOC	NO _x	CO	SO ₂	PM10 ^b	PM2.5 ^b
Phase 1	6	72	35	<1	5	2
Phase 2	4	46	27	<1	2	1
Phase 3	9	24	18	<1	2	1
Phase 4	1	13	13	<1	1	1
Maximum Daily Emissions	9	72	35	<1	5	2
SCAQMD Significance Thresholds	75	100	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

NOTE: Detailed emissions calculations are provided in Appendix A.

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A.

^b Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

Source: ESA 2018

5.2.2 Operational Emissions

The Project will involve the operation of three types of facilities. The three main facilities associated with the Project is a pump station, two flow equalization tanks, and associated piping with a valving/metering vault. As stated previously, the only emissions from operational activities related to air quality are associated with the use of consumer products and the re-application of architectural coatings. With respect to operational criteria pollutants, the only emissions would be associated with ROG and CO and resulting in less than 1 lb/day for each pollutant. Therefore, there would be an insignificant net increase in regional emissions and this impact would be less than significant.

5.3 Cumulatively Considerable Non-Attainment Pollutants

Short-term pollutants would be generated by construction of the proposed project. The Project site currently operates as a wastewater treatment facility and will continue to do so after construction. The proposed project would introduce negligible new long-term pollutants when operational.

5.3.1 Construction

The proposed project would result in the emission of criteria pollutants for which the area is in non-attainment during construction. A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. The Air Basin is currently in non-attainment for O₃, PM10, and PM2.5.

The emissions from construction of the proposed project are not predicted to exceed the SCAQMD regional (see Section 5.2) or localized (see Section 5.4) impact thresholds and therefore, are not expected to cause or substantially contribute to ground level concentrations that exceed the NAAQS or CAAQS. Therefore, the project would not result in a cumulatively considerable net increase for non-attainment pollutants or O₃ precursors and would result in a less than significant impact for construction emissions.

5.3.2 Operation

Future operations would generate ozone precursors (VOC, NO_x) as well as emissions of CO, PM₁₀, and PM_{2.5}. Under the 2023 Project scenario, representing the actual anticipated Project buildout year, operational emissions would not exceed the SCAQMD regional or local thresholds and would not be expected to result in ground level concentrations that exceed the NAAQS or CAAQS. Since the Project would not introduce any substantial stationary sources of emissions, CO is the benchmark pollutant for assessing local area air quality impacts from post-construction motor vehicle operations. As indicated earlier, no new vehicle trips would occur and therefore, no violations of the state and federal carbon monoxide standards are projected to occur for the Project. Therefore, operation of the Project would not result in a cumulatively considerable net increase for non-attainment of criteria pollutants or ozone precursors and the Project would result in a less than significant impact for operational emissions.

5.4 Substantial Pollutant Concentrations

5.4.1 Localized Construction Emissions

The localized construction air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology* (June 2003, revised July 2008).⁵⁶ The screening criteria provided in the *Localized Significance Threshold Methodology* were used to determine localized construction emissions thresholds for the Project. The maximum daily localized emissions for each of the construction phases and localized significance thresholds are presented in **Table 8.**, *Maximum Unmitigated Localized Construction Emissions*. As shown therein, maximum localized construction emissions for sensitive receptors would not exceed the localized thresholds for NO_x, CO, PM₁₀, and PM_{2.5}. Therefore, with respect to localized construction emissions, impacts would be less than significant.

5.4.2 Localized Operational Emissions

As discussed previously, the only new criteria pollutant emissions from the operation of the Project would be the emission of ROG and CO. Only CO is evaluated in the localized analysis and would result in less than 1 lb/day of localized emissions. This is well below the SCAQMD's significance threshold of 1,089 lbs/day. Therefore, the impact to sensitive receptors would be less than significant.

⁵⁶ South Coast Air Quality Management District, *Localized Significance Thresholds*, (2003, revised 2008), <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed November 2017.

TABLE 8
MAXIMUM UNMITIGATED LOCALIZED CONSTRUCTION EMISSIONS

Phase	Pollutant (pounds per day) ^a			
	NO _x	CO	PM10 ^b	PM2.5 ^b
Phase 1	54	28	4	2
Phase 2	35	23	1	1
Phase 3	14	15	1	1
Phase 4	13	13	1	1
Maximum Daily Emissions	54	28	4	2
SCAQMD Significance Thresholds	73	962	7	5
Exceeds Threshold?	No	No	No	No

NOTE: Detailed emissions calculations are provided in Appendix A.

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A.

^b Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

Source: ESA 2018

5.4.3 Carbon Monoxide Hotspots

The proposed Project is the operation of a pump station associated with the new OCS D conveyance facilities. There would be no new vehicle trips generated by this Project. Therefore, the Project would not result in traffic exceeding more than 100,000 vehicles per day with respect to any area intersection. CO hotspot impacts would be less than significant.

5.4.4 Toxic Air Contaminants

Construction

The Project would expose sensitive receptors to substantial concentrations of toxic air contaminants if the project would emit carcinogenic materials or TACs that exceed the maximum incremental cancer risk of ten in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or an acute or chronic hazard index of 1.0. Construction-related cancer risk and acute/chronic hazards were estimated and compared to this threshold.

The resulting health risk calculations were performed using a spreadsheet tool consistent with the OEHHA guidance. The spreadsheet tool incorporates the algorithms, equations, and a variable described above as well as in the OEHHA guidance, and incorporates the results of the AERMOD dispersion model.

For carcinogenic exposures, the cancer risk from DPM emissions from construction of the Project is estimated to result in a maximum carcinogenic risk of 47 per one million. The maximum impact would occur at sensitive land uses (residences) directly north of the Project Site (See

Figure 3). As discussed previously, the lifetime exposure under the OEHHA Guidance takes into account early life (infant and children) exposure. It should be noted that the calculated cancer risk conservatively assumes that exposure of sensitive receptors (residential uses) would not have any mitigation, such as mechanical filtration. As the maximum impact would be greater than the risk threshold of 10.0 in one million, impacts would be considered potentially significant.

Incorporation of Mitigation Measure MM-AQ-1 would reduce carcinogenic exposures at the maximum impact receptor to approximately 3 per one million. As the maximum impact would be less than the risk threshold of 10.0 in one million, impacts would be mitigated to less than significant.

The process of assessing health risks and impacts includes a degree of uncertainty. The level of uncertainty is dependent on the availability of data and the extent to which assumptions are relied upon in cases where the data are incomplete or unknown. All HRAs rely upon scientific studies in order to reduce the level of uncertainty; however, it is not possible to completely eliminate uncertainty from the analysis. Where assumptions are used to substitute for incomplete or unknown data, it is standard practice in performing HRAs to err on the side of health protection in order to avoid underestimating or underreporting the risk to the public by assessing risk on the most sensitive populations, such as children and the elderly. As shown, cancer risk for nearby sensitive receptors would be mitigated to below significance thresholds. These short-term emissions would not substantially contribute to a significant construction health risk. No residual emissions and corresponding individual cancer risk are anticipated after construction. Therefore, the proposed project would result in a less than significant impact related to construction TAC emissions.

Potential non-cancer effects of chronic (i.e., long term) DPM exposures were evaluated using the Hazard Index approach as described in the OEHHA Guidance. A hazard index equal to or greater than 1.0 represents a significant chronic health hazard. Nearby off-site sensitive receptors would be exposed to chronic impacts that would equal 0.4 before mitigation and would not exceed the threshold of 1.0. With implementation of Mitigation Measure MM-AQ-1, the chronic impact would be further reduced to 0.03. Health risk impacts would be less than significant with the implementation of mitigation.

Operation

The SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions. The Project would not generate any new vehicle or stationary source emissions. Based on the lack of new TAC sources, the Project would not warrant the need for a health risk assessment associated with onsite operational activities, and potential TAC impacts are expected to be less than significant. In addition, Project operations would only result in minimal emissions of air toxics from maintenance or other ongoing activities, such as from the use of architectural coatings and other products. Based on the nature of the conveyance facilities, potential long-term operational impacts associated with

the release of TACs would be minimal and would not be expected to exceed the SCAQMD thresholds of significance. Therefore, impacts would be less than significant.

5.5 Odors

5.5.1 Construction

Potential activities that may emit odors during construction activities include the use of architectural coatings and solvents and the combustion of diesel fuel in on-and off-road equipment. As discussed in the Regulatory Setting, Section 2, of this technical report, SCAQMD Rule 1113 would limit the amount of VOCs in architectural coatings and solvents. In addition, the proposed project would comply with the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks. Through mandatory compliance with SCAQMD Rules, no construction activities or materials are expected to create objectionable odors affecting a substantial number of people. Therefore, construction of the project would result in less than significant impacts.

5.5.2 Operation

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. The proposed project only implements conveyance facilities and does not introduce a new odor source to the existing waste water treatment plant. does not include any uses identified by the SCAQMD as being associated with substantial odors.

Additionally, the OCSO has prepared a comprehensive Odor Control Master Plan (OCMP) (SP-166) covering both treatment plants. The OCMP analyzes odor data from the both Plants, determines which odorants actually cause odor complaints, assesses the level of nuisance for those odorants, runs air dispersion models to determine the extent of odorous impacts, and analyzes foul air scrubbing technologies and appropriate combinations of technologies in order to mitigate odor impacts in the vicinity of the Plants (CH2M HILL Engineers, Inc. 2016). Currently, OCSO has SCAQMD permits for the operation of the foul air scrubbers. OCSO also maintains records of H₂S concentration in the discharge of the foul air scrubbers as well as other process information, such as pH and differential pressure across each scrubber. Odor complaints received at Plant No. 1 and Plant No. 2 have been logged since 1981.

The updated 2016 OCMP addresses nuisance odors at Plant No. 1 and Plant No. 2 from a more comprehensive perspective when compared to traditional OCMP efforts that historically have focused primarily on H₂S or dilutions-to-threshold (D/T) alone.

Based on the nature of the conveyance facilities, the Project is not expected to discharge new contaminants into the air in quantities that would cause a nuisance, injury, or annoyance to the public or property pursuant to SCAQMD Rule 402. Therefore, the project would not create adverse odors affecting a substantial number of people and impacts would be less than significant.

5.6 Greenhouse Gas Emissions

5.6.1 Construction

The Project will involve the operation of three types of facilities. The three main facilities associated with the Project is a pump station, two flow equalization tanks, and associated piping with a valving/metering vault. Although construction activities would increase GHG emissions, those emissions would be relatively minor and would cease after completion of construction. The total anticipated construction-related emissions associated with the proposed project would be 297 MTCO₂e. Typically, GHG construction emissions are amortized over 30 years and added to operational emissions. The total project GHG emissions amortized over 30 years would be the equivalent of 10 MTCO₂e over the course of a 30-year period.

5.6.2 Operation

As discussed previously, the major sources of GHG emissions associated with the project are related to are operations (consumer product use) and electric consumption. Emissions from the operation of the proposed project would result in approximately 1,751 MTCO₂e annually. With the inclusion of the amortized construction emissions, annual emissions of greenhouse gases would be approximately 1,761 MTCO₂e. The 1,761 MTCO₂e is well below the SCAQMD's interim threshold of 3,000 MTCO₂e and therefore the cumulative contribution to GHG emissions would be less than significant.

5.6.3 Consistency with Adopted Plan, Policy or Regulation

The construction and operation of the proposed project would not result in the increase in transportation related emissions, and therefore, the proposed project would not conflict with the SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), California Assembly Bill 32, California Air Resources Board Scoping Plan, and other statewide strategies to reduce GHG emissions.⁵⁷ Additionally, although electrical consumption would be increased by the project, the new building and equipment would need to meet the requirements of the Green Building standards and SCAQMD equipment standards. Therefore, the proposed Project would not be inconsistent with any of the plans policy strategies to reduce GHG emissions. because the project would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions, impacts would be less than significant. No mitigation or further study is required.

5.7 Mitigation Measures

AQ-1: Mobile off-road construction equipment (wheeled or tracked) used during construction of the conveyance facilities of the proposed Project shall meet the USEPA Tier 4 interim standards, either as original equipment or equipment retrofitted to meet the Tier 4 interim standards. A copy of each unit's certified tier specification or model year specification shall be available upon request at the time of mobilization of each applicable unit of equipment.

⁵⁷ Ibid. Pgs 5.7-18 to 5.7-19.

SECTION 6

Cumulative Impacts

6.1 Air Quality

The project would result in the emission of criteria pollutants for which the region is in non-attainment during both construction and operation. The Air Basin fails to meet national standards for O₃ and PM_{2.5} and therefore is considered a federal “non-attainment” area for these pollutants.

The SCAQMD has provided guidance on an acceptable approach to addressing the cumulative impacts issue for air quality as discussed below:⁵⁸

“As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR... Projects that exceed the Project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.”

Consistent with accepted and established SCAQMD cumulative impact evaluation methodologies, the potential for the project to results in cumulative impacts is assessed based on the SCAQMD thresholds. The thresholds are designed to assist the region in attaining the applicable State and national ambient air quality standards. These standards apply to both primary (criteria and precursor) and secondary pollutants (O₃). Although the project site is located in a region that is in non-attainment for O₃ and PM_{2.5}, the emissions associated with the project would not be cumulatively considerable as the emissions would fall below SCAQMD daily significance thresholds. In addition, the project would be consistent with the AQMP, which is intended to bring the Air Basin into attainment for all criteria pollutants.

6.1.1 Construction Impacts

The SCAQMD’s methodology to assess a project’s cumulative impact differs from the cumulative impacts methodology employed for other environmental topics such as traffic, which are typically based on the number, types, and proximity to related projects. The SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality.

58 South Coast Air Quality Management District, Cumulative Impacts White Paper, Appendix D, <http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf?sfvrsn=4>, accessed May 2017.

With respect to the project's short-term construction-related air quality emissions and cumulative conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the federal CAA mandates. Construction of the project would comply with SCAQMD Rule 403 requirements and the ATCM to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time (per SC-AQ-4). Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on all construction projects in the Air Basin, which would include the cumulative projects in the project area. As shown above in Table 7 and Table 8, regional and localized construction emissions associated with the project would not exceed the SCAQMD daily significance thresholds. As such, the project's contribution to cumulatively significant construction impacts to air quality would not be cumulatively considerable and cumulative impacts would be less than significant for regional and localized criteria pollutants during construction.

6.1.2 Operational Impacts

The SCAQMD's approach for assessing cumulative impacts related to operations or long-term implementation is based on attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. As discussed earlier, the SCAQMD has developed a comprehensive plan, the AQMP, which addresses the region's cumulative air quality condition.

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the Air Basin is currently in non-attainment for O₃, NO₂, PM₁₀, and PM_{2.5}, cumulative projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and the SCAQMD. In particular, Section 15064(h)(3) of the CEQA *Guidelines* provides guidance in determining the significance of cumulative impacts. Specifically, Section 15064(h)(3) states in part that:

“A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency...”

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the project's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted 2016 AQMP. The project would be consistent with the City's zoning designation and growth projections for the area. Therefore, the

project would not conflict with or obstruct implementation of AQMP and would be consistent with the growth projections in the AQMP.

Nonetheless, SCAQMD no longer recommends relying solely upon consistency with the AQMP as an appropriate methodology for assessing cumulative air quality impacts. The SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As discussed above, regional and localized operational emissions associated with the project would not exceed the SCAQMD daily significance thresholds. As such, the project's contribution to cumulatively significant construction impacts to air quality would not be cumulatively considerable and cumulative impacts would be less than significant for regional and localized criteria pollutants during construction.

6.2 Greenhouse Gas Emissions

A cumulatively considerable impact would occur where the impact of the Project in addition to the related projects would be significant. However, in the case of global climate change, a cumulative impacts analysis differs from other environmental issues areas, such as air quality. The proximity of the Project to other related projects or other GHG emission generating activities is not directly relevant to the determination of a cumulative impact because climate change is a global condition. According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective."⁵⁹ Moreover, although the State requires MPOs and other planning agencies to consider how region-wide planning decisions can impact global climate change, there is currently no established non-speculative method to assess the cumulative impact of proposed independent private-party development projects.

Although HSC Division 25.5 sets a statewide target for 2020 GHG emissions, the implementing tools of the law (e.g., CARB's *Climate Change Scoping Plan*) are clear that the reductions are not expected to occur uniformly from all sources or sectors. CARB has set targets specific to the transportation sector (land use-related transportation emissions), for example, and under SB 375 SCAG must incorporate these GHG-reduction goals into the RTP and demonstrate that its SCS or Alternative Planning Strategy is consistent with the Regional Housing Needs Assessment. One of the goals of this process is to ensure that the efforts of State, regional and local planning agencies accommodate the contemporaneous increase in population and employment with a decrease in overall GHG emissions. For example, adopting zoning designations that reduce density in areas which are expected to experience growth in population and housing needs, is seen as inconsistent with anti-sprawl goals of sustainable planning. Although development under a reduced density scenario results in lower GHG emissions from the use of that land compared to what is currently or hypothetically allowed (by creating fewer units and fewer attributable vehicle trips), total regional GHG emissions will likely fail to decrease at the desired rate or, worse, increase if regional housing and employment needs of an area are met with a larger number of less-intensive

⁵⁹ California Air Pollution Control Officers Association, CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, 2008.

development projects. Therefore, it is not simply a cumulative increase in regional development or the resultant GHG emissions that threatens GHG reduction goals.

With implementation of good planning policies, the land use sector can accommodate growth and still be consistent with statewide plans to reduce GHG emissions. To that end, various agencies are required to develop programs to guide future building and transportation development towards minimized resource consumption and lowered resultant pollution.

As discussed above, the Project would be consistent with plans adopted for the purpose of reducing GHG emissions, such as the SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), California Assembly Bill 32, California Air Resources Board Scoping Plan, and other statewide strategies to reduce GHG emissions.⁶⁰ Development of the Project would increase energy consumption from electricity but would not increase other sources of GHG emissions. As identified, annual GHG emissions would not exceed the SCAQMD's regulatory thresholds. As such, the project would not conflict with the goals of the RTP/SCS or other plans implemented to reduce GHG emissions. Therefore, it is concluded that the Project's impacts are not cumulatively considerable.

⁶⁰ Ibid. Pgs 5.7-18 to 5.7-19.

SECTION 7

NEPA Conformity Analysis

7.1 Methodology

The NEPA analysis compares the proposed Project's impacts with the Federal thresholds in order to determine if impacts to Clean Air Act pollutants would exceed federal thresholds. Considering the standards developed for the State of California are more restrictive than the federal thresholds, the analysis detailed above for Air Quality and Greenhouse Gasses would serve to prove compliance with the NEPA analysis.

The SCAQMD is responsible for the development of the Basin's portion of the State Implementation Plan (SIP), which is required under the federal Clean Air Act for areas that are in nonattainment for criteria pollutants. The project may obtain state funding and therefore, under the Clean Air Act, the project would be subject to a SIP conformity determination. This is because the project is in an extreme nonattainment area for 8-hour ozone, a moderate nonattainment area for PM_{2.5} and a maintenance area for CO and PM₁₀. Table 4 shows the federal thresholds while Table 5 shows the attainment status for each of the criteria air pollutants. Under the Clean Air Act, de minimis levels for criteria pollutants have been established as a screening level to determine the potential for a proposed Project to adversely impact air emissions. Emissions are compared to these levels for the SIP conformity determination (de minimis). If the project is below the de minimis levels then the project is determined to be in conformance with the SIP. If a project exceeds the de minimis levels then a full conformity analysis must be conducted.

7.2 Thresholds of Significance

40 CFR 93 § 153 defines *de minimis* levels, that is, the minimum threshold for which a conformity determination must be performed, for various criteria pollutants in various areas. The information is summarized in **Table 9, De Minimis Emission Levels**.

TABLE 9
DE MINIMIS EMISSION LEVELS

Pollutant	Area Type	Tons/year
Ozone (VOC or NOx)	Serious nonattainment	50
	Severe nonattainment	25
	Extreme nonattainment	10
	Other areas outside an ozone transport region	100
Ozone (NOx)	Marginal and moderate nonattainment inside an ozone transportation region	100
	Maintenance	100
Ozone (VOC)	Marginal and moderate nonattainment inside an ozone transport region	50
	Maintenance within an ozone transport region	50
	Maintenance outside an ozone transport region	100
CO, SO ₂ , NO ₂	All nonattainment and maintenance	100
PM ₁₀	Serious nonattainment	70
	Moderate nonattainment and maintenance	100
PM _{2.5}	All nonattainment and maintenance	100

Source: United States Environmental Protection Agency. *General Conformity De Minimis Tables*. <https://www.epa.gov/general-conformity/de-minimis-tables>. August 2017

7.3 Project Impacts

NEPA-1: Conformity Analysis

The proposed Project would be consistent with the SIP as indicated by emissions being below the de minimis thresholds, and therefore, a detailed conformity analysis is not warranted. No mitigation is required.

As shown in **Table 10**, *SIP Conformity Evaluation* ozone precursors are below the *de minimis* thresholds for unmitigated construction and operational activities, and therefore, the project is consistent with the SIP. Construction emissions show only the maximum emissions for the proposed Project in tons per year and are based on the maximum days of construction per subphase. Because the Project emissions are below the *de minimis* thresholds, a detailed conformity analysis is not warranted.

TABLE 10
SIP CONFORMITY EVALUATION

Pollutant	Federal Status	Nonattainment Rates	Threshold of Significance (tons/year)	Maximum Construction Emissions (tons/year)	Operational Emissions (tons/year)
Ozone (O ₃)	Nonattainment	Extreme		See (VOC & NO _x)	
Carbon Monoxide (CO)	Attainment/ Maintenance	N/A	100	1	<1
Oxides of Nitrogen (NO _x)	N/A	N/A	10	2	0.0
Volatile Organic Compounds (VOC)	N/A	N/A	10	<1	<1
Lead (Pb)	Attainment	N/A	N/A	N/A	N/A
Particulate matter less than 2.5 microns (PM _{2.5})*	Nonattainment	Moderate	100	<1	0.0
Particulate matter less than 10 microns (PM ₁₀)*	Attainment/ Maintenance	N/A	100	<1	0.0
Sulfur Dioxide (SO ₂)	Attainment	N/A	N/A	<1	0.0

Notes: N/A = Non-applicable

Source: ESA 2018; United States Environmental Protection Agency. General Conformity De Minimis Tables. <https://www.epa.gov/general-conformity/de-minimis-tables>. August 2017

As discussed previously, no growth-inducing development or land use would occur under the project, and therefore, the project would not conflict with the City of Huntington Beach General Plan. Therefore, the project would be consistent with the AQMP. Additionally, as the annual emissions from the project would be well below the *de minimis* thresholds for SIP conformity, the proposed project is considered to be in conformance with the SIP. No mitigation would be required.

APPENDIX A

Air Quality Emissions Calculation Worksheets

- Construction Assumptions and Calculation Summaries
- Construction CalEEMod Output
- Operational Assumptions and Calculation Summaries
- Operational CalEEMod Output

Construction Assumptions and Calculations

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Construction Assumptions

CalEEMod Inputs (Non-Default information only)

Project Location
 County Los Angeles
 Air District South Coast
 Climate Zone 11
 Construction Year 2018
 Operational Year 2020 Existing
 Utility Provider Southern California Edison

	Base	2015 ¹	2020 ¹
CO intensity	702.43634	531.744309	411.627695
% renewable	0%	24.30%	41.40%

<http://www.cpuc.ca.gov/renewables/>

Land Use	SF/ DU/ Seat/ Room /Spaces	KSF	Acres	CalEEMod Land Use Type
Pump Station	3,800	3.80	2	General Light Industrial

Modeling Scenarios

There are two modeling scenarios used. One for Criteria Pollutant Analysis, and one for Health Risk and GHG Emissions. The proposed project has various pieces of equipment operating throughout the given construction period for a given number of days. For a conservative criteria pollutant analysis it is assumed that all equipment may operate during one day at some point during the construction period resulting in maximum daily emissions. For Health Risk and GHG emissions estimates, the equipment emissions are estimated based on the total number of days for each piece of equipment, which includes the emissions for haul, vendor and worker trips. As well as determining daily emissions for each piece of equipment so as to determine the accurate emissions for health risk and GHG emissions. Note that for CalEEMod Modeling all phases start in 2020 to provide a worst case emissions scenario.

Construction Scenarios

Construction will consist of 4 phases beginning in August 2020 and concluding in December 2022. The phases will not overlap. The construction phases and schedule are as follows:

- Phase 1 Pump Station, Tanks, Pipeline/Meter Vault Excavation
- Phase 2 Construction of Pump Station Wet Wells, Tank Piles, Piping
- Phase 3 Construction of Tank, Pump Station Building, Valve/Meter Vault
- Phase 4 Equipmping of Pump Station, Tanks, Valve/Meter Vault

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Construction Assumptions

Construction Schedule

	Actual		Modeled		
	Start	End	Start	End	Days
Phase 1	9/1/2020	4/30/2021	1/1/2020	1/14/2020	18
Phase 2	5/1/2021	12/31/2021	2/1/2020	2/19/2020	13
Phase 3	1/1/2022	8/31/2022	3/1/2020	3/26/2020	19
Phase 4	9/1/2022	12/31/2022	4/1/2020	5/12/2020	30

Note: Days based on number of haul truck days (Phases 1-3) and Max schedule (Phase 4)

Construction Equipment

Phase 1

Grading Phase

7200 CY Dirt exported

Provided Equipment (CalEEMod Designation)	#	hrs/day	Total Days	HP	LF
Bull dozer (Rubber Tired Dozer)	2	6	30	250	0.4
Compactor (Roller)	1	6	10	200	0.3752
Excavator (Excavators)	2	6	20	200	0.3819
Dump Truck (Off-Highway Trucks)	6	6	18	350	0.3819
Water Trucks (Off-Highway Trucks)	1	8	45	350	0.3819

Phase 2

Building Construction Phase

2,120 cubic yards of concrete

Equipment	#	hrs/day	Total Days	HP	LF
Drill Rig (Bore/Drill Rig)	1	6	20	500	0.5
Backhoe (Tractor/Loader/Backhoe)	1	6	20	150	0.37
Concrete Truck (Off-Highway Trucks)	4	6	14	350	0.3819
Dump Truck (Off-Highway Trucks)	2	5	3	350	0.3819
Water Trucks (Off-Highway Trucks)	2	4	25	350	0.3819

Phase 3

Building Construction/Architectural Coating

2,900 cubic yards of concrete

Equipment	#	hrs/day	Total Days	HP	LF
Crane (Cranes)	1	6	10	300	0.29
Forklift (Forklifts)	4	6	30	120	0.2
Concrete Trucks (Off-highway Trucks)	4	6	19	350	0.3819
Manual Lift (Ariel Lift)	5	6	15	75	0.3082
Air Compressor	1	6	5	78	0.48

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Construction Assumptions

Phase 4

Building Construction					
Equipment	#	hrs/day	Total Days	HP	LF
Crane (Cranes)	1	6	10	300	0.29
Forklift (Forklifts)	4	6	30	120	0.2
Manual Lift (Ariel Lift)	5	6	15	75	0.3082

Trips and VMT

	Worker trips per day	Vendor Trips per Day	Total 1-way Trips	# Days
Phase 1	25	2	540	18
Phase 2	25	4	230	13
Phase 3	25	2	304	19
Phase 4	13	6	0	0

*Note: Project Description shows only Number of workers and total round trips for vendors and truck, not total one way trips. Worker trips are 2.5 per worker and Truck Trips are total round trips times 2.

Single Hour Emissions per vehicle

	#	hrs/day	Total Days	HP	LF
Building Construction Phase	Backhoe	1	1	150	0.37
	Bull dozer	1	1	250	0.4
	Compactor	1	1	200	0.3752
	Concrete Trucks/Dump Truck/Water Truck	1	1	350	0.3819
	Crane	1	1	300	0.29
	Drill Rig	1	1	500	0.5
	Excavator	1	1	200	0.3819
	Forklift	1	1	120	0.2
	Manual Lift	1	1	75	0.3082
	Air Compressor	1	1	78	0.48

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Maximum Daily Construction Emissions

CalEEMod 2016.3.2

Title: OCSD - Plant No. 2 GWRS - Max Daily Concentration

Date: 1/23/2018

Unmitigated Construction

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	lbs/day					
Phase 1 Total	6.05	72.10	33.15	0.14	5.02	2.47
Onsite	5.38	54.32	28.03	0.09	3.62	2.05
Offsite	0.67	17.78	5.13	0.05	1.40	0.42
Phase 2 Total	4.08	46.16	26.57	0.11	2.25	1.47
Onsite	3.62	35.33	23.04	0.08	1.29	1.19
Offsite	0.46	10.82	3.52	0.03	0.96	0.29
Phase 3 Total	8.84	23.87	17.78	0.05	1.63	0.96
Onsite	8.42	14.25	14.55	0.02	0.74	0.69
Offsite	0.42	9.62	3.23	0.03	0.88	0.26
Phase 4 Total	1.22	13.25	13.46	0.02	0.82	0.64
Onsite	1.13	12.57	12.72	0.02	0.63	0.58
Offsite	0.09	0.69	0.74	0.00	0.19	0.05
MAX Total	8.84	72.10	33.15	0.14	5.02	2.47
SCAQMD Thresholds	75	100	550	150	150	55
Significant	No	No	No	No	No	No

LST Analysis

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1		54.32	28.03		3.62	2.05
Phase 2		35.33	23.04		1.29	1.19
Phase 3		14.25	14.55		0.74	0.69
Phase 4		12.57	12.72		0.63	0.58
Max		54.32	28.03		3.62	2.05
2		73	962		7	5
Significant		No	No		No	No

2 acre site. SRA 18 at 25 meters

Operational

6

2

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Maximum Daily Construction Emissions

Unmitigated Construction

		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
		lbs/day Winter					
Phase 1	total	6.05	72.10	33.15	0.14	5.02	2.47
	onsite	5.38	54.32	28.03	0.09	3.62	2.05
	offsite	0.67	17.78	5.13	0.05	1.40	0.42
Phase 2	total	4.08	46.16	26.57	0.11	2.25	1.47
	onsite	3.62	35.33	23.04	0.08	1.29	1.19
	offsite	0.46	10.82	3.52	0.03	0.96	0.29
Phase 3	total	8.84	23.87	17.78	0.05	1.63	0.96
	onsite	8.42	14.25	14.55	0.02	0.74	0.69
	offsite	0.42	9.62	3.23	0.03	0.88	0.26
Phase 4	total	1.22	13.25	13.43	0.02	0.82	0.64
	onsite	1.13	12.57	12.72	0.02	0.63	0.58
	offsite	0.09	0.69	0.71	0.00	0.19	0.05

		Winter					
		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1	Fugitive					3.4072	1.8469
	Onsite	5.3805	54.3234	28.0251	0.09	0.21587	0.1986
	Offsite	0.672	17.7791	5.1269	4.99E-02	1.4006	0.422
	Total	6.0525	72.1025	33.152	0.1399	5.02367	2.4675
Phase 2	Fugitive						
	Onsite	3.623	35.334	23.0439	0.0799	1.2897	1.1865
	Offsite	0.4592	10.8222	3.5216	3.13E-02	0.9611	0.2867
	Total	4.0822	46.1562	26.5655	0.1112	2.2508	1.4732
Phase 3	Fugitive						
	Onsite	1.1282	12.5666	12.7207	0.0193	0.6331	0.5825
	Offsite	0.4215	9.6237	3.2309	2.81E-02	0.8849	0.2628
	Total	1.5497	22.1903	15.9516	0.0474	1.518	0.8453
Phase 3 - AC	Fugitive						
	Onsite	7.2874	1.6838	1.8314	2.97E-03	0.1109	0.1109
	Offsite	0	0	0	0	0	0
	Total	7.2874	1.6838	1.8314	0.00297	0.1109	0.1109
Phase 4	Fugitive						
	Onsite	1.1282	12.5666	12.7207	0.0193	0.6331	0.5825
	Offsite	0.0887	0.6852	0.7057	2.96E-03	0.188	0.0536
	Total	1.2169	13.2518	13.4264	0.02226	0.8211	0.6361

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Maximum Daily Construction Emissions

Unmitigated Construction

		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
		lbs/day Summer					
Phase 1	total	5.50	54.62	29.18	0.09	3.92	2.13
	onsite	5.38	54.32	28.03	0.09	3.62	2.05
	offsite	0.12	0.29	1.15	0.00	0.30	0.08
Phase 2	total	3.75	35.84	24.25	0.08	1.60	1.27
	onsite	3.62	35.33	23.04	0.08	1.29	1.19
	offsite	0.13	0.51	1.21	0.00	0.31	0.09
Phase 3	total	8.54	14.55	15.70	0.03	1.04	0.77
	onsite	8.42	14.25	14.55	0.02	0.74	0.69
	offsite	0.12	0.29	1.15	0.00	0.30	0.08
Phase 4	total	1.21	13.25	13.46	0.02	0.82	0.64
	onsite	1.13	12.57	12.72	0.02	0.63	0.58
	offsite	0.08	0.68	0.74	0.00	0.19	0.05

		Summer					
		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1	Fugitive					3.4072	1.8469
	Onsite	5.3805	54.3234	28.0251	0.09	0.21587	0.1986
	Offsite	0.1222	0.2946	1.1504	3.47E-03	0.2956	0.0809
	Total	5.5027	54.618	29.1755	0.09347	3.91867	2.1264
Phase 2	Fugitive	0				0	0
	Onsite	3.623	35.334	23.0439	0.0799	1.2897	1.1865
	Offsite	0.1293	0.5073	1.2061	3.99E-03	0.3094	0.0856
	Total	3.7523	35.8413	24.25	0.08389	1.5991	1.2721
Phase 3	Fugitive	0				0	0
	Onsite	1.1282	12.5666	12.7207	0.0193	0.6331	0.5825
	Offsite	0.1222	0.2946	1.1504	3.47E-03	0.2956	0.0809
	Total	1.2504	12.8612	13.8711	0.02277	0.9287	0.6634
Phase 3 - AC	Fugitive	0				0	0
	Onsite	7.2874	1.6838	1.8314	0.00297	0.1109	0.1109
	Offsite	0	0	0	0	0	0
	Total	7.2874	1.6838	1.8314	0.00297	0.1109	0.1109
Phase 4	Fugitive	0				0	0
	Onsite	1.1282	12.5666	12.7207	0.0193	0.6331	0.5825
	Offsite	0.0812	0.6808	0.7364	3.10E-03	0.1879	0.0536
	Total	1.2094	13.2474	13.4571	0.0224	0.821	0.6361

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Maximum Daily Construction Emissions

Mitigated Construction

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	lbs/day					
Phase 1 Total	2.16	41.73	53.39	0.14	4.96	2.42
Onsite	1.49	23.95	48.26	0.09	3.56	2.00
Offsite	0.67	17.78	5.13	0.05	1.40	0.42
Phase 2 Total	1.75	32.55	46.96	0.11	1.09	0.42
Onsite	1.29	21.73	43.43	0.08	0.13	0.13
Offsite	0.46	10.82	3.52	0.03	0.96	0.29
Phase 3 Total	7.86	18.19	18.44	0.05	0.92	0.30
Onsite	7.44	8.57	15.21	0.02	0.04	0.03
Offsite	0.42	9.62	3.23	0.03	0.88	0.26
Phase 4 Total	0.43	8.19	14.12	0.02	0.22	0.09
Onsite	0.34	7.51	13.38	0.02	0.03	0.03
Offsite	0.09	0.69	0.74	0.00	0.19	0.05
MAX Total	7.86	41.73	53.39	0.14	4.96	2.42
SCAQMD Thresholds	75	100	550	150	150	55
Significant	No	No	No	No	No	No

LST Analysis

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1		23.95	48.26		3.56	2.00
Phase 2		21.73	43.43		0.13	0.13
Phase 3		8.57	15.21		0.04	0.03
Phase 4		7.51	13.38		0.03	0.03
Max		23.95	48.26		3.56	2.00
2		73	962		7	5
Significant		No	No		No	No

Mitigation: Tier 4 Equipment

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Maximum Daily Construction Emissions

Mitigated Construction

		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
		lbs/day Winter					
Phase 1	total	2.16	41.73	53.39	0.14	4.96	2.42
	onsite	1.49	23.95	48.26	0.09	3.56	2.00
	offsite	0.67	17.78	5.13	0.05	1.40	0.42
Phase 2	total	1.75	32.55	46.96	0.11	1.09	0.42
	onsite	1.29	21.73	43.43	0.08	0.13	0.13
	offsite	0.46	10.82	3.52	0.03	0.96	0.29
Phase 3	total	7.86	18.19	18.44	0.05	0.92	0.30
	onsite	7.44	8.57	15.21	0.02	0.04	0.03
	offsite	0.42	9.62	3.23	0.03	0.88	0.26
Phase 4	total	0.43	8.19	14.09	0.02	0.22	0.09
	onsite	0.34	7.51	13.38	0.02	0.03	0.03
	offsite	0.09	0.69	0.71	0.00	0.19	0.05

		Winter					
		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1	Fugitive					3.4072	1.8469
	Onsite	1.485	23.9462	48.2636	0.0909	0.1485	0.1485
	Offsite	0.672	17.7791	5.1269	0.0499	1.4006	0.422
	Total	2.157	41.7253	53.3905	0.1408	4.9563	2.4174
Phase 2	Fugitive					0	0
	Onsite	1.2938	21.7307	43.4334	0.0799	0.1309	0.1309
	Offsite	0.4592	10.8222	3.5216	0.0313	0.9611	0.2867
	Total	1.753	32.5529	46.955	0.1112	1.092	0.4176
Phase 3	Fugitive					0	0
	Onsite	0.3374	7.5055	13.3802	0.0193	0.0317	0.0317
	Offsite	0.4215	9.6237	3.2309	0.0281	0.8849	0.2628
	Total	0.7589	17.1292	16.6111	0.0474	0.9166	0.2945
Phase 3 - AC	Fugitive					0	0
	Onsite	7.0997	1.0598	1.8324	2.97E-03	3.96E-03	
	Offsite	0	0	0	0	0	0
	Total	7.0997	1.0598	1.8324	0.00297	0.00396	3.96E-03
Phase 4	Fugitive					0	0
	Onsite	0.3374	7.5055	13.3802	0.0193	0.0317	0.0317
	Offsite	0.0887	0.6852	0.7057	0.00296	0.188	0.0536
	Total	0.4261	8.1907	14.0859	0.02226	0.2197	0.0853

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Maximum Daily Construction Emissions

Mitigated Construction

		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
		lbs/day Summer					
Phase 1	total	1.61	24.24	49.41	0.09	3.85	2.08
	onsite	1.49	23.95	48.26	0.09	3.56	2.00
	offsite	0.12	0.29	1.15	0.00	0.30	0.08
Phase 2	total	1.42	22.24	44.64	0.08	0.44	0.22
	onsite	1.29	21.73	43.43	0.08	0.13	0.13
	offsite	0.13	0.51	1.21	0.00	0.31	0.09
Phase 3	total	7.56	8.86	16.36	0.03	0.33	0.11
	onsite	7.44	8.57	15.21	0.02	0.04	0.03
	offsite	0.12	0.29	1.15	0.00	0.30	0.08
Phase 4	total	0.42	8.19	14.12	0.02	0.22	0.09
	onsite	0.34	7.51	13.38	0.02	0.03	0.03
	offsite	0.08	0.68	0.74	0.00	0.19	0.05

		Summer					
		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1	Fugitive	0	0	0	0	3.4072	1.8469
	Onsite	1.485	23.9462	48.2636	0.0909	0.1485	0.1485
	Offsite	0.1222	0.2946	1.1504	0.00347	0.2956	0.0809
	Total	1.6072	24.2408	49.414	0.09437	3.8513	2.0763
Phase 2	Fugitive	0	0	0	0	0	0
	Onsite	1.2938	21.7307	43.4334	0.0799	0.1309	0.1309
	Offiste	0.1293	0.5073	1.2061	0.00399	0.3094	0.0856
	Total	1.4231	22.238	44.6395	0.08389	0.4403	0.2165
Phase 3	Fugitive	0	0	0	0	0	0
	Onsite	0.3374	7.5055	13.3802	0.0193	0.0317	0.0317
	Offiste	0.1222	0.2946	1.1504	0.00347	0.2956	0.0809
	Total	0.4596	7.8001	14.5306	0.02277	0.3273	0.1126
Phase 3 - AC	Fugitive	0	0	0	0	0	0
	Onsite	7.0997	1.0598	1.8324	0.00297	0.00396	0
	Offiste	0	0	0	0	0	0
	Total	7.0997	1.0598	1.8324	0.00297	0.00396	0
Phase 4	Fugitive	0	0	0	0	0	0
	Onsite	0.3374	7.5055	13.3802	0.0193	0.0317	0.0317
	Offiste	0.0812	0.6808	0.7364	0.0031	0.1879	0.0536
	Total	0.4186	8.1863	14.1166	0.0224	0.2196	0.0853

Construction CalEEMod Output

OCSD - Plant No. 2 GWRS - Max Daily Construction - Los Angeles-South Coast County, Winter

OCSD - Plant No. 2 GWRS - Max Daily Construction

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.80	1000sqft	2.00	3,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	411.63	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Trips and VMT - See Assumptions

Grading - See Assumptions

Vehicle Trips - No New Trips

Energy Use - No Heat

Water And Wastewater - No New Water Use

Solid Waste - No New Solid Waste Generation

Construction Off-road Equipment Mitigation - See Assumptions - watering 4 times per day

Operational Off-Road Equipment - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	5.00

tblConstructionPhase	NumDays	200.00	13.00
tblConstructionPhase	NumDays	200.00	19.00
tblConstructionPhase	NumDays	200.00	30.00
tblConstructionPhase	NumDays	4.00	18.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24NG	13.65	0.00
tblGrading	AcresOfGrading	0.00	2.00
tblGrading	MaterialExported	0.00	7,200.00
tblLandUse	LotAcreage	0.09	2.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	89.00	120.00
tblOffRoadEquipment	HorsePower	89.00	120.00
tblOffRoadEquipment	HorsePower	247.00	250.00
tblOffRoadEquipment	HorsePower	97.00	150.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	221.00	500.00
tblOffRoadEquipment	HorsePower	158.00	200.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	80.00	200.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	411.63
tblSolidWaste	SolidWasteGenerationRate	4.71	0.00
tblTripsAndVMT	HaulingTripNumber	900.00	1,080.00
tblTripsAndVMT	HaulingTripNumber	0.00	460.00
tblTripsAndVMT	HaulingTripNumber	0.00	608.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	1.00	4.00
tblTripsAndVMT	VendorTripNumber	1.00	2.00
tblTripsAndVMT	VendorTripNumber	1.00	6.00
tblTripsAndVMT	WorkerTripNumber	30.00	25.00
tblTripsAndVMT	WorkerTripNumber	2.00	25.00
tblTripsAndVMT	WorkerTripNumber	2.00	25.00
tblTripsAndVMT	WorkerTripNumber	2.00	13.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00

tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	878,750.00	0.00

2.0 Emissions Summary

Summaries Not Used

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1	Grading	1/1/2020	1/24/2020	5	18	
2	Phase 2	Building Construction	2/1/2020	2/19/2020	5	13	
3	Phase 3	Building Construction	3/1/2020	3/26/2020	5	19	
4	Phase 3 Architectural Coating	Architectural Coating	3/1/2020	3/6/2020	5	5	
5	Phase 4	Building Construction	4/1/2020	5/12/2020	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,700; Non-Residential Outdoor: 1,900; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase 1	Excavators	2	6.00	200	0.38
Phase 1	Graders	0	8.00	187	0.41
Phase 1	Off-Highway Trucks	6	6.00	350	0.38
Phase 1	Off-Highway Trucks	1	8.00	350	0.38
Phase 1	Rollers	1	6.00	200	0.38
Phase 1	Rubber Tired Dozers	2	6.00	250	0.40
Phase 1	Tractors/Loaders/Backhoes	0	7.00	97	0.37

Phase 2	Bore/Drill Rigs	1	6.00	500	0.50
Phase 2	Cranes	0	8.00	231	0.29
Phase 2	Forklifts	0	7.00	89	0.20
Phase 2	Generator Sets	0	8.00	84	0.74
Phase 2	Off-Highway Trucks	4	6.00	350	0.38
Phase 2	Off-Highway Trucks	2	5.00	350	0.38
Phase 2	Off-Highway Trucks	2	4.00	350	0.38
Phase 2	Tractors/Loaders/Backhoes	1	6.00	150	0.37
Phase 2	Welders	0	8.00	46	0.45
Phase 3	Aerial Lifts	5	6.00	75	0.31
Phase 3	Cranes	1	6.00	300	0.29
Phase 3	Forklifts	4	6.00	120	0.20
Phase 3	Generator Sets	0	8.00	84	0.74
Phase 3	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Phase 3	Welders	0	8.00	46	0.45
Phase 4	Aerial Lifts	5	6.00	75	0.31
Phase 4	Cranes	1	6.00	300	0.29
Phase 4	Forklifts	4	6.00	120	0.20
Phase 4	Generator Sets	0	8.00	84	0.74
Phase 4	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Phase 4	Welders	0	8.00	46	0.45
Phase 3 Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Phase 1	12	25.00	2.00	1,080.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2	10	25.00	4.00	460.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase 3	10	25.00	2.00	608.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4	10	13.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Phase 3 Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
-------------------------------	---	------	------	------	-------	------	-------	--------	---------	------

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Phase 1 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.1962	0.0000	9.1962	4.9849	0.0000	4.9849			0.0000			0.0000
Off-Road	5.3805	54.3234	28.0251	0.0909		2.1587	2.1587		1.9860	1.9860		8,803.4960	8,803.4960	2.8472		8,874.6767
Total	5.3805	54.3234	28.0251	0.0909	9.1962	2.1587	11.3549	4.9849	1.9860	6.9709		8,803.4960	8,803.4960	2.8472		8,874.6767

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5368	17.4758	4.0629	0.0466	1.0491	0.0559	1.1050	0.2876	0.0535	0.3411		5,046.5644	5,046.5644	0.3622		5,055.6201

Vendor	7.4400e-003	0.2127	0.0615	5.0000e-004	0.0128	1.0200e-003	0.0138	3.6900e-003	9.7000e-004	4.6600e-003		53.8898	53.8898	3.6000e-003		53.9799
Worker	0.1278	0.0906	1.0025	2.7800e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		276.8551	276.8551	8.7300e-003		277.0733
Total	0.6720	17.7791	5.1269	0.0499	1.3413	0.0593	1.4006	0.3654	0.0566	0.4220		5,377.3093	5,377.3093	0.3746		5,386.6733

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.4072	0.0000	3.4072	1.8469	0.0000	1.8469			0.0000			0.0000
Off-Road	1.4850	23.9462	48.2636	0.0909		0.1485	0.1485		0.1485	0.1485	0.0000	8,803.4960	8,803.4960	2.8472		8,874.6767
Total	1.4850	23.9462	48.2636	0.0909	3.4072	0.1485	3.5557	1.8469	0.1485	1.9954	0.0000	8,803.4960	8,803.4960	2.8472		8,874.6767

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5368	17.4758	4.0629	0.0466	1.0491	0.0559	1.1050	0.2876	0.0535	0.3411		5,046.5644	5,046.5644	0.3622		5,055.6201
Vendor	7.4400e-003	0.2127	0.0615	5.0000e-004	0.0128	1.0200e-003	0.0138	3.6900e-003	9.7000e-004	4.6600e-003		53.8898	53.8898	3.6000e-003		53.9799
Worker	0.1278	0.0906	1.0025	2.7800e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		276.8551	276.8551	8.7300e-003		277.0733
Total	0.6720	17.7791	5.1269	0.0499	1.3413	0.0593	1.4006	0.3654	0.0566	0.4220		5,377.3093	5,377.3093	0.3746		5,386.6733

3.3 Phase 2 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6230	35.3340	23.0439	0.0799		1.2897	1.2897		1.1865	1.1865		7,731.4166	7,731.4166	2.5005		7,793.9291
Total	3.6230	35.3340	23.0439	0.0799		1.2897	1.2897		1.1865	1.1865		7,731.4166	7,731.4166	2.5005		7,793.9291

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3166	10.3062	2.3961	0.0275	0.6187	0.0330	0.6517	0.1696	0.0315	0.2011		2,976.1790	2,976.1790	0.2136		2,981.5196
Vendor	0.0149	0.4254	0.1230	1.0100e-003	0.0256	2.0300e-003	0.0276	7.3700e-003	1.9500e-003	9.3200e-003		107.7796	107.7796	7.2100e-003		107.9598
Worker	0.1278	0.0906	1.0025	2.7800e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		276.8551	276.8551	8.7300e-003		277.0733
Total	0.4592	10.8222	3.5216	0.0313	0.9237	0.0373	0.9611	0.2511	0.0356	0.2867		3,360.8137	3,360.8137	0.2296		3,366.5526

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2938	21.7307	43.3334	0.0799		0.1309	0.1309		0.1309	0.1309	0.0000	7,731.4166	7,731.4166	2.5005		7,793.9290
Total	1.2938	21.7307	43.3334	0.0799		0.1309	0.1309		0.1309	0.1309	0.0000	7,731.4166	7,731.4166	2.5005		7,793.9290

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3166	10.3062	2.3961	0.0275	0.6187	0.0330	0.6517	0.1696	0.0315	0.2011		2,976.1790	2,976.1790	0.2136		2,981.5196
Vendor	0.0149	0.4254	0.1230	1.0100e-003	0.0256	2.0300e-003	0.0276	7.3700e-003	1.9500e-003	9.3200e-003		107.7796	107.7796	7.2100e-003		107.9598
Worker	0.1278	0.0906	1.0025	2.7800e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		276.8551	276.8551	8.7300e-003		277.0733
Total	0.4592	10.8222	3.5216	0.0313	0.9237	0.0373	0.9611	0.2511	0.0356	0.2867		3,360.8137	3,360.8137	0.2296		3,366.5526

3.4 Phase 3 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1282	12.5666	12.7207	0.0193		0.6331	0.6331		0.5825	0.5825		1,868.5836	1,868.5836	0.6043		1,883.6921

Total	1.1282	12.5666	12.7207	0.0193		0.6331	0.6331		0.5825	0.5825		1,868.5836	1,868.5836	0.6043		1,883.6921
-------	--------	---------	---------	--------	--	--------	--------	--	--------	--------	--	------------	------------	--------	--	------------

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2863	9.3204	2.1669	0.0248	0.5595	0.0298	0.5893	0.1534	0.0285	0.1819		2,691.5010	2,691.5010	0.1932		2,696.3307
Vendor	7.4400e-003	0.2127	0.0615	5.0000e-004	0.0128	1.0200e-003	0.0138	3.6900e-003	9.7000e-004	4.6600e-003		53.8898	53.8898	3.6000e-003		53.9799
Worker	0.1278	0.0906	1.0025	2.7800e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		276.8551	276.8551	8.7300e-003		277.0733
Total	0.4215	9.6237	3.2309	0.0281	0.8517	0.0332	0.8849	0.2312	0.0317	0.2628		3,022.2459	3,022.2459	0.2055		3,027.3839

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3374	7.5055	13.3802	0.0193		0.0317	0.0317		0.0317	0.0317	0.0000	1,868.5836	1,868.5836	0.6043		1,883.6921
Total	0.3374	7.5055	13.3802	0.0193		0.0317	0.0317		0.0317	0.0317	0.0000	1,868.5836	1,868.5836	0.6043		1,883.6921

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2863	9.3204	2.1669	0.0248	0.5595	0.0298	0.5893	0.1534	0.0285	0.1819		2,691.5010	2,691.5010	0.1932		2,696.3307
Vendor	7.4400e-003	0.2127	0.0615	5.0000e-004	0.0128	1.0200e-003	0.0138	3.6900e-003	9.7000e-004	4.6600e-003		53.8898	53.8898	3.6000e-003		53.9799
Worker	0.1278	0.0906	1.0025	2.7800e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		276.8551	276.8551	8.7300e-003		277.0733
Total	0.4215	9.6237	3.2309	0.0281	0.8517	0.0332	0.8849	0.2312	0.0317	0.2628		3,022.2459	3,022.2459	0.2055		3,027.3839

3.5 Phase 3 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.0452					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	7.2874	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
--	-----	-----	----	-----	---------------	--------------	------------	----------------	---------------	-------------	----------	----------	-----------	-----	-----	------

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.0452					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0545	1.0598	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0218		281.9928
Total	7.0997	1.0598	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0218		281.9928

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.6 Phase 4 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1282	12.5666	12.7207	0.0193		0.6331	0.6331		0.5825	0.5825		1,868.5836	1,868.5836	0.6043		1,883.6921
Total	1.1282	12.5666	12.7207	0.0193		0.6331	0.6331		0.5825	0.5825		1,868.5836	1,868.5836	0.6043		1,883.6921

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0223	0.6381	0.1844	1.5100e-003	0.0384	3.0500e-003	0.0415	0.0111	2.9200e-003	0.0140		161.6694	161.6694	0.0108		161.9397
Worker	0.0664	0.0471	0.5213	1.4500e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		143.9647	143.9647	4.5400e-003		144.0781
Total	0.0887	0.6852	0.7057	2.9600e-003	0.1837	4.2600e-003	0.1880	0.0496	4.0400e-003	0.0536		305.6341	305.6341	0.0154		306.0178

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3374	7.5055	13.3802	0.0193		0.0317	0.0317		0.0317	0.0317	0.0000	1,868.5836	1,868.5836	0.6043		1,883.6921
Total	0.3374	7.5055	13.3802	0.0193		0.0317	0.0317		0.0317	0.0317	0.0000	1,868.5836	1,868.5836	0.6043		1,883.6921

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0223	0.6381	0.1844	1.5100e-003	0.0384	3.0500e-003	0.0415	0.0111	2.9200e-003	0.0140		161.6694	161.6694	0.0108		161.9397
Worker	0.0664	0.0471	0.5213	1.4500e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		143.9647	143.9647	4.5400e-003		144.0781
Total	0.0887	0.6852	0.7057	2.9600e-003	0.1837	4.2600e-003	0.1880	0.0496	4.0400e-003	0.0536		305.6341	305.6341	0.0154		306.0178

4.0 Operational Detail - Mobile

Operational Emissions Modeled Separately

OCSD - Plant No. 2 GWRS - Max Daily Construction - Los Angeles-South Coast County, Summer

OCSD - Plant No. 2 GWRS - Max Daily Construction

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.80	1000sqft	2.00	3,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	411.63	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Trips and VMT - See Assumptions

Grading - See Assumptions

Vehicle Trips - No New Trips

Energy Use - No Heat

Water And Wastewater - No New Water Use

Solid Waste - No New Solid Waste Generation

Construction Off-road Equipment Mitigation - See Assumptions - watering 4 times per day

Operational Off-Road Equipment - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	5.00

tblConstructionPhase	NumDays	200.00	13.00
tblConstructionPhase	NumDays	200.00	19.00
tblConstructionPhase	NumDays	200.00	30.00
tblConstructionPhase	NumDays	4.00	18.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24NG	13.65	0.00
tblGrading	AcresOfGrading	0.00	2.00
tblGrading	MaterialExported	0.00	7,200.00
tblLandUse	LotAcreage	0.09	2.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	89.00	120.00
tblOffRoadEquipment	HorsePower	89.00	120.00
tblOffRoadEquipment	HorsePower	247.00	250.00
tblOffRoadEquipment	HorsePower	97.00	150.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	221.00	500.00
tblOffRoadEquipment	HorsePower	158.00	200.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	80.00	200.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	411.63
tblSolidWaste	SolidWasteGenerationRate	4.71	0.00
tblTripsAndVMT	HaulingTripNumber	900.00	1,080.00
tblTripsAndVMT	HaulingTripNumber	0.00	460.00
tblTripsAndVMT	HaulingTripNumber	0.00	608.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	1.00	4.00
tblTripsAndVMT	VendorTripNumber	1.00	2.00
tblTripsAndVMT	VendorTripNumber	1.00	6.00
tblTripsAndVMT	WorkerTripNumber	30.00	25.00
tblTripsAndVMT	WorkerTripNumber	2.00	25.00
tblTripsAndVMT	WorkerTripNumber	2.00	25.00
tblTripsAndVMT	WorkerTripNumber	2.00	13.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00

tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	878,750.00	0.00

2.0 Emissions Summary

Su Summaries not used

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1	Grading	1/1/2020	1/24/2020	5	18	
2	Phase 2	Building Construction	2/1/2020	2/19/2020	5	13	
3	Phase 3	Building Construction	3/1/2020	3/26/2020	5	19	
4	Phase 3 Architectural Coating	Architectural Coating	3/1/2020	3/6/2020	5	5	
5	Phase 4	Building Construction	4/1/2020	5/12/2020	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,700; Non-Residential Outdoor: 1,900; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase 1	Excavators	2	6.00	200	0.38
Phase 1	Graders	0	8.00	187	0.41
Phase 1	Off-Highway Trucks	6	6.00	350	0.38
Phase 1	Off-Highway Trucks	1	8.00	350	0.38
Phase 1	Rollers	1	6.00	200	0.38
Phase 1	Rubber Tired Dozers	2	6.00	250	0.40
Phase 1	Tractors/Loaders/Backhoes	0	7.00	97	0.37

Phase 2	Bore/Drill Rigs	1	6.00	500	0.50
Phase 2	Cranes	0	8.00	231	0.29
Phase 2	Forklifts	0	7.00	89	0.20
Phase 2	Generator Sets	0	8.00	84	0.74
Phase 2	Off-Highway Trucks	4	6.00	350	0.38
Phase 2	Off-Highway Trucks	2	5.00	350	0.38
Phase 2	Off-Highway Trucks	2	4.00	350	0.38
Phase 2	Tractors/Loaders/Backhoes	1	6.00	150	0.37
Phase 2	Welders	0	8.00	46	0.45
Phase 3	Aerial Lifts	5	6.00	75	0.31
Phase 3	Cranes	1	6.00	300	0.29
Phase 3	Forklifts	4	6.00	120	0.20
Phase 3	Generator Sets	0	8.00	84	0.74
Phase 3	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Phase 3	Welders	0	8.00	46	0.45
Phase 4	Aerial Lifts	5	6.00	75	0.31
Phase 4	Cranes	1	6.00	300	0.29
Phase 4	Forklifts	4	6.00	120	0.20
Phase 4	Generator Sets	0	8.00	84	0.74
Phase 4	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Phase 4	Welders	0	8.00	46	0.45
Phase 3 Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Phase 1	12	25.00	2.00	1,080.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2	10	25.00	4.00	460.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase 3	10	25.00	2.00	608.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4	10	13.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Phase 3 Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
-------------------------------	---	------	------	------	-------	------	-------	--------	---------	------

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Phase 1 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.1962	0.0000	9.1962	4.9849	0.0000	4.9849			0.0000			0.0000
Off-Road	5.3805	54.3234	28.0251	0.0909		2.1587	2.1587		1.9860	1.9860		8,803.4960	8,803.4960	2.8472		8,874.6767
Total	5.3805	54.3234	28.0251	0.0909	9.1962	2.1587	11.3549	4.9849	1.9860	6.9709		8,803.4960	8,803.4960	2.8472		8,874.6767

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5241	17.2524	3.8230	0.0474	1.0491	0.0551	1.1041	0.2876	0.0527	0.3402		5,134.9909	5,134.9909	0.3495		5,143.7289

Vendor	7.1100e-003	0.2127	0.0557	5.2000e-004	0.0128	1.0000e-003	0.0138	3.6900e-003	9.6000e-004	4.6400e-003		55.4049	55.4049	3.3800e-003		55.4895
Worker	0.1151	0.0819	1.0946	2.9500e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		294.0282	294.0282	9.2700e-003		294.2600
Total	0.6463	17.5470	4.9733	0.0509	1.3413	0.0584	1.3997	0.3654	0.0558	0.4211		5,484.4241	5,484.4241	0.3622		5,493.4783

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.4072	0.0000	3.4072	1.8469	0.0000	1.8469			0.0000			0.0000
Off-Road	1.4850	23.9462	48.2636	0.0909		0.1485	0.1485		0.1485	0.1485	0.0000	8,803.4960	8,803.4960	2.8472		8,874.6767
Total	1.4850	23.9462	48.2636	0.0909	3.4072	0.1485	3.5557	1.8469	0.1485	1.9954	0.0000	8,803.4960	8,803.4960	2.8472		8,874.6767

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5241	17.2524	3.8230	0.0474	1.0491	0.0551	1.1041	0.2876	0.0527	0.3402		5,134.9909	5,134.9909	0.3495		5,143.7289
Vendor	7.1100e-003	0.2127	0.0557	5.2000e-004	0.0128	1.0000e-003	0.0138	3.6900e-003	9.6000e-004	4.6400e-003		55.4049	55.4049	3.3800e-003		55.4895
Worker	0.1151	0.0819	1.0946	2.9500e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		294.0282	294.0282	9.2700e-003		294.2600
Total	0.6463	17.5470	4.9733	0.0509	1.3413	0.0584	1.3997	0.3654	0.0558	0.4211		5,484.4241	5,484.4241	0.3622		5,493.4783

3.3 Phase 2 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6230	35.3340	23.0439	0.0799		1.2897	1.2897		1.1865	1.1865		7,731.4166	7,731.4166	2.5005		7,793.9291
Total	3.6230	35.3340	23.0439	0.0799		1.2897	1.2897		1.1865	1.1865		7,731.4166	7,731.4166	2.5005		7,793.9291

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3091	10.1745	2.2546	0.0280	0.6187	0.0325	0.6512	0.1696	0.0311	0.2007		3,028.3280	3,028.3280	0.2061		3,033.4812
Vendor	0.0142	0.4255	0.1115	1.0400e-003	0.0256	2.0000e-003	0.0276	7.3700e-003	1.9200e-003	9.2900e-003		110.8099	110.8099	6.7600e-003		110.9789
Worker	0.1151	0.0819	1.0946	2.9500e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		294.0282	294.0282	9.2700e-003		294.2600
Total	0.4384	10.6819	3.4607	0.0319	0.9237	0.0368	0.9606	0.2511	0.0351	0.2862		3,433.1661	3,433.1661	0.2222		3,438.7201

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2938	21.7307	43.3334	0.0799		0.1309	0.1309		0.1309	0.1309	0.0000	7,731.4166	7,731.4166	2.5005		7,793.9290
Total	1.2938	21.7307	43.3334	0.0799		0.1309	0.1309		0.1309	0.1309	0.0000	7,731.4166	7,731.4166	2.5005		7,793.9290

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3091	10.1745	2.2546	0.0280	0.6187	0.0325	0.6512	0.1696	0.0311	0.2007		3,028.3280	3,028.3280	0.2061		3,033.4812
Vendor	0.0142	0.4255	0.1115	1.0400e-003	0.0256	2.0000e-003	0.0276	7.3700e-003	1.9200e-003	9.2900e-003		110.8099	110.8099	6.7600e-003		110.9789
Worker	0.1151	0.0819	1.0946	2.9500e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		294.0282	294.0282	9.2700e-003		294.2600
Total	0.4384	10.6819	3.4607	0.0319	0.9237	0.0368	0.9606	0.2511	0.0351	0.2862		3,433.1661	3,433.1661	0.2222		3,438.7201

3.4 Phase 3 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1282	12.5666	12.7207	0.0193		0.6331	0.6331		0.5825	0.5825		1,868.5836	1,868.5836	0.6043		1,883.6921

Total	1.1282	12.5666	12.7207	0.0193		0.6331	0.6331		0.5825	0.5825		1,868.5836	1,868.5836	0.6043		1,883.6921
-------	--------	---------	---------	--------	--	--------	--------	--	--------	--------	--	------------	------------	--------	--	------------

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2795	9.2013	2.0389	0.0253	0.5595	0.0294	0.5889	0.1534	0.0281	0.1815		2,738.6618	2,738.6618	0.1864		2,743.3221
Vendor	7.1100e-003	0.2127	0.0557	5.2000e-004	0.0128	1.0000e-003	0.0138	3.6900e-003	9.6000e-004	4.6400e-003		55.4049	55.4049	3.3800e-003		55.4895
Worker	0.1151	0.0819	1.0946	2.9500e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		294.0282	294.0282	9.2700e-003		294.2600
Total	0.4017	9.4959	3.1893	0.0288	0.8517	0.0327	0.8845	0.2312	0.0312	0.2624		3,088.0950	3,088.0950	0.1991		3,093.0715

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3374	7.5055	13.3802	0.0193		0.0317	0.0317		0.0317	0.0317	0.0000	1,868.5836	1,868.5836	0.6043		1,883.6921
Total	0.3374	7.5055	13.3802	0.0193		0.0317	0.0317		0.0317	0.0317	0.0000	1,868.5836	1,868.5836	0.6043		1,883.6921

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2795	9.2013	2.0389	0.0253	0.5595	0.0294	0.5889	0.1534	0.0281	0.1815		2,738.6618	2,738.6618	0.1864		2,743.3221
Vendor	7.1100e-003	0.2127	0.0557	5.2000e-004	0.0128	1.0000e-003	0.0138	3.6900e-003	9.6000e-004	4.6400e-003		55.4049	55.4049	3.3800e-003		55.4895
Worker	0.1151	0.0819	1.0946	2.9500e-003	0.2794	2.3400e-003	0.2818	0.0741	2.1500e-003	0.0763		294.0282	294.0282	9.2700e-003		294.2600
Total	0.4017	9.4959	3.1893	0.0288	0.8517	0.0327	0.8845	0.2312	0.0312	0.2624		3,088.0950	3,088.0950	0.1991		3,093.0715

3.5 Phase 3 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.0452					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	7.2874	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
--	-----	-----	----	-----	---------------	--------------	------------	----------------	---------------	-------------	----------	----------	-----------	-----	-----	------

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.0452					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0545	1.0598	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0218		281.9928
Total	7.0997	1.0598	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0218		281.9928

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.6 Phase 4 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1282	12.5666	12.7207	0.0193		0.6331	0.6331		0.5825	0.5825		1,868.5836	1,868.5836	0.6043		1,883.6921
Total	1.1282	12.5666	12.7207	0.0193		0.6331	0.6331		0.5825	0.5825		1,868.5836	1,868.5836	0.6043		1,883.6921

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0213	0.6382	0.1672	1.5600e-003	0.0384	3.0000e-003	0.0414	0.0111	2.8700e-003	0.0139		166.2148	166.2148	0.0101		166.4684
Worker	0.0598	0.0426	0.5692	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		152.8947	152.8947	4.8200e-003		153.0152
Total	0.0812	0.6808	0.7364	3.1000e-003	0.1837	4.2100e-003	0.1879	0.0496	3.9900e-003	0.0536		319.1095	319.1095	0.0150		319.4836

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3374	7.5055	13.3802	0.0193		0.0317	0.0317		0.0317	0.0317	0.0000	1,868.5836	1,868.5836	0.6043		1,883.6921
Total	0.3374	7.5055	13.3802	0.0193		0.0317	0.0317		0.0317	0.0317	0.0000	1,868.5836	1,868.5836	0.6043		1,883.6921

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0213	0.6382	0.1672	1.5600e-003	0.0384	3.0000e-003	0.0414	0.0111	2.8700e-003	0.0139		166.2148	166.2148	0.0101		166.4684
Worker	0.0598	0.0426	0.5692	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		152.8947	152.8947	4.8200e-003		153.0152
Total	0.0812	0.6808	0.7364	3.1000e-003	0.1837	4.2100e-003	0.1879	0.0496	3.9900e-003	0.0536		319.1095	319.1095	0.0150		319.4836

4.0 Operational Detail - Mobile

Operational emissions modeled separately

Operational Assumptions and Calculations

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Operational Assumptions

CalEEMod Inputs (Non-Default information only)

Project Location
 County Los Angeles
 Air District South Coast
 Climate Zone
 Operational Year Existing
 Utility Provider Southern California Edison

	Base	2015 ¹	2020 ¹	2030
CO intensity	702.43634	531.7443094	411.6276952	351.21817
% renewable	0%	24.30%	41.40%	50.00%

¹ <http://www.cpuc.ca.gov/renewables/>

Land Use	SF/ DU/ Seat/Room /Spaces	KSF	Acers	CalEEMod Land Use Type
Pump Station	3800	3.80	2	General Light Industrial

Information for the land use types are taken from the project description.

Trip Generation:

Employees Not modeled as there is no increase in employees with the project.
Truck Trips 0 New Vehicle Trips

Energy Use

Building Use CalEEMod Defaults (Electric Only, No Heating, no Natural Gas)
 Equipment 5 350-hp pumps (4 active, one stand-by), 24 hr per day use

350 HP
 349.1712 KVA
 331.71264 KW
 4 Quantity in Operation
 1,061 kW
 25,476 KW/day
 9,298,569 kW/year
 2446.99177 kW/square foot

Water Use

No New Water Usage

Solid Waste Generation -

No New Solid Waste Generation

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Operational CalEEMod Summary

CalEEMod 2016.3.2

Title: OCSD GWRS Plant No.2 - Operational

Date: 1/23/2018

Unmitigated Emissions - CEQA Analysis

	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
lbs/day Winter Unmitigated						
Area	8.49E-02	0.00E+00	3.90E-04	0.00E+00	0.00E+00	0.00E+00
Energy - Building	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mobile	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total	8.49E-02	0.00E+00	3.90E-04	0.00E+00	0.00E+00	0.00E+00

Unmitigated LST Analysis

Emissions Source	Pollutant			
	NO _x	CO	PM ₁₀	PM _{2.5}
Daily (lbs/day)				
Project - Area	0	0	0	0
Project - Energy	0	0	0	0
Project - Mobile*	0	0	0	0
Pumps	0	0	0	0
Total	0	0	0	0
SCAQMD Thresholds	101	1,253	3	2
Significant	No	No	No	No

SRA 18 5 acres

The nearest sensitive receptors are the residences approximately 25 meters away.

*Mobile source emissions conservatively assumes that 1 percent of emissions occurs onsite.

Operational CalEEMod Output

OCSD GWRS Plant No.2 - Operational - Los Angeles-South Coast County, Winter

OCSD GWRS Plant No.2 - Operational

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.80	1000sqft	2.00	3,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	411.63	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment - See Assumptions

Grading -

Trips and VMT - See Assumptions

Vehicle Trips - See Assumptions

Energy Use - See Assumptions

Water And Wastewater - See Assumptions

Solid Waste - See Assumptions

Operational Off-Road Equipment -

Construction Off-road Equipment Mitigation - See Assumptions

Off-road Equipment - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	1.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblEnergyUse	NT24E	5.75	2,447.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24NG	13.65	0.00
tblLandUse	LotAcreage	0.09	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	411.63
tblSolidWaste	SolidWasteGenerationRate	4.71	0.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	2.00	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	878,750.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0849	0.0000	3.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000	0.0000	8.9000e-004

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0849	0.0000	3.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000	0.0000	8.9000e-004

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Construction Modeled Separately

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
--	----------------	-----	-----	----	-----	---------------	--------------	------------	----------------	---------------	-------------	----------	-----------	-----------	-----	-----	------

Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004
Unmitigated	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.6500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	0.0752					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004
Total	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.6500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0752					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004
Total	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

OCSD GWRS Plant No.2 - Operational - Los Angeles-South Coast County, Summer

OCSD GWRS Plant No.2 - Operational

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.80	1000sqft	2.00	3,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	411.63	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment - See Assumptions

Grading -

Trips and VMT - See Assumptions

Vehicle Trips - See Assumptions

Energy Use - See Assumptions

Water And Wastewater - See Assumptions

Solid Waste - See Assumptions

Operational Off-Road Equipment -

Construction Off-road Equipment Mitigation - See Assumptions

Off-road Equipment - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	1.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblEnergyUse	NT24E	5.75	2,447.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24NG	13.65	0.00
tblLandUse	LotAcreage	0.09	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	411.63
tblSolidWaste	SolidWasteGenerationRate	4.71	0.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	2.00	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	878,750.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Construction modeled separately

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0849	0.0000	3.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000	0.0000	8.9000e-004

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0849	0.0000	3.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000	0.0000	8.9000e-004

[illegible]

3.0 Construction Detail

Construction modeled separately

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
----------	-----	------	------	-----	------	------	-----	-----	------	------	-----	------	----

General Light Industry	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
------------------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas
Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004
Unmitigated	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.6500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0752					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004
Total	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.6500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0752					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004
Total	0.0849	0.0000	3.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.3000e-004	8.3000e-004	0.0000		8.9000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

APPENDIX B

Health Risk Modeling

- Construction Emissions Summary and CalEEMod Output
- Unmitigated Assumptions and Risk Summary
- Unmitigated Risk Calculations
- Mitigated Assumptions and Risk Summary
- Mitigated Risk Calculations
- AERMOD Output

Construction Emissions Summary and CalEEMod Output

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Health Risk PM10 Emissions

CalEEMod 2016.3.1

Title: OCSD GWRS Plant No.2 - 1 Hour Construction

Date: 1/23/2018

Unmitigated Construction

	Phase 1	Phase 2	Phase 3	Phase 4	
# days	18	13	19	30	
Onsite Emissions	2.8711	1.6620923	1.393532	0.48255	lbs/day
Offsite Emissions	1.105	0.6517	0.5893	0	lbs/day
Offsite Emissions Vendor:	0.0138	0.0276	0.0138	0.0415	

Mitigated Construction

	Phase 1	Phase 2	Phase 3	Phase 4	
# days	18	13	19	30	
Onsite Emissions	0.1773833	0.1712308	0.0879	0.01929	lbs/day
Offsite Emissions Haul:	1.105	0.6517	0.5893	0	lbs/day
Offsite Emissions Vendor:	0.0138	0.0276	0.0138	0.0415	lbs/day

Phase 1	#	Days	hrs/day	6
Bull dozer (Rubber Tired Dozer)	2	30		
Compactor (Roller)	1	10		
Excavator (Excavators)	2	20		
Dump Truck (Off-Highway Trucks)	6	18		
Water Trucks (Off-Highway Trucks)	1	45		
Phase 2				
Drill Rig (Bore/Drill Rig)	1	20		
Backhoe (Tractor/Loader/Backhoe)	1	20		
Concrete Truck (Off-Highway Trucks)	4	14		
Dump Truck (Off-Highway Trucks)	2	3		
Water Trucks (Off-Highway Trucks)	2	25		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Health Risk PM10 Emissions

Phase 3

Crane (Cranes)	1	10
Forklift (Forklifts)	4	30
Concrete Trucks (Off-highway Trucks)	4	19
Manual Lift (Ariel Lift)	5	15
Air Compressor	1	5

Phase 4

Crane (Cranes)	1	10
Forklift (Forklifts)	4	30
Manual Lift (Ariel Lift)	5	15

Winter (lbs/hr)

	ROG	NO _x	CO	SO _x	Default PM ₁₀	Tier 4 PM ₁₀
Backhoe					1.49E-02	9.80E-04
Bull dozer					0.0702	1.76E-03
Compactor					0.0149	1.34E-03
te Trucks/Dump Truck/Water Truck					0.0251	2.35E-03
Crane					0.0297	1.53E-03
Drill Rig					0.0246	4.41E-03
Excavator					0.0103	1.34E-03
Forklift					0.0163	4.20E-04
Manual Lift					2.13E-03	4.10E-04
Air Compressor					0.0185	6.60E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Health Risk PM₁₀ Emissions

		Default PM₁₀	Tier 4 PM₁₀
Phase 1	total	52.80	4.31
	onsite	51.68	3.19
	Offsite H	19.89	19.89
	Offsite V	0.25	0.25
Phase 2	total	22.29	2.91
	onsite	21.61	2.23
	Offsite H	8.47	8.47
	Offsite V	0.36	0.36
Phase 3	total	27.08	2.27
	onsite	26.48	1.67
	Offsite H	11.20	11.20
	Offsite V	0.26	0.26
Phase 4	total	14.52	0.62
	onsite	14.48	0.58
	Offsite H	0.00	0.00
	Offsite V	1.25	1.25

		Default PM₁₀	Tier 4 PM₁₀
Phase 1	Onsite	51.6798	3.1929
	Offsite H	1.105	1.105
	Offsite V	0.0138	0.0138
	Total	52.7986	4.3117
Phase 2	Onsite	21.6072	2.226
	Offsite H	0.6517	0.6517
	Offsite V	0.0276	0.0276
	Total	22.2865	2.9053

		Default PM₁₀	Tier 4 PM₁₀
Phase 3	Onsite	26.4771	1.6701
	Offsite H	0.5893	0.5893
	Offsite V	0.0138	0.0138
	Total	27.0802	2.2732
Phase 4	Onsite	14.4765	0.5787
	Offsite H	0	0
	Offsite V	0.0415	0.0415
	Total	14.518	0.6202

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Health Risk PM10 Emissions

	Default	Tier 4
	PM ₁₀	PM ₁₀
Bull dozer (Rubber Tired Dozer)	25.272	0.6336
Compactor (Roller)	0.894	0.0804
Excavator (Excavators)	2.472	0.3216
Dump Truck (Off-Highway Trucks)	16.2648	1.5228
Water Trucks (Off-Highway Trucks)	6.777	0.6345
Drill Rig (Bore/Drill Rig)	2.952	0.5292
Backhoe (Tractor/Loader/Backhoe)	1.788	0.1176
Concrete Truck (Off-Highway Trucks)	8.4336	0.7896
Dump Truck (Off-Highway Trucks)	0.9036	0.0846
Water Trucks (Off-Highway Trucks)	7.53	0.705
Crane (Cranes)	1.782	0.0918
Forklift (Forklifts)	11.736	0.3024
Concrete Trucks (Off-highway Trucks)	11.4456	1.0716
Manual Lift (Ariel Lift)	0.9585	0.1845
Air Compressor	0.555	0.0198
Crane (Cranes)	1.782	0.0918
Forklift (Forklifts)	11.736	0.3024
Manual Lift (Ariel Lift)	0.9585	0.1845

OCSD - GWRS Plant No. 2 - 1 Hour - Construction - Los Angeles-South Coast County, Winter

OCSD - GWRS Plant No. 2 - 1 Hour - Construction

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.80	1000sqft	2.00	3,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	411.63	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

[illegible]

[illegible]

tblConstructionPhase	PhaseEndDate	10/6/2020	1/1/2020
tblConstructionPhase	PhaseEndDate	10/20/2020	10/7/2020
tblConstructionPhase	PhaseEndDate	11/3/2020	10/21/2020
tblConstructionPhase	PhaseEndDate	11/17/2020	11/4/2020
tblConstructionPhase	PhaseEndDate	12/1/2020	11/18/2020
tblConstructionPhase	PhaseEndDate	12/15/2020	12/2/2020
tblConstructionPhase	PhaseEndDate	12/29/2020	12/16/2020
tblConstructionPhase	PhaseEndDate	1/12/2021	12/30/2020
tblConstructionPhase	PhaseEndDate	1/26/2021	1/13/2020
tblConstructionPhase	PhaseEndDate	2/9/2021	1/27/2020
tblConstructionPhase	PhaseStartDate	1/13/2021	1/13/2020
tblConstructionPhase	PhaseStartDate	1/27/2021	1/27/2020
tblLandUse	LotAcreage	0.09	2.00
tblOffRoadEquipment	HorsePower	97.00	150.00
tblOffRoadEquipment	HorsePower	247.00	250.00
tblOffRoadEquipment	HorsePower	80.00	200.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	231.00	300.00
tblOffRoadEquipment	HorsePower	221.00	500.00
tblOffRoadEquipment	HorsePower	158.00	200.00
tblOffRoadEquipment	HorsePower	89.00	120.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	1.00
tblOffRoadEquipment	UsageHours	6.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	411.63
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	2.00	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00

2.0 Emissions Summary

Summary not used

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Backhoe	Building Construction	1/1/2020	1/1/2020	5	1	
2	Bulldozer	Architectural Coating	10/7/2020	10/7/2020	5	1	
3	Compactor	Architectural Coating	10/21/2020	10/21/2020	5	1	

4	Conctete/Dump/Water Truck	Architectural Coating	11/4/2020	11/4/2020	5	1
5	Crane	Architectural Coating	11/18/2020	11/18/2020	5	1
6	Drill Rig	Architectural Coating	12/2/2020	12/2/2020	5	1
7	Excavator	Architectural Coating	12/16/2020	12/16/2020	5	1
8	Forklift	Architectural Coating	12/30/2020	12/30/2020	5	1
9	Manual Lift	Architectural Coating	1/13/2020	1/13/2020	5	1
10	Air Compressor	Architectural Coating	1/27/2020	1/27/2020	5	1

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Air Compressor	Air Compressors	1	1.00	78	0.48
Bulldozer	Air Compressors	0	6.00	78	0.48
Compactor	Air Compressors	0	6.00	78	0.48
Backhoe	Generator Sets	0	8.00	84	0.74
Backhoe	Cranes	0	8.00	231	0.29
Backhoe	Forklifts	0	7.00	89	0.20
Conctete/Dump/Water Truck	Air Compressors	0	6.00	78	0.48
Crane	Air Compressors	0	6.00	78	0.48
Drill Rig	Air Compressors	0	6.00	78	0.48
Excavator	Air Compressors	0	6.00	78	0.48
Forklift	Air Compressors	0	6.00	78	0.48
Backhoe	Tractors/Loaders/Backhoes	1	1.00	150	0.37
Manual Lift	Air Compressors	0	6.00	78	0.48
Bulldozer	Rubber Tired Dozers	1	1.00	250	0.40
Compactor	Rollers	1	1.00	200	0.38

Conctete/Dump/Water Truck	Off-Highway Trucks	1	1.00	350	0.38
Crane	Cranes	1	1.00	300	0.29
Drill Rig	Bore/Drill Rigs	1	1.00	500	0.50
Excavator	Excavators	1	1.00	200	0.38
Backhoe	Welders	0	8.00	46	0.45
Forklift	Forklifts	1	1.00	120	0.20
Manual Lift	Aerial Lifts	1	1.00	75	0.31

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Air Compressor	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Backhoe	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Bulldozer	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Compactor	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Conctete/Dump/Water Truck	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Crane	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Drill Rig	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavator	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Forklift	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Manual Lift	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Backhoe - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0300	0.2955	0.3799	5.9000e-004		0.0149	0.0149		0.0137	0.0137		57.2033	57.2033	0.0185		57.6658
Total	0.0300	0.2955	0.3799	5.9000e-004		0.0149	0.0149		0.0137	0.0137		57.2033	57.2033	0.0185		57.6658

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.3400e-003	0.2631	0.4527	5.9000e-004		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	57.2033	57.2033	0.0185		57.6658

Total	7.3400e-003	0.2631	0.4527	5.9000e-004		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	57.2033	57.2033	0.0185		57.6658
-------	-------------	--------	--------	-------------	--	-------------	-------------	--	-------------	-------------	--------	---------	---------	--------	--	---------

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.3 Bulldozer - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1366	1.4337	0.5227	1.0800e-003		0.0702	0.0702		0.0646	0.0646		104.6739	104.6739	0.0339		105.5202
Total	0.1366	1.4337	0.5227	1.0800e-003		0.0702	0.0702		0.0646	0.0646		104.6739	104.6739	0.0339		105.5202

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0176	0.2844	0.5732	1.0800e-003		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	104.6739	104.6739	0.0339		105.5202
Total	0.0176	0.2844	0.5732	1.0800e-003		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	104.6739	104.6739	0.0339		105.5202

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
--	-----	-----	----	-----	---------------	--------------	------------	----------------	---------------	-------------	----------	----------	-----------	-----	-----	------

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.4 Compactor - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0349	0.4609	0.2100	8.2000e-004		0.0149	0.0149		0.0138	0.0138		79.3133	79.3133	0.0257		79.9545
Total	0.0349	0.4609	0.2100	8.2000e-004		0.0149	0.0149		0.0138	0.0138		79.3133	79.3133	0.0257		79.9545

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0134	0.2161	0.4356	8.2000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	79.3133	79.3133	0.0257		79.9545
Total	0.0134	0.2161	0.4356	8.2000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	79.3133	79.3133	0.0257		79.9545

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.5 Conctete/Dump/Water Truck - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0722	0.6881	0.4147	1.4400e-003		0.0251	0.0251		0.0231	0.0231		139.1535	139.1535	0.0450		140.2786
Total	0.0722	0.6881	0.4147	1.4400e-003		0.0251	0.0251		0.0231	0.0231		139.1535	139.1535	0.0450		140.2786

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
--	-----	-----	----	-----	---------------	--------------	------------	----------------	---------------	-------------	----------	----------	-----------	-----	-----	------

Category	lb/day										lb/day				
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000		0.0000
Off-Road	0.0235	0.3783	0.7624	1.4400e-003		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	139.1535	139.1535	0.0450	140.2786
Total	0.0235	0.3783	0.7624	1.4400e-003		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	139.1535	139.1535	0.0450	140.2786

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.6 Crane - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0615	0.7408	0.5103	9.4000e-004		0.0297	0.0297		0.0273	0.0273		90.6376	90.6376	0.0293		91.3705

Total	0.0615	0.7408	0.5103	9.4000e-004		0.0297	0.0297		0.0273	0.0273		90.6376	90.6376	0.0293		91.3705
-------	--------	--------	--------	-------------	--	--------	--------	--	--------	--------	--	---------	---------	--------	--	---------

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0153	0.2474	0.4987	9.4000e-004		1.5300e-003	1.5300e-003		1.5300e-003	1.5300e-003	0.0000	90.6376	90.6376	0.0293		91.3705
Total	0.0153	0.2474	0.4987	9.4000e-004		1.5300e-003	1.5300e-003		1.5300e-003	1.5300e-003	0.0000	90.6376	90.6376	0.0293		91.3705

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.7 Drill Rig - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0686	0.7768	0.5581	2.6600e-003		0.0246	0.0246		0.0226	0.0226		257.2915	257.2915	0.0832		259.3719
Total	0.0686	0.7768	0.5581	2.6600e-003		0.0246	0.0246		0.0226	0.0226		257.2915	257.2915	0.0832		259.3719

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0441	0.7110	1.4330	2.6600e-003		4.4100e-003	4.4100e-003		4.4100e-003	4.4100e-003	0.0000	257.2915	257.2915	0.0832		259.3719
Total	0.0441	0.7110	1.4330	2.6600e-003		4.4100e-003	4.4100e-003		4.4100e-003	4.4100e-003	0.0000	257.2915	257.2915	0.0832		259.3719

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--	--------	--------	--------	--	--------

3.8 Excavator - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.3397	0.1873	8.2000e-004		0.0103	0.0103		9.4600e-003	9.4600e-003		79.0646	79.0646	0.0256		79.7039
Total	0.0297	0.3397	0.1873	8.2000e-004		0.0103	0.0103		9.4600e-003	9.4600e-003		79.0646	79.0646	0.0256		79.7039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0134	0.2161	0.4356	8.2000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	79.0646	79.0646	0.0256		79.7039
Total	0.0134	0.2161	0.4356	8.2000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	79.0646	79.0646	0.0256		79.7039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.9 Forklift - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0243	0.2187	0.1989	2.6000e-004		0.0163	0.0163		0.0150	0.0150		24.9490	24.9490	8.0700e-003		25.1507
Total	0.0243	0.2187	0.1989	2.6000e-004		0.0163	0.0163		0.0150	0.0150		24.9490	24.9490	8.0700e-003		25.1507

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	3.1700e-003	0.1138	0.1958	2.6000e-004		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	24.9490	24.9490	8.0700e-003		25.1507
Total	3.1700e-003	0.1138	0.1958	2.6000e-004		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	24.9490	24.9490	8.0700e-003		25.1507

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.10 Manual Lift - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	5.8900e-003	0.0958	0.1628	2.5000e-004		2.1300e-003	2.1300e-003		1.9600e-003	1.9600e-003		24.1994	24.1994	7.8300e-003		24.3951
Total	5.8900e-003	0.0958	0.1628	2.5000e-004		2.1300e-003	2.1300e-003		1.9600e-003	1.9600e-003		24.1994	24.1994	7.8300e-003		24.3951

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	5.6400e-003	0.1097	0.1897	2.5000e-004		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	24.1994	24.1994	7.8300e-003		24.3951
Total	5.6400e-003	0.1097	0.1897	2.5000e-004		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	24.1994	24.1994	7.8300e-003		24.3951

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

3.11 Air Compressor - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0404	0.2806	0.3052	5.0000e-004		0.0185	0.0185		0.0185	0.0185		46.9080	46.9080	3.6300e-003		46.9988
Total	0.0404	0.2806	0.3052	5.0000e-004		0.0185	0.0185		0.0185	0.0185		46.9080	46.9080	3.6300e-003		

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	9.0800e-003	0.1766	0.3054	5.0000e-004		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	46.9080	46.9080	3.6300e-003		46.9988
Total	9.0800e-003	0.1766	0.3054	5.0000e-004		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	46.9080	46.9080	3.6300e-003		46.9988

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.0 Operational Detail - Mobile

Operations modeled separately

Unmitigated Assumptions and Risk Summary

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
AERMOD Unmitigated Risk Assumptions

		Days per Age group			lbs/day	lbs/mile
		# Days	3rd	0-2		
Phase 1	Onsite	45	45	0	0.177383	
	Offsite H	18	18	0	1.105	0.05525
	Offsite V	45	45	0	0.0138	0.002
Phase 2	Onsite	24	24	0	0.171231	
	Offsite H	13	13	0	0.6517	0.032585
	Offsite V	24	24	0	0.0276	0.004
Phase 3	Onsite	30	19	11	0.0879	
	Offsite H	19	19	0	0.5893	0.029465
	Offsite V	30	19	11	0.0138	0.002
Phase 4	Onsite	30	0	30	0.01929	
	Offsite H	30	0	30	0	0
	Offsite V	30	0	30	0.0415	0.006014493
Total			88	700		

Distance

P2TR1 0.730518

P2TR2 0.178901

		lbs/day	hrs/day	gr/sec	3rd	0-2
Phase 1	Onsite	2.8711	8	0.04342539	1.954143	
	P2TR1	0.041822	8	0.00063256	0.011386	
	P2TR2	0.010242	8	0.00015491	0.006971	
Phase 2	Onsite	1.662	8	0.02513775	0.603306	
	P2TR1	0.026726	8	0.00040423	0.005255	
	P2TR2	0.006545	8	0.00009899	0.002376	
Phase 3	Onsite	1.3935	8	0.02107669	0.400457	0.23184359
	P2TR1	0.022986	8	0.00034766	0.006606	
	P2TR2	0.005629	8	0.00008514	0.001618	
Phase 4	Onsite	0.4825	8	0.00729781	0	0.2189343
	P2TR1	0.004394	8	0.00006645	0	0.0019935
	P2TR2	0.001076	8	0.00001627	0	0.0004881

Weighted average

Onsite	0.033613	0.010994583
P2TR1	0.000465	0.00006645
P2TR2	0.000125	1.19049E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
AERMOD Unmitigated Risk Assumptions

	3rd	0-2	2-16	>16	Units
DBR	361	1090	861	290	L/kg
A	1	1	1	1	no units
EF	0.958904	0.958904	0.958904	0.95890411	years
Constant 1	0.000001	0.000001	0.000001	0.000001	no units
CPF	1.1	1.1	1.1	1.1	mg/kg-day-1
ASF	10	10	3	1	no units
ED	0.25	0.112329	0	0	years
AT	70	70	70	70	years
FAH	0.85	0.85	0.72	0.73	day
Constant 2	1,000,000	1,000,000	1,000,000	1,000,000	no units

Dose = (Cair X DBR X A X EF X Constant 1)

Cancer Risk = Dose X CPF x ASF x (ED/AT) X FAH

Risk per Million = Cancer Risk X Constant 2

OCSD - Plant No. 2 GWRS Conveyance Facilities Project **Unmitigated Risk Summary**

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2	Max	Receptor #
1	410571	3722482	0.565519	0.518053	0.045726	0.00174	47.27263	380
2	410631	3722482	0.620233	0.557752	0.060599	0.001882		
3	410511	3722542	0.537311	0.503389	0.032226	0.001695		
4	410571	3722542	0.586193	0.544294	0.040055	0.001843		
5	410631	3722542	0.642649	0.589643	0.050999	0.002007		
6	410691	3722542	0.708948	0.639175	0.067584	0.002188		
7	410511	3722602	0.558058	0.527034	0.02924	0.001785		
8	410571	3722602	0.608879	0.571462	0.035468	0.001949		
9	410631	3722602	0.667455	0.621382	0.043939	0.002135		
10	410691	3722602	0.736155	0.677831	0.055979	0.002345		
11	410751	3722602	0.818666	0.741932	0.074149	0.002585		
12	410571	3722662	0.630725	0.596997	0.031677	0.002052		
13	410631	3722662	0.693006	0.65238	0.038364	0.002261		
14	410691	3722662	0.765807	0.715791	0.047512	0.002504		
15	410751	3722662	0.852092	0.788688	0.06062	0.002784		
16	410811	3722662	0.954244	0.870762	0.08038	0.003102		
17	410631	3722722	0.720378	0.684086	0.033901	0.00239		
18	410691	3722722	0.798982	0.755255	0.041059	0.002668		
19	410751	3722722	0.890899	0.837054	0.050854	0.002991		
20	410811	3722722	0.999785	0.931537	0.064879	0.00337		
21	410871	3722722	1.134923	1.04415	0.086951	0.003822		
22	410691	3722782	0.831773	0.793064	0.035883	0.002826		
23	410751	3722782	0.931375	0.884741	0.043436	0.003198		
24	410811	3722782	1.048597	0.991178	0.05378	0.003639		
25	410871	3722782	1.193757	1.120637	0.068938	0.004182		
26	410931	3722782	1.372721	1.275114	0.092767	0.00484		
27	410751	3722842	0.97086	0.929888	0.037578	0.003395		
28	410811	3722842	1.098381	1.04903	0.045449	0.003903		
29	410871	3722842	1.257973	1.196927	0.056499	0.004546		
30	410931	3722842	1.456507	1.378353	0.072795	0.005359		
31	410991	3722842	1.710483	1.604662	0.099423	0.006398		
32	410811	3722902	1.147136	1.104055	0.038929	0.004152		
33	410871	3722902	1.319715	1.267704	0.047124	0.004888		
34	410931	3722902	1.539163	1.474614	0.058694	0.005855		
35	410991	3722902	1.818073	1.73513	0.07581	0.007133		
36	411051	3722902	2.202078	2.087402	0.105742	0.008934		
37	410871	3722962	1.376282	1.3313	0.03979	0.005192		
38	410931	3722962	1.614818	1.56034	0.048181	0.006297		
39	410991	3722962	1.926184	1.858322	0.060035	0.007827		
40	411051	3722962	2.354351	2.265686	0.078589	0.010076		
41	410931	3723022	1.686913	1.640008	0.040215	0.00669		
42	410991	3723022	2.02673	1.969701	0.048596	0.008433		
43	411051	3723022	2.491347	2.419743	0.060557	0.011047		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk Summary

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
44	411111	3723022	3.157702	3.063109	0.079288	0.015305
45	410991	3723082	2.094513	2.046093	0.039598	0.008822
46	411051	3723082	2.586273	2.527139	0.047471	0.011664
47	411111	3723082	3.294835	3.219863	0.058603	0.016368
48	411171	3723082	4.36353	4.262942	0.075474	0.025114
49	411111	3723142	3.348932	3.288261	0.044309	0.016362
50	411171	3723142	4.387829	4.311139	0.052587	0.024103
51	411111	3723202	3.311449	3.261773	0.034328	0.015348
52	411171	3723202	4.28274	4.222726	0.038627	0.021386
53	411231	3723202	5.730916	5.65666	0.043107	0.03115
54	411111	3723262	3.198459	3.15735	0.027349	0.01376
55	411171	3723262	4.067745	4.019754	0.029845	0.018147
56	411231	3723262	5.36914	5.312185	0.032277	0.024679
57	411291	3723262	7.365123	7.29623	0.03442	0.034473
58	411111	3723322	3.011743	2.977439	0.022376	0.011929
59	411171	3723322	3.778109	3.739089	0.023984	0.015036
60	411231	3723322	4.881907	4.83718	0.025517	0.01921
61	411291	3723322	6.556243	6.504552	0.026859	0.024833
62	411111	3723382	2.801466	2.772509	0.018735	0.010222
63	411171	3723382	3.433659	3.401486	0.019848	0.012325
64	411231	3723382	4.296331	4.260524	0.020912	0.014895
65	411291	3723382	5.523351	5.483502	0.021848	0.018002
66	411351	3723382	7.344717	7.300594	0.022463	0.02166
67	411111	3723442	2.542081	2.517462	0.015974	0.008645
68	411171	3723442	3.041522	3.014664	0.016794	0.010065
69	411231	3723442	3.686658	3.65739	0.017577	0.011691
70	411291	3723442	4.515134	4.483371	0.018273	0.01349
71	411351	3723442	5.602109	5.567837	0.018773	0.015499
72	411111	3723502	2.27549	2.254344	0.013827	0.007319
73	411171	3723502	2.653665	2.630922	0.014456	0.008287
74	411231	3723502	3.119876	3.095459	0.015058	0.009358
75	411291	3723502	3.658879	3.632803	0.015603	0.010473
76	411351	3723502	4.301417	4.273707	0.016017	0.011693
77	411111	3723562	2.015557	1.997211	0.012119	0.006227
78	411171	3723562	2.294797	2.275279	0.012616	0.006902
79	411231	3723562	2.623881	2.603155	0.013095	0.007631
80	411291	3723562	2.974576	2.952678	0.013535	0.008363
81	411351	3723562	3.368067	3.345025	0.013885	0.009157
82	411111	3723622	1.778111	1.762033	0.010735	0.005343
83	411171	3723622	1.983721	1.966756	0.011138	0.005827
84	411231	3723622	2.206887	2.189037	0.011527	0.006323
85	411291	3723622	2.44633	2.427608	0.011887	0.006836
86	411351	3723622	2.697897	2.678335	0.012185	0.007377

OCSD - Plant No. 2 GWRS Conveyance Facilities Project **Unmitigated Risk Summary**

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
87	411111	3723682	1.56534	1.551129	0.009591	0.00462
88	411171	3723682	1.718348	1.703447	0.009924	0.004977
89	411231	3723682	1.878714	1.86313	0.010247	0.005337
90	411291	3723682	2.055959	2.039681	0.010553	0.005725
91	411351	3723682	2.231544	2.214611	0.010813	0.00612
92	411111	3723742	1.383179	1.370511	0.008635	0.004033
93	411171	3723742	1.498433	1.485216	0.008915	0.004302
94	411231	3723742	1.618285	1.604521	0.009189	0.004574
95	411291	3723742	1.743575	1.729268	0.009449	0.004859
96	411351	3723742	1.870955	1.856123	0.009676	0.005156
97	411111	3723802	1.22657	1.215198	0.007825	0.003547
98	411171	3723802	1.316341	1.30452	0.008064	0.003757
99	411231	3723802	1.407978	1.395709	0.008299	0.003969
100	411291	3723802	1.499639	1.486933	0.008522	0.004184
101	411351	3723802	1.595652	1.582515	0.008722	0.004415
102	410709.5	3722302	0.722606	0.505667	0.215273	0.001666
103	410679.5	3722332	0.701942	0.50731	0.192953	0.001678
104	410709.5	3722332	0.84361	0.523965	0.317912	0.001733
105	410649.5	3722362	0.619595	0.506301	0.111614	0.001681
106	410679.5	3722362	0.675616	0.524128	0.149747	0.001741
107	410709.5	3722362	0.759571	0.541305	0.216468	0.001799
108	410739.5	3722362	0.832211	0.558778	0.271575	0.001858
109	410649.5	3722392	0.620377	0.522894	0.09574	0.001743
110	410679.5	3722392	0.664762	0.540469	0.12249	0.001804
111	410709.5	3722392	0.725299	0.558958	0.164474	0.001867
112	410739.5	3722392	0.821069	0.57862	0.240516	0.001933
113	410769.5	3722392	0.817444	0.597552	0.217893	0.001998
114	410619.5	3722422	0.591221	0.520229	0.069253	0.001739
115	410649.5	3722422	0.623875	0.538376	0.083696	0.001803
116	410679.5	3722422	0.663078	0.557881	0.103327	0.00187
117	410709.5	3722422	0.71207	0.577745	0.132387	0.001939
118	410739.5	3722422	0.779604	0.598309	0.179284	0.00201
119	410769.5	3722422	0.890209	0.620136	0.267988	0.002085
120	410799.5	3722422	0.893066	0.641369	0.24954	0.002158
121	410589.5	3722452	0.571622	0.516196	0.053697	0.001729
122	410619.5	3722452	0.599326	0.534837	0.062693	0.001796
123	410649.5	3722452	0.630781	0.554745	0.07417	0.001865
124	410679.5	3722452	0.666811	0.575473	0.0894	0.001938
125	410709.5	3722452	0.709608	0.596722	0.110873	0.002013
126	410739.5	3722452	0.763612	0.618689	0.142832	0.00209
127	410769.5	3722452	0.839191	0.642485	0.194534	0.002172
128	410799.5	3722452	0.96683	0.665294	0.299285	0.002252
129	410649.5	3722482	0.639638	0.57103	0.066679	0.001929

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk Summary

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
130	410679.5	3722482	0.67412	0.593238	0.078874	0.002008
131	410709.5	3722482	0.71351	0.616013	0.095407	0.002089
132	410739.5	3722482	0.760616	0.639899	0.118542	0.002174
133	410769.5	3722482	0.820163	0.664531	0.153371	0.002261
134	410799.5	3722482	0.90593	0.690784	0.212793	0.002353
135	410829.5	3722482	0.99663	0.71817	0.276012	0.002448
136	410679.5	3722512	0.683986	0.611425	0.070482	0.00208
137	410709.5	3722512	0.721494	0.635653	0.083673	0.002168
138	410739.5	3722512	0.765054	0.661541	0.101252	0.002261
139	410769.5	3722512	0.815234	0.687407	0.125473	0.002354
140	410799.5	3722512	0.88376	0.716751	0.164551	0.002458
141	410829.5	3722512	0.982052	0.747183	0.232305	0.002565
142	410859.5	3722512	1.065961	0.777564	0.285726	0.002671
143	410709.5	3722542	0.732457	0.655797	0.074411	0.002249
144	410739.5	3722542	0.774183	0.683542	0.088291	0.00235
145	410769.5	3722542	0.820381	0.711444	0.106485	0.002452
146	410799.5	3722542	0.880045	0.743407	0.13407	0.002567
147	410829.5	3722542	0.955402	0.776173	0.176545	0.002684
148	410859.5	3722542	1.067917	0.810027	0.255085	0.002805
149	410739.5	3722572	0.786123	0.705515	0.078168	0.002441
150	410769.5	3722572	0.831241	0.73621	0.092476	0.002554
151	410799.5	3722572	0.886351	0.770704	0.112967	0.00268
152	410829.5	3722572	0.950918	0.805876	0.142233	0.002809
153	410859.5	3722572	1.033577	0.842423	0.188213	0.002941
154	410889.5	3722572	1.167771	0.882924	0.281761	0.003086
155	410769.5	3722602	0.846206	0.761813	0.081733	0.002661
156	410799.5	3722602	0.898304	0.798152	0.097357	0.002796
157	410829.5	3722602	0.957937	0.836303	0.118696	0.002938
158	410859.5	3722602	1.029871	0.87668	0.150103	0.003088
159	410889.5	3722602	1.128336	0.920918	0.204169	0.003249
160	410919.5	3722602	1.282785	0.966384	0.312988	0.003414
161	410799.5	3722632	0.914906	0.826536	0.085453	0.002917
162	410829.5	3722632	0.972061	0.867352	0.101637	0.003072
163	410859.5	3722632	1.039951	0.911965	0.124745	0.00324
164	410889.5	3722632	1.122277	0.959344	0.159515	0.003418
165	410919.5	3722632	1.232572	1.009824	0.219142	0.003605
166	410949.5	3722632	1.346946	1.063996	0.279146	0.003804
167	410829.5	3722662	0.990659	0.898799	0.08865	0.00321
168	410859.5	3722662	1.058909	0.948764	0.106743	0.003402
169	410889.5	3722662	1.136129	1.000759	0.131769	0.003601
170	410919.5	3722662	1.230614	1.056334	0.170468	0.003813
171	410949.5	3722662	1.359702	1.115986	0.239678	0.004037
172	410979.5	3722662	1.41387	1.178511	0.231089	0.00427

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk Summary

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
173	410859.5	3722692	1.081413	0.985086	0.092762	0.003565
174	410889.5	3722692	1.156621	1.041362	0.111473	0.003786
175	410919.5	3722692	1.244766	1.102276	0.138465	0.004025
176	410949.5	3722692	1.35406	1.168324	0.181455	0.004281
177	410979.5	3722692	1.502032	1.238102	0.259381	0.004549
178	410889.5	3722722	1.182772	1.082525	0.096269	0.003978
179	410919.5	3722722	1.268338	1.148208	0.115888	0.004243
180	410949.5	3722722	1.372537	1.222221	0.145778	0.004538
181	410979.5	3722722	1.495527	1.299005	0.191678	0.004844
182	411009.5	3722722	1.679586	1.38688	0.28752	0.005187
183	410919.5	3722752	1.302235	1.197657	0.100101	0.004478
184	410949.5	3722752	1.400106	1.274632	0.120676	0.004798
185	410979.5	3722752	1.519809	1.36222	0.152431	0.005158
186	411009.5	3722752	1.671926	1.459664	0.206707	0.005554
187	411039.5	3722752	1.89246	1.565995	0.320486	0.00598
188	410949.5	3722782	1.440483	1.331765	0.103636	0.005081
189	410979.5	3722782	1.561979	1.429445	0.127036	0.005497
190	411009.5	3722782	1.700094	1.53319	0.160965	0.00594
191	411039.5	3722782	1.88293	1.653605	0.222879	0.006446
192	411069.5	3722782	2.070277	1.784842	0.278448	0.006987
193	410979.5	3722812	1.607857	1.494259	0.107761	0.005838
194	411009.5	3722812	1.751903	1.612762	0.132777	0.006364
195	411039.5	3722812	1.917516	1.740622	0.169961	0.006932
196	411069.5	3722812	2.141922	1.892754	0.241571	0.007596
197	411099.5	3722812	2.294474	2.059157	0.227007	0.008309
198	411009.5	3722842	1.807615	1.689097	0.111729	0.006788
199	411039.5	3722842	1.981069	1.83502	0.13858	0.007469
200	411069.5	3722842	2.187247	1.998579	0.180435	0.008233
201	411099.5	3722842	2.467222	2.194231	0.26386	0.009131
202	411039.5	3722872	2.049781	1.926109	0.115661	0.008011
203	411069.5	3722872	2.258947	2.106222	0.143817	0.008908
204	411099.5	3722872	2.531986	2.328755	0.193223	0.010007
205	411129.5	3722872	2.880047	2.579213	0.289592	0.011243
206	411069.5	3722902	2.342593	2.214022	0.118965	0.009607
207	411099.5	3722902	2.619241	2.457221	0.151113	0.010907
208	411129.5	3722902	2.956659	2.739692	0.204528	0.012439
209	411159.5	3722902	3.419026	3.084016	0.320711	0.014299
210	411069.5	3722932	2.427375	2.316672	0.10041	0.010293
211	411099.5	3722932	2.724322	2.589052	0.123423	0.011847
212	411129.5	3722932	3.079263	2.907352	0.158173	0.013737
213	411159.5	3722932	3.52866	3.292889	0.219672	0.016098
214	411189.5	3722932	4.056164	3.766262	0.27086	0.019043
215	411069.5	3722962	2.513865	2.416691	0.08621	0.010964

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk Summary

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
216	411099.5	3722962	2.819887	2.704475	0.102694	0.012718
217	411129.5	3722962	3.193177	3.051766	0.126454	0.014957
218	411159.5	3722962	3.661438	3.479476	0.164076	0.017886
219	411189.5	3722962	4.274951	4.019434	0.233696	0.021821
220	411099.5	3722992	2.923099	2.822187	0.087332	0.01358
221	411129.5	3722992	3.31943	3.198783	0.104474	0.016174
222	411159.5	3722992	3.81452	3.665132	0.129705	0.019683
223	411189.5	3722992	4.452874	4.257332	0.170897	0.024645
224	411219.5	3722992	5.323383	5.039839	0.251438	0.032107
225	411129.5	3723022	3.424502	3.319944	0.087361	0.017197
226	411159.5	3723022	3.943285	3.817287	0.10479	0.021208
227	411189.5	3723022	4.605519	4.447655	0.130799	0.027065
228	411219.5	3723022	5.481961	5.271308	0.174318	0.036336
229	411249.5	3723022	6.71401	6.395927	0.26501	0.053073
230	411159.5	3723052	4.049413	3.940973	0.086085	0.022356
231	411189.5	3723052	4.732432	4.600561	0.103053	0.028818
232	411219.5	3723052	5.602539	5.435439	0.128083	0.039017
233	411249.5	3723052	6.817195	6.58717	0.171852	0.058174
234	411279.5	3723052	8.541524	8.17254	0.265896	0.103089
235	411189.5	3723082	4.801801	4.689866	0.08253	0.029405
236	411219.5	3723082	5.649708	5.513716	0.096819	0.039174
237	411249.5	3723082	6.807026	6.633382	0.117638	0.056006
238	411279.5	3723082	8.398696	8.163161	0.148514	0.087022
239	411309.5	3723082	10.54048	10.21639	0.181004	0.143087
240	411219.5	3723112	5.65158	5.538633	0.075458	0.037488
241	411249.5	3723112	6.783155	6.646104	0.085912	0.05114
242	411279.5	3723112	8.169928	8.002221	0.096672	0.071035
243	411309.5	3723112	10.15647	9.944385	0.106438	0.105651
244	411219.5	3723142	5.599104	5.503837	0.060496	0.034771
245	411249.5	3723142	6.677691	6.566072	0.066112	0.045506
246	411279.5	3723142	8.015552	7.883488	0.071506	0.060558
247	411309.5	3723142	9.725845	9.567458	0.07554	0.082847
248	411339.5	3723142	12.2002	12.0021	0.075795	0.122303
249	411249.5	3723172	6.524682	6.431195	0.053272	0.040215
250	411279.5	3723172	7.796755	7.688644	0.056381	0.05173
251	411309.5	3723172	9.390633	9.264136	0.058735	0.067763
252	411339.5	3723172	11.63605	11.48311	0.059357	0.093578
253	411369.5	3723172	14.82948	14.63453	0.057061	0.137892
254	411249.5	3723202	6.339583	6.259771	0.044388	0.035423
255	411279.5	3723202	7.504622	7.414211	0.046408	0.044004
256	411309.5	3723202	9.102134	8.997657	0.047994	0.056483
257	411339.5	3723202	11.13452	11.01236	0.048565	0.073599
258	411369.5	3723202	14.18204	14.03243	0.047655	0.101951

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk Summary

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
259	411399.5	3723202	18.55091	18.35692	0.04517	0.148824
260	411279.5	3723232	7.227341	7.150301	0.039328	0.037711
261	411309.5	3723232	8.718441	8.631181	0.040457	0.046802
262	411339.5	3723232	10.71926	10.61904	0.041002	0.059225
263	411369.5	3723232	13.42038	13.30369	0.04062	0.076069
264	411399.5	3723232	17.94683	17.80254	0.039286	0.105008
265	411309.5	3723262	8.291753	8.218028	0.034882	0.038843
266	411339.5	3723262	10.1187	10.03611	0.035368	0.047221
267	411369.5	3723262	12.60449	12.51151	0.03524	0.057733
268	411399.5	3723262	16.73443	16.62644	0.034524	0.073465
269	411429.5	3723262	23.69966	23.5721	0.033138	0.094416
270	411339.5	3723292	9.487047	9.417962	0.031003	0.038083
271	411369.5	3723292	11.73756	11.66168	0.03106	0.044822
272	411399.5	3723292	15.15541	15.07173	0.030629	0.053051
273	411429.5	3723292	21.2005	21.10715	0.029764	0.063587
274	411339.5	3723322	8.702408	8.64405	0.027536	0.030822
275	411369.5	3723322	10.61506	10.55224	0.027656	0.03516
276	411399.5	3723322	13.3968	13.32926	0.027442	0.040098
277	411429.5	3723322	17.5449	17.47281	0.026874	0.045219
278	411459.5	3723322	24.94491	24.86794	0.026	0.050966
279	411369.5	3723352	9.40816	9.355112	0.024854	0.028194
280	411399.5	3723352	11.47015	11.41409	0.024764	0.031294
281	411429.5	3723352	14.13273	14.07406	0.024402	0.034264
282	411459.5	3723352	18.40403	18.34245	0.023797	0.037784
283	411369.5	3723382	8.079621	8.034229	0.022524	0.022867
284	411399.5	3723382	9.515112	9.467658	0.022504	0.024949
285	411429.5	3723382	11.27415	11.22481	0.022279	0.027064
286	411459.5	3723382	13.47424	13.42319	0.021857	0.029193
287	411489.5	3723382	16.23511	16.18283	0.021253	0.031029
288	411369.5	3723412	7.005302	6.965633	0.020542	0.019127
289	411399.5	3723412	8.002473	7.961293	0.02057	0.02061
290	411429.5	3723412	9.140013	9.097446	0.020442	0.022125
291	411459.5	3723412	10.43531	10.39153	0.020149	0.023624
292	411489.5	3723412	11.9226	11.87798	0.019703	0.024918
293	411369.5	3723442	5.979004	5.944034	0.018848	0.016122
294	411399.5	3723442	6.660351	6.624238	0.018903	0.01721
295	411429.5	3723442	7.380041	7.342918	0.018829	0.018294
296	411459.5	3723442	8.175528	8.137514	0.018629	0.019385
297	411489.5	3723442	9.113638	9.074912	0.018311	0.020415
298	411369.5	3723472	5.191194	5.159923	0.017378	0.013893
299	411399.5	3723472	5.67141	5.639242	0.017452	0.014716
300	411429.5	3723472	6.14068	6.107756	0.01742	0.015504
301	411459.5	3723472	6.676685	6.643064	0.017286	0.016335

OCSD - Plant No. 2 GWRS Conveyance Facilities Project **Unmitigated Risk Summary**

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
302	411489.5	3723472	7.337406	7.303169	0.01706	0.017178
303	411519.5	3723472	7.99894	7.964474	0.01672	0.017746
304	411369.5	3723502	4.504125	4.475967	0.016094	0.012065
305	411399.5	3723502	4.86345	4.834549	0.016178	0.012722
306	411429.5	3723502	5.203824	5.174301	0.016177	0.013346
307	411459.5	3723502	5.593633	5.563529	0.016096	0.014008
308	411489.5	3723502	6.053863	6.023264	0.015932	0.014667
309	411519.5	3723502	6.505899	6.475084	0.015673	0.015141
310	411369.5	3723532	3.948238	3.922674	0.014962	0.010602
311	411399.5	3723532	4.220698	4.194516	0.015052	0.01113
312	411429.5	3723532	4.481152	4.454437	0.015076	0.011639
313	411459.5	3723532	4.785847	4.758623	0.015034	0.01219
314	411489.5	3723532	5.128916	5.101281	0.014912	0.012723
315	411519.5	3723532	5.469621	5.441767	0.014716	0.013139
316	411369.5	3723562	3.497349	3.473979	0.013957	0.009414
317	411399.5	3723562	3.701857	3.677972	0.014051	0.009834
318	411429.5	3723562	3.890331	3.866017	0.014084	0.010229
319	411459.5	3723562	4.11478	4.090048	0.014066	0.010665
320	411489.5	3723562	4.376243	4.351142	0.013992	0.011109
321	411519.5	3723562	4.620037	4.594744	0.013844	0.011449
322	411549.5	3723562	4.885432	4.860079	0.013637	0.011715
323	411369.5	3723592	3.107029	3.085564	0.013061	0.008404
324	411399.5	3723592	3.275504	3.253588	0.013156	0.00876
325	411429.5	3723592	3.425549	3.403258	0.013201	0.00909
326	411459.5	3723592	3.59964	3.576993	0.0132	0.009446
327	411489.5	3723592	3.807599	3.784622	0.013155	0.009821
328	411519.5	3723592	4.003168	3.979999	0.013047	0.010122
329	411549.5	3723592	4.204408	4.181165	0.012886	0.010358
330	411369.5	3723622	2.774629	2.754833	0.012251	0.007545
331	411399.5	3723622	2.905593	2.885413	0.012344	0.007835
332	411429.5	3723622	3.041108	3.020571	0.012402	0.008135
333	411459.5	3723622	3.184428	3.163571	0.012418	0.008439
334	411489.5	3723622	3.33504	3.31392	0.012388	0.008732
335	411519.5	3723622	3.494048	3.472739	0.012312	0.008997
336	411549.5	3723622	3.67021	3.648785	0.012192	0.009233
337	411369.5	3723652	2.51677	2.498384	0.011532	0.006854
338	411399.5	3723652	2.624864	2.606139	0.011624	0.007101
339	411429.5	3723652	2.733501	2.714466	0.011685	0.00735
340	411459.5	3723652	2.846586	2.827275	0.01171	0.007601
341	411489.5	3723652	2.981591	2.962024	0.011699	0.007868
342	411519.5	3723652	3.112742	3.092997	0.011646	0.0081
343	411549.5	3723652	3.245228	3.225383	0.01155	0.008295
344	411369.5	3723682	2.285542	2.268424	0.010874	0.006243

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk Summary

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
345	411399.5	3723682	2.376186	2.358766	0.010964	0.006455
346	411429.5	3723682	2.466526	2.448829	0.011029	0.006668
347	411459.5	3723682	2.566264	2.548309	0.011063	0.006891
348	411489.5	3723682	2.667373	2.649204	0.011064	0.007105
349	411519.5	3723682	2.771308	2.752976	0.011029	0.007302
350	411549.5	3723682	2.88814	2.869695	0.010958	0.007487
351	411369.5	3723712	2.083723	2.067735	0.010277	0.005711
352	411399.5	3723712	2.161867	2.145607	0.010364	0.005896
353	411429.5	3723712	2.235773	2.219267	0.01043	0.006076
354	411459.5	3723712	2.314997	2.298267	0.010469	0.006262
355	411489.5	3723712	2.41004	2.393097	0.01048	0.006463
356	411519.5	3723712	2.498121	2.481022	0.010461	0.006637
357	411549.5	3723712	2.590612	2.573407	0.010409	0.006796
358	411369.5	3723742	1.905984	1.891009	0.009731	0.005243
359	411399.5	3723742	1.970905	1.955688	0.009816	0.005401
360	411429.5	3723742	2.040265	2.024815	0.009882	0.005568
361	411459.5	3723742	2.110679	2.09502	0.009926	0.005734
362	411489.5	3723742	2.187006	2.171159	0.009944	0.005902
363	411519.5	3723742	2.260491	2.244499	0.009937	0.006055
364	411549.5	3723742	2.339205	2.323106	0.009901	0.006198
365	411369.5	3723772	1.758912	1.744834	0.009232	0.004845
366	411399.5	3723772	1.813925	1.799629	0.009314	0.004982
367	411429.5	3723772	1.872345	1.85784	0.009379	0.005126
368	411459.5	3723772	1.934283	1.919585	0.009425	0.005273
369	411489.5	3723772	1.996056	1.98119	0.00945	0.005416
370	411519.5	3723772	2.063901	2.048892	0.00945	0.005558
371	411549.5	3723772	2.126666	2.111557	0.009429	0.005681
372	411369.5	3723802	1.623849	1.610591	0.008773	0.004485
373	411399.5	3723802	1.672584	1.659125	0.008852	0.004607
374	411429.5	3723802	1.722307	1.708658	0.008916	0.004732
375	411459.5	3723802	1.77563	1.761803	0.008964	0.004862
376	411489.5	3723802	1.829144	1.815162	0.008994	0.004988
377	411519.5	3723802	1.888478	1.87436	0.009002	0.005116
378	411549.5	3723802	1.943928	1.92971	0.00899	0.005228
379	411549.5	3723802	35.36253	35.29776	0.022251	0.042519
380	411549.5	3723802	47.27263	47.20777	0.021724	0.043136
381	411549.5	3723802	26.02552	25.9677	0.021267	0.036552
382	411549.5	3723802	27.80668	27.7508	0.020589	0.035292
383	411549.5	3723802	19.29689	19.24774	0.019508	0.029638
384	411549.5	3723802	14.17142	14.1279	0.018491	0.025034
385	411549.5	3723802	11.53273	11.49342	0.017514	0.021804
386	411549.5	3723802	9.30004	9.264971	0.016398	0.018671
387	411549.5	3723802	7.759985	7.728225	0.015449	0.016311

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk Summary

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
388	411549.5	3723802	6.638224	6.609103	0.014642	0.014478
389	411549.5	3723802	5.751337	5.724401	0.013956	0.01298
390	411549.5	3723802	5.141861	5.11664	0.013363	0.011859

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2	Max	Receptor #
1	0.009026	8.24E-03	7.57E-04	2.92E-05	0.117187	57
2	0.009906	8.87E-03	1.00E-03	3.16E-05		
3	0.008568	8.01E-03	5.34E-04	2.84E-05		
4	0.009351	8.66E-03	6.63E-04	3.09E-05		
5	0.010256	9.38E-03	8.45E-04	3.37E-05		
6	0.011321	1.02E-02	1.12E-03	3.67E-05		
7	0.008896	8.38E-03	4.84E-04	3.00E-05		
8	0.009709	9.09E-03	5.87E-04	3.27E-05		
9	0.010646	9.88E-03	7.28E-04	3.58E-05		
10	0.011747	1.08E-02	9.27E-04	3.94E-05		
11	0.013071	1.18E-02	1.23E-03	4.34E-05		
12	0.010054	9.49E-03	5.25E-04	3.44E-05		
13	0.011049	1.04E-02	6.35E-04	3.79E-05		
14	0.012213	1.14E-02	7.87E-04	4.20E-05		
15	0.013594	1.25E-02	1.00E-03	4.67E-05		
16	0.015232	1.38E-02	1.33E-03	5.20E-05		
17	0.011481	1.09E-02	5.62E-04	4.01E-05		
18	0.012736	1.20E-02	6.80E-04	4.48E-05		
19	0.014205	1.33E-02	8.42E-04	5.02E-05		
20	0.015946	1.48E-02	1.07E-03	5.65E-05		
21	0.01811	1.66E-02	1.44E-03	6.41E-05		
22	0.013255	1.26E-02	5.94E-04	4.74E-05		
23	0.014844	1.41E-02	7.19E-04	5.37E-05		
24	0.016715	1.58E-02	8.91E-04	6.11E-05		
25	0.019034	1.78E-02	1.14E-03	7.02E-05		
26	0.021897	2.03E-02	1.54E-03	8.12E-05		
27	0.015468	1.48E-02	6.22E-04	5.70E-05		
28	0.017502	1.67E-02	7.53E-04	6.55E-05		
29	0.020048	1.90E-02	9.36E-04	7.63E-05		
30	0.023217	2.19E-02	1.21E-03	8.99E-05		
31	0.027274	2.55E-02	1.65E-03	1.07E-04		
32	0.018273	1.76E-02	6.45E-04	6.97E-05		
33	0.021024	2.02E-02	7.81E-04	8.20E-05		
34	0.024522	2.35E-02	9.72E-04	9.82E-05		
35	0.028971	2.76E-02	1.26E-03	1.20E-04		
36	0.035099	3.32E-02	1.75E-03	1.50E-04		
37	0.021919	2.12E-02	6.59E-04	8.71E-05		
38	0.025719	2.48E-02	7.98E-04	1.06E-04		
39	0.03068	2.96E-02	9.94E-04	1.31E-04		
40	0.037504	3.60E-02	1.30E-03	1.69E-04		
41	0.026861	2.61E-02	6.66E-04	1.12E-04		
42	0.032272	3.13E-02	8.05E-04	1.41E-04		
43	0.039672	3.85E-02	1.00E-03	1.85E-04		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
44	0.050285	4.87E-02	1.31E-03	2.57E-04
45	0.033345	3.25E-02	6.56E-04	1.48E-04
46	0.041173	4.02E-02	7.86E-04	1.96E-04
47	0.052454	5.12E-02	9.71E-04	2.75E-04
48	0.069469	6.78E-02	1.25E-03	4.21E-04
49	0.053304	5.23E-02	7.34E-04	2.75E-04
50	0.069839	6.86E-02	8.71E-04	4.04E-04
51	0.052701	5.19E-02	5.69E-04	2.58E-04
52	0.068156	6.72E-02	6.40E-04	3.59E-04
53	0.091199	9.00E-02	7.14E-04	5.23E-04
54	0.050898	5.02E-02	4.53E-04	2.31E-04
55	0.064728	6.39E-02	4.94E-04	3.04E-04
56	0.085433	8.45E-02	5.35E-04	4.14E-04
57	0.117187	1.16E-01	5.70E-04	5.78E-04
58	0.047923	4.74E-02	3.71E-04	2.00E-04
59	0.060115	5.95E-02	3.97E-04	2.52E-04
60	0.077675	7.69E-02	4.23E-04	3.22E-04
61	0.104309	1.03E-01	4.45E-04	4.17E-04
62	0.044575	4.41E-02	3.10E-04	1.72E-04
63	0.054632	5.41E-02	3.29E-04	2.07E-04
64	0.068355	6.78E-02	3.46E-04	2.50E-04
65	0.087873	8.72E-02	3.62E-04	3.02E-04
66	0.116843	1.16E-01	3.72E-04	3.63E-04
67	0.040447	4.00E-02	2.65E-04	1.45E-04
68	0.048392	4.79E-02	2.78E-04	1.69E-04
69	0.058654	5.82E-02	2.91E-04	1.96E-04
70	0.071832	7.13E-02	3.03E-04	2.26E-04
71	0.089121	8.86E-02	3.11E-04	2.60E-04
72	0.036205	3.59E-02	2.29E-04	1.23E-04
73	0.04222	4.18E-02	2.39E-04	1.39E-04
74	0.049636	4.92E-02	2.49E-04	1.57E-04
75	0.05821	5.78E-02	2.58E-04	1.76E-04
76	0.06843	6.80E-02	2.65E-04	1.96E-04
77	0.032069	3.18E-02	2.01E-04	1.04E-04
78	0.03651	3.62E-02	2.09E-04	1.16E-04
79	0.041745	4.14E-02	2.17E-04	1.28E-04
80	0.047323	4.70E-02	2.24E-04	1.40E-04
81	0.053582	5.32E-02	2.30E-04	1.54E-04
82	0.028291	2.80E-02	1.78E-04	8.97E-05
83	0.031561	3.13E-02	1.84E-04	9.78E-05
84	0.035111	3.48E-02	1.91E-04	1.06E-04
85	0.03892	3.86E-02	1.97E-04	1.15E-04
86	0.042921	4.26E-02	2.02E-04	1.24E-04

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Unmitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
87	0.024905	2.47E-02	1.59E-04	7.75E-05
88	0.027339	2.71E-02	1.64E-04	8.35E-05
89	0.02989	2.96E-02	1.70E-04	8.96E-05
90	0.03271	3.24E-02	1.75E-04	9.61E-05
91	0.035503	3.52E-02	1.79E-04	1.03E-04
92	0.022007	2.18E-02	1.43E-04	6.77E-05
93	0.02384	2.36E-02	1.48E-04	7.22E-05
94	0.025747	2.55E-02	1.52E-04	7.68E-05
95	0.02774	2.75E-02	1.57E-04	8.15E-05
96	0.029766	2.95E-02	1.60E-04	8.65E-05
97	0.019515	1.93E-02	1.30E-04	5.95E-05
98	0.020943	2.07E-02	1.34E-04	6.30E-05
99	0.022401	2.22E-02	1.37E-04	6.66E-05
100	0.023859	2.36E-02	1.41E-04	7.02E-05
101	0.025387	2.52E-02	1.44E-04	7.41E-05
102	0.011636	8.04E-03	3.57E-03	2.80E-05
103	0.011292	8.07E-03	3.20E-03	2.82E-05
104	0.013628	8.33E-03	5.27E-03	2.91E-05
105	0.009929	8.05E-03	1.85E-03	2.82E-05
106	0.010845	8.34E-03	2.48E-03	2.92E-05
107	0.012224	8.61E-03	3.59E-03	3.02E-05
108	0.013416	8.89E-03	4.50E-03	3.12E-05
109	0.009931	8.32E-03	1.59E-03	2.92E-05
110	0.010655	8.60E-03	2.03E-03	3.03E-05
111	0.011645	8.89E-03	2.72E-03	3.13E-05
112	0.013218	9.20E-03	3.98E-03	3.24E-05
113	0.013146	9.50E-03	3.61E-03	3.35E-05
114	0.00945	8.27E-03	1.15E-03	2.92E-05
115	0.009979	8.56E-03	1.39E-03	3.02E-05
116	0.010615	8.87E-03	1.71E-03	3.14E-05
117	0.011414	9.19E-03	2.19E-03	3.25E-05
118	0.012519	9.52E-03	2.97E-03	3.37E-05
119	0.014336	9.86E-03	4.44E-03	3.50E-05
120	0.01437	1.02E-02	4.13E-03	3.62E-05
121	0.009128	8.21E-03	8.89E-04	2.90E-05
122	0.009574	8.51E-03	1.04E-03	3.01E-05
123	0.010082	8.82E-03	1.23E-03	3.13E-05
124	0.010666	9.15E-03	1.48E-03	3.25E-05
125	0.01136	9.49E-03	1.84E-03	3.38E-05
126	0.01224	9.84E-03	2.37E-03	3.51E-05
127	0.013477	1.02E-02	3.22E-03	3.65E-05
128	0.015576	1.06E-02	4.96E-03	3.78E-05
129	0.010218	9.08E-03	1.10E-03	3.24E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
130	0.010775	9.43E-03	1.31E-03	3.37E-05
131	0.011412	9.80E-03	1.58E-03	3.51E-05
132	0.012177	1.02E-02	1.96E-03	3.65E-05
133	0.013147	1.06E-02	2.54E-03	3.79E-05
134	0.01455	1.10E-02	3.52E-03	3.95E-05
135	0.016034	1.14E-02	4.57E-03	4.11E-05
136	0.010926	9.72E-03	1.17E-03	3.49E-05
137	0.011532	1.01E-02	1.39E-03	3.64E-05
138	0.012236	1.05E-02	1.68E-03	3.79E-05
139	0.01305	1.09E-02	2.08E-03	3.95E-05
140	0.014166	1.14E-02	2.73E-03	4.12E-05
141	0.015774	1.19E-02	3.85E-03	4.30E-05
142	0.017144	1.24E-02	4.73E-03	4.48E-05
143	0.0117	1.04E-02	1.23E-03	3.77E-05
144	0.012373	1.09E-02	1.46E-03	3.94E-05
145	0.01312	1.13E-02	1.76E-03	4.11E-05
146	0.014087	1.18E-02	2.22E-03	4.31E-05
147	0.015313	1.23E-02	2.92E-03	4.50E-05
148	0.017155	1.29E-02	4.23E-03	4.71E-05
149	0.012556	1.12E-02	1.29E-03	4.10E-05
150	0.013283	1.17E-02	1.53E-03	4.29E-05
151	0.014173	1.23E-02	1.87E-03	4.50E-05
152	0.015219	1.28E-02	2.36E-03	4.71E-05
153	0.016565	1.34E-02	3.12E-03	4.94E-05
154	0.018761	1.40E-02	4.67E-03	5.18E-05
155	0.013514	1.21E-02	1.35E-03	4.46E-05
156	0.014353	1.27E-02	1.61E-03	4.69E-05
157	0.015316	1.33E-02	1.97E-03	4.93E-05
158	0.016481	1.39E-02	2.49E-03	5.18E-05
159	0.018082	1.46E-02	3.38E-03	5.45E-05
160	0.020611	1.54E-02	5.18E-03	5.73E-05
161	0.014609	1.31E-02	1.42E-03	4.89E-05
162	0.015529	1.38E-02	1.68E-03	5.16E-05
163	0.016624	1.45E-02	2.07E-03	5.44E-05
164	0.017957	1.53E-02	2.64E-03	5.74E-05
165	0.01975	1.61E-02	3.63E-03	6.05E-05
166	0.021609	1.69E-02	4.62E-03	6.38E-05
167	0.015817	1.43E-02	1.47E-03	5.39E-05
168	0.016914	1.51E-02	1.77E-03	5.71E-05
169	0.018159	1.59E-02	2.18E-03	6.04E-05
170	0.019687	1.68E-02	2.82E-03	6.40E-05
171	0.021786	1.77E-02	3.97E-03	6.77E-05
172	0.022642	1.87E-02	3.83E-03	7.17E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
173	0.017263	1.57E-02	1.54E-03	5.98E-05
174	0.018472	1.66E-02	1.85E-03	6.35E-05
175	0.019891	1.75E-02	2.29E-03	6.75E-05
176	0.021658	1.86E-02	3.01E-03	7.18E-05
177	0.024063	1.97E-02	4.30E-03	7.63E-05
178	0.018878	1.72E-02	1.59E-03	6.67E-05
179	0.020252	1.83E-02	1.92E-03	7.12E-05
180	0.021929	1.94E-02	2.41E-03	7.61E-05
181	0.023915	2.07E-02	3.17E-03	8.13E-05
182	0.026906	2.21E-02	4.76E-03	8.70E-05
183	0.02078	1.90E-02	1.66E-03	7.51E-05
184	0.022351	2.03E-02	2.00E-03	8.05E-05
185	0.024276	2.17E-02	2.52E-03	8.66E-05
186	0.026731	2.32E-02	3.42E-03	9.32E-05
187	0.030314	2.49E-02	5.31E-03	1.00E-04
188	0.022982	2.12E-02	1.72E-03	8.53E-05
189	0.02493	2.27E-02	2.10E-03	9.22E-05
190	0.027149	2.44E-02	2.67E-03	9.97E-05
191	0.030098	2.63E-02	3.69E-03	1.08E-04
192	0.033115	2.84E-02	4.61E-03	1.17E-04
193	0.025647	2.38E-02	1.78E-03	9.80E-05
194	0.027955	2.56E-02	2.20E-03	1.07E-04
195	0.030614	2.77E-02	2.82E-03	1.16E-04
196	0.034231	3.01E-02	4.00E-03	1.27E-04
197	0.036648	3.27E-02	3.76E-03	1.39E-04
198	0.028828	2.69E-02	1.85E-03	1.14E-04
199	0.031605	2.92E-02	2.30E-03	1.25E-04
200	0.034912	3.18E-02	2.99E-03	1.38E-04
201	0.03942	3.49E-02	4.37E-03	1.53E-04
202	0.032683	3.06E-02	1.92E-03	1.34E-04
203	0.036029	3.35E-02	2.38E-03	1.49E-04
204	0.040404	3.70E-02	3.20E-03	1.68E-04
205	0.046005	4.10E-02	4.80E-03	1.89E-04
206	0.037343	3.52E-02	1.97E-03	1.61E-04
207	0.041765	3.91E-02	2.50E-03	1.83E-04
208	0.047168	4.36E-02	3.39E-03	2.09E-04
209	0.0546	4.90E-02	5.31E-03	2.40E-04
210	0.03868	3.68E-02	1.66E-03	1.73E-04
211	0.043419	4.12E-02	2.04E-03	1.99E-04
212	0.049088	4.62E-02	2.62E-03	2.31E-04
213	0.056278	5.24E-02	3.64E-03	2.70E-04
214	0.064704	5.99E-02	4.49E-03	3.20E-04
215	0.040047	3.84E-02	1.43E-03	1.84E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
216	0.044926	4.30E-02	1.70E-03	2.13E-04
217	0.05088	4.85E-02	2.09E-03	2.51E-04
218	0.058355	5.53E-02	2.72E-03	3.00E-04
219	0.068161	6.39E-02	3.87E-03	3.66E-04
220	0.046558	4.49E-02	1.45E-03	2.28E-04
221	0.052875	5.09E-02	1.73E-03	2.71E-04
222	0.060768	5.83E-02	2.15E-03	3.30E-04
223	0.070952	6.77E-02	2.83E-03	4.14E-04
224	0.084856	8.02E-02	4.16E-03	5.39E-04
225	0.054535	5.28E-02	1.45E-03	2.89E-04
226	0.062801	6.07E-02	1.74E-03	3.56E-04
227	0.073355	7.07E-02	2.17E-03	4.54E-04
228	0.087331	8.38E-02	2.89E-03	6.10E-04
229	0.107	1.02E-01	4.39E-03	8.91E-04
230	0.064478	6.27E-02	1.43E-03	3.75E-04
231	0.075357	7.32E-02	1.71E-03	4.84E-04
232	0.089221	8.64E-02	2.12E-03	6.55E-04
233	0.108584	1.05E-01	2.85E-03	9.76E-04
234	0.136109	1.30E-01	4.40E-03	1.73E-03
235	0.076447	7.46E-02	1.37E-03	4.93E-04
236	0.08995	8.77E-02	1.60E-03	6.57E-04
237	0.108384	1.05E-01	1.95E-03	9.40E-04
238	0.133746	1.30E-01	2.46E-03	1.46E-03
239	0.167879	1.62E-01	3.00E-03	2.40E-03
240	0.089964	8.81E-02	1.25E-03	6.29E-04
241	0.10798	1.06E-01	1.42E-03	8.58E-04
242	0.130059	1.27E-01	1.60E-03	1.19E-03
243	0.16169	1.58E-01	1.76E-03	1.77E-03
244	0.089118	8.75E-02	1.00E-03	5.83E-04
245	0.106284	1.04E-01	1.10E-03	7.64E-04
246	0.127578	1.25E-01	1.18E-03	1.02E-03
247	0.154801	1.52E-01	1.25E-03	1.39E-03
248	0.194187	1.91E-01	1.26E-03	2.05E-03
249	0.103838	1.02E-01	8.82E-04	6.75E-04
250	0.124081	1.22E-01	9.34E-04	8.68E-04
251	0.149445	1.47E-01	9.73E-04	1.14E-03
252	0.185179	1.83E-01	9.83E-04	1.57E-03
253	0.236004	2.33E-01	9.45E-04	2.31E-03
254	0.100884	9.96E-02	7.35E-04	5.94E-04
255	0.119421	1.18E-01	7.69E-04	7.38E-04
256	0.14484	1.43E-01	7.95E-04	9.48E-04
257	0.177178	1.75E-01	8.04E-04	1.23E-03
258	0.22567	2.23E-01	7.89E-04	1.71E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
259	0.295191	2.92E-01	7.48E-04	2.50E-03
260	0.115001	1.14E-01	6.51E-04	6.33E-04
261	0.138724	1.37E-01	6.70E-04	7.85E-04
262	0.170556	1.69E-01	6.79E-04	9.94E-04
263	0.213529	2.12E-01	6.73E-04	1.28E-03
264	0.285542	2.83E-01	6.51E-04	1.76E-03
265	0.131928	1.31E-01	5.78E-04	6.52E-04
266	0.160991	1.60E-01	5.86E-04	7.92E-04
267	0.200534	1.99E-01	5.84E-04	9.69E-04
268	0.266229	2.64E-01	5.72E-04	1.23E-03
269	0.37702	3.75E-01	5.49E-04	1.58E-03
270	0.150934	1.50E-01	5.14E-04	6.39E-04
271	0.186732	1.85E-01	5.14E-04	7.52E-04
272	0.241096	2.40E-01	5.07E-04	8.90E-04
273	0.337245	3.36E-01	4.93E-04	1.07E-03
274	0.138447	1.37E-01	4.56E-04	5.17E-04
275	0.168869	1.68E-01	4.58E-04	5.90E-04
276	0.213114	2.12E-01	4.55E-04	6.73E-04
277	0.279089	2.78E-01	4.45E-04	7.59E-04
278	0.396782	3.95E-01	4.31E-04	8.55E-04
279	0.149667	1.49E-01	4.12E-04	4.73E-04
280	0.182463	1.82E-01	4.10E-04	5.25E-04
281	0.224811	2.24E-01	4.04E-04	5.75E-04
282	0.292744	2.92E-01	3.94E-04	6.34E-04
283	0.128532	1.28E-01	3.73E-04	3.84E-04
284	0.151364	1.51E-01	3.73E-04	4.19E-04
285	0.179341	1.79E-01	3.69E-04	4.54E-04
286	0.214332	2.13E-01	3.62E-04	4.90E-04
287	0.258242	2.57E-01	3.52E-04	5.21E-04
288	0.111442	1.11E-01	3.40E-04	3.21E-04
289	0.127302	1.27E-01	3.41E-04	3.46E-04
290	0.145394	1.45E-01	3.39E-04	3.71E-04
291	0.165995	1.65E-01	3.34E-04	3.96E-04
292	0.18965	1.89E-01	3.26E-04	4.18E-04
293	0.095116	9.45E-02	3.12E-04	2.71E-04
294	0.105953	1.05E-01	3.13E-04	2.89E-04
295	0.117399	1.17E-01	3.12E-04	3.07E-04
296	0.130052	1.29E-01	3.09E-04	3.25E-04
297	0.144972	1.44E-01	3.03E-04	3.43E-04
298	0.082584	8.21E-02	2.88E-04	2.33E-04
299	0.090222	8.97E-02	2.89E-04	2.47E-04
300	0.097685	9.71E-02	2.89E-04	2.60E-04
301	0.106211	1.06E-01	2.86E-04	2.74E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
302	0.116719	1.16E-01	2.83E-04	2.88E-04
303	0.12724	1.27E-01	2.77E-04	2.98E-04
304	0.071654	7.12E-02	2.67E-04	2.02E-04
305	0.077369	7.69E-02	2.68E-04	2.13E-04
306	0.082783	8.23E-02	2.68E-04	2.24E-04
307	0.088983	8.85E-02	2.67E-04	2.35E-04
308	0.096303	9.58E-02	2.64E-04	2.46E-04
309	0.103492	1.03E-01	2.60E-04	2.54E-04
310	0.062811	6.24E-02	2.48E-04	1.78E-04
311	0.067145	6.67E-02	2.49E-04	1.87E-04
312	0.071288	7.08E-02	2.50E-04	1.95E-04
313	0.076134	7.57E-02	2.49E-04	2.05E-04
314	0.08159	8.11E-02	2.47E-04	2.13E-04
315	0.087009	8.65E-02	2.44E-04	2.20E-04
316	0.055639	5.52E-02	2.31E-04	1.58E-04
317	0.058892	5.85E-02	2.33E-04	1.65E-04
318	0.061889	6.15E-02	2.33E-04	1.72E-04
319	0.065459	6.50E-02	2.33E-04	1.79E-04
320	0.069618	6.92E-02	2.32E-04	1.86E-04
321	0.073496	7.31E-02	2.29E-04	1.92E-04
322	0.077716	7.73E-02	2.26E-04	1.97E-04
323	0.04943	4.91E-02	2.16E-04	1.41E-04
324	0.052109	5.17E-02	2.18E-04	1.47E-04
325	0.054496	5.41E-02	2.19E-04	1.53E-04
326	0.057265	5.69E-02	2.19E-04	1.59E-04
327	0.060573	6.02E-02	2.18E-04	1.65E-04
328	0.063683	6.33E-02	2.16E-04	1.70E-04
329	0.066884	6.65E-02	2.13E-04	1.74E-04
330	0.044142	4.38E-02	2.03E-04	1.27E-04
331	0.046225	4.59E-02	2.04E-04	1.31E-04
332	0.048381	4.80E-02	2.05E-04	1.37E-04
333	0.05066	5.03E-02	2.06E-04	1.42E-04
334	0.053056	5.27E-02	2.05E-04	1.47E-04
335	0.055585	5.52E-02	2.04E-04	1.51E-04
336	0.058387	5.80E-02	2.02E-04	1.55E-04
337	0.04004	3.97E-02	1.91E-04	1.15E-04
338	0.041759	4.14E-02	1.93E-04	1.19E-04
339	0.043487	4.32E-02	1.94E-04	1.23E-04
340	0.045286	4.50E-02	1.94E-04	1.28E-04
341	0.047433	4.71E-02	1.94E-04	1.32E-04
342	0.049519	4.92E-02	1.93E-04	1.36E-04
343	0.051626	5.13E-02	1.91E-04	1.39E-04
344	0.036362	3.61E-02	1.80E-04	1.05E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
345	0.037803	3.75E-02	1.82E-04	1.08E-04
346	0.03924	3.89E-02	1.83E-04	1.12E-04
347	0.040827	4.05E-02	1.83E-04	1.16E-04
348	0.042435	4.21E-02	1.83E-04	1.19E-04
349	0.044088	4.38E-02	1.83E-04	1.23E-04
350	0.045946	4.56E-02	1.81E-04	1.26E-04
351	0.033151	3.29E-02	1.70E-04	9.58E-05
352	0.034394	3.41E-02	1.72E-04	9.89E-05
353	0.03557	3.53E-02	1.73E-04	1.02E-04
354	0.03683	3.66E-02	1.73E-04	1.05E-04
355	0.038341	3.81E-02	1.74E-04	1.08E-04
356	0.039742	3.95E-02	1.73E-04	1.11E-04
357	0.041214	4.09E-02	1.72E-04	1.14E-04
358	0.030323	3.01E-02	1.61E-04	8.80E-05
359	0.031356	3.11E-02	1.63E-04	9.06E-05
360	0.032459	3.22E-02	1.64E-04	9.34E-05
361	0.033579	3.33E-02	1.64E-04	9.62E-05
362	0.034794	3.45E-02	1.65E-04	9.90E-05
363	0.035962	3.57E-02	1.65E-04	1.02E-04
364	0.037214	3.69E-02	1.64E-04	1.04E-04
365	0.027984	2.77E-02	1.53E-04	8.13E-05
366	0.028859	2.86E-02	1.54E-04	8.36E-05
367	0.029788	2.95E-02	1.55E-04	8.60E-05
368	0.030773	3.05E-02	1.56E-04	8.85E-05
369	0.031756	3.15E-02	1.57E-04	9.09E-05
370	0.032835	3.26E-02	1.57E-04	9.33E-05
371	0.033833	3.36E-02	1.56E-04	9.53E-05
372	0.025835	2.56E-02	1.45E-04	7.53E-05
373	0.02661	2.64E-02	1.47E-04	7.73E-05
374	0.027401	2.72E-02	1.48E-04	7.94E-05
375	0.02825	2.80E-02	1.48E-04	8.16E-05
376	0.029101	2.89E-02	1.49E-04	8.37E-05
377	0.030044	2.98E-02	1.49E-04	8.58E-05
378	0.030926	3.07E-02	1.49E-04	8.77E-05
379	0.562452	5.61E-01	3.69E-04	7.13E-04
380	0.751869	7.51E-01	3.60E-04	7.24E-04
381	0.413952	4.13E-01	3.52E-04	6.13E-04
382	0.442278	4.41E-01	3.41E-04	5.92E-04
383	0.306934	3.06E-01	3.23E-04	4.97E-04
384	0.225414	2.25E-01	3.06E-04	4.20E-04
385	0.183445	1.83E-01	2.90E-04	3.66E-04
386	0.147934	1.47E-01	2.72E-04	3.13E-04
387	0.123438	1.23E-01	2.56E-04	2.74E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
388	0.105596	1.05E-01	2.43E-04	2.43E-04
389	0.091489	9.10E-02	2.31E-04	2.18E-04
390	0.081795	8.14E-02	2.21E-04	1.99E-04

Unmitigated Risk Calculations

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	
1	0.92351	0.03	0.03	361	1	0.96	0.000001	1.07E-05	1.1	10	0.25	70	0.85	3.59E-07	0.36
2	0.99428	0.03	0.03	361	1	0.96	0.000001	1.16E-05	1.1	10	0.25	70	0.85	3.86E-07	0.39
3	0.89737	0.03	0.03	361	1	0.96	0.000001	1.04E-05	1.1	10	0.25	70	0.85	3.49E-07	0.35
4	0.97029	0.03	0.03	361	1	0.96	0.000001	1.13E-05	1.1	10	0.25	70	0.85	3.77E-07	0.38
5	1.05113	0.03	0.04	361	1	0.96	0.000001	1.22E-05	1.1	10	0.25	70	0.85	4.08E-07	0.41
6	1.13943	0.03	0.04	361	1	0.96	0.000001	1.33E-05	1.1	10	0.25	70	0.85	4.43E-07	0.44
7	0.93952	0.03	0.03	361	1	0.96	0.000001	1.09E-05	1.1	10	0.25	70	0.85	3.65E-07	0.37
8	1.01872	0.03	0.03	361	1	0.96	0.000001	1.19E-05	1.1	10	0.25	70	0.85	3.96E-07	0.40
9	1.10771	0.03	0.04	361	1	0.96	0.000001	1.29E-05	1.1	10	0.25	70	0.85	4.30E-07	0.43
10	1.20834	0.03	0.04	361	1	0.96	0.000001	1.41E-05	1.1	10	0.25	70	0.85	4.69E-07	0.47
11	1.32261	0.03	0.04	361	1	0.96	0.000001	1.54E-05	1.1	10	0.25	70	0.85	5.14E-07	0.51
12	1.06424	0.03	0.04	361	1	0.96	0.000001	1.24E-05	1.1	10	0.25	70	0.85	4.14E-07	0.41
13	1.16297	0.03	0.04	361	1	0.96	0.000001	1.35E-05	1.1	10	0.25	70	0.85	4.52E-07	0.45
14	1.27601	0.03	0.04	361	1	0.96	0.000001	1.48E-05	1.1	10	0.25	70	0.85	4.96E-07	0.50
15	1.40596	0.03	0.05	361	1	0.96	0.000001	1.64E-05	1.1	10	0.25	70	0.85	5.46E-07	0.55
16	1.55227	0.03	0.05	361	1	0.96	0.000001	1.81E-05	1.1	10	0.25	70	0.85	6.03E-07	0.60
17	1.21949	0.03	0.04	361	1	0.96	0.000001	1.42E-05	1.1	10	0.25	70	0.85	4.74E-07	0.47
18	1.34636	0.03	0.05	361	1	0.96	0.000001	1.57E-05	1.1	10	0.25	70	0.85	5.23E-07	0.52
19	1.49218	0.03	0.05	361	1	0.96	0.000001	1.74E-05	1.1	10	0.25	70	0.85	5.80E-07	0.58
20	1.66061	0.03	0.06	361	1	0.96	0.000001	1.93E-05	1.1	10	0.25	70	0.85	6.45E-07	0.65
21	1.86136	0.03	0.06	361	1	0.96	0.000001	2.17E-05	1.1	10	0.25	70	0.85	7.23E-07	0.72
22	1.41376	0.03	0.05	361	1	0.96	0.000001	1.64E-05	1.1	10	0.25	70	0.85	5.49E-07	0.55
23	1.57719	0.03	0.05	361	1	0.96	0.000001	1.84E-05	1.1	10	0.25	70	0.85	6.13E-07	0.61
24	1.76693	0.03	0.06	361	1	0.96	0.000001	2.06E-05	1.1	10	0.25	70	0.85	6.87E-07	0.69
25	1.99771	0.03	0.07	361	1	0.96	0.000001	2.32E-05	1.1	10	0.25	70	0.85	7.76E-07	0.78
26	2.27309	0.03	0.08	361	1	0.96	0.000001	2.64E-05	1.1	10	0.25	70	0.85	8.83E-07	0.88
27	1.65767	0.03	0.06	361	1	0.96	0.000001	1.93E-05	1.1	10	0.25	70	0.85	6.44E-07	0.64
28	1.87006	0.03	0.06	361	1	0.96	0.000001	2.18E-05	1.1	10	0.25	70	0.85	7.27E-07	0.73
29	2.13371	0.03	0.07	361	1	0.96	0.000001	2.48E-05	1.1	10	0.25	70	0.85	8.29E-07	0.83
30	2.45713	0.03	0.08	361	1	0.96	0.000001	2.86E-05	1.1	10	0.25	70	0.85	9.55E-07	0.95
31	2.86056	0.03	0.10	361	1	0.96	0.000001	3.33E-05	1.1	10	0.25	70	0.85	1.11E-06	1.11
32	1.96815	0.03	0.07	361	1	0.96	0.000001	2.29E-05	1.1	10	0.25	70	0.85	7.65E-07	0.76

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
33	2.25988	0.03	0.08	361	1	0.96	0.000001	2.63E-05	1.1	10	0.25	70	0.85	8.78E-07	0.88
34	2.62873	0.03	0.09	361	1	0.96	0.000001	3.06E-05	1.1	10	0.25	70	0.85	1.02E-06	1.02
35	3.09314	0.03	0.10	361	1	0.96	0.000001	3.60E-05	1.1	10	0.25	70	0.85	1.20E-06	1.20
36	3.72112	0.03	0.13	361	1	0.96	0.000001	4.33E-05	1.1	10	0.25	70	0.85	1.45E-06	1.45
37	2.37325	0.03	0.08	361	1	0.96	0.000001	2.76E-05	1.1	10	0.25	70	0.85	9.22E-07	0.92
38	2.78155	0.03	0.09	361	1	0.96	0.000001	3.24E-05	1.1	10	0.25	70	0.85	1.08E-06	1.08
39	3.31275	0.03	0.11	361	1	0.96	0.000001	3.85E-05	1.1	10	0.25	70	0.85	1.29E-06	1.29
40	4.03894	0.03	0.14	361	1	0.96	0.000001	4.70E-05	1.1	10	0.25	70	0.85	1.57E-06	1.57
41	2.92357	0.03	0.10	361	1	0.96	0.000001	3.40E-05	1.1	10	0.25	70	0.85	1.14E-06	1.14
42	3.5113	0.03	0.12	361	1	0.96	0.000001	4.09E-05	1.1	10	0.25	70	0.85	1.36E-06	1.36
43	4.31357	0.03	0.14	361	1	0.96	0.000001	5.02E-05	1.1	10	0.25	70	0.85	1.68E-06	1.68
44	5.46047	0.03	0.18	361	1	0.96	0.000001	6.35E-05	1.1	10	0.25	70	0.85	2.12E-06	2.12
45	3.64748	0.03	0.12	361	1	0.96	0.000001	4.24E-05	1.1	10	0.25	70	0.85	1.42E-06	1.42
46	4.50502	0.03	0.15	361	1	0.96	0.000001	5.24E-05	1.1	10	0.25	70	0.85	1.75E-06	1.75
47	5.73991	0.03	0.19	361	1	0.96	0.000001	6.68E-05	1.1	10	0.25	70	0.85	2.23E-06	2.23
48	7.59936	0.03	0.26	361	1	0.96	0.000001	8.84E-05	1.1	10	0.25	70	0.85	2.95E-06	2.95
49	5.86184	0.03	0.20	361	1	0.96	0.000001	6.82E-05	1.1	10	0.25	70	0.85	2.28E-06	2.28
50	7.68528	0.03	0.26	361	1	0.96	0.000001	8.94E-05	1.1	10	0.25	70	0.85	2.99E-06	2.99
51	5.81462	0.03	0.20	361	1	0.96	0.000001	6.77E-05	1.1	10	0.25	70	0.85	2.26E-06	2.26
52	7.52767	0.03	0.25	361	1	0.96	0.000001	8.76E-05	1.1	10	0.25	70	0.85	2.92E-06	2.92
53	10.08388	0.03	0.34	361	1	0.96	0.000001	1.17E-04	1.1	10	0.25	70	0.85	3.92E-06	3.92
54	5.62847	0.03	0.19	361	1	0.96	0.000001	6.55E-05	1.1	10	0.25	70	0.85	2.19E-06	2.19
55	7.16584	0.03	0.24	361	1	0.96	0.000001	8.34E-05	1.1	10	0.25	70	0.85	2.78E-06	2.78
56	9.4698	0.03	0.32	361	1	0.96	0.000001	1.10E-04	1.1	10	0.25	70	0.85	3.68E-06	3.68
57	13.00667	0.03	0.44	361	1	0.96	0.000001	1.51E-04	1.1	10	0.25	70	0.85	5.05E-06	5.05
58	5.30775	0.03	0.18	361	1	0.96	0.000001	6.18E-05	1.1	10	0.25	70	0.85	2.06E-06	2.06
59	6.66551	0.03	0.22	361	1	0.96	0.000001	7.76E-05	1.1	10	0.25	70	0.85	2.59E-06	2.59
60	8.62303	0.03	0.29	361	1	0.96	0.000001	1.00E-04	1.1	10	0.25	70	0.85	3.35E-06	3.35
61	11.59538	0.03	0.39	361	1	0.96	0.000001	1.35E-04	1.1	10	0.25	70	0.85	4.51E-06	4.51
62	4.94243	0.03	0.17	361	1	0.96	0.000001	5.75E-05	1.1	10	0.25	70	0.85	1.92E-06	1.92
63	6.06368	0.03	0.20	361	1	0.96	0.000001	7.06E-05	1.1	10	0.25	70	0.85	2.36E-06	2.36
64	7.59505	0.03	0.26	361	1	0.96	0.000001	8.84E-05	1.1	10	0.25	70	0.85	2.95E-06	2.95

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
65	9.7752	0.03	0.33	361	1	0.96	0.000001	1.14E-04	1.1	10	0.25	70	0.85	3.80E-06	3.80
66	13.01445	0.03	0.44	361	1	0.96	0.000001	1.51E-04	1.1	10	0.25	70	0.85	5.06E-06	5.06
67	4.48777	0.03	0.15	361	1	0.96	0.000001	5.22E-05	1.1	10	0.25	70	0.85	1.74E-06	1.74
68	5.37411	0.03	0.18	361	1	0.96	0.000001	6.25E-05	1.1	10	0.25	70	0.85	2.09E-06	2.09
69	6.51987	0.03	0.22	361	1	0.96	0.000001	7.59E-05	1.1	10	0.25	70	0.85	2.53E-06	2.53
70	7.99231	0.03	0.27	361	1	0.96	0.000001	9.30E-05	1.1	10	0.25	70	0.85	3.11E-06	3.11
71	9.92554	0.03	0.33	361	1	0.96	0.000001	1.15E-04	1.1	10	0.25	70	0.85	3.86E-06	3.86
72	4.01872	0.03	0.14	361	1	0.96	0.000001	4.68E-05	1.1	10	0.25	70	0.85	1.56E-06	1.56
73	4.69003	0.03	0.16	361	1	0.96	0.000001	5.46E-05	1.1	10	0.25	70	0.85	1.82E-06	1.82
74	5.51814	0.03	0.19	361	1	0.96	0.000001	6.42E-05	1.1	10	0.25	70	0.85	2.14E-06	2.14
75	6.47604	0.03	0.22	361	1	0.96	0.000001	7.54E-05	1.1	10	0.25	70	0.85	2.52E-06	2.52
76	7.61855	0.03	0.26	361	1	0.96	0.000001	8.86E-05	1.1	10	0.25	70	0.85	2.96E-06	2.96
77	3.56034	0.03	0.12	361	1	0.96	0.000001	4.14E-05	1.1	10	0.25	70	0.85	1.38E-06	1.38
78	4.05604	0.03	0.14	361	1	0.96	0.000001	4.72E-05	1.1	10	0.25	70	0.85	1.58E-06	1.58
79	4.64053	0.03	0.16	361	1	0.96	0.000001	5.40E-05	1.1	10	0.25	70	0.85	1.80E-06	1.80
80	5.26361	0.03	0.18	361	1	0.96	0.000001	6.12E-05	1.1	10	0.25	70	0.85	2.05E-06	2.05
81	5.96303	0.03	0.20	361	1	0.96	0.000001	6.94E-05	1.1	10	0.25	70	0.85	2.32E-06	2.32
82	3.1411	0.03	0.11	361	1	0.96	0.000001	3.65E-05	1.1	10	0.25	70	0.85	1.22E-06	1.22
83	3.50605	0.03	0.12	361	1	0.96	0.000001	4.08E-05	1.1	10	0.25	70	0.85	1.36E-06	1.36
84	3.9023	0.03	0.13	361	1	0.96	0.000001	4.54E-05	1.1	10	0.25	70	0.85	1.52E-06	1.52
85	4.32759	0.03	0.15	361	1	0.96	0.000001	5.04E-05	1.1	10	0.25	70	0.85	1.68E-06	1.68
86	4.77455	0.03	0.16	361	1	0.96	0.000001	5.56E-05	1.1	10	0.25	70	0.85	1.86E-06	1.86
87	2.76513	0.03	0.09	361	1	0.96	0.000001	3.22E-05	1.1	10	0.25	70	0.85	1.07E-06	1.07
88	3.03666	0.03	0.10	361	1	0.96	0.000001	3.53E-05	1.1	10	0.25	70	0.85	1.18E-06	1.18
89	3.32132	0.03	0.11	361	1	0.96	0.000001	3.86E-05	1.1	10	0.25	70	0.85	1.29E-06	1.29
90	3.63605	0.03	0.12	361	1	0.96	0.000001	4.23E-05	1.1	10	0.25	70	0.85	1.41E-06	1.41
91	3.94789	0.03	0.13	361	1	0.96	0.000001	4.59E-05	1.1	10	0.25	70	0.85	1.53E-06	1.53
92	2.44315	0.03	0.08	361	1	0.96	0.000001	2.84E-05	1.1	10	0.25	70	0.85	9.49E-07	0.95
93	2.64763	0.03	0.09	361	1	0.96	0.000001	3.08E-05	1.1	10	0.25	70	0.85	1.03E-06	1.03
94	2.86031	0.03	0.10	361	1	0.96	0.000001	3.33E-05	1.1	10	0.25	70	0.85	1.11E-06	1.11
95	3.08269	0.03	0.10	361	1	0.96	0.000001	3.59E-05	1.1	10	0.25	70	0.85	1.20E-06	1.20
96	3.30883	0.03	0.11	361	1	0.96	0.000001	3.85E-05	1.1	10	0.25	70	0.85	1.29E-06	1.29

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
97	2.16628	0.03	0.07	361	1	0.96	0.000001	2.52E-05	1.1	10	0.25	70	0.85	8.42E-07	0.84
98	2.32551	0.03	0.08	361	1	0.96	0.000001	2.71E-05	1.1	10	0.25	70	0.85	9.04E-07	0.90
99	2.48807	0.03	0.08	361	1	0.96	0.000001	2.89E-05	1.1	10	0.25	70	0.85	9.67E-07	0.97
100	2.65069	0.03	0.09	361	1	0.96	0.000001	3.08E-05	1.1	10	0.25	70	0.85	1.03E-06	1.03
101	2.82108	0.03	0.09	361	1	0.96	0.000001	3.28E-05	1.1	10	0.25	70	0.85	1.10E-06	1.10
102	0.90143	0.03	0.03	361	1	0.96	0.000001	1.05E-05	1.1	10	0.25	70	0.85	3.50E-07	0.35
103	0.90436	0.03	0.03	361	1	0.96	0.000001	1.05E-05	1.1	10	0.25	70	0.85	3.51E-07	0.35
104	0.93405	0.03	0.03	361	1	0.96	0.000001	1.09E-05	1.1	10	0.25	70	0.85	3.63E-07	0.36
105	0.90256	0.03	0.03	361	1	0.96	0.000001	1.05E-05	1.1	10	0.25	70	0.85	3.51E-07	0.35
106	0.93434	0.03	0.03	361	1	0.96	0.000001	1.09E-05	1.1	10	0.25	70	0.85	3.63E-07	0.36
107	0.96496	0.03	0.03	361	1	0.96	0.000001	1.12E-05	1.1	10	0.25	70	0.85	3.75E-07	0.37
108	0.99611	0.03	0.03	361	1	0.96	0.000001	1.16E-05	1.1	10	0.25	70	0.85	3.87E-07	0.39
109	0.93214	0.03	0.03	361	1	0.96	0.000001	1.08E-05	1.1	10	0.25	70	0.85	3.62E-07	0.36
110	0.96347	0.03	0.03	361	1	0.96	0.000001	1.12E-05	1.1	10	0.25	70	0.85	3.74E-07	0.37
111	0.99643	0.03	0.03	361	1	0.96	0.000001	1.16E-05	1.1	10	0.25	70	0.85	3.87E-07	0.39
112	1.03148	0.03	0.03	361	1	0.96	0.000001	1.20E-05	1.1	10	0.25	70	0.85	4.01E-07	0.40
113	1.06523	0.03	0.04	361	1	0.96	0.000001	1.24E-05	1.1	10	0.25	70	0.85	4.14E-07	0.41
114	0.92739	0.03	0.03	361	1	0.96	0.000001	1.08E-05	1.1	10	0.25	70	0.85	3.60E-07	0.36
115	0.95974	0.03	0.03	361	1	0.96	0.000001	1.12E-05	1.1	10	0.25	70	0.85	3.73E-07	0.37
116	0.99451	0.03	0.03	361	1	0.96	0.000001	1.16E-05	1.1	10	0.25	70	0.85	3.86E-07	0.39
117	1.02992	0.03	0.03	361	1	0.96	0.000001	1.20E-05	1.1	10	0.25	70	0.85	4.00E-07	0.40
118	1.06658	0.03	0.04	361	1	0.96	0.000001	1.24E-05	1.1	10	0.25	70	0.85	4.14E-07	0.41
119	1.10549	0.03	0.04	361	1	0.96	0.000001	1.29E-05	1.1	10	0.25	70	0.85	4.30E-07	0.43
120	1.14334	0.03	0.04	361	1	0.96	0.000001	1.33E-05	1.1	10	0.25	70	0.85	4.44E-07	0.44
121	0.9202	0.03	0.03	361	1	0.96	0.000001	1.07E-05	1.1	10	0.25	70	0.85	3.58E-07	0.36
122	0.95343	0.03	0.03	361	1	0.96	0.000001	1.11E-05	1.1	10	0.25	70	0.85	3.70E-07	0.37
123	0.98892	0.03	0.03	361	1	0.96	0.000001	1.15E-05	1.1	10	0.25	70	0.85	3.84E-07	0.38
124	1.02587	0.03	0.03	361	1	0.96	0.000001	1.19E-05	1.1	10	0.25	70	0.85	3.99E-07	0.40
125	1.06375	0.03	0.04	361	1	0.96	0.000001	1.24E-05	1.1	10	0.25	70	0.85	4.13E-07	0.41
126	1.10291	0.03	0.04	361	1	0.96	0.000001	1.28E-05	1.1	10	0.25	70	0.85	4.29E-07	0.43
127	1.14533	0.03	0.04	361	1	0.96	0.000001	1.33E-05	1.1	10	0.25	70	0.85	4.45E-07	0.45
128	1.18599	0.03	0.04	361	1	0.96	0.000001	1.38E-05	1.1	10	0.25	70	0.85	4.61E-07	0.46

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
129	1.01795	0.03	0.03	361	1	0.96	0.000001	1.18E-05	1.1	10	0.25	70	0.85	3.96E-07	0.40
130	1.05754	0.03	0.04	361	1	0.96	0.000001	1.23E-05	1.1	10	0.25	70	0.85	4.11E-07	0.41
131	1.09814	0.03	0.04	361	1	0.96	0.000001	1.28E-05	1.1	10	0.25	70	0.85	4.27E-07	0.43
132	1.14072	0.03	0.04	361	1	0.96	0.000001	1.33E-05	1.1	10	0.25	70	0.85	4.43E-07	0.44
133	1.18463	0.03	0.04	361	1	0.96	0.000001	1.38E-05	1.1	10	0.25	70	0.85	4.60E-07	0.46
134	1.23143	0.03	0.04	361	1	0.96	0.000001	1.43E-05	1.1	10	0.25	70	0.85	4.78E-07	0.48
135	1.28025	0.03	0.04	361	1	0.96	0.000001	1.49E-05	1.1	10	0.25	70	0.85	4.97E-07	0.50
136	1.08996	0.03	0.04	361	1	0.96	0.000001	1.27E-05	1.1	10	0.25	70	0.85	4.23E-07	0.42
137	1.13315	0.03	0.04	361	1	0.96	0.000001	1.32E-05	1.1	10	0.25	70	0.85	4.40E-07	0.44
138	1.1793	0.03	0.04	361	1	0.96	0.000001	1.37E-05	1.1	10	0.25	70	0.85	4.58E-07	0.46
139	1.22541	0.03	0.04	361	1	0.96	0.000001	1.43E-05	1.1	10	0.25	70	0.85	4.76E-07	0.48
140	1.27772	0.03	0.04	361	1	0.96	0.000001	1.49E-05	1.1	10	0.25	70	0.85	4.96E-07	0.50
141	1.33197	0.03	0.04	361	1	0.96	0.000001	1.55E-05	1.1	10	0.25	70	0.85	5.18E-07	0.52
142	1.38613	0.03	0.05	361	1	0.96	0.000001	1.61E-05	1.1	10	0.25	70	0.85	5.39E-07	0.54
143	1.16906	0.03	0.04	361	1	0.96	0.000001	1.36E-05	1.1	10	0.25	70	0.85	4.54E-07	0.45
144	1.21852	0.03	0.04	361	1	0.96	0.000001	1.42E-05	1.1	10	0.25	70	0.85	4.73E-07	0.47
145	1.26826	0.03	0.04	361	1	0.96	0.000001	1.48E-05	1.1	10	0.25	70	0.85	4.93E-07	0.49
146	1.32524	0.03	0.04	361	1	0.96	0.000001	1.54E-05	1.1	10	0.25	70	0.85	5.15E-07	0.51
147	1.38365	0.03	0.05	361	1	0.96	0.000001	1.61E-05	1.1	10	0.25	70	0.85	5.38E-07	0.54
148	1.444	0.03	0.05	361	1	0.96	0.000001	1.68E-05	1.1	10	0.25	70	0.85	5.61E-07	0.56
149	1.25769	0.03	0.04	361	1	0.96	0.000001	1.46E-05	1.1	10	0.25	70	0.85	4.89E-07	0.49
150	1.31241	0.03	0.04	361	1	0.96	0.000001	1.53E-05	1.1	10	0.25	70	0.85	5.10E-07	0.51
151	1.3739	0.03	0.05	361	1	0.96	0.000001	1.60E-05	1.1	10	0.25	70	0.85	5.34E-07	0.53
152	1.4366	0.03	0.05	361	1	0.96	0.000001	1.67E-05	1.1	10	0.25	70	0.85	5.58E-07	0.56
153	1.50175	0.03	0.05	361	1	0.96	0.000001	1.75E-05	1.1	10	0.25	70	0.85	5.83E-07	0.58
154	1.57395	0.03	0.05	361	1	0.96	0.000001	1.83E-05	1.1	10	0.25	70	0.85	6.12E-07	0.61
155	1.35805	0.03	0.05	361	1	0.96	0.000001	1.58E-05	1.1	10	0.25	70	0.85	5.28E-07	0.53
156	1.42283	0.03	0.05	361	1	0.96	0.000001	1.66E-05	1.1	10	0.25	70	0.85	5.53E-07	0.55
157	1.49084	0.03	0.05	361	1	0.96	0.000001	1.73E-05	1.1	10	0.25	70	0.85	5.79E-07	0.58
158	1.56282	0.03	0.05	361	1	0.96	0.000001	1.82E-05	1.1	10	0.25	70	0.85	6.07E-07	0.61
159	1.64168	0.03	0.06	361	1	0.96	0.000001	1.91E-05	1.1	10	0.25	70	0.85	6.38E-07	0.64
160	1.72273	0.03	0.06	361	1	0.96	0.000001	2.00E-05	1.1	10	0.25	70	0.85	6.69E-07	0.67

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
161	1.47343	0.03	0.05	361	1	0.96	0.000001	1.71E-05	1.1	10	0.25	70	0.85	5.72E-07	0.57
162	1.54619	0.03	0.05	361	1	0.96	0.000001	1.80E-05	1.1	10	0.25	70	0.85	6.01E-07	0.60
163	1.62572	0.03	0.05	361	1	0.96	0.000001	1.89E-05	1.1	10	0.25	70	0.85	6.32E-07	0.63
164	1.71018	0.03	0.06	361	1	0.96	0.000001	1.99E-05	1.1	10	0.25	70	0.85	6.64E-07	0.66
165	1.80017	0.03	0.06	361	1	0.96	0.000001	2.09E-05	1.1	10	0.25	70	0.85	6.99E-07	0.70
166	1.89674	0.03	0.06	361	1	0.96	0.000001	2.21E-05	1.1	10	0.25	70	0.85	7.37E-07	0.74
167	1.60225	0.03	0.05	361	1	0.96	0.000001	1.86E-05	1.1	10	0.25	70	0.85	6.23E-07	0.62
168	1.69132	0.03	0.06	361	1	0.96	0.000001	1.97E-05	1.1	10	0.25	70	0.85	6.57E-07	0.66
169	1.78401	0.03	0.06	361	1	0.96	0.000001	2.08E-05	1.1	10	0.25	70	0.85	6.93E-07	0.69
170	1.88308	0.03	0.06	361	1	0.96	0.000001	2.19E-05	1.1	10	0.25	70	0.85	7.32E-07	0.73
171	1.98942	0.03	0.07	361	1	0.96	0.000001	2.31E-05	1.1	10	0.25	70	0.85	7.73E-07	0.77
172	2.10088	0.03	0.07	361	1	0.96	0.000001	2.44E-05	1.1	10	0.25	70	0.85	8.16E-07	0.82
173	1.75607	0.03	0.06	361	1	0.96	0.000001	2.04E-05	1.1	10	0.25	70	0.85	6.82E-07	0.68
174	1.85639	0.03	0.06	361	1	0.96	0.000001	2.16E-05	1.1	10	0.25	70	0.85	7.21E-07	0.72
175	1.96498	0.03	0.07	361	1	0.96	0.000001	2.29E-05	1.1	10	0.25	70	0.85	7.63E-07	0.76
176	2.08272	0.03	0.07	361	1	0.96	0.000001	2.42E-05	1.1	10	0.25	70	0.85	8.09E-07	0.81
177	2.20711	0.03	0.07	361	1	0.96	0.000001	2.57E-05	1.1	10	0.25	70	0.85	8.58E-07	0.86
178	1.92977	0.03	0.06	361	1	0.96	0.000001	2.25E-05	1.1	10	0.25	70	0.85	7.50E-07	0.75
179	2.04686	0.03	0.07	361	1	0.96	0.000001	2.38E-05	1.1	10	0.25	70	0.85	7.95E-07	0.80
180	2.1788	0.03	0.07	361	1	0.96	0.000001	2.54E-05	1.1	10	0.25	70	0.85	8.47E-07	0.85
181	2.31568	0.03	0.08	361	1	0.96	0.000001	2.69E-05	1.1	10	0.25	70	0.85	9.00E-07	0.90
182	2.47233	0.03	0.08	361	1	0.96	0.000001	2.88E-05	1.1	10	0.25	70	0.85	9.61E-07	0.96
183	2.13501	0.03	0.07	361	1	0.96	0.000001	2.48E-05	1.1	10	0.25	70	0.85	8.30E-07	0.83
184	2.27223	0.03	0.08	361	1	0.96	0.000001	2.64E-05	1.1	10	0.25	70	0.85	8.83E-07	0.88
185	2.42837	0.03	0.08	361	1	0.96	0.000001	2.83E-05	1.1	10	0.25	70	0.85	9.44E-07	0.94
186	2.60208	0.03	0.09	361	1	0.96	0.000001	3.03E-05	1.1	10	0.25	70	0.85	1.01E-06	1.01
187	2.79163	0.03	0.09	361	1	0.96	0.000001	3.25E-05	1.1	10	0.25	70	0.85	1.08E-06	1.08
188	2.37408	0.03	0.08	361	1	0.96	0.000001	2.76E-05	1.1	10	0.25	70	0.85	9.22E-07	0.92
189	2.54821	0.03	0.09	361	1	0.96	0.000001	2.96E-05	1.1	10	0.25	70	0.85	9.90E-07	0.99
190	2.73315	0.03	0.09	361	1	0.96	0.000001	3.18E-05	1.1	10	0.25	70	0.85	1.06E-06	1.06
191	2.94781	0.03	0.10	361	1	0.96	0.000001	3.43E-05	1.1	10	0.25	70	0.85	1.15E-06	1.15
192	3.18176	0.03	0.11	361	1	0.96	0.000001	3.70E-05	1.1	10	0.25	70	0.85	1.24E-06	1.24

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
193	2.66375	0.03	0.09	361	1	0.96	0.000001	3.10E-05	1.1	10	0.25	70	0.85	1.03E-06	1.03
194	2.875	0.03	0.10	361	1	0.96	0.000001	3.35E-05	1.1	10	0.25	70	0.85	1.12E-06	1.12
195	3.10293	0.03	0.10	361	1	0.96	0.000001	3.61E-05	1.1	10	0.25	70	0.85	1.21E-06	1.21
196	3.37413	0.03	0.11	361	1	0.96	0.000001	3.93E-05	1.1	10	0.25	70	0.85	1.31E-06	1.31
197	3.67077	0.03	0.12	361	1	0.96	0.000001	4.27E-05	1.1	10	0.25	70	0.85	1.43E-06	1.43
198	3.01108	0.03	0.10	361	1	0.96	0.000001	3.50E-05	1.1	10	0.25	70	0.85	1.17E-06	1.17
199	3.27121	0.03	0.11	361	1	0.96	0.000001	3.81E-05	1.1	10	0.25	70	0.85	1.27E-06	1.27
200	3.56278	0.03	0.12	361	1	0.96	0.000001	4.15E-05	1.1	10	0.25	70	0.85	1.38E-06	1.38
201	3.91156	0.03	0.13	361	1	0.96	0.000001	4.55E-05	1.1	10	0.25	70	0.85	1.52E-06	1.52
202	3.43359	0.03	0.12	361	1	0.96	0.000001	4.00E-05	1.1	10	0.25	70	0.85	1.33E-06	1.33
203	3.75467	0.03	0.13	361	1	0.96	0.000001	4.37E-05	1.1	10	0.25	70	0.85	1.46E-06	1.46
204	4.15137	0.03	0.14	361	1	0.96	0.000001	4.83E-05	1.1	10	0.25	70	0.85	1.61E-06	1.61
205	4.59785	0.03	0.15	361	1	0.96	0.000001	5.35E-05	1.1	10	0.25	70	0.85	1.79E-06	1.79
206	3.94684	0.03	0.13	361	1	0.96	0.000001	4.59E-05	1.1	10	0.25	70	0.85	1.53E-06	1.53
207	4.38038	0.03	0.15	361	1	0.96	0.000001	5.10E-05	1.1	10	0.25	70	0.85	1.70E-06	1.70
208	4.88393	0.03	0.16	361	1	0.96	0.000001	5.68E-05	1.1	10	0.25	70	0.85	1.90E-06	1.90
209	5.49774	0.03	0.18	361	1	0.96	0.000001	6.40E-05	1.1	10	0.25	70	0.85	2.14E-06	2.14
210	4.12983	0.03	0.14	361	1	0.96	0.000001	4.81E-05	1.1	10	0.25	70	0.85	1.60E-06	1.60
211	4.61539	0.03	0.16	361	1	0.96	0.000001	5.37E-05	1.1	10	0.25	70	0.85	1.79E-06	1.79
212	5.18281	0.03	0.17	361	1	0.96	0.000001	6.03E-05	1.1	10	0.25	70	0.85	2.01E-06	2.01
213	5.87009	0.03	0.20	361	1	0.96	0.000001	6.83E-05	1.1	10	0.25	70	0.85	2.28E-06	2.28
214	6.71395	0.03	0.23	361	1	0.96	0.000001	7.81E-05	1.1	10	0.25	70	0.85	2.61E-06	2.61
215	4.30813	0.03	0.14	361	1	0.96	0.000001	5.01E-05	1.1	10	0.25	70	0.85	1.67E-06	1.67
216	4.82115	0.03	0.16	361	1	0.96	0.000001	5.61E-05	1.1	10	0.25	70	0.85	1.87E-06	1.87
217	5.44025	0.03	0.18	361	1	0.96	0.000001	6.33E-05	1.1	10	0.25	70	0.85	2.11E-06	2.11
218	6.20271	0.03	0.21	361	1	0.96	0.000001	7.22E-05	1.1	10	0.25	70	0.85	2.41E-06	2.41
219	7.16527	0.03	0.24	361	1	0.96	0.000001	8.34E-05	1.1	10	0.25	70	0.85	2.78E-06	2.78
220	5.03099	0.03	0.17	361	1	0.96	0.000001	5.85E-05	1.1	10	0.25	70	0.85	1.95E-06	1.95
221	5.70233	0.03	0.19	361	1	0.96	0.000001	6.63E-05	1.1	10	0.25	70	0.85	2.22E-06	2.22
222	6.53367	0.03	0.22	361	1	0.96	0.000001	7.60E-05	1.1	10	0.25	70	0.85	2.54E-06	2.54
223	7.58936	0.03	0.26	361	1	0.96	0.000001	8.83E-05	1.1	10	0.25	70	0.85	2.95E-06	2.95
224	8.9843	0.03	0.30	361	1	0.96	0.000001	1.05E-04	1.1	10	0.25	70	0.85	3.49E-06	3.49

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH			
225	5.91832	0.03	0.20	361	1	0.96	0.000001	6.89E-05	1.1	10	0.25	70	0.85	2.30E-06	2.30	
226	6.80491	0.03	0.23	361	1	0.96	0.000001	7.92E-05	1.1	10	0.25	70	0.85	2.64E-06	2.64	
227	7.92864	0.03	0.27	361	1	0.96	0.000001	9.23E-05	1.1	10	0.25	70	0.85	3.08E-06	3.08	
228	9.39693	0.03	0.32	361	1	0.96	0.000001	1.09E-04	1.1	10	0.25	70	0.85	3.65E-06	3.65	
229	11.40174	0.03	0.38	361	1	0.96	0.000001	1.33E-04	1.1	10	0.25	70	0.85	4.43E-06	4.43	
230	7.0254	0.03	0.24	361	1	0.96	0.000001	8.17E-05	1.1	10	0.25	70	0.85	2.73E-06	2.73	
231	8.20122	0.03	0.28	361	1	0.96	0.000001	9.54E-05	1.1	10	0.25	70	0.85	3.19E-06	3.19	
232	9.68952	0.03	0.33	361	1	0.96	0.000001	1.13E-04	1.1	10	0.25	70	0.85	3.76E-06	3.76	
233	11.74266	0.03	0.39	361	1	0.96	0.000001	1.37E-04	1.1	10	0.25	70	0.85	4.56E-06	4.56	
234	14.56883	0.03	0.49	361	1	0.96	0.000001	1.70E-04	1.1	10	0.25	70	0.85	5.66E-06	5.66	
235	8.36042	0.03	0.28	361	1	0.96	0.000001	9.73E-05	1.1	10	0.25	70	0.85	3.25E-06	3.25	
236	9.82906	0.03	0.33	361	1	0.96	0.000001	1.14E-04	1.1	10	0.25	70	0.85	3.82E-06	3.82	
237	11.82504	0.03	0.40	361	1	0.96	0.000001	1.38E-04	1.1	10	0.25	70	0.85	4.59E-06	4.59	
238	14.55211	0.03	0.49	361	1	0.96	0.000001	1.69E-04	1.1	10	0.25	70	0.85	5.65E-06	5.65	
239	18.21231	0.03	0.61	361	1	0.96	0.000001	2.12E-04	1.1	10	0.25	70	0.85	7.08E-06	7.08	
240	9.87348	0.03	0.33	361	1	0.96	0.000001	1.15E-04	1.1	10	0.25	70	0.85	3.84E-06	3.84	
241	11.84772	0.03	0.40	361	1	0.96	0.000001	1.38E-04	1.1	10	0.25	70	0.85	4.60E-06	4.60	
242	14.26521	0.03	0.48	361	1	0.96	0.000001	1.66E-04	1.1	10	0.25	70	0.85	5.54E-06	5.54	
243	17.72742	0.03	0.60	361	1	0.96	0.000001	2.06E-04	1.1	10	0.25	70	0.85	6.89E-06	6.89	
244	9.81145	0.03	0.33	361	1	0.96	0.000001	1.14E-04	1.1	10	0.25	70	0.85	3.81E-06	3.81	
245	11.70505	0.03	0.39	361	1	0.96	0.000001	1.36E-04	1.1	10	0.25	70	0.85	4.55E-06	4.55	
246	14.05355	0.03	0.47	361	1	0.96	0.000001	1.64E-04	1.1	10	0.25	70	0.85	5.46E-06	5.46	
247	17.05549	0.03	0.57	361	1	0.96	0.000001	1.98E-04	1.1	10	0.25	70	0.85	6.63E-06	6.63	
248	21.39562	0.03	0.72	361	1	0.96	0.000001	2.49E-04	1.1	10	0.25	70	0.85	8.31E-06	8.31	
249	11.46461	0.03	0.39	361	1	0.96	0.000001	1.33E-04	1.1	10	0.25	70	0.85	4.45E-06	4.45	
250	13.70621	0.03	0.46	361	1	0.96	0.000001	1.59E-04	1.1	10	0.25	70	0.85	5.33E-06	5.33	
251	16.51477	0.03	0.56	361	1	0.96	0.000001	1.92E-04	1.1	10	0.25	70	0.85	6.42E-06	6.42	
252	20.47044	0.03	0.69	361	1	0.96	0.000001	2.38E-04	1.1	10	0.25	70	0.85	7.95E-06	7.95	
253	26.08833	0.03	0.88	361	1	0.96	0.000001	3.04E-04	1.1	10	0.25	70	0.85	1.01E-05	10.14	
254	11.15902	0.03	0.38	361	1	0.96	0.000001	1.30E-04	1.1	10	0.25	70	0.85	4.34E-06	4.34	
255	13.21699	0.03	0.44	361	1	0.96	0.000001	1.54E-04	1.1	10	0.25	70	0.85	5.14E-06	5.14	
256	16.03973	0.03	0.54	361	1	0.96	0.000001	1.87E-04	1.1	10	0.25	70	0.85	6.23E-06	6.23	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
257	19.63125	0.03	0.66	361	1	0.96	0.000001	2.28E-04	1.1	10	0.25	70	0.85	7.63E-06	7.63
258	25.015	0.03	0.84	361	1	0.96	0.000001	2.91E-04	1.1	10	0.25	70	0.85	9.72E-06	9.72
259	32.72408	0.03	1.10	361	1	0.96	0.000001	3.81E-04	1.1	10	0.25	70	0.85	1.27E-05	12.71
260	12.74653	0.03	0.43	361	1	0.96	0.000001	1.48E-04	1.1	10	0.25	70	0.85	4.95E-06	4.95
261	15.38643	0.03	0.52	361	1	0.96	0.000001	1.79E-04	1.1	10	0.25	70	0.85	5.98E-06	5.98
262	18.93009	0.03	0.64	361	1	0.96	0.000001	2.20E-04	1.1	10	0.25	70	0.85	7.36E-06	7.36
263	23.71591	0.03	0.80	361	1	0.96	0.000001	2.76E-04	1.1	10	0.25	70	0.85	9.21E-06	9.21
264	31.73581	0.03	1.07	361	1	0.96	0.000001	3.69E-04	1.1	10	0.25	70	0.85	1.23E-05	12.33
265	14.64992	0.03	0.49	361	1	0.96	0.000001	1.70E-04	1.1	10	0.25	70	0.85	5.69E-06	5.69
266	17.89094	0.03	0.60	361	1	0.96	0.000001	2.08E-04	1.1	10	0.25	70	0.85	6.95E-06	6.95
267	22.30373	0.03	0.75	361	1	0.96	0.000001	2.60E-04	1.1	10	0.25	70	0.85	8.67E-06	8.67
268	29.63923	0.03	1.00	361	1	0.96	0.000001	3.45E-04	1.1	10	0.25	70	0.85	1.15E-05	11.52
269	42.02096	0.03	1.41	361	1	0.96	0.000001	4.89E-04	1.1	10	0.25	70	0.85	1.63E-05	16.33
270	16.78899	0.03	0.56	361	1	0.96	0.000001	1.95E-04	1.1	10	0.25	70	0.85	6.52E-06	6.52
271	20.78876	0.03	0.70	361	1	0.96	0.000001	2.42E-04	1.1	10	0.25	70	0.85	8.08E-06	8.08
272	26.86772	0.03	0.90	361	1	0.96	0.000001	3.13E-04	1.1	10	0.25	70	0.85	1.04E-05	10.44
273	37.62679	0.03	1.26	361	1	0.96	0.000001	4.38E-04	1.1	10	0.25	70	0.85	1.46E-05	14.62
274	15.40937	0.03	0.52	361	1	0.96	0.000001	1.79E-04	1.1	10	0.25	70	0.85	5.99E-06	5.99
275	18.81102	0.03	0.63	361	1	0.96	0.000001	2.19E-04	1.1	10	0.25	70	0.85	7.31E-06	7.31
276	23.76149	0.03	0.80	361	1	0.96	0.000001	2.76E-04	1.1	10	0.25	70	0.85	9.23E-06	9.23
277	31.14801	0.03	1.05	361	1	0.96	0.000001	3.62E-04	1.1	10	0.25	70	0.85	1.21E-05	12.10
278	44.33099	0.03	1.49	361	1	0.96	0.000001	5.16E-04	1.1	10	0.25	70	0.85	1.72E-05	17.22
279	16.67695	0.03	0.56	361	1	0.96	0.000001	1.94E-04	1.1	10	0.25	70	0.85	6.48E-06	6.48
280	20.3474	0.03	0.68	361	1	0.96	0.000001	2.37E-04	1.1	10	0.25	70	0.85	7.91E-06	7.91
281	25.08922	0.03	0.84	361	1	0.96	0.000001	2.92E-04	1.1	10	0.25	70	0.85	9.75E-06	9.75
282	32.69829	0.03	1.10	361	1	0.96	0.000001	3.80E-04	1.1	10	0.25	70	0.85	1.27E-05	12.70
283	14.32227	0.03	0.48	361	1	0.96	0.000001	1.67E-04	1.1	10	0.25	70	0.85	5.56E-06	5.56
284	16.87758	0.03	0.57	361	1	0.96	0.000001	1.96E-04	1.1	10	0.25	70	0.85	6.56E-06	6.56
285	20.00997	0.03	0.67	361	1	0.96	0.000001	2.33E-04	1.1	10	0.25	70	0.85	7.77E-06	7.77
286	23.92894	0.03	0.80	361	1	0.96	0.000001	2.78E-04	1.1	10	0.25	70	0.85	9.30E-06	9.30
287	28.84843	0.03	0.97	361	1	0.96	0.000001	3.36E-04	1.1	10	0.25	70	0.85	1.12E-05	11.21
288	12.41733	0.03	0.42	361	1	0.96	0.000001	1.44E-04	1.1	10	0.25	70	0.85	4.82E-06	4.82

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
289	14.19225	0.03	0.48	361	1	0.96	0.000001	1.65E-04	1.1	10	0.25	70	0.85	5.51E-06	5.51
290	16.21762	0.03	0.55	361	1	0.96	0.000001	1.89E-04	1.1	10	0.25	70	0.85	6.30E-06	6.30
291	18.52453	0.03	0.62	361	1	0.96	0.000001	2.16E-04	1.1	10	0.25	70	0.85	7.20E-06	7.20
292	21.17436	0.03	0.71	361	1	0.96	0.000001	2.46E-04	1.1	10	0.25	70	0.85	8.23E-06	8.23
293	10.59617	0.03	0.36	361	1	0.96	0.000001	1.23E-04	1.1	10	0.25	70	0.85	4.12E-06	4.12
294	11.80874	0.03	0.40	361	1	0.96	0.000001	1.37E-04	1.1	10	0.25	70	0.85	4.59E-06	4.59
295	13.0899	0.03	0.44	361	1	0.96	0.000001	1.52E-04	1.1	10	0.25	70	0.85	5.09E-06	5.09
296	14.50639	0.03	0.49	361	1	0.96	0.000001	1.69E-04	1.1	10	0.25	70	0.85	5.64E-06	5.64
297	16.17745	0.03	0.54	361	1	0.96	0.000001	1.88E-04	1.1	10	0.25	70	0.85	6.29E-06	6.29
298	9.19837	0.03	0.31	361	1	0.96	0.000001	1.07E-04	1.1	10	0.25	70	0.85	3.57E-06	3.57
299	10.05283	0.03	0.34	361	1	0.96	0.000001	1.17E-04	1.1	10	0.25	70	0.85	3.91E-06	3.91
300	10.88803	0.03	0.37	361	1	0.96	0.000001	1.27E-04	1.1	10	0.25	70	0.85	4.23E-06	4.23
301	11.8423	0.03	0.40	361	1	0.96	0.000001	1.38E-04	1.1	10	0.25	70	0.85	4.60E-06	4.60
302	13.01904	0.03	0.44	361	1	0.96	0.000001	1.51E-04	1.1	10	0.25	70	0.85	5.06E-06	5.06
303	14.19792	0.03	0.48	361	1	0.96	0.000001	1.65E-04	1.1	10	0.25	70	0.85	5.52E-06	5.52
304	7.97911	0.03	0.27	361	1	0.96	0.000001	9.28E-05	1.1	10	0.25	70	0.85	3.10E-06	3.10
305	8.61834	0.03	0.29	361	1	0.96	0.000001	1.00E-04	1.1	10	0.25	70	0.85	3.35E-06	3.35
306	9.224	0.03	0.31	361	1	0.96	0.000001	1.07E-04	1.1	10	0.25	70	0.85	3.58E-06	3.58
307	9.91786	0.03	0.33	361	1	0.96	0.000001	1.15E-04	1.1	10	0.25	70	0.85	3.85E-06	3.85
308	10.73741	0.03	0.36	361	1	0.96	0.000001	1.25E-04	1.1	10	0.25	70	0.85	4.17E-06	4.17
309	11.54285	0.03	0.39	361	1	0.96	0.000001	1.34E-04	1.1	10	0.25	70	0.85	4.48E-06	4.48
310	6.99278	0.03	0.24	361	1	0.96	0.000001	8.14E-05	1.1	10	0.25	70	0.85	2.72E-06	2.72
311	7.47738	0.03	0.25	361	1	0.96	0.000001	8.70E-05	1.1	10	0.25	70	0.85	2.91E-06	2.91
312	7.94073	0.03	0.27	361	1	0.96	0.000001	9.24E-05	1.1	10	0.25	70	0.85	3.09E-06	3.09
313	8.48299	0.03	0.29	361	1	0.96	0.000001	9.87E-05	1.1	10	0.25	70	0.85	3.30E-06	3.30
314	9.09383	0.03	0.31	361	1	0.96	0.000001	1.06E-04	1.1	10	0.25	70	0.85	3.53E-06	3.53
315	9.7008	0.03	0.33	361	1	0.96	0.000001	1.13E-04	1.1	10	0.25	70	0.85	3.77E-06	3.77
316	6.19291	0.03	0.21	361	1	0.96	0.000001	7.21E-05	1.1	10	0.25	70	0.85	2.41E-06	2.41
317	6.55656	0.03	0.22	361	1	0.96	0.000001	7.63E-05	1.1	10	0.25	70	0.85	2.55E-06	2.55
318	6.89178	0.03	0.23	361	1	0.96	0.000001	8.02E-05	1.1	10	0.25	70	0.85	2.68E-06	2.68
319	7.29115	0.03	0.25	361	1	0.96	0.000001	8.48E-05	1.1	10	0.25	70	0.85	2.83E-06	2.83
320	7.75659	0.03	0.26	361	1	0.96	0.000001	9.03E-05	1.1	10	0.25	70	0.85	3.01E-06	3.01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
321	8.19085	0.03	0.28	361	1	0.96	0.000001	9.53E-05	1.1	10	0.25	70	0.85	3.18E-06	3.18
322	8.66385	0.03	0.29	361	1	0.96	0.000001	1.01E-04	1.1	10	0.25	70	0.85	3.37E-06	3.37
323	5.5005	0.03	0.18	361	1	0.96	0.000001	6.40E-05	1.1	10	0.25	70	0.85	2.14E-06	2.14
324	5.80003	0.03	0.19	361	1	0.96	0.000001	6.75E-05	1.1	10	0.25	70	0.85	2.25E-06	2.25
325	6.06684	0.03	0.20	361	1	0.96	0.000001	7.06E-05	1.1	10	0.25	70	0.85	2.36E-06	2.36
326	6.37655	0.03	0.21	361	1	0.96	0.000001	7.42E-05	1.1	10	0.25	70	0.85	2.48E-06	2.48
327	6.74668	0.03	0.23	361	1	0.96	0.000001	7.85E-05	1.1	10	0.25	70	0.85	2.62E-06	2.62
328	7.09497	0.03	0.24	361	1	0.96	0.000001	8.26E-05	1.1	10	0.25	70	0.85	2.76E-06	2.76
329	7.45358	0.03	0.25	361	1	0.96	0.000001	8.67E-05	1.1	10	0.25	70	0.85	2.90E-06	2.90
330	4.91092	0.03	0.17	361	1	0.96	0.000001	5.71E-05	1.1	10	0.25	70	0.85	1.91E-06	1.91
331	5.1437	0.03	0.17	361	1	0.96	0.000001	5.98E-05	1.1	10	0.25	70	0.85	2.00E-06	2.00
332	5.38464	0.03	0.18	361	1	0.96	0.000001	6.27E-05	1.1	10	0.25	70	0.85	2.09E-06	2.09
333	5.63956	0.03	0.19	361	1	0.96	0.000001	6.56E-05	1.1	10	0.25	70	0.85	2.19E-06	2.19
334	5.90758	0.03	0.20	361	1	0.96	0.000001	6.87E-05	1.1	10	0.25	70	0.85	2.30E-06	2.30
335	6.1907	0.03	0.21	361	1	0.96	0.000001	7.20E-05	1.1	10	0.25	70	0.85	2.41E-06	2.41
336	6.50453	0.03	0.22	361	1	0.96	0.000001	7.57E-05	1.1	10	0.25	70	0.85	2.53E-06	2.53
337	4.45376	0.03	0.15	361	1	0.96	0.000001	5.18E-05	1.1	10	0.25	70	0.85	1.73E-06	1.73
338	4.64585	0.03	0.16	361	1	0.96	0.000001	5.41E-05	1.1	10	0.25	70	0.85	1.81E-06	1.81
339	4.83896	0.03	0.16	361	1	0.96	0.000001	5.63E-05	1.1	10	0.25	70	0.85	1.88E-06	1.88
340	5.04006	0.03	0.17	361	1	0.96	0.000001	5.86E-05	1.1	10	0.25	70	0.85	1.96E-06	1.96
341	5.28027	0.03	0.18	361	1	0.96	0.000001	6.14E-05	1.1	10	0.25	70	0.85	2.05E-06	2.05
342	5.51375	0.03	0.19	361	1	0.96	0.000001	6.42E-05	1.1	10	0.25	70	0.85	2.14E-06	2.14
343	5.74975	0.03	0.19	361	1	0.96	0.000001	6.69E-05	1.1	10	0.25	70	0.85	2.23E-06	2.23
344	4.04382	0.03	0.14	361	1	0.96	0.000001	4.71E-05	1.1	10	0.25	70	0.85	1.57E-06	1.57
345	4.20487	0.03	0.14	361	1	0.96	0.000001	4.89E-05	1.1	10	0.25	70	0.85	1.63E-06	1.63
346	4.36542	0.03	0.15	361	1	0.96	0.000001	5.08E-05	1.1	10	0.25	70	0.85	1.70E-06	1.70
347	4.54276	0.03	0.15	361	1	0.96	0.000001	5.29E-05	1.1	10	0.25	70	0.85	1.77E-06	1.77
348	4.72262	0.03	0.16	361	1	0.96	0.000001	5.49E-05	1.1	10	0.25	70	0.85	1.83E-06	1.83
349	4.90761	0.03	0.16	361	1	0.96	0.000001	5.71E-05	1.1	10	0.25	70	0.85	1.91E-06	1.91
350	5.11568	0.03	0.17	361	1	0.96	0.000001	5.95E-05	1.1	10	0.25	70	0.85	1.99E-06	1.99
351	3.68606	0.03	0.12	361	1	0.96	0.000001	4.29E-05	1.1	10	0.25	70	0.85	1.43E-06	1.43
352	3.82488	0.03	0.13	361	1	0.96	0.000001	4.45E-05	1.1	10	0.25	70	0.85	1.49E-06	1.49

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
353	3.95619	0.03	0.13	361	1	0.96	0.000001	4.60E-05	1.1	10	0.25	70	0.85	1.54E-06	1.54
354	4.09702	0.03	0.14	361	1	0.96	0.000001	4.77E-05	1.1	10	0.25	70	0.85	1.59E-06	1.59
355	4.26607	0.03	0.14	361	1	0.96	0.000001	4.96E-05	1.1	10	0.25	70	0.85	1.66E-06	1.66
356	4.42281	0.03	0.15	361	1	0.96	0.000001	5.15E-05	1.1	10	0.25	70	0.85	1.72E-06	1.72
357	4.5875	0.03	0.15	361	1	0.96	0.000001	5.34E-05	1.1	10	0.25	70	0.85	1.78E-06	1.78
358	3.37102	0.03	0.11	361	1	0.96	0.000001	3.92E-05	1.1	10	0.25	70	0.85	1.31E-06	1.31
359	3.48632	0.03	0.12	361	1	0.96	0.000001	4.06E-05	1.1	10	0.25	70	0.85	1.35E-06	1.35
360	3.60955	0.03	0.12	361	1	0.96	0.000001	4.20E-05	1.1	10	0.25	70	0.85	1.40E-06	1.40
361	3.7347	0.03	0.13	361	1	0.96	0.000001	4.35E-05	1.1	10	0.25	70	0.85	1.45E-06	1.45
362	3.87043	0.03	0.13	361	1	0.96	0.000001	4.50E-05	1.1	10	0.25	70	0.85	1.50E-06	1.50
363	4.00117	0.03	0.13	361	1	0.96	0.000001	4.66E-05	1.1	10	0.25	70	0.85	1.55E-06	1.55
364	4.1413	0.03	0.14	361	1	0.96	0.000001	4.82E-05	1.1	10	0.25	70	0.85	1.61E-06	1.61
365	3.11044	0.03	0.10	361	1	0.96	0.000001	3.62E-05	1.1	10	0.25	70	0.85	1.21E-06	1.21
366	3.20812	0.03	0.11	361	1	0.96	0.000001	3.73E-05	1.1	10	0.25	70	0.85	1.25E-06	1.25
367	3.31189	0.03	0.11	361	1	0.96	0.000001	3.85E-05	1.1	10	0.25	70	0.85	1.29E-06	1.29
368	3.42196	0.03	0.12	361	1	0.96	0.000001	3.98E-05	1.1	10	0.25	70	0.85	1.33E-06	1.33
369	3.53178	0.03	0.12	361	1	0.96	0.000001	4.11E-05	1.1	10	0.25	70	0.85	1.37E-06	1.37
370	3.65247	0.03	0.12	361	1	0.96	0.000001	4.25E-05	1.1	10	0.25	70	0.85	1.42E-06	1.42
371	3.76418	0.03	0.13	361	1	0.96	0.000001	4.38E-05	1.1	10	0.25	70	0.85	1.46E-06	1.46
372	2.87113	0.03	0.10	361	1	0.96	0.000001	3.34E-05	1.1	10	0.25	70	0.85	1.12E-06	1.12
373	2.95765	0.03	0.10	361	1	0.96	0.000001	3.44E-05	1.1	10	0.25	70	0.85	1.15E-06	1.15
374	3.04595	0.03	0.10	361	1	0.96	0.000001	3.54E-05	1.1	10	0.25	70	0.85	1.18E-06	1.18
375	3.14069	0.03	0.11	361	1	0.96	0.000001	3.65E-05	1.1	10	0.25	70	0.85	1.22E-06	1.22
376	3.23581	0.03	0.11	361	1	0.96	0.000001	3.77E-05	1.1	10	0.25	70	0.85	1.26E-06	1.26
377	3.34134	0.03	0.11	361	1	0.96	0.000001	3.89E-05	1.1	10	0.25	70	0.85	1.30E-06	1.30
378	3.44001	0.03	0.12	361	1	0.96	0.000001	4.00E-05	1.1	10	0.25	70	0.85	1.34E-06	1.34
379	62.92378	0.03	2.12	361	1	0.96	0.000001	7.32E-04	1.1	10	0.25	70	0.85	2.44E-05	24.45
380	84.15523	0.03	2.83	361	1	0.96	0.000001	9.79E-04	1.1	10	0.25	70	0.85	3.27E-05	32.70
381	46.29148	0.03	1.56	361	1	0.96	0.000001	5.39E-04	1.1	10	0.25	70	0.85	1.80E-05	17.99
382	49.47014	0.03	1.66	361	1	0.96	0.000001	5.76E-04	1.1	10	0.25	70	0.85	1.92E-05	19.22
383	34.31211	0.03	1.15	361	1	0.96	0.000001	3.99E-04	1.1	10	0.25	70	0.85	1.33E-05	13.33
384	25.18519	0.03	0.85	361	1	0.96	0.000001	2.93E-04	1.1	10	0.25	70	0.85	9.79E-06	9.79

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Constant1	Risk from 3rd Trimester							(3rd Tri)	(Risk/Mill)
								DOSE	CPF	ASF	ED	AT	FAH			
385	20.48881	0.03	0.69	361	1	0.96	0.000001	2.38E-04	1.1	10	0.25	70	0.85	7.96E-06	7.96	
386	16.51626	0.03	0.56	361	1	0.96	0.000001	1.92E-04	1.1	10	0.25	70	0.85	6.42E-06	6.42	
387	13.77677	0.03	0.46	361	1	0.96	0.000001	1.60E-04	1.1	10	0.25	70	0.85	5.35E-06	5.35	
388	11.78176	0.03	0.40	361	1	0.96	0.000001	1.37E-04	1.1	10	0.25	70	0.85	4.58E-06	4.58	
389	10.20464	0.03	0.34	361	1	0.96	0.000001	1.19E-04	1.1	10	0.25	70	0.85	3.96E-06	3.96	
390	9.12121	0.03	0.31	361	1	0.96	0.000001	1.06E-04	1.1	10	0.25	70	0.85	3.54E-06	3.54	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total	
1	0.010995	0.01	1090	1	0.96	0.000001	1.06E-05	1.1	10	0.11	70	0.85	1.59E-07	0.16	0.518053	Max 47.21
2	0.010995	0.01	1090	1	0.96	0.000001	1.14E-05	1.1	10	0.11	70	0.85	1.71E-07	0.17	0.557752	
3	0.010995	0.01	1090	1	0.96	0.000001	1.03E-05	1.1	10	0.11	70	0.85	1.55E-07	0.15	0.503389	
4	0.010995	0.01	1090	1	0.96	0.000001	1.12E-05	1.1	10	0.11	70	0.85	1.67E-07	0.17	0.544294	
5	0.010995	0.01	1090	1	0.96	0.000001	1.21E-05	1.1	10	0.11	70	0.85	1.81E-07	0.18	0.589643	
6	0.010995	0.01	1090	1	0.96	0.000001	1.31E-05	1.1	10	0.11	70	0.85	1.96E-07	0.20	0.639175	
7	0.010995	0.01	1090	1	0.96	0.000001	1.08E-05	1.1	10	0.11	70	0.85	1.62E-07	0.16	0.527034	
8	0.010995	0.01	1090	1	0.96	0.000001	1.17E-05	1.1	10	0.11	70	0.85	1.76E-07	0.18	0.571462	
9	0.010995	0.01	1090	1	0.96	0.000001	1.27E-05	1.1	10	0.11	70	0.85	1.91E-07	0.19	0.621382	
10	0.010995	0.01	1090	1	0.96	0.000001	1.39E-05	1.1	10	0.11	70	0.85	2.08E-07	0.21	0.677831	
11	0.010995	0.01	1090	1	0.96	0.000001	1.52E-05	1.1	10	0.11	70	0.85	2.28E-07	0.23	0.741932	
12	0.010995	0.01	1090	1	0.96	0.000001	1.22E-05	1.1	10	0.11	70	0.85	1.83E-07	0.18	0.596997	
13	0.010995	0.01	1090	1	0.96	0.000001	1.34E-05	1.1	10	0.11	70	0.85	2.01E-07	0.20	0.65238	
14	0.010995	0.01	1090	1	0.96	0.000001	1.47E-05	1.1	10	0.11	70	0.85	2.20E-07	0.22	0.715791	
15	0.010995	0.02	1090	1	0.96	0.000001	1.62E-05	1.1	10	0.11	70	0.85	2.42E-07	0.24	0.788688	
16	0.010995	0.02	1090	1	0.96	0.000001	1.78E-05	1.1	10	0.11	70	0.85	2.68E-07	0.27	0.870762	
17	0.010995	0.01	1090	1	0.96	0.000001	1.40E-05	1.1	10	0.11	70	0.85	2.10E-07	0.21	0.684086	
18	0.010995	0.01	1090	1	0.96	0.000001	1.55E-05	1.1	10	0.11	70	0.85	2.32E-07	0.23	0.755255	
19	0.010995	0.02	1090	1	0.96	0.000001	1.71E-05	1.1	10	0.11	70	0.85	2.57E-07	0.26	0.837054	
20	0.010995	0.02	1090	1	0.96	0.000001	1.91E-05	1.1	10	0.11	70	0.85	2.86E-07	0.29	0.931537	
21	0.010995	0.02	1090	1	0.96	0.000001	2.14E-05	1.1	10	0.11	70	0.85	3.21E-07	0.32	1.04415	
22	0.010995	0.02	1090	1	0.96	0.000001	1.62E-05	1.1	10	0.11	70	0.85	2.44E-07	0.24	0.793064	
23	0.010995	0.02	1090	1	0.96	0.000001	1.81E-05	1.1	10	0.11	70	0.85	2.72E-07	0.27	0.884741	
24	0.010995	0.02	1090	1	0.96	0.000001	2.03E-05	1.1	10	0.11	70	0.85	3.05E-07	0.30	0.991178	
25	0.010995	0.02	1090	1	0.96	0.000001	2.30E-05	1.1	10	0.11	70	0.85	3.44E-07	0.34	1.120637	
26	0.010995	0.02	1090	1	0.96	0.000001	2.61E-05	1.1	10	0.11	70	0.85	3.92E-07	0.39	1.275114	
27	0.010995	0.02	1090	1	0.96	0.000001	1.90E-05	1.1	10	0.11	70	0.85	2.86E-07	0.29	0.929888	
28	0.010995	0.02	1090	1	0.96	0.000001	2.15E-05	1.1	10	0.11	70	0.85	3.22E-07	0.32	1.04903	
29	0.010995	0.02	1090	1	0.96	0.000001	2.45E-05	1.1	10	0.11	70	0.85	3.68E-07	0.37	1.196927	
30	0.010995	0.03	1090	1	0.96	0.000001	2.82E-05	1.1	10	0.11	70	0.85	4.24E-07	0.42	1.378353	
31	0.010995	0.03	1090	1	0.96	0.000001	3.29E-05	1.1	10	0.11	70	0.85	4.93E-07	0.49	1.604662	
32	0.010995	0.02	1090	1	0.96	0.000001	2.26E-05	1.1	10	0.11	70	0.85	3.39E-07	0.34	1.104055	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
33	0.010995	0.02	1090	1	0.96	0.000001	2.60E-05	1.1	10	0.11	70	0.85	3.90E-07	0.39	1.267704
34	0.010995	0.03	1090	1	0.96	0.000001	3.02E-05	1.1	10	0.11	70	0.85	4.53E-07	0.45	1.474614
35	0.010995	0.03	1090	1	0.96	0.000001	3.55E-05	1.1	10	0.11	70	0.85	5.33E-07	0.53	1.73513
36	0.010995	0.04	1090	1	0.96	0.000001	4.28E-05	1.1	10	0.11	70	0.85	6.42E-07	0.64	2.087402
37	0.010995	0.03	1090	1	0.96	0.000001	2.73E-05	1.1	10	0.11	70	0.85	4.09E-07	0.41	1.3313
38	0.010995	0.03	1090	1	0.96	0.000001	3.20E-05	1.1	10	0.11	70	0.85	4.80E-07	0.48	1.56034
39	0.010995	0.04	1090	1	0.96	0.000001	3.81E-05	1.1	10	0.11	70	0.85	5.71E-07	0.57	1.858322
40	0.010995	0.04	1090	1	0.96	0.000001	4.64E-05	1.1	10	0.11	70	0.85	6.96E-07	0.70	2.265686
41	0.010995	0.03	1090	1	0.96	0.000001	3.36E-05	1.1	10	0.11	70	0.85	5.04E-07	0.50	1.640008
42	0.010995	0.04	1090	1	0.96	0.000001	4.04E-05	1.1	10	0.11	70	0.85	6.05E-07	0.61	1.969701
43	0.010995	0.05	1090	1	0.96	0.000001	4.96E-05	1.1	10	0.11	70	0.85	7.44E-07	0.74	2.419743
44	0.010995	0.06	1090	1	0.96	0.000001	6.27E-05	1.1	10	0.11	70	0.85	9.41E-07	0.94	3.063109
45	0.010995	0.04	1090	1	0.96	0.000001	4.19E-05	1.1	10	0.11	70	0.85	6.29E-07	0.63	2.046093
46	0.010995	0.05	1090	1	0.96	0.000001	5.18E-05	1.1	10	0.11	70	0.85	7.77E-07	0.78	2.527139
47	0.010995	0.06	1090	1	0.96	0.000001	6.60E-05	1.1	10	0.11	70	0.85	9.90E-07	0.99	3.219863
48	0.010995	0.08	1090	1	0.96	0.000001	8.73E-05	1.1	10	0.11	70	0.85	1.31E-06	1.31	4.262942
49	0.010995	0.06	1090	1	0.96	0.000001	6.74E-05	1.1	10	0.11	70	0.85	1.01E-06	1.01	3.288261
50	0.010995	0.08	1090	1	0.96	0.000001	8.83E-05	1.1	10	0.11	70	0.85	1.33E-06	1.33	4.311139
51	0.010995	0.06	1090	1	0.96	0.000001	6.68E-05	1.1	10	0.11	70	0.85	1.00E-06	1.00	3.261773
52	0.010995	0.08	1090	1	0.96	0.000001	8.65E-05	1.1	10	0.11	70	0.85	1.30E-06	1.30	4.222726
53	0.010995	0.11	1090	1	0.96	0.000001	1.16E-04	1.1	10	0.11	70	0.85	1.74E-06	1.74	5.65666
54	0.010995	0.06	1090	1	0.96	0.000001	6.47E-05	1.1	10	0.11	70	0.85	9.70E-07	0.97	3.15735
55	0.010995	0.08	1090	1	0.96	0.000001	8.23E-05	1.1	10	0.11	70	0.85	1.24E-06	1.24	4.019754
56	0.010995	0.10	1090	1	0.96	0.000001	1.09E-04	1.1	10	0.11	70	0.85	1.63E-06	1.63	5.312185
57	0.010995	0.14	1090	1	0.96	0.000001	1.49E-04	1.1	10	0.11	70	0.85	2.24E-06	2.24	7.29623
58	0.010995	0.06	1090	1	0.96	0.000001	6.10E-05	1.1	10	0.11	70	0.85	9.15E-07	0.92	2.977439
59	0.010995	0.07	1090	1	0.96	0.000001	7.66E-05	1.1	10	0.11	70	0.85	1.15E-06	1.15	3.739089
60	0.010995	0.09	1090	1	0.96	0.000001	9.91E-05	1.1	10	0.11	70	0.85	1.49E-06	1.49	4.83718
61	0.010995	0.13	1090	1	0.96	0.000001	1.33E-04	1.1	10	0.11	70	0.85	2.00E-06	2.00	6.504552
62	0.010995	0.05	1090	1	0.96	0.000001	5.68E-05	1.1	10	0.11	70	0.85	8.52E-07	0.85	2.772509
63	0.010995	0.07	1090	1	0.96	0.000001	6.97E-05	1.1	10	0.11	70	0.85	1.05E-06	1.05	3.401486
64	0.010995	0.08	1090	1	0.96	0.000001	8.73E-05	1.1	10	0.11	70	0.85	1.31E-06	1.31	4.260524

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
65	0.010995	0.11	1090	1	0.96	0.000001	1.12E-04	1.1	10	0.11	70	0.85	1.69E-06	1.69	5.483502
66	0.010995	0.14	1090	1	0.96	0.000001	1.50E-04	1.1	10	0.11	70	0.85	2.24E-06	2.24	7.300594
67	0.010995	0.05	1090	1	0.96	0.000001	5.16E-05	1.1	10	0.11	70	0.85	7.74E-07	0.77	2.517462
68	0.010995	0.06	1090	1	0.96	0.000001	6.18E-05	1.1	10	0.11	70	0.85	9.27E-07	0.93	3.014664
69	0.010995	0.07	1090	1	0.96	0.000001	7.49E-05	1.1	10	0.11	70	0.85	1.12E-06	1.12	3.65739
70	0.010995	0.09	1090	1	0.96	0.000001	9.18E-05	1.1	10	0.11	70	0.85	1.38E-06	1.38	4.483371
71	0.010995	0.11	1090	1	0.96	0.000001	1.14E-04	1.1	10	0.11	70	0.85	1.71E-06	1.71	5.567837
72	0.010995	0.04	1090	1	0.96	0.000001	4.62E-05	1.1	10	0.11	70	0.85	6.93E-07	0.69	2.254344
73	0.010995	0.05	1090	1	0.96	0.000001	5.39E-05	1.1	10	0.11	70	0.85	8.09E-07	0.81	2.630922
74	0.010995	0.06	1090	1	0.96	0.000001	6.34E-05	1.1	10	0.11	70	0.85	9.51E-07	0.95	3.095459
75	0.010995	0.07	1090	1	0.96	0.000001	7.44E-05	1.1	10	0.11	70	0.85	1.12E-06	1.12	3.632803
76	0.010995	0.08	1090	1	0.96	0.000001	8.75E-05	1.1	10	0.11	70	0.85	1.31E-06	1.31	4.273707
77	0.010995	0.04	1090	1	0.96	0.000001	4.09E-05	1.1	10	0.11	70	0.85	6.14E-07	0.61	1.997211
78	0.010995	0.04	1090	1	0.96	0.000001	4.66E-05	1.1	10	0.11	70	0.85	6.99E-07	0.70	2.275279
79	0.010995	0.05	1090	1	0.96	0.000001	5.33E-05	1.1	10	0.11	70	0.85	8.00E-07	0.80	2.603155
80	0.010995	0.06	1090	1	0.96	0.000001	6.05E-05	1.1	10	0.11	70	0.85	9.08E-07	0.91	2.952678
81	0.010995	0.07	1090	1	0.96	0.000001	6.85E-05	1.1	10	0.11	70	0.85	1.03E-06	1.03	3.345025
82	0.010995	0.03	1090	1	0.96	0.000001	3.61E-05	1.1	10	0.11	70	0.85	5.42E-07	0.54	1.762033
83	0.010995	0.04	1090	1	0.96	0.000001	4.03E-05	1.1	10	0.11	70	0.85	6.05E-07	0.60	1.966756
84	0.010995	0.04	1090	1	0.96	0.000001	4.48E-05	1.1	10	0.11	70	0.85	6.73E-07	0.67	2.189037
85	0.010995	0.05	1090	1	0.96	0.000001	4.97E-05	1.1	10	0.11	70	0.85	7.46E-07	0.75	2.427608
86	0.010995	0.05	1090	1	0.96	0.000001	5.49E-05	1.1	10	0.11	70	0.85	8.23E-07	0.82	2.678335
87	0.010995	0.03	1090	1	0.96	0.000001	3.18E-05	1.1	10	0.11	70	0.85	4.77E-07	0.48	1.551129
88	0.010995	0.03	1090	1	0.96	0.000001	3.49E-05	1.1	10	0.11	70	0.85	5.24E-07	0.52	1.703447
89	0.010995	0.04	1090	1	0.96	0.000001	3.82E-05	1.1	10	0.11	70	0.85	5.73E-07	0.57	1.86313
90	0.010995	0.04	1090	1	0.96	0.000001	4.18E-05	1.1	10	0.11	70	0.85	6.27E-07	0.63	2.039681
91	0.010995	0.04	1090	1	0.96	0.000001	4.54E-05	1.1	10	0.11	70	0.85	6.81E-07	0.68	2.214611
92	0.010995	0.03	1090	1	0.96	0.000001	2.81E-05	1.1	10	0.11	70	0.85	4.21E-07	0.42	1.370511
93	0.010995	0.03	1090	1	0.96	0.000001	3.04E-05	1.1	10	0.11	70	0.85	4.57E-07	0.46	1.485216
94	0.010995	0.03	1090	1	0.96	0.000001	3.29E-05	1.1	10	0.11	70	0.85	4.93E-07	0.49	1.604521
95	0.010995	0.03	1090	1	0.96	0.000001	3.54E-05	1.1	10	0.11	70	0.85	5.32E-07	0.53	1.729268
96	0.010995	0.04	1090	1	0.96	0.000001	3.80E-05	1.1	10	0.11	70	0.85	5.71E-07	0.57	1.856123

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
97	0.010995	0.02	1090	1	0.96	0.000001	2.49E-05	1.1	10	0.11	70	0.85	3.74E-07	0.37	1.215198
98	0.010995	0.03	1090	1	0.96	0.000001	2.67E-05	1.1	10	0.11	70	0.85	4.01E-07	0.40	1.30452
99	0.010995	0.03	1090	1	0.96	0.000001	2.86E-05	1.1	10	0.11	70	0.85	4.29E-07	0.43	1.395709
100	0.010995	0.03	1090	1	0.96	0.000001	3.05E-05	1.1	10	0.11	70	0.85	4.57E-07	0.46	1.486933
101	0.010995	0.03	1090	1	0.96	0.000001	3.24E-05	1.1	10	0.11	70	0.85	4.86E-07	0.49	1.582515
102	0.010995	0.01	1090	1	0.96	0.000001	1.04E-05	1.1	10	0.11	70	0.85	1.55E-07	0.16	0.505667
103	0.010995	0.01	1090	1	0.96	0.000001	1.04E-05	1.1	10	0.11	70	0.85	1.56E-07	0.16	0.50731
104	0.010995	0.01	1090	1	0.96	0.000001	1.07E-05	1.1	10	0.11	70	0.85	1.61E-07	0.16	0.523965
105	0.010995	0.01	1090	1	0.96	0.000001	1.04E-05	1.1	10	0.11	70	0.85	1.56E-07	0.16	0.506301
106	0.010995	0.01	1090	1	0.96	0.000001	1.07E-05	1.1	10	0.11	70	0.85	1.61E-07	0.16	0.524128
107	0.010995	0.01	1090	1	0.96	0.000001	1.11E-05	1.1	10	0.11	70	0.85	1.66E-07	0.17	0.541305
108	0.010995	0.01	1090	1	0.96	0.000001	1.14E-05	1.1	10	0.11	70	0.85	1.72E-07	0.17	0.558778
109	0.010995	0.01	1090	1	0.96	0.000001	1.07E-05	1.1	10	0.11	70	0.85	1.61E-07	0.16	0.522894
110	0.010995	0.01	1090	1	0.96	0.000001	1.11E-05	1.1	10	0.11	70	0.85	1.66E-07	0.17	0.540469
111	0.010995	0.01	1090	1	0.96	0.000001	1.15E-05	1.1	10	0.11	70	0.85	1.72E-07	0.17	0.558958
112	0.010995	0.01	1090	1	0.96	0.000001	1.19E-05	1.1	10	0.11	70	0.85	1.78E-07	0.18	0.57862
113	0.010995	0.01	1090	1	0.96	0.000001	1.22E-05	1.1	10	0.11	70	0.85	1.84E-07	0.18	0.597552
114	0.010995	0.01	1090	1	0.96	0.000001	1.07E-05	1.1	10	0.11	70	0.85	1.60E-07	0.16	0.520229
115	0.010995	0.01	1090	1	0.96	0.000001	1.10E-05	1.1	10	0.11	70	0.85	1.65E-07	0.17	0.538376
116	0.010995	0.01	1090	1	0.96	0.000001	1.14E-05	1.1	10	0.11	70	0.85	1.71E-07	0.17	0.557881
117	0.010995	0.01	1090	1	0.96	0.000001	1.18E-05	1.1	10	0.11	70	0.85	1.78E-07	0.18	0.577745
118	0.010995	0.01	1090	1	0.96	0.000001	1.23E-05	1.1	10	0.11	70	0.85	1.84E-07	0.18	0.598309
119	0.010995	0.01	1090	1	0.96	0.000001	1.27E-05	1.1	10	0.11	70	0.85	1.91E-07	0.19	0.620136
120	0.010995	0.01	1090	1	0.96	0.000001	1.31E-05	1.1	10	0.11	70	0.85	1.97E-07	0.20	0.641369
121	0.010995	0.01	1090	1	0.96	0.000001	1.06E-05	1.1	10	0.11	70	0.85	1.59E-07	0.16	0.516196
122	0.010995	0.01	1090	1	0.96	0.000001	1.10E-05	1.1	10	0.11	70	0.85	1.64E-07	0.16	0.534837
123	0.010995	0.01	1090	1	0.96	0.000001	1.14E-05	1.1	10	0.11	70	0.85	1.71E-07	0.17	0.554745
124	0.010995	0.01	1090	1	0.96	0.000001	1.18E-05	1.1	10	0.11	70	0.85	1.77E-07	0.18	0.575473
125	0.010995	0.01	1090	1	0.96	0.000001	1.22E-05	1.1	10	0.11	70	0.85	1.83E-07	0.18	0.596722
126	0.010995	0.01	1090	1	0.96	0.000001	1.27E-05	1.1	10	0.11	70	0.85	1.90E-07	0.19	0.618689
127	0.010995	0.01	1090	1	0.96	0.000001	1.32E-05	1.1	10	0.11	70	0.85	1.97E-07	0.20	0.642485
128	0.010995	0.01	1090	1	0.96	0.000001	1.36E-05	1.1	10	0.11	70	0.85	2.04E-07	0.20	0.665294

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
129	0.010995	0.01	1090	1	0.96	0.000001	1.17E-05	1.1	10	0.11	70	0.85	1.76E-07	0.18	0.57103
130	0.010995	0.01	1090	1	0.96	0.000001	1.22E-05	1.1	10	0.11	70	0.85	1.82E-07	0.18	0.593238
131	0.010995	0.01	1090	1	0.96	0.000001	1.26E-05	1.1	10	0.11	70	0.85	1.89E-07	0.19	0.616013
132	0.010995	0.01	1090	1	0.96	0.000001	1.31E-05	1.1	10	0.11	70	0.85	1.97E-07	0.20	0.639899
133	0.010995	0.01	1090	1	0.96	0.000001	1.36E-05	1.1	10	0.11	70	0.85	2.04E-07	0.20	0.664531
134	0.010995	0.01	1090	1	0.96	0.000001	1.42E-05	1.1	10	0.11	70	0.85	2.12E-07	0.21	0.690784
135	0.010995	0.01	1090	1	0.96	0.000001	1.47E-05	1.1	10	0.11	70	0.85	2.21E-07	0.22	0.71817
136	0.010995	0.01	1090	1	0.96	0.000001	1.25E-05	1.1	10	0.11	70	0.85	1.88E-07	0.19	0.611425
137	0.010995	0.01	1090	1	0.96	0.000001	1.30E-05	1.1	10	0.11	70	0.85	1.95E-07	0.20	0.635653
138	0.010995	0.01	1090	1	0.96	0.000001	1.36E-05	1.1	10	0.11	70	0.85	2.03E-07	0.20	0.661541
139	0.010995	0.01	1090	1	0.96	0.000001	1.41E-05	1.1	10	0.11	70	0.85	2.11E-07	0.21	0.687407
140	0.010995	0.01	1090	1	0.96	0.000001	1.47E-05	1.1	10	0.11	70	0.85	2.20E-07	0.22	0.716751
141	0.010995	0.01	1090	1	0.96	0.000001	1.53E-05	1.1	10	0.11	70	0.85	2.30E-07	0.23	0.747183
142	0.010995	0.02	1090	1	0.96	0.000001	1.59E-05	1.1	10	0.11	70	0.85	2.39E-07	0.24	0.777564
143	0.010995	0.01	1090	1	0.96	0.000001	1.34E-05	1.1	10	0.11	70	0.85	2.02E-07	0.20	0.655797
144	0.010995	0.01	1090	1	0.96	0.000001	1.40E-05	1.1	10	0.11	70	0.85	2.10E-07	0.21	0.683542
145	0.010995	0.01	1090	1	0.96	0.000001	1.46E-05	1.1	10	0.11	70	0.85	2.19E-07	0.22	0.711444
146	0.010995	0.01	1090	1	0.96	0.000001	1.52E-05	1.1	10	0.11	70	0.85	2.28E-07	0.23	0.743407
147	0.010995	0.02	1090	1	0.96	0.000001	1.59E-05	1.1	10	0.11	70	0.85	2.39E-07	0.24	0.776173
148	0.010995	0.02	1090	1	0.96	0.000001	1.66E-05	1.1	10	0.11	70	0.85	2.49E-07	0.25	0.810027
149	0.010995	0.01	1090	1	0.96	0.000001	1.45E-05	1.1	10	0.11	70	0.85	2.17E-07	0.22	0.705515
150	0.010995	0.01	1090	1	0.96	0.000001	1.51E-05	1.1	10	0.11	70	0.85	2.26E-07	0.23	0.73621
151	0.010995	0.02	1090	1	0.96	0.000001	1.58E-05	1.1	10	0.11	70	0.85	2.37E-07	0.24	0.770704
152	0.010995	0.02	1090	1	0.96	0.000001	1.65E-05	1.1	10	0.11	70	0.85	2.48E-07	0.25	0.805876
153	0.010995	0.02	1090	1	0.96	0.000001	1.73E-05	1.1	10	0.11	70	0.85	2.59E-07	0.26	0.842423
154	0.010995	0.02	1090	1	0.96	0.000001	1.81E-05	1.1	10	0.11	70	0.85	2.71E-07	0.27	0.882924
155	0.010995	0.01	1090	1	0.96	0.000001	1.56E-05	1.1	10	0.11	70	0.85	2.34E-07	0.23	0.761813
156	0.010995	0.02	1090	1	0.96	0.000001	1.64E-05	1.1	10	0.11	70	0.85	2.45E-07	0.25	0.798152
157	0.010995	0.02	1090	1	0.96	0.000001	1.71E-05	1.1	10	0.11	70	0.85	2.57E-07	0.26	0.836303
158	0.010995	0.02	1090	1	0.96	0.000001	1.80E-05	1.1	10	0.11	70	0.85	2.69E-07	0.27	0.87668
159	0.010995	0.02	1090	1	0.96	0.000001	1.89E-05	1.1	10	0.11	70	0.85	2.83E-07	0.28	0.920918
160	0.010995	0.02	1090	1	0.96	0.000001	1.98E-05	1.1	10	0.11	70	0.85	2.97E-07	0.30	0.966384

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
161	0.010995	0.02	1090	1	0.96	0.000001	1.69E-05	1.1	10	0.11	70	0.85	2.54E-07	0.25	0.826536
162	0.010995	0.02	1090	1	0.96	0.000001	1.78E-05	1.1	10	0.11	70	0.85	2.67E-07	0.27	0.867352
163	0.010995	0.02	1090	1	0.96	0.000001	1.87E-05	1.1	10	0.11	70	0.85	2.80E-07	0.28	0.911965
164	0.010995	0.02	1090	1	0.96	0.000001	1.97E-05	1.1	10	0.11	70	0.85	2.95E-07	0.29	0.959344
165	0.010995	0.02	1090	1	0.96	0.000001	2.07E-05	1.1	10	0.11	70	0.85	3.10E-07	0.31	1.009824
166	0.010995	0.02	1090	1	0.96	0.000001	2.18E-05	1.1	10	0.11	70	0.85	3.27E-07	0.33	1.063996
167	0.010995	0.02	1090	1	0.96	0.000001	1.84E-05	1.1	10	0.11	70	0.85	2.76E-07	0.28	0.898799
168	0.010995	0.02	1090	1	0.96	0.000001	1.94E-05	1.1	10	0.11	70	0.85	2.92E-07	0.29	0.948764
169	0.010995	0.02	1090	1	0.96	0.000001	2.05E-05	1.1	10	0.11	70	0.85	3.08E-07	0.31	1.000759
170	0.010995	0.02	1090	1	0.96	0.000001	2.16E-05	1.1	10	0.11	70	0.85	3.25E-07	0.32	1.056334
171	0.010995	0.02	1090	1	0.96	0.000001	2.29E-05	1.1	10	0.11	70	0.85	3.43E-07	0.34	1.115986
172	0.010995	0.02	1090	1	0.96	0.000001	2.41E-05	1.1	10	0.11	70	0.85	3.62E-07	0.36	1.178511
173	0.010995	0.02	1090	1	0.96	0.000001	2.02E-05	1.1	10	0.11	70	0.85	3.03E-07	0.30	0.985086
174	0.010995	0.02	1090	1	0.96	0.000001	2.13E-05	1.1	10	0.11	70	0.85	3.20E-07	0.32	1.041362
175	0.010995	0.02	1090	1	0.96	0.000001	2.26E-05	1.1	10	0.11	70	0.85	3.39E-07	0.34	1.102276
176	0.010995	0.02	1090	1	0.96	0.000001	2.39E-05	1.1	10	0.11	70	0.85	3.59E-07	0.36	1.168324
177	0.010995	0.02	1090	1	0.96	0.000001	2.54E-05	1.1	10	0.11	70	0.85	3.81E-07	0.38	1.238102
178	0.010995	0.02	1090	1	0.96	0.000001	2.22E-05	1.1	10	0.11	70	0.85	3.33E-07	0.33	1.082525
179	0.010995	0.02	1090	1	0.96	0.000001	2.35E-05	1.1	10	0.11	70	0.85	3.53E-07	0.35	1.148208
180	0.010995	0.02	1090	1	0.96	0.000001	2.50E-05	1.1	10	0.11	70	0.85	3.76E-07	0.38	1.222221
181	0.010995	0.03	1090	1	0.96	0.000001	2.66E-05	1.1	10	0.11	70	0.85	3.99E-07	0.40	1.299005
182	0.010995	0.03	1090	1	0.96	0.000001	2.84E-05	1.1	10	0.11	70	0.85	4.26E-07	0.43	1.38688
183	0.010995	0.02	1090	1	0.96	0.000001	2.45E-05	1.1	10	0.11	70	0.85	3.68E-07	0.37	1.197657
184	0.010995	0.02	1090	1	0.96	0.000001	2.61E-05	1.1	10	0.11	70	0.85	3.92E-07	0.39	1.274632
185	0.010995	0.03	1090	1	0.96	0.000001	2.79E-05	1.1	10	0.11	70	0.85	4.19E-07	0.42	1.36222
186	0.010995	0.03	1090	1	0.96	0.000001	2.99E-05	1.1	10	0.11	70	0.85	4.49E-07	0.45	1.459664
187	0.010995	0.03	1090	1	0.96	0.000001	3.21E-05	1.1	10	0.11	70	0.85	4.81E-07	0.48	1.565995
188	0.010995	0.03	1090	1	0.96	0.000001	2.73E-05	1.1	10	0.11	70	0.85	4.09E-07	0.41	1.331765
189	0.010995	0.03	1090	1	0.96	0.000001	2.93E-05	1.1	10	0.11	70	0.85	4.39E-07	0.44	1.429445
190	0.010995	0.03	1090	1	0.96	0.000001	3.14E-05	1.1	10	0.11	70	0.85	4.71E-07	0.47	1.53319
191	0.010995	0.03	1090	1	0.96	0.000001	3.39E-05	1.1	10	0.11	70	0.85	5.08E-07	0.51	1.653605
192	0.010995	0.03	1090	1	0.96	0.000001	3.66E-05	1.1	10	0.11	70	0.85	5.49E-07	0.55	1.784842

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
193	0.010995	0.03	1090	1	0.96	0.000001	3.06E-05	1.1	10	0.11	70	0.85	4.59E-07	1.494259
194	0.010995	0.03	1090	1	0.96	0.000001	3.30E-05	1.1	10	0.11	70	0.85	4.96E-07	1.612762
195	0.010995	0.03	1090	1	0.96	0.000001	3.57E-05	1.1	10	0.11	70	0.85	5.35E-07	1.740622
196	0.010995	0.04	1090	1	0.96	0.000001	3.88E-05	1.1	10	0.11	70	0.85	5.82E-07	1.892754
197	0.010995	0.04	1090	1	0.96	0.000001	4.22E-05	1.1	10	0.11	70	0.85	6.33E-07	2.059157
198	0.010995	0.03	1090	1	0.96	0.000001	3.46E-05	1.1	10	0.11	70	0.85	5.19E-07	1.689097
199	0.010995	0.04	1090	1	0.96	0.000001	3.76E-05	1.1	10	0.11	70	0.85	5.64E-07	1.83502
200	0.010995	0.04	1090	1	0.96	0.000001	4.09E-05	1.1	10	0.11	70	0.85	6.14E-07	1.998579
201	0.010995	0.04	1090	1	0.96	0.000001	4.50E-05	1.1	10	0.11	70	0.85	6.74E-07	2.194231
202	0.010995	0.04	1090	1	0.96	0.000001	3.95E-05	1.1	10	0.11	70	0.85	5.92E-07	1.926109
203	0.010995	0.04	1090	1	0.96	0.000001	4.31E-05	1.1	10	0.11	70	0.85	6.47E-07	2.106222
204	0.010995	0.05	1090	1	0.96	0.000001	4.77E-05	1.1	10	0.11	70	0.85	7.16E-07	2.328755
205	0.010995	0.05	1090	1	0.96	0.000001	5.28E-05	1.1	10	0.11	70	0.85	7.93E-07	2.579213
206	0.010995	0.04	1090	1	0.96	0.000001	4.54E-05	1.1	10	0.11	70	0.85	6.81E-07	2.214022
207	0.010995	0.05	1090	1	0.96	0.000001	5.03E-05	1.1	10	0.11	70	0.85	7.55E-07	2.457221
208	0.010995	0.05	1090	1	0.96	0.000001	5.61E-05	1.1	10	0.11	70	0.85	8.42E-07	2.739692
209	0.010995	0.06	1090	1	0.96	0.000001	6.32E-05	1.1	10	0.11	70	0.85	9.48E-07	3.084016
210	0.010995	0.05	1090	1	0.96	0.000001	4.75E-05	1.1	10	0.11	70	0.85	7.12E-07	2.316672
211	0.010995	0.05	1090	1	0.96	0.000001	5.30E-05	1.1	10	0.11	70	0.85	7.96E-07	2.589052
212	0.010995	0.06	1090	1	0.96	0.000001	5.96E-05	1.1	10	0.11	70	0.85	8.94E-07	2.907352
213	0.010995	0.06	1090	1	0.96	0.000001	6.75E-05	1.1	10	0.11	70	0.85	1.01E-06	3.292889
214	0.010995	0.07	1090	1	0.96	0.000001	7.72E-05	1.1	10	0.11	70	0.85	1.16E-06	3.766262
215	0.010995	0.05	1090	1	0.96	0.000001	4.95E-05	1.1	10	0.11	70	0.85	7.43E-07	2.416691
216	0.010995	0.05	1090	1	0.96	0.000001	5.54E-05	1.1	10	0.11	70	0.85	8.31E-07	2.704475
217	0.010995	0.06	1090	1	0.96	0.000001	6.25E-05	1.1	10	0.11	70	0.85	9.38E-07	3.051766
218	0.010995	0.07	1090	1	0.96	0.000001	7.13E-05	1.1	10	0.11	70	0.85	1.07E-06	3.479476
219	0.010995	0.08	1090	1	0.96	0.000001	8.23E-05	1.1	10	0.11	70	0.85	1.24E-06	4.019434
220	0.010995	0.06	1090	1	0.96	0.000001	5.78E-05	1.1	10	0.11	70	0.85	8.67E-07	2.822187
221	0.010995	0.06	1090	1	0.96	0.000001	6.55E-05	1.1	10	0.11	70	0.85	9.83E-07	3.198783
222	0.010995	0.07	1090	1	0.96	0.000001	7.51E-05	1.1	10	0.11	70	0.85	1.13E-06	3.665132
223	0.010995	0.08	1090	1	0.96	0.000001	8.72E-05	1.1	10	0.11	70	0.85	1.31E-06	4.257332
224	0.010995	0.10	1090	1	0.96	0.000001	1.03E-04	1.1	10	0.11	70	0.85	1.55E-06	5.039839

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
225	0.010995	0.07	1090	1	0.96	0.000001	6.80E-05	1.1	10	0.11	70	0.85	1.02E-06	1.02	3.319944
226	0.010995	0.07	1090	1	0.96	0.000001	7.82E-05	1.1	10	0.11	70	0.85	1.17E-06	1.17	3.817287
227	0.010995	0.09	1090	1	0.96	0.000001	9.11E-05	1.1	10	0.11	70	0.85	1.37E-06	1.37	4.447655
228	0.010995	0.10	1090	1	0.96	0.000001	1.08E-04	1.1	10	0.11	70	0.85	1.62E-06	1.62	5.271308
229	0.010995	0.13	1090	1	0.96	0.000001	1.31E-04	1.1	10	0.11	70	0.85	1.97E-06	1.97	6.395927
230	0.010995	0.08	1090	1	0.96	0.000001	8.07E-05	1.1	10	0.11	70	0.85	1.21E-06	1.21	3.940973
231	0.010995	0.09	1090	1	0.96	0.000001	9.42E-05	1.1	10	0.11	70	0.85	1.41E-06	1.41	4.600561
232	0.010995	0.11	1090	1	0.96	0.000001	1.11E-04	1.1	10	0.11	70	0.85	1.67E-06	1.67	5.435439
233	0.010995	0.13	1090	1	0.96	0.000001	1.35E-04	1.1	10	0.11	70	0.85	2.02E-06	2.02	6.58717
234	0.010995	0.16	1090	1	0.96	0.000001	1.67E-04	1.1	10	0.11	70	0.85	2.51E-06	2.51	8.17254
235	0.010995	0.09	1090	1	0.96	0.000001	9.61E-05	1.1	10	0.11	70	0.85	1.44E-06	1.44	4.689866
236	0.010995	0.11	1090	1	0.96	0.000001	1.13E-04	1.1	10	0.11	70	0.85	1.69E-06	1.69	5.513716
237	0.010995	0.13	1090	1	0.96	0.000001	1.36E-04	1.1	10	0.11	70	0.85	2.04E-06	2.04	6.633382
238	0.010995	0.16	1090	1	0.96	0.000001	1.67E-04	1.1	10	0.11	70	0.85	2.51E-06	2.51	8.163161
239	0.010995	0.20	1090	1	0.96	0.000001	2.09E-04	1.1	10	0.11	70	0.85	3.14E-06	3.14	10.21639
240	0.010995	0.11	1090	1	0.96	0.000001	1.13E-04	1.1	10	0.11	70	0.85	1.70E-06	1.70	5.538633
241	0.010995	0.13	1090	1	0.96	0.000001	1.36E-04	1.1	10	0.11	70	0.85	2.04E-06	2.04	6.646104
242	0.010995	0.16	1090	1	0.96	0.000001	1.64E-04	1.1	10	0.11	70	0.85	2.46E-06	2.46	8.002221
243	0.010995	0.19	1090	1	0.96	0.000001	2.04E-04	1.1	10	0.11	70	0.85	3.06E-06	3.06	9.944385
244	0.010995	0.11	1090	1	0.96	0.000001	1.13E-04	1.1	10	0.11	70	0.85	1.69E-06	1.69	5.503837
245	0.010995	0.13	1090	1	0.96	0.000001	1.35E-04	1.1	10	0.11	70	0.85	2.02E-06	2.02	6.566072
246	0.010995	0.15	1090	1	0.96	0.000001	1.61E-04	1.1	10	0.11	70	0.85	2.42E-06	2.42	7.883488
247	0.010995	0.19	1090	1	0.96	0.000001	1.96E-04	1.1	10	0.11	70	0.85	2.94E-06	2.94	9.567458
248	0.010995	0.24	1090	1	0.96	0.000001	2.46E-04	1.1	10	0.11	70	0.85	3.69E-06	3.69	12.0021
249	0.010995	0.13	1090	1	0.96	0.000001	1.32E-04	1.1	10	0.11	70	0.85	1.98E-06	1.98	6.431195
250	0.010995	0.15	1090	1	0.96	0.000001	1.58E-04	1.1	10	0.11	70	0.85	2.36E-06	2.36	7.688644
251	0.010995	0.18	1090	1	0.96	0.000001	1.90E-04	1.1	10	0.11	70	0.85	2.85E-06	2.85	9.264136
252	0.010995	0.23	1090	1	0.96	0.000001	2.35E-04	1.1	10	0.11	70	0.85	3.53E-06	3.53	11.48311
253	0.010995	0.29	1090	1	0.96	0.000001	3.00E-04	1.1	10	0.11	70	0.85	4.50E-06	4.50	14.63453
254	0.010995	0.12	1090	1	0.96	0.000001	1.28E-04	1.1	10	0.11	70	0.85	1.92E-06	1.92	6.259771
255	0.010995	0.15	1090	1	0.96	0.000001	1.52E-04	1.1	10	0.11	70	0.85	2.28E-06	2.28	7.414211
256	0.010995	0.18	1090	1	0.96	0.000001	1.84E-04	1.1	10	0.11	70	0.85	2.77E-06	2.77	8.997657

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
257	0.010995	0.22	1090	1	0.96	0.000001	2.26E-04	1.1	10	0.11	70	0.85	3.38E-06	3.38	11.01236
258	0.010995	0.28	1090	1	0.96	0.000001	2.87E-04	1.1	10	0.11	70	0.85	4.31E-06	4.31	14.03243
259	0.010995	0.36	1090	1	0.96	0.000001	3.76E-04	1.1	10	0.11	70	0.85	5.64E-06	5.64	18.35692
260	0.010995	0.14	1090	1	0.96	0.000001	1.46E-04	1.1	10	0.11	70	0.85	2.20E-06	2.20	7.150301
261	0.010995	0.17	1090	1	0.96	0.000001	1.77E-04	1.1	10	0.11	70	0.85	2.65E-06	2.65	8.631181
262	0.010995	0.21	1090	1	0.96	0.000001	2.18E-04	1.1	10	0.11	70	0.85	3.26E-06	3.26	10.61904
263	0.010995	0.26	1090	1	0.96	0.000001	2.73E-04	1.1	10	0.11	70	0.85	4.09E-06	4.09	13.30369
264	0.010995	0.35	1090	1	0.96	0.000001	3.65E-04	1.1	10	0.11	70	0.85	5.47E-06	5.47	17.80254
265	0.010995	0.16	1090	1	0.96	0.000001	1.68E-04	1.1	10	0.11	70	0.85	2.53E-06	2.53	8.218028
266	0.010995	0.20	1090	1	0.96	0.000001	2.06E-04	1.1	10	0.11	70	0.85	3.08E-06	3.08	10.03611
267	0.010995	0.25	1090	1	0.96	0.000001	2.56E-04	1.1	10	0.11	70	0.85	3.85E-06	3.85	12.51151
268	0.010995	0.33	1090	1	0.96	0.000001	3.41E-04	1.1	10	0.11	70	0.85	5.11E-06	5.11	16.62644
269	0.010995	0.46	1090	1	0.96	0.000001	4.83E-04	1.1	10	0.11	70	0.85	7.25E-06	7.25	23.5721
270	0.010995	0.18	1090	1	0.96	0.000001	1.93E-04	1.1	10	0.11	70	0.85	2.89E-06	2.89	9.417962
271	0.010995	0.23	1090	1	0.96	0.000001	2.39E-04	1.1	10	0.11	70	0.85	3.58E-06	3.58	11.66168
272	0.010995	0.30	1090	1	0.96	0.000001	3.09E-04	1.1	10	0.11	70	0.85	4.63E-06	4.63	15.07173
273	0.010995	0.41	1090	1	0.96	0.000001	4.32E-04	1.1	10	0.11	70	0.85	6.49E-06	6.49	21.10715
274	0.010995	0.17	1090	1	0.96	0.000001	1.77E-04	1.1	10	0.11	70	0.85	2.66E-06	2.66	8.64405
275	0.010995	0.21	1090	1	0.96	0.000001	2.16E-04	1.1	10	0.11	70	0.85	3.24E-06	3.24	10.55224
276	0.010995	0.26	1090	1	0.96	0.000001	2.73E-04	1.1	10	0.11	70	0.85	4.10E-06	4.10	13.32926
277	0.010995	0.34	1090	1	0.96	0.000001	3.58E-04	1.1	10	0.11	70	0.85	5.37E-06	5.37	17.47281
278	0.010995	0.49	1090	1	0.96	0.000001	5.09E-04	1.1	10	0.11	70	0.85	7.64E-06	7.64	24.86794
279	0.010995	0.18	1090	1	0.96	0.000001	1.92E-04	1.1	10	0.11	70	0.85	2.88E-06	2.88	9.355112
280	0.010995	0.22	1090	1	0.96	0.000001	2.34E-04	1.1	10	0.11	70	0.85	3.51E-06	3.51	11.41409
281	0.010995	0.28	1090	1	0.96	0.000001	2.88E-04	1.1	10	0.11	70	0.85	4.33E-06	4.33	14.07406
282	0.010995	0.36	1090	1	0.96	0.000001	3.76E-04	1.1	10	0.11	70	0.85	5.64E-06	5.64	18.34245
283	0.010995	0.16	1090	1	0.96	0.000001	1.65E-04	1.1	10	0.11	70	0.85	2.47E-06	2.47	8.034229
284	0.010995	0.19	1090	1	0.96	0.000001	1.94E-04	1.1	10	0.11	70	0.85	2.91E-06	2.91	9.467658
285	0.010995	0.22	1090	1	0.96	0.000001	2.30E-04	1.1	10	0.11	70	0.85	3.45E-06	3.45	11.22481
286	0.010995	0.26	1090	1	0.96	0.000001	2.75E-04	1.1	10	0.11	70	0.85	4.13E-06	4.13	13.42319
287	0.010995	0.32	1090	1	0.96	0.000001	3.32E-04	1.1	10	0.11	70	0.85	4.97E-06	4.97	16.18283
288	0.010995	0.14	1090	1	0.96	0.000001	1.43E-04	1.1	10	0.11	70	0.85	2.14E-06	2.14	6.965633

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
289	0.010995	0.16	1090	1	0.96	0.000001	1.63E-04	1.1	10	0.11	70	0.85	2.45E-06	7.961293
290	0.010995	0.18	1090	1	0.96	0.000001	1.86E-04	1.1	10	0.11	70	0.85	2.80E-06	9.097446
291	0.010995	0.20	1090	1	0.96	0.000001	2.13E-04	1.1	10	0.11	70	0.85	3.19E-06	10.39153
292	0.010995	0.23	1090	1	0.96	0.000001	2.43E-04	1.1	10	0.11	70	0.85	3.65E-06	11.87798
293	0.010995	0.12	1090	1	0.96	0.000001	1.22E-04	1.1	10	0.11	70	0.85	1.83E-06	5.944034
294	0.010995	0.13	1090	1	0.96	0.000001	1.36E-04	1.1	10	0.11	70	0.85	2.04E-06	6.624238
295	0.010995	0.14	1090	1	0.96	0.000001	1.50E-04	1.1	10	0.11	70	0.85	2.26E-06	7.342918
296	0.010995	0.16	1090	1	0.96	0.000001	1.67E-04	1.1	10	0.11	70	0.85	2.50E-06	8.137514
297	0.010995	0.18	1090	1	0.96	0.000001	1.86E-04	1.1	10	0.11	70	0.85	2.79E-06	9.074912
298	0.010995	0.10	1090	1	0.96	0.000001	1.06E-04	1.1	10	0.11	70	0.85	1.59E-06	5.159923
299	0.010995	0.11	1090	1	0.96	0.000001	1.16E-04	1.1	10	0.11	70	0.85	1.73E-06	5.639242
300	0.010995	0.12	1090	1	0.96	0.000001	1.25E-04	1.1	10	0.11	70	0.85	1.88E-06	6.107756
301	0.010995	0.13	1090	1	0.96	0.000001	1.36E-04	1.1	10	0.11	70	0.85	2.04E-06	6.643064
302	0.010995	0.14	1090	1	0.96	0.000001	1.50E-04	1.1	10	0.11	70	0.85	2.24E-06	7.303169
303	0.010995	0.16	1090	1	0.96	0.000001	1.63E-04	1.1	10	0.11	70	0.85	2.45E-06	7.964474
304	0.010995	0.09	1090	1	0.96	0.000001	9.17E-05	1.1	10	0.11	70	0.85	1.38E-06	4.475967
305	0.010995	0.09	1090	1	0.96	0.000001	9.90E-05	1.1	10	0.11	70	0.85	1.49E-06	4.834549
306	0.010995	0.10	1090	1	0.96	0.000001	1.06E-04	1.1	10	0.11	70	0.85	1.59E-06	5.174301
307	0.010995	0.11	1090	1	0.96	0.000001	1.14E-04	1.1	10	0.11	70	0.85	1.71E-06	5.563529
308	0.010995	0.12	1090	1	0.96	0.000001	1.23E-04	1.1	10	0.11	70	0.85	1.85E-06	6.023264
309	0.010995	0.13	1090	1	0.96	0.000001	1.33E-04	1.1	10	0.11	70	0.85	1.99E-06	6.475084
310	0.010995	0.08	1090	1	0.96	0.000001	8.04E-05	1.1	10	0.11	70	0.85	1.21E-06	3.922674
311	0.010995	0.08	1090	1	0.96	0.000001	8.59E-05	1.1	10	0.11	70	0.85	1.29E-06	4.194516
312	0.010995	0.09	1090	1	0.96	0.000001	9.13E-05	1.1	10	0.11	70	0.85	1.37E-06	4.454437
313	0.010995	0.09	1090	1	0.96	0.000001	9.75E-05	1.1	10	0.11	70	0.85	1.46E-06	4.758623
314	0.010995	0.10	1090	1	0.96	0.000001	1.05E-04	1.1	10	0.11	70	0.85	1.57E-06	5.101281
315	0.010995	0.11	1090	1	0.96	0.000001	1.11E-04	1.1	10	0.11	70	0.85	1.67E-06	5.441767
316	0.010995	0.07	1090	1	0.96	0.000001	7.12E-05	1.1	10	0.11	70	0.85	1.07E-06	3.473979
317	0.010995	0.07	1090	1	0.96	0.000001	7.53E-05	1.1	10	0.11	70	0.85	1.13E-06	3.677972
318	0.010995	0.08	1090	1	0.96	0.000001	7.92E-05	1.1	10	0.11	70	0.85	1.19E-06	3.866017
319	0.010995	0.08	1090	1	0.96	0.000001	8.38E-05	1.1	10	0.11	70	0.85	1.26E-06	4.090048
320	0.010995	0.09	1090	1	0.96	0.000001	8.91E-05	1.1	10	0.11	70	0.85	1.34E-06	4.351142

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
321	0.010995	0.09	1090	1	0.96	0.000001	9.41E-05	1.1	10	0.11	70	0.85	1.41E-06	1.41	4.594744
322	0.010995	0.10	1090	1	0.96	0.000001	9.96E-05	1.1	10	0.11	70	0.85	1.49E-06	1.49	4.860079
323	0.010995	0.06	1090	1	0.96	0.000001	6.32E-05	1.1	10	0.11	70	0.85	9.48E-07	0.95	3.085564
324	0.010995	0.06	1090	1	0.96	0.000001	6.67E-05	1.1	10	0.11	70	0.85	1.00E-06	1.00	3.253588
325	0.010995	0.07	1090	1	0.96	0.000001	6.97E-05	1.1	10	0.11	70	0.85	1.05E-06	1.05	3.403258
326	0.010995	0.07	1090	1	0.96	0.000001	7.33E-05	1.1	10	0.11	70	0.85	1.10E-06	1.10	3.576993
327	0.010995	0.07	1090	1	0.96	0.000001	7.75E-05	1.1	10	0.11	70	0.85	1.16E-06	1.16	3.784622
328	0.010995	0.08	1090	1	0.96	0.000001	8.15E-05	1.1	10	0.11	70	0.85	1.22E-06	1.22	3.979999
329	0.010995	0.08	1090	1	0.96	0.000001	8.57E-05	1.1	10	0.11	70	0.85	1.29E-06	1.29	4.181165
330	0.010995	0.05	1090	1	0.96	0.000001	5.64E-05	1.1	10	0.11	70	0.85	8.47E-07	0.85	2.754833
331	0.010995	0.06	1090	1	0.96	0.000001	5.91E-05	1.1	10	0.11	70	0.85	8.87E-07	0.89	2.885413
332	0.010995	0.06	1090	1	0.96	0.000001	6.19E-05	1.1	10	0.11	70	0.85	9.28E-07	0.93	3.020571
333	0.010995	0.06	1090	1	0.96	0.000001	6.48E-05	1.1	10	0.11	70	0.85	9.72E-07	0.97	3.163571
334	0.010995	0.06	1090	1	0.96	0.000001	6.79E-05	1.1	10	0.11	70	0.85	1.02E-06	1.02	3.31392
335	0.010995	0.07	1090	1	0.96	0.000001	7.11E-05	1.1	10	0.11	70	0.85	1.07E-06	1.07	3.472739
336	0.010995	0.07	1090	1	0.96	0.000001	7.47E-05	1.1	10	0.11	70	0.85	1.12E-06	1.12	3.648785
337	0.010995	0.05	1090	1	0.96	0.000001	5.12E-05	1.1	10	0.11	70	0.85	7.68E-07	0.77	2.498384
338	0.010995	0.05	1090	1	0.96	0.000001	5.34E-05	1.1	10	0.11	70	0.85	8.01E-07	0.80	2.606139
339	0.010995	0.05	1090	1	0.96	0.000001	5.56E-05	1.1	10	0.11	70	0.85	8.34E-07	0.83	2.714466
340	0.010995	0.06	1090	1	0.96	0.000001	5.79E-05	1.1	10	0.11	70	0.85	8.69E-07	0.87	2.827275
341	0.010995	0.06	1090	1	0.96	0.000001	6.07E-05	1.1	10	0.11	70	0.85	9.10E-07	0.91	2.962024
342	0.010995	0.06	1090	1	0.96	0.000001	6.34E-05	1.1	10	0.11	70	0.85	9.51E-07	0.95	3.092997
343	0.010995	0.06	1090	1	0.96	0.000001	6.61E-05	1.1	10	0.11	70	0.85	9.91E-07	0.99	3.225383
344	0.010995	0.04	1090	1	0.96	0.000001	4.65E-05	1.1	10	0.11	70	0.85	6.97E-07	0.70	2.268424
345	0.010995	0.05	1090	1	0.96	0.000001	4.83E-05	1.1	10	0.11	70	0.85	7.25E-07	0.72	2.358766
346	0.010995	0.05	1090	1	0.96	0.000001	5.02E-05	1.1	10	0.11	70	0.85	7.53E-07	0.75	2.448829
347	0.010995	0.05	1090	1	0.96	0.000001	5.22E-05	1.1	10	0.11	70	0.85	7.83E-07	0.78	2.548309
348	0.010995	0.05	1090	1	0.96	0.000001	5.43E-05	1.1	10	0.11	70	0.85	8.14E-07	0.81	2.649204
349	0.010995	0.05	1090	1	0.96	0.000001	5.64E-05	1.1	10	0.11	70	0.85	8.46E-07	0.85	2.752976
350	0.010995	0.06	1090	1	0.96	0.000001	5.88E-05	1.1	10	0.11	70	0.85	8.82E-07	0.88	2.869695
351	0.010995	0.04	1090	1	0.96	0.000001	4.24E-05	1.1	10	0.11	70	0.85	6.36E-07	0.64	2.067735
352	0.010995	0.04	1090	1	0.96	0.000001	4.40E-05	1.1	10	0.11	70	0.85	6.59E-07	0.66	2.145607

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
353	0.010995	0.04	1090	1	0.96	0.000001	4.55E-05	1.1	10	0.11	70	0.85	6.82E-07	0.68	2.219267
354	0.010995	0.05	1090	1	0.96	0.000001	4.71E-05	1.1	10	0.11	70	0.85	7.06E-07	0.71	2.298267
355	0.010995	0.05	1090	1	0.96	0.000001	4.90E-05	1.1	10	0.11	70	0.85	7.36E-07	0.74	2.393097
356	0.010995	0.05	1090	1	0.96	0.000001	5.08E-05	1.1	10	0.11	70	0.85	7.63E-07	0.76	2.481022
357	0.010995	0.05	1090	1	0.96	0.000001	5.27E-05	1.1	10	0.11	70	0.85	7.91E-07	0.79	2.573407
358	0.010995	0.04	1090	1	0.96	0.000001	3.87E-05	1.1	10	0.11	70	0.85	5.81E-07	0.58	1.891009
359	0.010995	0.04	1090	1	0.96	0.000001	4.01E-05	1.1	10	0.11	70	0.85	6.01E-07	0.60	1.955688
360	0.010995	0.04	1090	1	0.96	0.000001	4.15E-05	1.1	10	0.11	70	0.85	6.22E-07	0.62	2.024815
361	0.010995	0.04	1090	1	0.96	0.000001	4.29E-05	1.1	10	0.11	70	0.85	6.44E-07	0.64	2.09502
362	0.010995	0.04	1090	1	0.96	0.000001	4.45E-05	1.1	10	0.11	70	0.85	6.67E-07	0.67	2.171159
363	0.010995	0.04	1090	1	0.96	0.000001	4.60E-05	1.1	10	0.11	70	0.85	6.90E-07	0.69	2.244499
364	0.010995	0.05	1090	1	0.96	0.000001	4.76E-05	1.1	10	0.11	70	0.85	7.14E-07	0.71	2.323106
365	0.010995	0.03	1090	1	0.96	0.000001	3.57E-05	1.1	10	0.11	70	0.85	5.36E-07	0.54	1.744834
366	0.010995	0.04	1090	1	0.96	0.000001	3.69E-05	1.1	10	0.11	70	0.85	5.53E-07	0.55	1.799629
367	0.010995	0.04	1090	1	0.96	0.000001	3.81E-05	1.1	10	0.11	70	0.85	5.71E-07	0.57	1.85784
368	0.010995	0.04	1090	1	0.96	0.000001	3.93E-05	1.1	10	0.11	70	0.85	5.90E-07	0.59	1.919585
369	0.010995	0.04	1090	1	0.96	0.000001	4.06E-05	1.1	10	0.11	70	0.85	6.09E-07	0.61	1.98119
370	0.010995	0.04	1090	1	0.96	0.000001	4.20E-05	1.1	10	0.11	70	0.85	6.30E-07	0.63	2.048892
371	0.010995	0.04	1090	1	0.96	0.000001	4.33E-05	1.1	10	0.11	70	0.85	6.49E-07	0.65	2.111557
372	0.010995	0.03	1090	1	0.96	0.000001	3.30E-05	1.1	10	0.11	70	0.85	4.95E-07	0.50	1.610591
373	0.010995	0.03	1090	1	0.96	0.000001	3.40E-05	1.1	10	0.11	70	0.85	5.10E-07	0.51	1.659125
374	0.010995	0.03	1090	1	0.96	0.000001	3.50E-05	1.1	10	0.11	70	0.85	5.25E-07	0.53	1.708658
375	0.010995	0.03	1090	1	0.96	0.000001	3.61E-05	1.1	10	0.11	70	0.85	5.42E-07	0.54	1.761803
376	0.010995	0.04	1090	1	0.96	0.000001	3.72E-05	1.1	10	0.11	70	0.85	5.58E-07	0.56	1.815162
377	0.010995	0.04	1090	1	0.96	0.000001	3.84E-05	1.1	10	0.11	70	0.85	5.76E-07	0.58	1.87436
378	0.010995	0.04	1090	1	0.96	0.000001	3.95E-05	1.1	10	0.11	70	0.85	5.93E-07	0.59	1.92971
379	0.010995	0.69	1090	1	0.96	0.000001	7.23E-04	1.1	10	0.11	70	0.85	1.08E-05	10.85	35.29776
380	0.010995	0.93	1090	1	0.96	0.000001	9.67E-04	1.1	10	0.11	70	0.85	1.45E-05	14.51	47.20777
381	0.010995	0.51	1090	1	0.96	0.000001	5.32E-04	1.1	10	0.11	70	0.85	7.98E-06	7.98	25.9677
382	0.010995	0.54	1090	1	0.96	0.000001	5.68E-04	1.1	10	0.11	70	0.85	8.53E-06	8.53	27.7508
383	0.010995	0.38	1090	1	0.96	0.000001	3.94E-04	1.1	10	0.11	70	0.85	5.92E-06	5.92	19.24774
384	0.010995	0.28	1090	1	0.96	0.000001	2.89E-04	1.1	10	0.11	70	0.85	4.34E-06	4.34	14.1279

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Unmitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
385	0.010995	0.23	1090	1	0.96	0.000001	2.35E-04	1.1	10	0.11	70	0.85	3.53E-06	3.53	11.49342
386	0.010995	0.18	1090	1	0.96	0.000001	1.90E-04	1.1	10	0.11	70	0.85	2.85E-06	2.85	9.264971
387	0.010995	0.15	1090	1	0.96	0.000001	1.58E-04	1.1	10	0.11	70	0.85	2.38E-06	2.38	7.728225
388	0.010995	0.13	1090	1	0.96	0.000001	1.35E-04	1.1	10	0.11	70	0.85	2.03E-06	2.03	6.609103
389	0.010995	0.11	1090	1	0.96	0.000001	1.17E-04	1.1	10	0.11	70	0.85	1.76E-06	1.76	5.724401
390	0.010995	0.10	1090	1	0.96	0.000001	1.05E-04	1.1	10	0.11	70	0.85	1.57E-06	1.57	5.11664

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI	
1	4.12E-02	5	8.24E-03	Max
2	4.44E-02	5	8.87E-03	7.51E-01
3	4.00E-02	5	8.01E-03	
4	4.33E-02	5	8.66E-03	
5	4.69E-02	5	9.38E-03	
6	5.08E-02	5	1.02E-02	
7	4.19E-02	5	8.38E-03	
8	4.54E-02	5	9.09E-03	
9	4.94E-02	5	9.88E-03	
10	5.39E-02	5	1.08E-02	
11	5.90E-02	5	1.18E-02	
12	4.75E-02	5	9.49E-03	
13	5.19E-02	5	1.04E-02	
14	5.69E-02	5	1.14E-02	
15	6.27E-02	5	1.25E-02	
16	6.92E-02	5	1.38E-02	
17	5.44E-02	5	1.09E-02	
18	6.01E-02	5	1.20E-02	
19	6.66E-02	5	1.33E-02	
20	7.41E-02	5	1.48E-02	
21	8.30E-02	5	1.66E-02	
22	6.31E-02	5	1.26E-02	
23	7.04E-02	5	1.41E-02	
24	7.88E-02	5	1.58E-02	
25	8.91E-02	5	1.78E-02	
26	1.01E-01	5	2.03E-02	
27	7.39E-02	5	1.48E-02	
28	8.34E-02	5	1.67E-02	
29	9.52E-02	5	1.90E-02	
30	1.10E-01	5	2.19E-02	
31	1.28E-01	5	2.55E-02	
32	8.78E-02	5	1.76E-02	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
33	1.01E-01	5	2.02E-02
34	1.17E-01	5	2.35E-02
35	1.38E-01	5	2.76E-02
36	1.66E-01	5	3.32E-02
37	1.06E-01	5	2.12E-02
38	1.24E-01	5	2.48E-02
39	1.48E-01	5	2.96E-02
40	1.80E-01	5	3.60E-02
41	1.30E-01	5	2.61E-02
42	1.57E-01	5	3.13E-02
43	1.92E-01	5	3.85E-02
44	2.44E-01	5	4.87E-02
45	1.63E-01	5	3.25E-02
46	2.01E-01	5	4.02E-02
47	2.56E-01	5	5.12E-02
48	3.39E-01	5	6.78E-02
49	2.61E-01	5	5.23E-02
50	3.43E-01	5	6.86E-02
51	2.59E-01	5	5.19E-02
52	3.36E-01	5	6.72E-02
53	4.50E-01	5	9.00E-02
54	2.51E-01	5	5.02E-02
55	3.20E-01	5	6.39E-02
56	4.22E-01	5	8.45E-02
57	5.80E-01	5	1.16E-01
58	2.37E-01	5	4.74E-02
59	2.97E-01	5	5.95E-02
60	3.85E-01	5	7.69E-02
61	5.17E-01	5	1.03E-01
62	2.20E-01	5	4.41E-02
63	2.70E-01	5	5.41E-02
64	3.39E-01	5	6.78E-02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
65	4.36E-01	5	8.72E-02
66	5.81E-01	5	1.16E-01
67	2.00E-01	5	4.00E-02
68	2.40E-01	5	4.79E-02
69	2.91E-01	5	5.82E-02
70	3.57E-01	5	7.13E-02
71	4.43E-01	5	8.86E-02
72	1.79E-01	5	3.59E-02
73	2.09E-01	5	4.18E-02
74	2.46E-01	5	4.92E-02
75	2.89E-01	5	5.78E-02
76	3.40E-01	5	6.80E-02
77	1.59E-01	5	3.18E-02
78	1.81E-01	5	3.62E-02
79	2.07E-01	5	4.14E-02
80	2.35E-01	5	4.70E-02
81	2.66E-01	5	5.32E-02
82	1.40E-01	5	2.80E-02
83	1.56E-01	5	3.13E-02
84	1.74E-01	5	3.48E-02
85	1.93E-01	5	3.86E-02
86	2.13E-01	5	4.26E-02
87	1.23E-01	5	2.47E-02
88	1.35E-01	5	2.71E-02
89	1.48E-01	5	2.96E-02
90	1.62E-01	5	3.24E-02
91	1.76E-01	5	3.52E-02
92	1.09E-01	5	2.18E-02
93	1.18E-01	5	2.36E-02
94	1.28E-01	5	2.55E-02
95	1.38E-01	5	2.75E-02
96	1.48E-01	5	2.95E-02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
97	9.66E-02	5	1.93E-02
98	1.04E-01	5	2.07E-02
99	1.11E-01	5	2.22E-02
100	1.18E-01	5	2.36E-02
101	1.26E-01	5	2.52E-02
102	4.02E-02	5	8.04E-03
103	4.03E-02	5	8.07E-03
104	4.17E-02	5	8.33E-03
105	4.03E-02	5	8.05E-03
106	4.17E-02	5	8.34E-03
107	4.30E-02	5	8.61E-03
108	4.44E-02	5	8.89E-03
109	4.16E-02	5	8.32E-03
110	4.30E-02	5	8.60E-03
111	4.44E-02	5	8.89E-03
112	4.60E-02	5	9.20E-03
113	4.75E-02	5	9.50E-03
114	4.14E-02	5	8.27E-03
115	4.28E-02	5	8.56E-03
116	4.44E-02	5	8.87E-03
117	4.59E-02	5	9.19E-03
118	4.76E-02	5	9.52E-03
119	4.93E-02	5	9.86E-03
120	5.10E-02	5	1.02E-02
121	4.10E-02	5	8.21E-03
122	4.25E-02	5	8.51E-03
123	4.41E-02	5	8.82E-03
124	4.58E-02	5	9.15E-03
125	4.75E-02	5	9.49E-03
126	4.92E-02	5	9.84E-03
127	5.11E-02	5	1.02E-02
128	5.29E-02	5	1.06E-02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
129	4.54E-02	5	9.08E-03
130	4.72E-02	5	9.43E-03
131	4.90E-02	5	9.80E-03
132	5.09E-02	5	1.02E-02
133	5.28E-02	5	1.06E-02
134	5.49E-02	5	1.10E-02
135	5.71E-02	5	1.14E-02
136	4.86E-02	5	9.72E-03
137	5.05E-02	5	1.01E-02
138	5.26E-02	5	1.05E-02
139	5.47E-02	5	1.09E-02
140	5.70E-02	5	1.14E-02
141	5.94E-02	5	1.19E-02
142	6.18E-02	5	1.24E-02
143	5.21E-02	5	1.04E-02
144	5.44E-02	5	1.09E-02
145	5.66E-02	5	1.13E-02
146	5.91E-02	5	1.18E-02
147	6.17E-02	5	1.23E-02
148	6.44E-02	5	1.29E-02
149	5.61E-02	5	1.12E-02
150	5.85E-02	5	1.17E-02
151	6.13E-02	5	1.23E-02
152	6.41E-02	5	1.28E-02
153	6.70E-02	5	1.34E-02
154	7.02E-02	5	1.40E-02
155	6.06E-02	5	1.21E-02
156	6.35E-02	5	1.27E-02
157	6.65E-02	5	1.33E-02
158	6.97E-02	5	1.39E-02
159	7.32E-02	5	1.46E-02
160	7.68E-02	5	1.54E-02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
161	6.57E-02	5	1.31E-02
162	6.90E-02	5	1.38E-02
163	7.25E-02	5	1.45E-02
164	7.63E-02	5	1.53E-02
165	8.03E-02	5	1.61E-02
166	8.46E-02	5	1.69E-02
167	7.15E-02	5	1.43E-02
168	7.54E-02	5	1.51E-02
169	7.96E-02	5	1.59E-02
170	8.40E-02	5	1.68E-02
171	8.87E-02	5	1.77E-02
172	9.37E-02	5	1.87E-02
173	7.83E-02	5	1.57E-02
174	8.28E-02	5	1.66E-02
175	8.77E-02	5	1.75E-02
176	9.29E-02	5	1.86E-02
177	9.85E-02	5	1.97E-02
178	8.61E-02	5	1.72E-02
179	9.13E-02	5	1.83E-02
180	9.72E-02	5	1.94E-02
181	1.03E-01	5	2.07E-02
182	1.10E-01	5	2.21E-02
183	9.52E-02	5	1.90E-02
184	1.01E-01	5	2.03E-02
185	1.08E-01	5	2.17E-02
186	1.16E-01	5	2.32E-02
187	1.25E-01	5	2.49E-02
188	1.06E-01	5	2.12E-02
189	1.14E-01	5	2.27E-02
190	1.22E-01	5	2.44E-02
191	1.31E-01	5	2.63E-02
192	1.42E-01	5	2.84E-02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
193	1.19E-01	5	2.38E-02
194	1.28E-01	5	2.56E-02
195	1.38E-01	5	2.77E-02
196	1.51E-01	5	3.01E-02
197	1.64E-01	5	3.27E-02
198	1.34E-01	5	2.69E-02
199	1.46E-01	5	2.92E-02
200	1.59E-01	5	3.18E-02
201	1.74E-01	5	3.49E-02
202	1.53E-01	5	3.06E-02
203	1.67E-01	5	3.35E-02
204	1.85E-01	5	3.70E-02
205	2.05E-01	5	4.10E-02
206	1.76E-01	5	3.52E-02
207	1.95E-01	5	3.91E-02
208	2.18E-01	5	4.36E-02
209	2.45E-01	5	4.90E-02
210	1.84E-01	5	3.68E-02
211	2.06E-01	5	4.12E-02
212	2.31E-01	5	4.62E-02
213	2.62E-01	5	5.24E-02
214	2.99E-01	5	5.99E-02
215	1.92E-01	5	3.84E-02
216	2.15E-01	5	4.30E-02
217	2.43E-01	5	4.85E-02
218	2.77E-01	5	5.53E-02
219	3.20E-01	5	6.39E-02
220	2.24E-01	5	4.49E-02
221	2.54E-01	5	5.09E-02
222	2.91E-01	5	5.83E-02
223	3.39E-01	5	6.77E-02
224	4.01E-01	5	8.02E-02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Construction Activities

Receptor #	Conc	REL	HI
225	2.64E-01	5	5.28E-02
226	3.04E-01	5	6.07E-02
227	3.54E-01	5	7.07E-02
228	4.19E-01	5	8.38E-02
229	5.09E-01	5	1.02E-01
230	3.13E-01	5	6.27E-02
231	3.66E-01	5	7.32E-02
232	4.32E-01	5	8.64E-02
233	5.24E-01	5	1.05E-01
234	6.50E-01	5	1.30E-01
235	3.73E-01	5	7.46E-02
236	4.38E-01	5	8.77E-02
237	5.27E-01	5	1.05E-01
238	6.49E-01	5	1.30E-01
239	8.12E-01	5	1.62E-01
240	4.40E-01	5	8.81E-02
241	5.28E-01	5	1.06E-01
242	6.36E-01	5	1.27E-01
243	7.91E-01	5	1.58E-01
244	4.38E-01	5	8.75E-02
245	5.22E-01	5	1.04E-01
246	6.27E-01	5	1.25E-01
247	7.61E-01	5	1.52E-01
248	9.54E-01	5	1.91E-01
249	5.11E-01	5	1.02E-01
250	6.11E-01	5	1.22E-01
251	7.37E-01	5	1.47E-01
252	9.13E-01	5	1.83E-01
253	1.16E+00	5	2.33E-01
254	4.98E-01	5	9.96E-02
255	5.90E-01	5	1.18E-01
256	7.15E-01	5	1.43E-01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
257	8.76E-01	5	1.75E-01
258	1.12E+00	5	2.23E-01
259	1.46E+00	5	2.92E-01
260	5.69E-01	5	1.14E-01
261	6.86E-01	5	1.37E-01
262	8.44E-01	5	1.69E-01
263	1.06E+00	5	2.12E-01
264	1.42E+00	5	2.83E-01
265	6.53E-01	5	1.31E-01
266	7.98E-01	5	1.60E-01
267	9.95E-01	5	1.99E-01
268	1.32E+00	5	2.64E-01
269	1.87E+00	5	3.75E-01
270	7.49E-01	5	1.50E-01
271	9.27E-01	5	1.85E-01
272	1.20E+00	5	2.40E-01
273	1.68E+00	5	3.36E-01
274	6.87E-01	5	1.37E-01
275	8.39E-01	5	1.68E-01
276	1.06E+00	5	2.12E-01
277	1.39E+00	5	2.78E-01
278	1.98E+00	5	3.95E-01
279	7.44E-01	5	1.49E-01
280	9.08E-01	5	1.82E-01
281	1.12E+00	5	2.24E-01
282	1.46E+00	5	2.92E-01
283	6.39E-01	5	1.28E-01
284	7.53E-01	5	1.51E-01
285	8.93E-01	5	1.79E-01
286	1.07E+00	5	2.13E-01
287	1.29E+00	5	2.57E-01
288	5.54E-01	5	1.11E-01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
289	6.33E-01	5	1.27E-01
290	7.23E-01	5	1.45E-01
291	8.26E-01	5	1.65E-01
292	9.45E-01	5	1.89E-01
293	4.73E-01	5	9.45E-02
294	5.27E-01	5	1.05E-01
295	5.84E-01	5	1.17E-01
296	6.47E-01	5	1.29E-01
297	7.22E-01	5	1.44E-01
298	4.10E-01	5	8.21E-02
299	4.48E-01	5	8.97E-02
300	4.86E-01	5	9.71E-02
301	5.28E-01	5	1.06E-01
302	5.81E-01	5	1.16E-01
303	6.33E-01	5	1.27E-01
304	3.56E-01	5	7.12E-02
305	3.84E-01	5	7.69E-02
306	4.11E-01	5	8.23E-02
307	4.42E-01	5	8.85E-02
308	4.79E-01	5	9.58E-02
309	5.15E-01	5	1.03E-01
310	3.12E-01	5	6.24E-02
311	3.34E-01	5	6.67E-02
312	3.54E-01	5	7.08E-02
313	3.78E-01	5	7.57E-02
314	4.06E-01	5	8.11E-02
315	4.33E-01	5	8.65E-02
316	2.76E-01	5	5.52E-02
317	2.92E-01	5	5.85E-02
318	3.07E-01	5	6.15E-02
319	3.25E-01	5	6.50E-02
320	3.46E-01	5	6.92E-02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
321	3.65E-01	5	7.31E-02
322	3.86E-01	5	7.73E-02
323	2.45E-01	5	4.91E-02
324	2.59E-01	5	5.17E-02
325	2.71E-01	5	5.41E-02
326	2.84E-01	5	5.69E-02
327	3.01E-01	5	6.02E-02
328	3.16E-01	5	6.33E-02
329	3.32E-01	5	6.65E-02
330	2.19E-01	5	4.38E-02
331	2.29E-01	5	4.59E-02
332	2.40E-01	5	4.80E-02
333	2.52E-01	5	5.03E-02
334	2.64E-01	5	5.27E-02
335	2.76E-01	5	5.52E-02
336	2.90E-01	5	5.80E-02
337	1.99E-01	5	3.97E-02
338	2.07E-01	5	4.14E-02
339	2.16E-01	5	4.32E-02
340	2.25E-01	5	4.50E-02
341	2.36E-01	5	4.71E-02
342	2.46E-01	5	4.92E-02
343	2.56E-01	5	5.13E-02
344	1.80E-01	5	3.61E-02
345	1.88E-01	5	3.75E-02
346	1.95E-01	5	3.89E-02
347	2.03E-01	5	4.05E-02
348	2.11E-01	5	4.21E-02
349	2.19E-01	5	4.38E-02
350	2.28E-01	5	4.56E-02
351	1.64E-01	5	3.29E-02
352	1.71E-01	5	3.41E-02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
353	1.76E-01	5	3.53E-02
354	1.83E-01	5	3.66E-02
355	1.90E-01	5	3.81E-02
356	1.97E-01	5	3.95E-02
357	2.05E-01	5	4.09E-02
358	1.50E-01	5	3.01E-02
359	1.56E-01	5	3.11E-02
360	1.61E-01	5	3.22E-02
361	1.67E-01	5	3.33E-02
362	1.73E-01	5	3.45E-02
363	1.78E-01	5	3.57E-02
364	1.85E-01	5	3.69E-02
365	1.39E-01	5	2.77E-02
366	1.43E-01	5	2.86E-02
367	1.48E-01	5	2.95E-02
368	1.53E-01	5	3.05E-02
369	1.58E-01	5	3.15E-02
370	1.63E-01	5	3.26E-02
371	1.68E-01	5	3.36E-02
372	1.28E-01	5	2.56E-02
373	1.32E-01	5	2.64E-02
374	1.36E-01	5	2.72E-02
375	1.40E-01	5	2.80E-02
376	1.44E-01	5	2.89E-02
377	1.49E-01	5	2.98E-02
378	1.53E-01	5	3.07E-02
379	2.81E+00	5	5.61E-01
380	3.75E+00	5	7.51E-01
381	2.06E+00	5	4.13E-01
382	2.21E+00	5	4.41E-01
383	1.53E+00	5	3.06E-01
384	1.12E+00	5	2.25E-01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Unmitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
385	9.14E-01	5	1.83E-01
386	7.37E-01	5	1.47E-01
387	6.15E-01	5	1.23E-01
388	5.26E-01	5	1.05E-01
389	4.55E-01	5	9.10E-02
390	4.07E-01	5	8.14E-02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
1	7.12642	4.65E-04	3.31E-03	361	1	0.96	0.000001	1.15E-06	1.1	10	0.25	70	0.85	3.83E-08	0.04
2	9.44431	4.65E-04	4.39E-03	361	1	0.96	0.000001	1.52E-06	1.1	10	0.25	70	0.85	5.08E-08	0.05
3	5.02248	4.65E-04	2.34E-03	361	1	0.96	0.000001	8.08E-07	1.1	10	0.25	70	0.85	2.70E-08	0.03
4	6.24262	4.65E-04	2.90E-03	361	1	0.96	0.000001	1.00E-06	1.1	10	0.25	70	0.85	3.35E-08	0.03
5	7.94815	4.65E-04	3.70E-03	361	1	0.96	0.000001	1.28E-06	1.1	10	0.25	70	0.85	4.27E-08	0.04
6	10.533	4.65E-04	4.90E-03	361	1	0.96	0.000001	1.70E-06	1.1	10	0.25	70	0.85	5.66E-08	0.06
7	4.55703	4.65E-04	2.12E-03	361	1	0.96	0.000001	7.33E-07	1.1	10	0.25	70	0.85	2.45E-08	0.02
8	5.52767	4.65E-04	2.57E-03	361	1	0.96	0.000001	8.90E-07	1.1	10	0.25	70	0.85	2.97E-08	0.03
9	6.84787	4.65E-04	3.18E-03	361	1	0.96	0.000001	1.10E-06	1.1	10	0.25	70	0.85	3.68E-08	0.04
10	8.72425	4.65E-04	4.06E-03	361	1	0.96	0.000001	1.40E-06	1.1	10	0.25	70	0.85	4.69E-08	0.05
11	11.55618	4.65E-04	5.37E-03	361	1	0.96	0.000001	1.86E-06	1.1	10	0.25	70	0.85	6.21E-08	0.06
12	4.93686	4.65E-04	2.30E-03	361	1	0.96	0.000001	7.95E-07	1.1	10	0.25	70	0.85	2.65E-08	0.03
13	5.97904	4.65E-04	2.78E-03	361	1	0.96	0.000001	9.62E-07	1.1	10	0.25	70	0.85	3.21E-08	0.03
14	7.4047	4.65E-04	3.44E-03	361	1	0.96	0.000001	1.19E-06	1.1	10	0.25	70	0.85	3.98E-08	0.04
15	9.4476	4.65E-04	4.39E-03	361	1	0.96	0.000001	1.52E-06	1.1	10	0.25	70	0.85	5.08E-08	0.05
16	12.5272	4.65E-04	5.82E-03	361	1	0.96	0.000001	2.02E-06	1.1	10	0.25	70	0.85	6.73E-08	0.07
17	5.28354	4.65E-04	2.46E-03	361	1	0.96	0.000001	8.50E-07	1.1	10	0.25	70	0.85	2.84E-08	0.03
18	6.39912	4.65E-04	2.98E-03	361	1	0.96	0.000001	1.03E-06	1.1	10	0.25	70	0.85	3.44E-08	0.03
19	7.92554	4.65E-04	3.68E-03	361	1	0.96	0.000001	1.28E-06	1.1	10	0.25	70	0.85	4.26E-08	0.04
20	10.11134	4.65E-04	4.70E-03	361	1	0.96	0.000001	1.63E-06	1.1	10	0.25	70	0.85	5.43E-08	0.05
21	13.55128	4.65E-04	6.30E-03	361	1	0.96	0.000001	2.18E-06	1.1	10	0.25	70	0.85	7.28E-08	0.07
22	5.5923	4.65E-04	2.60E-03	361	1	0.96	0.000001	9.00E-07	1.1	10	0.25	70	0.85	3.01E-08	0.03
23	6.76949	4.65E-04	3.15E-03	361	1	0.96	0.000001	1.09E-06	1.1	10	0.25	70	0.85	3.64E-08	0.04
24	8.38163	4.65E-04	3.90E-03	361	1	0.96	0.000001	1.35E-06	1.1	10	0.25	70	0.85	4.50E-08	0.05
25	10.74398	4.65E-04	5.00E-03	361	1	0.96	0.000001	1.73E-06	1.1	10	0.25	70	0.85	5.77E-08	0.06
26	14.45776	4.65E-04	6.72E-03	361	1	0.96	0.000001	2.33E-06	1.1	10	0.25	70	0.85	7.77E-08	0.08
27	5.85653	4.65E-04	2.72E-03	361	1	0.96	0.000001	9.43E-07	1.1	10	0.25	70	0.85	3.15E-08	0.03
28	7.08318	4.65E-04	3.29E-03	361	1	0.96	0.000001	1.14E-06	1.1	10	0.25	70	0.85	3.81E-08	0.04
29	8.80543	4.65E-04	4.09E-03	361	1	0.96	0.000001	1.42E-06	1.1	10	0.25	70	0.85	4.73E-08	0.05
30	11.34514	4.65E-04	5.27E-03	361	1	0.96	0.000001	1.83E-06	1.1	10	0.25	70	0.85	6.10E-08	0.06
31	15.49511	4.65E-04	7.20E-03	361	1	0.96	0.000001	2.49E-06	1.1	10	0.25	70	0.85	8.33E-08	0.08
32	6.06715	4.65E-04	2.82E-03	361	1	0.96	0.000001	9.76E-07	1.1	10	0.25	70	0.85	3.26E-08	0.03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
33	7.34424	4.65E-04	3.41E-03	361	1	0.96	0.000001	1.18E-06	1.1	10	0.25	70	0.85	3.95E-08	0.04
34	9.14749	4.65E-04	4.25E-03	361	1	0.96	0.000001	1.47E-06	1.1	10	0.25	70	0.85	4.92E-08	0.05
35	11.81501	4.65E-04	5.49E-03	361	1	0.96	0.000001	1.90E-06	1.1	10	0.25	70	0.85	6.35E-08	0.06
36	16.47993	4.65E-04	7.66E-03	361	1	0.96	0.000001	2.65E-06	1.1	10	0.25	70	0.85	8.86E-08	0.09
37	6.20127	4.65E-04	2.88E-03	361	1	0.96	0.000001	9.98E-07	1.1	10	0.25	70	0.85	3.33E-08	0.03
38	7.50894	4.65E-04	3.49E-03	361	1	0.96	0.000001	1.21E-06	1.1	10	0.25	70	0.85	4.04E-08	0.04
39	9.35646	4.65E-04	4.35E-03	361	1	0.96	0.000001	1.51E-06	1.1	10	0.25	70	0.85	5.03E-08	0.05
40	12.24816	4.65E-04	5.69E-03	361	1	0.96	0.000001	1.97E-06	1.1	10	0.25	70	0.85	6.58E-08	0.07
41	6.26757	4.65E-04	2.91E-03	361	1	0.96	0.000001	1.01E-06	1.1	10	0.25	70	0.85	3.37E-08	0.03
42	7.57376	4.65E-04	3.52E-03	361	1	0.96	0.000001	1.22E-06	1.1	10	0.25	70	0.85	4.07E-08	0.04
43	9.43774	4.65E-04	4.39E-03	361	1	0.96	0.000001	1.52E-06	1.1	10	0.25	70	0.85	5.07E-08	0.05
44	12.35708	4.65E-04	5.75E-03	361	1	0.96	0.000001	1.99E-06	1.1	10	0.25	70	0.85	6.64E-08	0.07
45	6.17138	4.65E-04	2.87E-03	361	1	0.96	0.000001	9.93E-07	1.1	10	0.25	70	0.85	3.32E-08	0.03
46	7.39828	4.65E-04	3.44E-03	361	1	0.96	0.000001	1.19E-06	1.1	10	0.25	70	0.85	3.98E-08	0.04
47	9.13335	4.65E-04	4.25E-03	361	1	0.96	0.000001	1.47E-06	1.1	10	0.25	70	0.85	4.91E-08	0.05
48	11.76265	4.65E-04	5.47E-03	361	1	0.96	0.000001	1.89E-06	1.1	10	0.25	70	0.85	6.32E-08	0.06
49	6.90549	4.65E-04	3.21E-03	361	1	0.96	0.000001	1.11E-06	1.1	10	0.25	70	0.85	3.71E-08	0.04
50	8.19562	4.65E-04	3.81E-03	361	1	0.96	0.000001	1.32E-06	1.1	10	0.25	70	0.85	4.40E-08	0.04
51	5.35001	4.65E-04	2.49E-03	361	1	0.96	0.000001	8.61E-07	1.1	10	0.25	70	0.85	2.88E-08	0.03
52	6.02005	4.65E-04	2.80E-03	361	1	0.96	0.000001	9.69E-07	1.1	10	0.25	70	0.85	3.24E-08	0.03
53	6.7182	4.65E-04	3.12E-03	361	1	0.96	0.000001	1.08E-06	1.1	10	0.25	70	0.85	3.61E-08	0.04
54	4.26234	4.65E-04	1.98E-03	361	1	0.96	0.000001	6.86E-07	1.1	10	0.25	70	0.85	2.29E-08	0.02
55	4.65127	4.65E-04	2.16E-03	361	1	0.96	0.000001	7.49E-07	1.1	10	0.25	70	0.85	2.50E-08	0.02
56	5.03032	4.65E-04	2.34E-03	361	1	0.96	0.000001	8.10E-07	1.1	10	0.25	70	0.85	2.70E-08	0.03
57	5.36437	4.65E-04	2.49E-03	361	1	0.96	0.000001	8.63E-07	1.1	10	0.25	70	0.85	2.88E-08	0.03
58	3.48723	4.65E-04	1.62E-03	361	1	0.96	0.000001	5.61E-07	1.1	10	0.25	70	0.85	1.87E-08	0.02
59	3.73795	4.65E-04	1.74E-03	361	1	0.96	0.000001	6.02E-07	1.1	10	0.25	70	0.85	2.01E-08	0.02
60	3.97677	4.65E-04	1.85E-03	361	1	0.96	0.000001	6.40E-07	1.1	10	0.25	70	0.85	2.14E-08	0.02
61	4.18597	4.65E-04	1.95E-03	361	1	0.96	0.000001	6.74E-07	1.1	10	0.25	70	0.85	2.25E-08	0.02
62	2.91981	4.65E-04	1.36E-03	361	1	0.96	0.000001	4.70E-07	1.1	10	0.25	70	0.85	1.57E-08	0.02
63	3.09325	4.65E-04	1.44E-03	361	1	0.96	0.000001	4.98E-07	1.1	10	0.25	70	0.85	1.66E-08	0.02
64	3.25908	4.65E-04	1.52E-03	361	1	0.96	0.000001	5.25E-07	1.1	10	0.25	70	0.85	1.75E-08	0.02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
65	3.40495	4.65E-04	1.58E-03	361	1	0.96	0.000001	5.48E-07	1.1	10	0.25	70	0.85	1.83E-08	0.02		
66	3.5008	4.65E-04	1.63E-03	361	1	0.96	0.000001	5.63E-07	1.1	10	0.25	70	0.85	1.88E-08	0.02		
67	2.48949	4.65E-04	1.16E-03	361	1	0.96	0.000001	4.01E-07	1.1	10	0.25	70	0.85	1.34E-08	0.01		
68	2.61728	4.65E-04	1.22E-03	361	1	0.96	0.000001	4.21E-07	1.1	10	0.25	70	0.85	1.41E-08	0.01		
69	2.73937	4.65E-04	1.27E-03	361	1	0.96	0.000001	4.41E-07	1.1	10	0.25	70	0.85	1.47E-08	0.01		
70	2.8478	4.65E-04	1.32E-03	361	1	0.96	0.000001	4.58E-07	1.1	10	0.25	70	0.85	1.53E-08	0.02		
71	2.92577	4.65E-04	1.36E-03	361	1	0.96	0.000001	4.71E-07	1.1	10	0.25	70	0.85	1.57E-08	0.02		
72	2.15491	4.65E-04	1.00E-03	361	1	0.96	0.000001	3.47E-07	1.1	10	0.25	70	0.85	1.16E-08	0.01		
73	2.25296	4.65E-04	1.05E-03	361	1	0.96	0.000001	3.63E-07	1.1	10	0.25	70	0.85	1.21E-08	0.01		
74	2.34683	4.65E-04	1.09E-03	361	1	0.96	0.000001	3.78E-07	1.1	10	0.25	70	0.85	1.26E-08	0.01		
75	2.43169	4.65E-04	1.13E-03	361	1	0.96	0.000001	3.91E-07	1.1	10	0.25	70	0.85	1.31E-08	0.01		
76	2.49622	4.65E-04	1.16E-03	361	1	0.96	0.000001	4.02E-07	1.1	10	0.25	70	0.85	1.34E-08	0.01		
77	1.88877	4.65E-04	8.78E-04	361	1	0.96	0.000001	3.04E-07	1.1	10	0.25	70	0.85	1.02E-08	0.01		
78	1.96628	4.65E-04	9.14E-04	361	1	0.96	0.000001	3.16E-07	1.1	10	0.25	70	0.85	1.06E-08	0.01		
79	2.04091	4.65E-04	9.49E-04	361	1	0.96	0.000001	3.28E-07	1.1	10	0.25	70	0.85	1.10E-08	0.01		
80	2.10939	4.65E-04	9.81E-04	361	1	0.96	0.000001	3.39E-07	1.1	10	0.25	70	0.85	1.13E-08	0.01		
81	2.16393	4.65E-04	1.01E-03	361	1	0.96	0.000001	3.48E-07	1.1	10	0.25	70	0.85	1.16E-08	0.01		
82	1.67298	4.65E-04	7.78E-04	361	1	0.96	0.000001	2.69E-07	1.1	10	0.25	70	0.85	8.99E-09	0.01		
83	1.73582	4.65E-04	8.07E-04	361	1	0.96	0.000001	2.79E-07	1.1	10	0.25	70	0.85	9.33E-09	0.01		
84	1.79654	4.65E-04	8.35E-04	361	1	0.96	0.000001	2.89E-07	1.1	10	0.25	70	0.85	9.66E-09	0.01		
85	1.85252	4.65E-04	8.61E-04	361	1	0.96	0.000001	2.98E-07	1.1	10	0.25	70	0.85	9.96E-09	0.01		
86	1.89901	4.65E-04	8.83E-04	361	1	0.96	0.000001	3.06E-07	1.1	10	0.25	70	0.85	1.02E-08	0.01		
87	1.49478	4.65E-04	6.95E-04	361	1	0.96	0.000001	2.41E-07	1.1	10	0.25	70	0.85	8.03E-09	0.01		
88	1.54673	4.65E-04	7.19E-04	361	1	0.96	0.000001	2.49E-07	1.1	10	0.25	70	0.85	8.31E-09	0.01		
89	1.59702	4.65E-04	7.43E-04	361	1	0.96	0.000001	2.57E-07	1.1	10	0.25	70	0.85	8.58E-09	0.01		
90	1.64473	4.65E-04	7.65E-04	361	1	0.96	0.000001	2.65E-07	1.1	10	0.25	70	0.85	8.84E-09	0.01		
91	1.68519	4.65E-04	7.83E-04	361	1	0.96	0.000001	2.71E-07	1.1	10	0.25	70	0.85	9.06E-09	0.01		
92	1.34582	4.65E-04	6.26E-04	361	1	0.96	0.000001	2.17E-07	1.1	10	0.25	70	0.85	7.23E-09	0.01		
93	1.38942	4.65E-04	6.46E-04	361	1	0.96	0.000001	2.24E-07	1.1	10	0.25	70	0.85	7.47E-09	0.01		
94	1.43211	4.65E-04	6.66E-04	361	1	0.96	0.000001	2.30E-07	1.1	10	0.25	70	0.85	7.70E-09	0.01		
95	1.47264	4.65E-04	6.85E-04	361	1	0.96	0.000001	2.37E-07	1.1	10	0.25	70	0.85	7.91E-09	0.01		
96	1.50798	4.65E-04	7.01E-04	361	1	0.96	0.000001	2.43E-07	1.1	10	0.25	70	0.85	8.10E-09	0.01		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
97	1.21956	4.65E-04	5.67E-04	361	1	0.96	0.000001	1.96E-07	1.1	10	0.25	70	0.85	6.55E-09	0.01		
98	1.25683	4.65E-04	5.84E-04	361	1	0.96	0.000001	2.02E-07	1.1	10	0.25	70	0.85	6.75E-09	0.01		
99	1.29345	4.65E-04	6.01E-04	361	1	0.96	0.000001	2.08E-07	1.1	10	0.25	70	0.85	6.95E-09	0.01		
100	1.3282	4.65E-04	6.18E-04	361	1	0.96	0.000001	2.14E-07	1.1	10	0.25	70	0.85	7.14E-09	0.01		
101	1.3594	4.65E-04	6.32E-04	361	1	0.96	0.000001	2.19E-07	1.1	10	0.25	70	0.85	7.31E-09	0.01		
102	33.55026	4.65E-04	1.56E-02	361	1	0.96	0.000001	5.40E-06	1.1	10	0.25	70	0.85	1.80E-07	0.18		
103	30.07179	4.65E-04	1.40E-02	361	1	0.96	0.000001	4.84E-06	1.1	10	0.25	70	0.85	1.62E-07	0.16		
104	49.54652	4.65E-04	2.30E-02	361	1	0.96	0.000001	7.97E-06	1.1	10	0.25	70	0.85	2.66E-07	0.27		
105	17.39502	4.65E-04	8.09E-03	361	1	0.96	0.000001	2.80E-06	1.1	10	0.25	70	0.85	9.35E-08	0.09		
106	23.33807	4.65E-04	1.09E-02	361	1	0.96	0.000001	3.76E-06	1.1	10	0.25	70	0.85	1.25E-07	0.13		
107	33.73649	4.65E-04	1.57E-02	361	1	0.96	0.000001	5.43E-06	1.1	10	0.25	70	0.85	1.81E-07	0.18		
108	42.32493	4.65E-04	1.97E-02	361	1	0.96	0.000001	6.81E-06	1.1	10	0.25	70	0.85	2.27E-07	0.23		
109	14.92114	4.65E-04	6.94E-03	361	1	0.96	0.000001	2.40E-06	1.1	10	0.25	70	0.85	8.02E-08	0.08		
110	19.09	4.65E-04	8.88E-03	361	1	0.96	0.000001	3.07E-06	1.1	10	0.25	70	0.85	1.03E-07	0.10		
111	25.63326	4.65E-04	1.19E-02	361	1	0.96	0.000001	4.13E-06	1.1	10	0.25	70	0.85	1.38E-07	0.14		
112	37.48441	4.65E-04	1.74E-02	361	1	0.96	0.000001	6.03E-06	1.1	10	0.25	70	0.85	2.01E-07	0.20		
113	33.95865	4.65E-04	1.58E-02	361	1	0.96	0.000001	5.47E-06	1.1	10	0.25	70	0.85	1.83E-07	0.18		
114	10.79306	4.65E-04	5.02E-03	361	1	0.96	0.000001	1.74E-06	1.1	10	0.25	70	0.85	5.80E-08	0.06		
115	13.04407	4.65E-04	6.06E-03	361	1	0.96	0.000001	2.10E-06	1.1	10	0.25	70	0.85	7.01E-08	0.07		
116	16.10358	4.65E-04	7.49E-03	361	1	0.96	0.000001	2.59E-06	1.1	10	0.25	70	0.85	8.65E-08	0.09		
117	20.63244	4.65E-04	9.59E-03	361	1	0.96	0.000001	3.32E-06	1.1	10	0.25	70	0.85	1.11E-07	0.11		
118	27.94148	4.65E-04	1.30E-02	361	1	0.96	0.000001	4.50E-06	1.1	10	0.25	70	0.85	1.50E-07	0.15		
119	41.76594	4.65E-04	1.94E-02	361	1	0.96	0.000001	6.72E-06	1.1	10	0.25	70	0.85	2.24E-07	0.22		
120	38.89079	4.65E-04	1.81E-02	361	1	0.96	0.000001	6.26E-06	1.1	10	0.25	70	0.85	2.09E-07	0.21		
121	8.36861	4.65E-04	3.89E-03	361	1	0.96	0.000001	1.35E-06	1.1	10	0.25	70	0.85	4.50E-08	0.04		
122	9.77078	4.65E-04	4.54E-03	361	1	0.96	0.000001	1.57E-06	1.1	10	0.25	70	0.85	5.25E-08	0.05		
123	11.55942	4.65E-04	5.37E-03	361	1	0.96	0.000001	1.86E-06	1.1	10	0.25	70	0.85	6.21E-08	0.06		
124	13.93303	4.65E-04	6.48E-03	361	1	0.96	0.000001	2.24E-06	1.1	10	0.25	70	0.85	7.49E-08	0.07		
125	17.27952	4.65E-04	8.03E-03	361	1	0.96	0.000001	2.78E-06	1.1	10	0.25	70	0.85	9.29E-08	0.09		
126	22.26041	4.65E-04	1.03E-02	361	1	0.96	0.000001	3.58E-06	1.1	10	0.25	70	0.85	1.20E-07	0.12		
127	30.31811	4.65E-04	1.41E-02	361	1	0.96	0.000001	4.88E-06	1.1	10	0.25	70	0.85	1.63E-07	0.16		
128	46.64352	4.65E-04	2.17E-02	361	1	0.96	0.000001	7.51E-06	1.1	10	0.25	70	0.85	2.51E-07	0.25		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
129	10.39186	4.65E-04	4.83E-03	361	1	0.96	0.000001	1.67E-06	1.1	10	0.25	70	0.85	5.58E-08	0.06		
130	12.29247	4.65E-04	5.72E-03	361	1	0.96	0.000001	1.98E-06	1.1	10	0.25	70	0.85	6.61E-08	0.07		
131	14.86919	4.65E-04	6.91E-03	361	1	0.96	0.000001	2.39E-06	1.1	10	0.25	70	0.85	7.99E-08	0.08		
132	18.47484	4.65E-04	8.59E-03	361	1	0.96	0.000001	2.97E-06	1.1	10	0.25	70	0.85	9.93E-08	0.10		
133	23.90288	4.65E-04	1.11E-02	361	1	0.96	0.000001	3.85E-06	1.1	10	0.25	70	0.85	1.28E-07	0.13		
134	33.16374	4.65E-04	1.54E-02	361	1	0.96	0.000001	5.34E-06	1.1	10	0.25	70	0.85	1.78E-07	0.18		
135	43.01654	4.65E-04	2.00E-02	361	1	0.96	0.000001	6.92E-06	1.1	10	0.25	70	0.85	2.31E-07	0.23		
136	10.98455	4.65E-04	5.11E-03	361	1	0.96	0.000001	1.77E-06	1.1	10	0.25	70	0.85	5.90E-08	0.06		
137	13.04049	4.65E-04	6.06E-03	361	1	0.96	0.000001	2.10E-06	1.1	10	0.25	70	0.85	7.01E-08	0.07		
138	15.78015	4.65E-04	7.34E-03	361	1	0.96	0.000001	2.54E-06	1.1	10	0.25	70	0.85	8.48E-08	0.08		
139	19.55494	4.65E-04	9.09E-03	361	1	0.96	0.000001	3.15E-06	1.1	10	0.25	70	0.85	1.05E-07	0.11		
140	25.64532	4.65E-04	1.19E-02	361	1	0.96	0.000001	4.13E-06	1.1	10	0.25	70	0.85	1.38E-07	0.14		
141	36.20477	4.65E-04	1.68E-02	361	1	0.96	0.000001	5.83E-06	1.1	10	0.25	70	0.85	1.95E-07	0.19		
142	44.53036	4.65E-04	2.07E-02	361	1	0.96	0.000001	7.17E-06	1.1	10	0.25	70	0.85	2.39E-07	0.24		
143	11.59696	4.65E-04	5.39E-03	361	1	0.96	0.000001	1.87E-06	1.1	10	0.25	70	0.85	6.23E-08	0.06		
144	13.76023	4.65E-04	6.40E-03	361	1	0.96	0.000001	2.21E-06	1.1	10	0.25	70	0.85	7.40E-08	0.07		
145	16.5957	4.65E-04	7.72E-03	361	1	0.96	0.000001	2.67E-06	1.1	10	0.25	70	0.85	8.92E-08	0.09		
146	20.89485	4.65E-04	9.71E-03	361	1	0.96	0.000001	3.36E-06	1.1	10	0.25	70	0.85	1.12E-07	0.11		
147	27.51452	4.65E-04	1.28E-02	361	1	0.96	0.000001	4.43E-06	1.1	10	0.25	70	0.85	1.48E-07	0.15		
148	39.75497	4.65E-04	1.85E-02	361	1	0.96	0.000001	6.40E-06	1.1	10	0.25	70	0.85	2.14E-07	0.21		
149	12.18242	4.65E-04	5.66E-03	361	1	0.96	0.000001	1.96E-06	1.1	10	0.25	70	0.85	6.55E-08	0.07		
150	14.41244	4.65E-04	6.70E-03	361	1	0.96	0.000001	2.32E-06	1.1	10	0.25	70	0.85	7.75E-08	0.08		
151	17.60595	4.65E-04	8.19E-03	361	1	0.96	0.000001	2.83E-06	1.1	10	0.25	70	0.85	9.46E-08	0.09		
152	22.16708	4.65E-04	1.03E-02	361	1	0.96	0.000001	3.57E-06	1.1	10	0.25	70	0.85	1.19E-07	0.12		
153	29.33297	4.65E-04	1.36E-02	361	1	0.96	0.000001	4.72E-06	1.1	10	0.25	70	0.85	1.58E-07	0.16		
154	43.91249	4.65E-04	2.04E-02	361	1	0.96	0.000001	7.07E-06	1.1	10	0.25	70	0.85	2.36E-07	0.24		
155	12.73808	4.65E-04	5.92E-03	361	1	0.96	0.000001	2.05E-06	1.1	10	0.25	70	0.85	6.85E-08	0.07		
156	15.17303	4.65E-04	7.05E-03	361	1	0.96	0.000001	2.44E-06	1.1	10	0.25	70	0.85	8.15E-08	0.08		
157	18.49884	4.65E-04	8.60E-03	361	1	0.96	0.000001	2.98E-06	1.1	10	0.25	70	0.85	9.94E-08	0.10		
158	23.39351	4.65E-04	1.09E-02	361	1	0.96	0.000001	3.77E-06	1.1	10	0.25	70	0.85	1.26E-07	0.13		
159	31.81978	4.65E-04	1.48E-02	361	1	0.96	0.000001	5.12E-06	1.1	10	0.25	70	0.85	1.71E-07	0.17		
160	48.77912	4.65E-04	2.27E-02	361	1	0.96	0.000001	7.85E-06	1.1	10	0.25	70	0.85	2.62E-07	0.26		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
161	13.31781	4.65E-04	6.19E-03	361	1	0.96	0.000001	2.14E-06	1.1	10	0.25	70	0.85	7.16E-08	0.07		
162	15.84008	4.65E-04	7.36E-03	361	1	0.96	0.000001	2.55E-06	1.1	10	0.25	70	0.85	8.51E-08	0.09		
163	19.44156	4.65E-04	9.04E-03	361	1	0.96	0.000001	3.13E-06	1.1	10	0.25	70	0.85	1.04E-07	0.10		
164	24.86043	4.65E-04	1.16E-02	361	1	0.96	0.000001	4.00E-06	1.1	10	0.25	70	0.85	1.34E-07	0.13		
165	34.15334	4.65E-04	1.59E-02	361	1	0.96	0.000001	5.50E-06	1.1	10	0.25	70	0.85	1.84E-07	0.18		
166	43.50496	4.65E-04	2.02E-02	361	1	0.96	0.000001	7.00E-06	1.1	10	0.25	70	0.85	2.34E-07	0.23		
167	13.81609	4.65E-04	6.42E-03	361	1	0.96	0.000001	2.22E-06	1.1	10	0.25	70	0.85	7.43E-08	0.07		
168	16.63593	4.65E-04	7.73E-03	361	1	0.96	0.000001	2.68E-06	1.1	10	0.25	70	0.85	8.94E-08	0.09		
169	20.53613	4.65E-04	9.55E-03	361	1	0.96	0.000001	3.31E-06	1.1	10	0.25	70	0.85	1.10E-07	0.11		
170	26.56742	4.65E-04	1.24E-02	361	1	0.96	0.000001	4.28E-06	1.1	10	0.25	70	0.85	1.43E-07	0.14		
171	37.35384	4.65E-04	1.74E-02	361	1	0.96	0.000001	6.01E-06	1.1	10	0.25	70	0.85	2.01E-07	0.20		
172	36.0152	4.65E-04	1.67E-02	361	1	0.96	0.000001	5.80E-06	1.1	10	0.25	70	0.85	1.94E-07	0.19		
173	14.45701	4.65E-04	6.72E-03	361	1	0.96	0.000001	2.33E-06	1.1	10	0.25	70	0.85	7.77E-08	0.08		
174	17.37301	4.65E-04	8.08E-03	361	1	0.96	0.000001	2.80E-06	1.1	10	0.25	70	0.85	9.34E-08	0.09		
175	21.5797	4.65E-04	1.00E-02	361	1	0.96	0.000001	3.47E-06	1.1	10	0.25	70	0.85	1.16E-07	0.12		
176	28.27979	4.65E-04	1.31E-02	361	1	0.96	0.000001	4.55E-06	1.1	10	0.25	70	0.85	1.52E-07	0.15		
177	40.42447	4.65E-04	1.88E-02	361	1	0.96	0.000001	6.51E-06	1.1	10	0.25	70	0.85	2.17E-07	0.22		
178	15.00358	4.65E-04	6.98E-03	361	1	0.96	0.000001	2.41E-06	1.1	10	0.25	70	0.85	8.06E-08	0.08		
179	18.06113	4.65E-04	8.40E-03	361	1	0.96	0.000001	2.91E-06	1.1	10	0.25	70	0.85	9.71E-08	0.10		
180	22.71956	4.65E-04	1.06E-02	361	1	0.96	0.000001	3.66E-06	1.1	10	0.25	70	0.85	1.22E-07	0.12		
181	29.87302	4.65E-04	1.39E-02	361	1	0.96	0.000001	4.81E-06	1.1	10	0.25	70	0.85	1.61E-07	0.16		
182	44.81	4.65E-04	2.08E-02	361	1	0.96	0.000001	7.21E-06	1.1	10	0.25	70	0.85	2.41E-07	0.24		
183	15.60073	4.65E-04	7.25E-03	361	1	0.96	0.000001	2.51E-06	1.1	10	0.25	70	0.85	8.38E-08	0.08		
184	18.80739	4.65E-04	8.74E-03	361	1	0.96	0.000001	3.03E-06	1.1	10	0.25	70	0.85	1.01E-07	0.10		
185	23.75632	4.65E-04	1.10E-02	361	1	0.96	0.000001	3.82E-06	1.1	10	0.25	70	0.85	1.28E-07	0.13		
186	32.21529	4.65E-04	1.50E-02	361	1	0.96	0.000001	5.18E-06	1.1	10	0.25	70	0.85	1.73E-07	0.17		
187	49.94775	4.65E-04	2.32E-02	361	1	0.96	0.000001	8.04E-06	1.1	10	0.25	70	0.85	2.68E-07	0.27		
188	16.15173	4.65E-04	7.51E-03	361	1	0.96	0.000001	2.60E-06	1.1	10	0.25	70	0.85	8.68E-08	0.09		
189	19.79861	4.65E-04	9.21E-03	361	1	0.96	0.000001	3.19E-06	1.1	10	0.25	70	0.85	1.06E-07	0.11		
190	25.08632	4.65E-04	1.17E-02	361	1	0.96	0.000001	4.04E-06	1.1	10	0.25	70	0.85	1.35E-07	0.13		
191	34.73573	4.65E-04	1.61E-02	361	1	0.96	0.000001	5.59E-06	1.1	10	0.25	70	0.85	1.87E-07	0.19		
192	43.3961	4.65E-04	2.02E-02	361	1	0.96	0.000001	6.98E-06	1.1	10	0.25	70	0.85	2.33E-07	0.23		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
193	16.79449	4.65E-04	7.81E-03	361	1	0.96	0.000001	2.70E-06	1.1	10	0.25	70	0.85	9.03E-08	0.09
194	20.69337	4.65E-04	9.62E-03	361	1	0.96	0.000001	3.33E-06	1.1	10	0.25	70	0.85	1.11E-07	0.11
195	26.4885	4.65E-04	1.23E-02	361	1	0.96	0.000001	4.26E-06	1.1	10	0.25	70	0.85	1.42E-07	0.14
196	37.64884	4.65E-04	1.75E-02	361	1	0.96	0.000001	6.06E-06	1.1	10	0.25	70	0.85	2.02E-07	0.20
197	35.3791	4.65E-04	1.64E-02	361	1	0.96	0.000001	5.69E-06	1.1	10	0.25	70	0.85	1.90E-07	0.19
198	17.41292	4.65E-04	8.10E-03	361	1	0.96	0.000001	2.80E-06	1.1	10	0.25	70	0.85	9.36E-08	0.09
199	21.59767	4.65E-04	1.00E-02	361	1	0.96	0.000001	3.48E-06	1.1	10	0.25	70	0.85	1.16E-07	0.12
200	28.12072	4.65E-04	1.31E-02	361	1	0.96	0.000001	4.53E-06	1.1	10	0.25	70	0.85	1.51E-07	0.15
201	41.12258	4.65E-04	1.91E-02	361	1	0.96	0.000001	6.62E-06	1.1	10	0.25	70	0.85	2.21E-07	0.22
202	18.02574	4.65E-04	8.38E-03	361	1	0.96	0.000001	2.90E-06	1.1	10	0.25	70	0.85	9.69E-08	0.10
203	22.41384	4.65E-04	1.04E-02	361	1	0.96	0.000001	3.61E-06	1.1	10	0.25	70	0.85	1.20E-07	0.12
204	30.11382	4.65E-04	1.40E-02	361	1	0.96	0.000001	4.85E-06	1.1	10	0.25	70	0.85	1.62E-07	0.16
205	45.13292	4.65E-04	2.10E-02	361	1	0.96	0.000001	7.26E-06	1.1	10	0.25	70	0.85	2.43E-07	0.24
206	18.54066	4.65E-04	8.62E-03	361	1	0.96	0.000001	2.98E-06	1.1	10	0.25	70	0.85	9.96E-08	0.10
207	23.55101	4.65E-04	1.09E-02	361	1	0.96	0.000001	3.79E-06	1.1	10	0.25	70	0.85	1.27E-07	0.13
208	31.87562	4.65E-04	1.48E-02	361	1	0.96	0.000001	5.13E-06	1.1	10	0.25	70	0.85	1.71E-07	0.17
209	49.98284	4.65E-04	2.32E-02	361	1	0.96	0.000001	8.04E-06	1.1	10	0.25	70	0.85	2.69E-07	0.27
210	15.64889	4.65E-04	7.28E-03	361	1	0.96	0.000001	2.52E-06	1.1	10	0.25	70	0.85	8.41E-08	0.08
211	19.2355	4.65E-04	8.94E-03	361	1	0.96	0.000001	3.10E-06	1.1	10	0.25	70	0.85	1.03E-07	0.10
212	24.65128	4.65E-04	1.15E-02	361	1	0.96	0.000001	3.97E-06	1.1	10	0.25	70	0.85	1.32E-07	0.13
213	34.23593	4.65E-04	1.59E-02	361	1	0.96	0.000001	5.51E-06	1.1	10	0.25	70	0.85	1.84E-07	0.18
214	42.21348	4.65E-04	1.96E-02	361	1	0.96	0.000001	6.79E-06	1.1	10	0.25	70	0.85	2.27E-07	0.23
215	13.43579	4.65E-04	6.25E-03	361	1	0.96	0.000001	2.16E-06	1.1	10	0.25	70	0.85	7.22E-08	0.07
216	16.00489	4.65E-04	7.44E-03	361	1	0.96	0.000001	2.58E-06	1.1	10	0.25	70	0.85	8.60E-08	0.09
217	19.70792	4.65E-04	9.16E-03	361	1	0.96	0.000001	3.17E-06	1.1	10	0.25	70	0.85	1.06E-07	0.11
218	25.57126	4.65E-04	1.19E-02	361	1	0.96	0.000001	4.12E-06	1.1	10	0.25	70	0.85	1.37E-07	0.14
219	36.42147	4.65E-04	1.69E-02	361	1	0.96	0.000001	5.86E-06	1.1	10	0.25	70	0.85	1.96E-07	0.20
220	13.61074	4.65E-04	6.33E-03	361	1	0.96	0.000001	2.19E-06	1.1	10	0.25	70	0.85	7.31E-08	0.07
221	16.2822	4.65E-04	7.57E-03	361	1	0.96	0.000001	2.62E-06	1.1	10	0.25	70	0.85	8.75E-08	0.09
222	20.21449	4.65E-04	9.40E-03	361	1	0.96	0.000001	3.25E-06	1.1	10	0.25	70	0.85	1.09E-07	0.11
223	26.63429	4.65E-04	1.24E-02	361	1	0.96	0.000001	4.29E-06	1.1	10	0.25	70	0.85	1.43E-07	0.14
224	39.18658	4.65E-04	1.82E-02	361	1	0.96	0.000001	6.31E-06	1.1	10	0.25	70	0.85	2.11E-07	0.21

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
225	13.61514	4.65E-04	6.33E-03	361	1	0.96	0.000001	2.19E-06	1.1	10	0.25	70	0.85	7.32E-08	0.07		
226	16.33158	4.65E-04	7.59E-03	361	1	0.96	0.000001	2.63E-06	1.1	10	0.25	70	0.85	8.78E-08	0.09		
227	20.38504	4.65E-04	9.48E-03	361	1	0.96	0.000001	3.28E-06	1.1	10	0.25	70	0.85	1.10E-07	0.11		
228	27.16745	4.65E-04	1.26E-02	361	1	0.96	0.000001	4.37E-06	1.1	10	0.25	70	0.85	1.46E-07	0.15		
229	41.30182	4.65E-04	1.92E-02	361	1	0.96	0.000001	6.65E-06	1.1	10	0.25	70	0.85	2.22E-07	0.22		
230	13.41637	4.65E-04	6.24E-03	361	1	0.96	0.000001	2.16E-06	1.1	10	0.25	70	0.85	7.21E-08	0.07		
231	16.06074	4.65E-04	7.47E-03	361	1	0.96	0.000001	2.58E-06	1.1	10	0.25	70	0.85	8.63E-08	0.09		
232	19.96178	4.65E-04	9.28E-03	361	1	0.96	0.000001	3.21E-06	1.1	10	0.25	70	0.85	1.07E-07	0.11		
233	26.78309	4.65E-04	1.25E-02	361	1	0.96	0.000001	4.31E-06	1.1	10	0.25	70	0.85	1.44E-07	0.14		
234	41.43989	4.65E-04	1.93E-02	361	1	0.96	0.000001	6.67E-06	1.1	10	0.25	70	0.85	2.23E-07	0.22		
235	12.86229	4.65E-04	5.98E-03	361	1	0.96	0.000001	2.07E-06	1.1	10	0.25	70	0.85	6.91E-08	0.07		
236	15.08917	4.65E-04	7.02E-03	361	1	0.96	0.000001	2.43E-06	1.1	10	0.25	70	0.85	8.11E-08	0.08		
237	18.33392	4.65E-04	8.52E-03	361	1	0.96	0.000001	2.95E-06	1.1	10	0.25	70	0.85	9.85E-08	0.10		
238	23.14588	4.65E-04	1.08E-02	361	1	0.96	0.000001	3.73E-06	1.1	10	0.25	70	0.85	1.24E-07	0.12		
239	28.20951	4.65E-04	1.31E-02	361	1	0.96	0.000001	4.54E-06	1.1	10	0.25	70	0.85	1.52E-07	0.15		
240	11.7602	4.65E-04	5.47E-03	361	1	0.96	0.000001	1.89E-06	1.1	10	0.25	70	0.85	6.32E-08	0.06		
241	13.38931	4.65E-04	6.23E-03	361	1	0.96	0.000001	2.15E-06	1.1	10	0.25	70	0.85	7.20E-08	0.07		
242	15.06634	4.65E-04	7.00E-03	361	1	0.96	0.000001	2.42E-06	1.1	10	0.25	70	0.85	8.10E-08	0.08		
243	16.58835	4.65E-04	7.71E-03	361	1	0.96	0.000001	2.67E-06	1.1	10	0.25	70	0.85	8.92E-08	0.09		
244	9.42824	4.65E-04	4.38E-03	361	1	0.96	0.000001	1.52E-06	1.1	10	0.25	70	0.85	5.07E-08	0.05		
245	10.30359	4.65E-04	4.79E-03	361	1	0.96	0.000001	1.66E-06	1.1	10	0.25	70	0.85	5.54E-08	0.06		
246	11.14416	4.65E-04	5.18E-03	361	1	0.96	0.000001	1.79E-06	1.1	10	0.25	70	0.85	5.99E-08	0.06		
247	11.77298	4.65E-04	5.47E-03	361	1	0.96	0.000001	1.89E-06	1.1	10	0.25	70	0.85	6.33E-08	0.06		
248	11.81269	4.65E-04	5.49E-03	361	1	0.96	0.000001	1.90E-06	1.1	10	0.25	70	0.85	6.35E-08	0.06		
249	8.30251	4.65E-04	3.86E-03	361	1	0.96	0.000001	1.34E-06	1.1	10	0.25	70	0.85	4.46E-08	0.04		
250	8.78697	4.65E-04	4.09E-03	361	1	0.96	0.000001	1.41E-06	1.1	10	0.25	70	0.85	4.72E-08	0.05		
251	9.15386	4.65E-04	4.26E-03	361	1	0.96	0.000001	1.47E-06	1.1	10	0.25	70	0.85	4.92E-08	0.05		
252	9.25084	4.65E-04	4.30E-03	361	1	0.96	0.000001	1.49E-06	1.1	10	0.25	70	0.85	4.97E-08	0.05		
253	8.89292	4.65E-04	4.13E-03	361	1	0.96	0.000001	1.43E-06	1.1	10	0.25	70	0.85	4.78E-08	0.05		
254	6.91794	4.65E-04	3.22E-03	361	1	0.96	0.000001	1.11E-06	1.1	10	0.25	70	0.85	3.72E-08	0.04		
255	7.23262	4.65E-04	3.36E-03	361	1	0.96	0.000001	1.16E-06	1.1	10	0.25	70	0.85	3.89E-08	0.04		
256	7.47988	4.65E-04	3.48E-03	361	1	0.96	0.000001	1.20E-06	1.1	10	0.25	70	0.85	4.02E-08	0.04		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
257	7.56891	4.65E-04	3.52E-03	361	1	0.96	0.000001	1.22E-06	1.1	10	0.25	70	0.85	4.07E-08	0.04		
258	7.42703	4.65E-04	3.45E-03	361	1	0.96	0.000001	1.20E-06	1.1	10	0.25	70	0.85	3.99E-08	0.04		
259	7.03979	4.65E-04	3.27E-03	361	1	0.96	0.000001	1.13E-06	1.1	10	0.25	70	0.85	3.78E-08	0.04		
260	6.12934	4.65E-04	2.85E-03	361	1	0.96	0.000001	9.86E-07	1.1	10	0.25	70	0.85	3.29E-08	0.03		
261	6.30523	4.65E-04	2.93E-03	361	1	0.96	0.000001	1.01E-06	1.1	10	0.25	70	0.85	3.39E-08	0.03		
262	6.39015	4.65E-04	2.97E-03	361	1	0.96	0.000001	1.03E-06	1.1	10	0.25	70	0.85	3.43E-08	0.03		
263	6.33067	4.65E-04	2.94E-03	361	1	0.96	0.000001	1.02E-06	1.1	10	0.25	70	0.85	3.40E-08	0.03		
264	6.12279	4.65E-04	2.85E-03	361	1	0.96	0.000001	9.85E-07	1.1	10	0.25	70	0.85	3.29E-08	0.03		
265	5.4363	4.65E-04	2.53E-03	361	1	0.96	0.000001	8.75E-07	1.1	10	0.25	70	0.85	2.92E-08	0.03		
266	5.51205	4.65E-04	2.56E-03	361	1	0.96	0.000001	8.87E-07	1.1	10	0.25	70	0.85	2.96E-08	0.03		
267	5.49212	4.65E-04	2.55E-03	361	1	0.96	0.000001	8.84E-07	1.1	10	0.25	70	0.85	2.95E-08	0.03		
268	5.3805	4.65E-04	2.50E-03	361	1	0.96	0.000001	8.66E-07	1.1	10	0.25	70	0.85	2.89E-08	0.03		
269	5.16454	4.65E-04	2.40E-03	361	1	0.96	0.000001	8.31E-07	1.1	10	0.25	70	0.85	2.78E-08	0.03		
270	4.83176	4.65E-04	2.25E-03	361	1	0.96	0.000001	7.78E-07	1.1	10	0.25	70	0.85	2.60E-08	0.03		
271	4.84073	4.65E-04	2.25E-03	361	1	0.96	0.000001	7.79E-07	1.1	10	0.25	70	0.85	2.60E-08	0.03		
272	4.77349	4.65E-04	2.22E-03	361	1	0.96	0.000001	7.68E-07	1.1	10	0.25	70	0.85	2.57E-08	0.03		
273	4.63877	4.65E-04	2.16E-03	361	1	0.96	0.000001	7.47E-07	1.1	10	0.25	70	0.85	2.49E-08	0.02		
274	4.29146	4.65E-04	2.00E-03	361	1	0.96	0.000001	6.91E-07	1.1	10	0.25	70	0.85	2.31E-08	0.02		
275	4.31025	4.65E-04	2.00E-03	361	1	0.96	0.000001	6.94E-07	1.1	10	0.25	70	0.85	2.32E-08	0.02		
276	4.27681	4.65E-04	1.99E-03	361	1	0.96	0.000001	6.88E-07	1.1	10	0.25	70	0.85	2.30E-08	0.02		
277	4.18832	4.65E-04	1.95E-03	361	1	0.96	0.000001	6.74E-07	1.1	10	0.25	70	0.85	2.25E-08	0.02		
278	4.05217	4.65E-04	1.88E-03	361	1	0.96	0.000001	6.52E-07	1.1	10	0.25	70	0.85	2.18E-08	0.02		
279	3.87349	4.65E-04	1.80E-03	361	1	0.96	0.000001	6.23E-07	1.1	10	0.25	70	0.85	2.08E-08	0.02		
280	3.85945	4.65E-04	1.79E-03	361	1	0.96	0.000001	6.21E-07	1.1	10	0.25	70	0.85	2.07E-08	0.02		
281	3.8031	4.65E-04	1.77E-03	361	1	0.96	0.000001	6.12E-07	1.1	10	0.25	70	0.85	2.04E-08	0.02		
282	3.70874	4.65E-04	1.72E-03	361	1	0.96	0.000001	5.97E-07	1.1	10	0.25	70	0.85	1.99E-08	0.02		
283	3.51043	4.65E-04	1.63E-03	361	1	0.96	0.000001	5.65E-07	1.1	10	0.25	70	0.85	1.89E-08	0.02		
284	3.50731	4.65E-04	1.63E-03	361	1	0.96	0.000001	5.64E-07	1.1	10	0.25	70	0.85	1.88E-08	0.02		
285	3.47221	4.65E-04	1.61E-03	361	1	0.96	0.000001	5.59E-07	1.1	10	0.25	70	0.85	1.87E-08	0.02		
286	3.40646	4.65E-04	1.58E-03	361	1	0.96	0.000001	5.48E-07	1.1	10	0.25	70	0.85	1.83E-08	0.02		
287	3.31229	4.65E-04	1.54E-03	361	1	0.96	0.000001	5.33E-07	1.1	10	0.25	70	0.85	1.78E-08	0.02		
288	3.20153	4.65E-04	1.49E-03	361	1	0.96	0.000001	5.15E-07	1.1	10	0.25	70	0.85	1.72E-08	0.02		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
289	3.20589	4.65E-04	1.49E-03	361	1	0.96	0.000001	5.16E-07	1.1	10	0.25	70	0.85	1.72E-08	0.02		
290	3.18588	4.65E-04	1.48E-03	361	1	0.96	0.000001	5.13E-07	1.1	10	0.25	70	0.85	1.71E-08	0.02		
291	3.14029	4.65E-04	1.46E-03	361	1	0.96	0.000001	5.05E-07	1.1	10	0.25	70	0.85	1.69E-08	0.02		
292	3.07064	4.65E-04	1.43E-03	361	1	0.96	0.000001	4.94E-07	1.1	10	0.25	70	0.85	1.65E-08	0.02		
293	2.93743	4.65E-04	1.37E-03	361	1	0.96	0.000001	4.73E-07	1.1	10	0.25	70	0.85	1.58E-08	0.02		
294	2.94601	4.65E-04	1.37E-03	361	1	0.96	0.000001	4.74E-07	1.1	10	0.25	70	0.85	1.58E-08	0.02		
295	2.93445	4.65E-04	1.36E-03	361	1	0.96	0.000001	4.72E-07	1.1	10	0.25	70	0.85	1.58E-08	0.02		
296	2.90327	4.65E-04	1.35E-03	361	1	0.96	0.000001	4.67E-07	1.1	10	0.25	70	0.85	1.56E-08	0.02		
297	2.85381	4.65E-04	1.33E-03	361	1	0.96	0.000001	4.59E-07	1.1	10	0.25	70	0.85	1.53E-08	0.02		
298	2.70836	4.65E-04	1.26E-03	361	1	0.96	0.000001	4.36E-07	1.1	10	0.25	70	0.85	1.46E-08	0.01		
299	2.71996	4.65E-04	1.26E-03	361	1	0.96	0.000001	4.38E-07	1.1	10	0.25	70	0.85	1.46E-08	0.01		
300	2.71483	4.65E-04	1.26E-03	361	1	0.96	0.000001	4.37E-07	1.1	10	0.25	70	0.85	1.46E-08	0.01		
301	2.69409	4.65E-04	1.25E-03	361	1	0.96	0.000001	4.34E-07	1.1	10	0.25	70	0.85	1.45E-08	0.01		
302	2.65874	4.65E-04	1.24E-03	361	1	0.96	0.000001	4.28E-07	1.1	10	0.25	70	0.85	1.43E-08	0.01		
303	2.60586	4.65E-04	1.21E-03	361	1	0.96	0.000001	4.19E-07	1.1	10	0.25	70	0.85	1.40E-08	0.01		
304	2.50821	4.65E-04	1.17E-03	361	1	0.96	0.000001	4.04E-07	1.1	10	0.25	70	0.85	1.35E-08	0.01		
305	2.52139	4.65E-04	1.17E-03	361	1	0.96	0.000001	4.06E-07	1.1	10	0.25	70	0.85	1.36E-08	0.01		
306	2.52124	4.65E-04	1.17E-03	361	1	0.96	0.000001	4.06E-07	1.1	10	0.25	70	0.85	1.36E-08	0.01		
307	2.50855	4.65E-04	1.17E-03	361	1	0.96	0.000001	4.04E-07	1.1	10	0.25	70	0.85	1.35E-08	0.01		
308	2.48297	4.65E-04	1.15E-03	361	1	0.96	0.000001	4.00E-07	1.1	10	0.25	70	0.85	1.33E-08	0.01		
309	2.44271	4.65E-04	1.14E-03	361	1	0.96	0.000001	3.93E-07	1.1	10	0.25	70	0.85	1.31E-08	0.01		
310	2.33178	4.65E-04	1.08E-03	361	1	0.96	0.000001	3.75E-07	1.1	10	0.25	70	0.85	1.25E-08	0.01		
311	2.3459	4.65E-04	1.09E-03	361	1	0.96	0.000001	3.78E-07	1.1	10	0.25	70	0.85	1.26E-08	0.01		
312	2.34964	4.65E-04	1.09E-03	361	1	0.96	0.000001	3.78E-07	1.1	10	0.25	70	0.85	1.26E-08	0.01		
313	2.34307	4.65E-04	1.09E-03	361	1	0.96	0.000001	3.77E-07	1.1	10	0.25	70	0.85	1.26E-08	0.01		
314	2.32401	4.65E-04	1.08E-03	361	1	0.96	0.000001	3.74E-07	1.1	10	0.25	70	0.85	1.25E-08	0.01		
315	2.29345	4.65E-04	1.07E-03	361	1	0.96	0.000001	3.69E-07	1.1	10	0.25	70	0.85	1.23E-08	0.01		
316	2.17514	4.65E-04	1.01E-03	361	1	0.96	0.000001	3.50E-07	1.1	10	0.25	70	0.85	1.17E-08	0.01		
317	2.18984	4.65E-04	1.02E-03	361	1	0.96	0.000001	3.52E-07	1.1	10	0.25	70	0.85	1.18E-08	0.01		
318	2.19505	4.65E-04	1.02E-03	361	1	0.96	0.000001	3.53E-07	1.1	10	0.25	70	0.85	1.18E-08	0.01		
319	2.19225	4.65E-04	1.02E-03	361	1	0.96	0.000001	3.53E-07	1.1	10	0.25	70	0.85	1.18E-08	0.01		
320	2.18064	4.65E-04	1.01E-03	361	1	0.96	0.000001	3.51E-07	1.1	10	0.25	70	0.85	1.17E-08	0.01		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
321	2.15758	4.65E-04	1.00E-03	361	1	0.96	0.000001	3.47E-07	1.1	10	0.25	70	0.85	1.16E-08	0.01
322	2.1254	4.65E-04	9.88E-04	361	1	0.96	0.000001	3.42E-07	1.1	10	0.25	70	0.85	1.14E-08	0.01
323	2.03561	4.65E-04	9.46E-04	361	1	0.96	0.000001	3.28E-07	1.1	10	0.25	70	0.85	1.09E-08	0.01
324	2.05029	4.65E-04	9.53E-04	361	1	0.96	0.000001	3.30E-07	1.1	10	0.25	70	0.85	1.10E-08	0.01
325	2.0573	4.65E-04	9.57E-04	361	1	0.96	0.000001	3.31E-07	1.1	10	0.25	70	0.85	1.11E-08	0.01
326	2.05727	4.65E-04	9.56E-04	361	1	0.96	0.000001	3.31E-07	1.1	10	0.25	70	0.85	1.11E-08	0.01
327	2.05028	4.65E-04	9.53E-04	361	1	0.96	0.000001	3.30E-07	1.1	10	0.25	70	0.85	1.10E-08	0.01
328	2.03345	4.65E-04	9.45E-04	361	1	0.96	0.000001	3.27E-07	1.1	10	0.25	70	0.85	1.09E-08	0.01
329	2.00821	4.65E-04	9.34E-04	361	1	0.96	0.000001	3.23E-07	1.1	10	0.25	70	0.85	1.08E-08	0.01
330	1.90937	4.65E-04	8.88E-04	361	1	0.96	0.000001	3.07E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01
331	1.92388	4.65E-04	8.94E-04	361	1	0.96	0.000001	3.10E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01
332	1.93278	4.65E-04	8.99E-04	361	1	0.96	0.000001	3.11E-07	1.1	10	0.25	70	0.85	1.04E-08	0.01
333	1.93535	4.65E-04	9.00E-04	361	1	0.96	0.000001	3.11E-07	1.1	10	0.25	70	0.85	1.04E-08	0.01
334	1.93074	4.65E-04	8.98E-04	361	1	0.96	0.000001	3.11E-07	1.1	10	0.25	70	0.85	1.04E-08	0.01
335	1.91881	4.65E-04	8.92E-04	361	1	0.96	0.000001	3.09E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01
336	1.90007	4.65E-04	8.83E-04	361	1	0.96	0.000001	3.06E-07	1.1	10	0.25	70	0.85	1.02E-08	0.01
337	1.7972	4.65E-04	8.36E-04	361	1	0.96	0.000001	2.89E-07	1.1	10	0.25	70	0.85	9.66E-09	0.01
338	1.81158	4.65E-04	8.42E-04	361	1	0.96	0.000001	2.92E-07	1.1	10	0.25	70	0.85	9.74E-09	0.01
339	1.82118	4.65E-04	8.47E-04	361	1	0.96	0.000001	2.93E-07	1.1	10	0.25	70	0.85	9.79E-09	0.01
340	1.82504	4.65E-04	8.49E-04	361	1	0.96	0.000001	2.94E-07	1.1	10	0.25	70	0.85	9.81E-09	0.01
341	1.82335	4.65E-04	8.48E-04	361	1	0.96	0.000001	2.93E-07	1.1	10	0.25	70	0.85	9.80E-09	0.01
342	1.81496	4.65E-04	8.44E-04	361	1	0.96	0.000001	2.92E-07	1.1	10	0.25	70	0.85	9.75E-09	0.01
343	1.80006	4.65E-04	8.37E-04	361	1	0.96	0.000001	2.90E-07	1.1	10	0.25	70	0.85	9.67E-09	0.01
344	1.69476	4.65E-04	7.88E-04	361	1	0.96	0.000001	2.73E-07	1.1	10	0.25	70	0.85	9.11E-09	0.01
345	1.7088	4.65E-04	7.94E-04	361	1	0.96	0.000001	2.75E-07	1.1	10	0.25	70	0.85	9.18E-09	0.01
346	1.71886	4.65E-04	7.99E-04	361	1	0.96	0.000001	2.77E-07	1.1	10	0.25	70	0.85	9.24E-09	0.01
347	1.72417	4.65E-04	8.02E-04	361	1	0.96	0.000001	2.77E-07	1.1	10	0.25	70	0.85	9.27E-09	0.01
348	1.72434	4.65E-04	8.02E-04	361	1	0.96	0.000001	2.78E-07	1.1	10	0.25	70	0.85	9.27E-09	0.01
349	1.71894	4.65E-04	7.99E-04	361	1	0.96	0.000001	2.77E-07	1.1	10	0.25	70	0.85	9.24E-09	0.01
350	1.70774	4.65E-04	7.94E-04	361	1	0.96	0.000001	2.75E-07	1.1	10	0.25	70	0.85	9.18E-09	0.01
351	1.6017	4.65E-04	7.45E-04	361	1	0.96	0.000001	2.58E-07	1.1	10	0.25	70	0.85	8.61E-09	0.01
352	1.61524	4.65E-04	7.51E-04	361	1	0.96	0.000001	2.60E-07	1.1	10	0.25	70	0.85	8.68E-09	0.01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
353	1.62551	4.65E-04	7.56E-04	361	1	0.96	0.000001	2.62E-07	1.1	10	0.25	70	0.85	8.74E-09	0.01		
354	1.63153	4.65E-04	7.59E-04	361	1	0.96	0.000001	2.63E-07	1.1	10	0.25	70	0.85	8.77E-09	0.01		
355	1.63337	4.65E-04	7.59E-04	361	1	0.96	0.000001	2.63E-07	1.1	10	0.25	70	0.85	8.78E-09	0.01		
356	1.63038	4.65E-04	7.58E-04	361	1	0.96	0.000001	2.62E-07	1.1	10	0.25	70	0.85	8.76E-09	0.01		
357	1.62229	4.65E-04	7.54E-04	361	1	0.96	0.000001	2.61E-07	1.1	10	0.25	70	0.85	8.72E-09	0.01		
358	1.51662	4.65E-04	7.05E-04	361	1	0.96	0.000001	2.44E-07	1.1	10	0.25	70	0.85	8.15E-09	0.01		
359	1.52979	4.65E-04	7.11E-04	361	1	0.96	0.000001	2.46E-07	1.1	10	0.25	70	0.85	8.22E-09	0.01		
360	1.54012	4.65E-04	7.16E-04	361	1	0.96	0.000001	2.48E-07	1.1	10	0.25	70	0.85	8.28E-09	0.01		
361	1.54694	4.65E-04	7.19E-04	361	1	0.96	0.000001	2.49E-07	1.1	10	0.25	70	0.85	8.31E-09	0.01		
362	1.54984	4.65E-04	7.21E-04	361	1	0.96	0.000001	2.49E-07	1.1	10	0.25	70	0.85	8.33E-09	0.01		
363	1.54871	4.65E-04	7.20E-04	361	1	0.96	0.000001	2.49E-07	1.1	10	0.25	70	0.85	8.32E-09	0.01		
364	1.54309	4.65E-04	7.17E-04	361	1	0.96	0.000001	2.48E-07	1.1	10	0.25	70	0.85	8.29E-09	0.01		
365	1.4388	4.65E-04	6.69E-04	361	1	0.96	0.000001	2.32E-07	1.1	10	0.25	70	0.85	7.73E-09	0.01		
366	1.45154	4.65E-04	6.75E-04	361	1	0.96	0.000001	2.34E-07	1.1	10	0.25	70	0.85	7.80E-09	0.01		
367	1.4617	4.65E-04	6.80E-04	361	1	0.96	0.000001	2.35E-07	1.1	10	0.25	70	0.85	7.86E-09	0.01		
368	1.46881	4.65E-04	6.83E-04	361	1	0.96	0.000001	2.36E-07	1.1	10	0.25	70	0.85	7.89E-09	0.01		
369	1.47281	4.65E-04	6.85E-04	361	1	0.96	0.000001	2.37E-07	1.1	10	0.25	70	0.85	7.92E-09	0.01		
370	1.47286	4.65E-04	6.85E-04	361	1	0.96	0.000001	2.37E-07	1.1	10	0.25	70	0.85	7.92E-09	0.01		
371	1.46952	4.65E-04	6.83E-04	361	1	0.96	0.000001	2.37E-07	1.1	10	0.25	70	0.85	7.90E-09	0.01		
372	1.36733	4.65E-04	6.36E-04	361	1	0.96	0.000001	2.20E-07	1.1	10	0.25	70	0.85	7.35E-09	0.01		
373	1.37955	4.65E-04	6.41E-04	361	1	0.96	0.000001	2.22E-07	1.1	10	0.25	70	0.85	7.41E-09	0.01		
374	1.3896	4.65E-04	6.46E-04	361	1	0.96	0.000001	2.24E-07	1.1	10	0.25	70	0.85	7.47E-09	0.01		
375	1.39707	4.65E-04	6.50E-04	361	1	0.96	0.000001	2.25E-07	1.1	10	0.25	70	0.85	7.51E-09	0.01		
376	1.40171	4.65E-04	6.52E-04	361	1	0.96	0.000001	2.26E-07	1.1	10	0.25	70	0.85	7.53E-09	0.01		
377	1.40293	4.65E-04	6.52E-04	361	1	0.96	0.000001	2.26E-07	1.1	10	0.25	70	0.85	7.54E-09	0.01		
378	1.40112	4.65E-04	6.51E-04	361	1	0.96	0.000001	2.26E-07	1.1	10	0.25	70	0.85	7.53E-09	0.01		
379	3.46781	4.65E-04	1.61E-03	361	1	0.96	0.000001	5.58E-07	1.1	10	0.25	70	0.85	1.86E-08	0.02		
380	3.38575	4.65E-04	1.57E-03	361	1	0.96	0.000001	5.45E-07	1.1	10	0.25	70	0.85	1.82E-08	0.02		
381	3.31439	4.65E-04	1.54E-03	361	1	0.96	0.000001	5.33E-07	1.1	10	0.25	70	0.85	1.78E-08	0.02		
382	3.20886	4.65E-04	1.49E-03	361	1	0.96	0.000001	5.16E-07	1.1	10	0.25	70	0.85	1.72E-08	0.02		
383	3.04032	4.65E-04	1.41E-03	361	1	0.96	0.000001	4.89E-07	1.1	10	0.25	70	0.85	1.63E-08	0.02		
384	2.88186	4.65E-04	1.34E-03	361	1	0.96	0.000001	4.64E-07	1.1	10	0.25	70	0.85	1.55E-08	0.02		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
385	2.72952	4.65E-04	1.27E-03	361	1	0.96	0.000001	4.39E-07	1.1	10	0.25	70	0.85	1.47E-08	0.01
386	2.55559	4.65E-04	1.19E-03	361	1	0.96	0.000001	4.11E-07	1.1	10	0.25	70	0.85	1.37E-08	0.01
387	2.4077	4.65E-04	1.12E-03	361	1	0.96	0.000001	3.88E-07	1.1	10	0.25	70	0.85	1.29E-08	0.01
388	2.28203	4.65E-04	1.06E-03	361	1	0.96	0.000001	3.67E-07	1.1	10	0.25	70	0.85	1.23E-08	0.01
389	2.175	4.65E-04	1.01E-03	361	1	0.96	0.000001	3.50E-07	1.1	10	0.25	70	0.85	1.17E-08	0.01
390	2.08263	4.65E-04	9.68E-04	361	1	0.96	0.000001	3.35E-07	1.1	10	0.25	70	0.85	1.12E-08	0.01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total	
1	6.65E-05	4.74E-04	1090	1	0.96	0.000001	4.95E-07	1.1	10	0.112	70	0.85	7.43E-09	0.01	0.045726	Max 0.321
2	6.65E-05	6.28E-04	1090	1	0.96	0.000001	6.56E-07	1.1	10	0.112	70	0.85	9.84E-09	0.01	0.060599	
3	6.65E-05	3.34E-04	1090	1	0.96	0.000001	3.49E-07	1.1	10	0.112	70	0.85	5.23E-09	0.01	0.032226	
4	6.65E-05	4.15E-04	1090	1	0.96	0.000001	4.34E-07	1.1	10	0.112	70	0.85	6.51E-09	0.01	0.040055	
5	6.65E-05	5.28E-04	1090	1	0.96	0.000001	5.52E-07	1.1	10	0.112	70	0.85	8.28E-09	0.01	0.050999	
6	6.65E-05	7.00E-04	1090	1	0.96	0.000001	7.32E-07	1.1	10	0.112	70	0.85	1.10E-08	0.01	0.067584	
7	6.65E-05	3.03E-04	1090	1	0.96	0.000001	3.17E-07	1.1	10	0.112	70	0.85	4.75E-09	0.00	0.02924	
8	6.65E-05	3.67E-04	1090	1	0.96	0.000001	3.84E-07	1.1	10	0.112	70	0.85	5.76E-09	0.01	0.035468	
9	6.65E-05	4.55E-04	1090	1	0.96	0.000001	4.76E-07	1.1	10	0.112	70	0.85	7.14E-09	0.01	0.043939	
10	6.65E-05	5.80E-04	1090	1	0.96	0.000001	6.06E-07	1.1	10	0.112	70	0.85	9.09E-09	0.01	0.055979	
11	6.65E-05	7.68E-04	1090	1	0.96	0.000001	8.03E-07	1.1	10	0.112	70	0.85	1.20E-08	0.01	0.074149	
12	6.65E-05	3.28E-04	1090	1	0.96	0.000001	3.43E-07	1.1	10	0.112	70	0.85	5.14E-09	0.01	0.031677	
13	6.65E-05	3.97E-04	1090	1	0.96	0.000001	4.15E-07	1.1	10	0.112	70	0.85	6.23E-09	0.01	0.038364	
14	6.65E-05	4.92E-04	1090	1	0.96	0.000001	5.14E-07	1.1	10	0.112	70	0.85	7.72E-09	0.01	0.047512	
15	6.65E-05	6.28E-04	1090	1	0.96	0.000001	6.56E-07	1.1	10	0.112	70	0.85	9.85E-09	0.01	0.06062	
16	6.65E-05	8.32E-04	1090	1	0.96	0.000001	8.70E-07	1.1	10	0.112	70	0.85	1.31E-08	0.01	0.08038	
17	6.65E-05	3.51E-04	1090	1	0.96	0.000001	3.67E-07	1.1	10	0.112	70	0.85	5.51E-09	0.01	0.033901	
18	6.65E-05	4.25E-04	1090	1	0.96	0.000001	4.44E-07	1.1	10	0.112	70	0.85	6.67E-09	0.01	0.041059	
19	6.65E-05	5.27E-04	1090	1	0.96	0.000001	5.50E-07	1.1	10	0.112	70	0.85	8.26E-09	0.01	0.050854	
20	6.65E-05	6.72E-04	1090	1	0.96	0.000001	7.02E-07	1.1	10	0.112	70	0.85	1.05E-08	0.01	0.064879	
21	6.65E-05	9.00E-04	1090	1	0.96	0.000001	9.41E-07	1.1	10	0.112	70	0.85	1.41E-08	0.01	0.086951	
22	6.65E-05	3.72E-04	1090	1	0.96	0.000001	3.88E-07	1.1	10	0.112	70	0.85	5.83E-09	0.01	0.035883	
23	6.65E-05	4.50E-04	1090	1	0.96	0.000001	4.70E-07	1.1	10	0.112	70	0.85	7.05E-09	0.01	0.043436	
24	6.65E-05	5.57E-04	1090	1	0.96	0.000001	5.82E-07	1.1	10	0.112	70	0.85	8.73E-09	0.01	0.05378	
25	6.65E-05	7.14E-04	1090	1	0.96	0.000001	7.46E-07	1.1	10	0.112	70	0.85	1.12E-08	0.01	0.068938	
26	6.65E-05	9.61E-04	1090	1	0.96	0.000001	1.00E-06	1.1	10	0.112	70	0.85	1.51E-08	0.02	0.092767	
27	6.65E-05	3.89E-04	1090	1	0.96	0.000001	4.07E-07	1.1	10	0.112	70	0.85	6.10E-09	0.01	0.037578	
28	6.65E-05	4.71E-04	1090	1	0.96	0.000001	4.92E-07	1.1	10	0.112	70	0.85	7.38E-09	0.01	0.045449	
29	6.65E-05	5.85E-04	1090	1	0.96	0.000001	6.12E-07	1.1	10	0.112	70	0.85	9.18E-09	0.01	0.056499	
30	6.65E-05	7.54E-04	1090	1	0.96	0.000001	7.88E-07	1.1	10	0.112	70	0.85	1.18E-08	0.01	0.072795	
31	6.65E-05	1.03E-03	1090	1	0.96	0.000001	1.08E-06	1.1	10	0.112	70	0.85	1.61E-08	0.02	0.099423	
32	6.65E-05	4.03E-04	1090	1	0.96	0.000001	4.21E-07	1.1	10	0.112	70	0.85	6.32E-09	0.01	0.038929	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
33	6.65E-05	4.88E-04	1090	1	0.96	0.000001	5.10E-07	1.1	10	0.112	70	0.85	7.65E-09	0.047124
34	6.65E-05	6.08E-04	1090	1	0.96	0.000001	6.35E-07	1.1	10	0.112	70	0.85	9.53E-09	0.058694
35	6.65E-05	7.85E-04	1090	1	0.96	0.000001	8.21E-07	1.1	10	0.112	70	0.85	1.23E-08	0.07581
36	6.65E-05	1.10E-03	1090	1	0.96	0.000001	1.14E-06	1.1	10	0.112	70	0.85	1.72E-08	0.105742
37	6.65E-05	4.12E-04	1090	1	0.96	0.000001	4.31E-07	1.1	10	0.112	70	0.85	6.46E-09	0.03979
38	6.65E-05	4.99E-04	1090	1	0.96	0.000001	5.22E-07	1.1	10	0.112	70	0.85	7.82E-09	0.048181
39	6.65E-05	6.22E-04	1090	1	0.96	0.000001	6.50E-07	1.1	10	0.112	70	0.85	9.75E-09	0.060035
40	6.65E-05	8.14E-04	1090	1	0.96	0.000001	8.51E-07	1.1	10	0.112	70	0.85	1.28E-08	0.078589
41	6.65E-05	4.16E-04	1090	1	0.96	0.000001	4.35E-07	1.1	10	0.112	70	0.85	6.53E-09	0.040215
42	6.65E-05	5.03E-04	1090	1	0.96	0.000001	5.26E-07	1.1	10	0.112	70	0.85	7.89E-09	0.048596
43	6.65E-05	6.27E-04	1090	1	0.96	0.000001	6.55E-07	1.1	10	0.112	70	0.85	9.83E-09	0.060557
44	6.65E-05	8.21E-04	1090	1	0.96	0.000001	8.58E-07	1.1	10	0.112	70	0.85	1.29E-08	0.079288
45	6.65E-05	4.10E-04	1090	1	0.96	0.000001	4.29E-07	1.1	10	0.112	70	0.85	6.43E-09	0.039598
46	6.65E-05	4.92E-04	1090	1	0.96	0.000001	5.14E-07	1.1	10	0.112	70	0.85	7.71E-09	0.047471
47	6.65E-05	6.07E-04	1090	1	0.96	0.000001	6.34E-07	1.1	10	0.112	70	0.85	9.52E-09	0.058603
48	6.65E-05	7.82E-04	1090	1	0.96	0.000001	8.17E-07	1.1	10	0.112	70	0.85	1.23E-08	0.075474
49	6.65E-05	4.59E-04	1090	1	0.96	0.000001	4.80E-07	1.1	10	0.112	70	0.85	7.20E-09	0.044309
50	6.65E-05	5.45E-04	1090	1	0.96	0.000001	5.69E-07	1.1	10	0.112	70	0.85	8.54E-09	0.052587
51	6.65E-05	3.56E-04	1090	1	0.96	0.000001	3.72E-07	1.1	10	0.112	70	0.85	5.58E-09	0.034328
52	6.65E-05	4.00E-04	1090	1	0.96	0.000001	4.18E-07	1.1	10	0.112	70	0.85	6.27E-09	0.038627
53	6.65E-05	4.46E-04	1090	1	0.96	0.000001	4.67E-07	1.1	10	0.112	70	0.85	7.00E-09	0.043107
54	6.65E-05	2.83E-04	1090	1	0.96	0.000001	2.96E-07	1.1	10	0.112	70	0.85	4.44E-09	0.027349
55	6.65E-05	3.09E-04	1090	1	0.96	0.000001	3.23E-07	1.1	10	0.112	70	0.85	4.85E-09	0.029845
56	6.65E-05	3.34E-04	1090	1	0.96	0.000001	3.49E-07	1.1	10	0.112	70	0.85	5.24E-09	0.032277
57	6.65E-05	3.56E-04	1090	1	0.96	0.000001	3.73E-07	1.1	10	0.112	70	0.85	5.59E-09	0.03442
58	6.65E-05	2.32E-04	1090	1	0.96	0.000001	2.42E-07	1.1	10	0.112	70	0.85	3.63E-09	0.022376
59	6.65E-05	2.48E-04	1090	1	0.96	0.000001	2.60E-07	1.1	10	0.112	70	0.85	3.90E-09	0.023984
60	6.65E-05	2.64E-04	1090	1	0.96	0.000001	2.76E-07	1.1	10	0.112	70	0.85	4.14E-09	0.025517
61	6.65E-05	2.78E-04	1090	1	0.96	0.000001	2.91E-07	1.1	10	0.112	70	0.85	4.36E-09	0.026859
62	6.65E-05	1.94E-04	1090	1	0.96	0.000001	2.03E-07	1.1	10	0.112	70	0.85	3.04E-09	0.018735
63	6.65E-05	2.06E-04	1090	1	0.96	0.000001	2.15E-07	1.1	10	0.112	70	0.85	3.22E-09	0.019848
64	6.65E-05	2.17E-04	1090	1	0.96	0.000001	2.26E-07	1.1	10	0.112	70	0.85	3.40E-09	0.020912

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
65	6.65E-05	2.26E-04	1090	1	0.96	0.000001	2.36E-07	1.1	10	0.112	70	0.85	3.55E-09	0.00	0.021848
66	6.65E-05	2.33E-04	1090	1	0.96	0.000001	2.43E-07	1.1	10	0.112	70	0.85	3.65E-09	0.00	0.022463
67	6.65E-05	1.65E-04	1090	1	0.96	0.000001	1.73E-07	1.1	10	0.112	70	0.85	2.59E-09	0.00	0.015974
68	6.65E-05	1.74E-04	1090	1	0.96	0.000001	1.82E-07	1.1	10	0.112	70	0.85	2.73E-09	0.00	0.016794
69	6.65E-05	1.82E-04	1090	1	0.96	0.000001	1.90E-07	1.1	10	0.112	70	0.85	2.85E-09	0.00	0.017577
70	6.65E-05	1.89E-04	1090	1	0.96	0.000001	1.98E-07	1.1	10	0.112	70	0.85	2.97E-09	0.00	0.018273
71	6.65E-05	1.94E-04	1090	1	0.96	0.000001	2.03E-07	1.1	10	0.112	70	0.85	3.05E-09	0.00	0.018773
72	6.65E-05	1.43E-04	1090	1	0.96	0.000001	1.50E-07	1.1	10	0.112	70	0.85	2.25E-09	0.00	0.013827
73	6.65E-05	1.50E-04	1090	1	0.96	0.000001	1.56E-07	1.1	10	0.112	70	0.85	2.35E-09	0.00	0.014456
74	6.65E-05	1.56E-04	1090	1	0.96	0.000001	1.63E-07	1.1	10	0.112	70	0.85	2.45E-09	0.00	0.015058
75	6.65E-05	1.62E-04	1090	1	0.96	0.000001	1.69E-07	1.1	10	0.112	70	0.85	2.53E-09	0.00	0.015603
76	6.65E-05	1.66E-04	1090	1	0.96	0.000001	1.73E-07	1.1	10	0.112	70	0.85	2.60E-09	0.00	0.016017
77	6.65E-05	1.26E-04	1090	1	0.96	0.000001	1.31E-07	1.1	10	0.112	70	0.85	1.97E-09	0.00	0.012119
78	6.65E-05	1.31E-04	1090	1	0.96	0.000001	1.37E-07	1.1	10	0.112	70	0.85	2.05E-09	0.00	0.012616
79	6.65E-05	1.36E-04	1090	1	0.96	0.000001	1.42E-07	1.1	10	0.112	70	0.85	2.13E-09	0.00	0.013095
80	6.65E-05	1.40E-04	1090	1	0.96	0.000001	1.47E-07	1.1	10	0.112	70	0.85	2.20E-09	0.00	0.013535
81	6.65E-05	1.44E-04	1090	1	0.96	0.000001	1.50E-07	1.1	10	0.112	70	0.85	2.25E-09	0.00	0.013885
82	6.65E-05	1.11E-04	1090	1	0.96	0.000001	1.16E-07	1.1	10	0.112	70	0.85	1.74E-09	0.00	0.010735
83	6.65E-05	1.15E-04	1090	1	0.96	0.000001	1.21E-07	1.1	10	0.112	70	0.85	1.81E-09	0.00	0.011138
84	6.65E-05	1.19E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.87E-09	0.00	0.011527
85	6.65E-05	1.23E-04	1090	1	0.96	0.000001	1.29E-07	1.1	10	0.112	70	0.85	1.93E-09	0.00	0.011887
86	6.65E-05	1.26E-04	1090	1	0.96	0.000001	1.32E-07	1.1	10	0.112	70	0.85	1.98E-09	0.00	0.012185
87	6.65E-05	9.93E-05	1090	1	0.96	0.000001	1.04E-07	1.1	10	0.112	70	0.85	1.56E-09	0.00	0.009591
88	6.65E-05	1.03E-04	1090	1	0.96	0.000001	1.07E-07	1.1	10	0.112	70	0.85	1.61E-09	0.00	0.009924
89	6.65E-05	1.06E-04	1090	1	0.96	0.000001	1.11E-07	1.1	10	0.112	70	0.85	1.66E-09	0.00	0.010247
90	6.65E-05	1.09E-04	1090	1	0.96	0.000001	1.14E-07	1.1	10	0.112	70	0.85	1.71E-09	0.00	0.010553
91	6.65E-05	1.12E-04	1090	1	0.96	0.000001	1.17E-07	1.1	10	0.112	70	0.85	1.76E-09	0.00	0.010813
92	6.65E-05	8.94E-05	1090	1	0.96	0.000001	9.35E-08	1.1	10	0.112	70	0.85	1.40E-09	0.00	0.008635
93	6.65E-05	9.23E-05	1090	1	0.96	0.000001	9.65E-08	1.1	10	0.112	70	0.85	1.45E-09	0.00	0.008915
94	6.65E-05	9.52E-05	1090	1	0.96	0.000001	9.95E-08	1.1	10	0.112	70	0.85	1.49E-09	0.00	0.009189
95	6.65E-05	9.79E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.00	0.009449
96	6.65E-05	1.00E-04	1090	1	0.96	0.000001	1.05E-07	1.1	10	0.112	70	0.85	1.57E-09	0.00	0.009676

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
97	6.65E-05	8.10E-05	1090	1	0.96	0.000001	8.47E-08	1.1	10	0.112	70	0.85	1.27E-09	0.007825
98	6.65E-05	8.35E-05	1090	1	0.96	0.000001	8.73E-08	1.1	10	0.112	70	0.85	1.31E-09	0.008064
99	6.65E-05	8.59E-05	1090	1	0.96	0.000001	8.98E-08	1.1	10	0.112	70	0.85	1.35E-09	0.008299
100	6.65E-05	8.83E-05	1090	1	0.96	0.000001	9.22E-08	1.1	10	0.112	70	0.85	1.38E-09	0.008522
101	6.65E-05	9.03E-05	1090	1	0.96	0.000001	9.44E-08	1.1	10	0.112	70	0.85	1.42E-09	0.008722
102	6.65E-05	2.23E-03	1090	1	0.96	0.000001	2.33E-06	1.1	10	0.112	70	0.85	3.50E-08	0.215273
103	6.65E-05	2.00E-03	1090	1	0.96	0.000001	2.09E-06	1.1	10	0.112	70	0.85	3.13E-08	0.192953
104	6.65E-05	3.29E-03	1090	1	0.96	0.000001	3.44E-06	1.1	10	0.112	70	0.85	5.16E-08	0.317912
105	6.65E-05	1.16E-03	1090	1	0.96	0.000001	1.21E-06	1.1	10	0.112	70	0.85	1.81E-08	0.111614
106	6.65E-05	1.55E-03	1090	1	0.96	0.000001	1.62E-06	1.1	10	0.112	70	0.85	2.43E-08	0.149747
107	6.65E-05	2.24E-03	1090	1	0.96	0.000001	2.34E-06	1.1	10	0.112	70	0.85	3.52E-08	0.216468
108	6.65E-05	2.81E-03	1090	1	0.96	0.000001	2.94E-06	1.1	10	0.112	70	0.85	4.41E-08	0.271575
109	6.65E-05	9.92E-04	1090	1	0.96	0.000001	1.04E-06	1.1	10	0.112	70	0.85	1.55E-08	0.09574
110	6.65E-05	1.27E-03	1090	1	0.96	0.000001	1.33E-06	1.1	10	0.112	70	0.85	1.99E-08	0.12249
111	6.65E-05	1.70E-03	1090	1	0.96	0.000001	1.78E-06	1.1	10	0.112	70	0.85	2.67E-08	0.164474
112	6.65E-05	2.49E-03	1090	1	0.96	0.000001	2.60E-06	1.1	10	0.112	70	0.85	3.91E-08	0.240516
113	6.65E-05	2.26E-03	1090	1	0.96	0.000001	2.36E-06	1.1	10	0.112	70	0.85	3.54E-08	0.217893
114	6.65E-05	7.17E-04	1090	1	0.96	0.000001	7.50E-07	1.1	10	0.112	70	0.85	1.12E-08	0.069253
115	6.65E-05	8.67E-04	1090	1	0.96	0.000001	9.06E-07	1.1	10	0.112	70	0.85	1.36E-08	0.083696
116	6.65E-05	1.07E-03	1090	1	0.96	0.000001	1.12E-06	1.1	10	0.112	70	0.85	1.68E-08	0.103327
117	6.65E-05	1.37E-03	1090	1	0.96	0.000001	1.43E-06	1.1	10	0.112	70	0.85	2.15E-08	0.132387
118	6.65E-05	1.86E-03	1090	1	0.96	0.000001	1.94E-06	1.1	10	0.112	70	0.85	2.91E-08	0.179284
119	6.65E-05	2.78E-03	1090	1	0.96	0.000001	2.90E-06	1.1	10	0.112	70	0.85	4.35E-08	0.267988
120	6.65E-05	2.58E-03	1090	1	0.96	0.000001	2.70E-06	1.1	10	0.112	70	0.85	4.05E-08	0.24954
121	6.65E-05	5.56E-04	1090	1	0.96	0.000001	5.81E-07	1.1	10	0.112	70	0.85	8.72E-09	0.053697
122	6.65E-05	6.49E-04	1090	1	0.96	0.000001	6.79E-07	1.1	10	0.112	70	0.85	1.02E-08	0.062693
123	6.65E-05	7.68E-04	1090	1	0.96	0.000001	8.03E-07	1.1	10	0.112	70	0.85	1.20E-08	0.07417
124	6.65E-05	9.26E-04	1090	1	0.96	0.000001	9.68E-07	1.1	10	0.112	70	0.85	1.45E-08	0.0894
125	6.65E-05	1.15E-03	1090	1	0.96	0.000001	1.20E-06	1.1	10	0.112	70	0.85	1.80E-08	0.110873
126	6.65E-05	1.48E-03	1090	1	0.96	0.000001	1.55E-06	1.1	10	0.112	70	0.85	2.32E-08	0.142832
127	6.65E-05	2.01E-03	1090	1	0.96	0.000001	2.11E-06	1.1	10	0.112	70	0.85	3.16E-08	0.194534
128	6.65E-05	3.10E-03	1090	1	0.96	0.000001	3.24E-06	1.1	10	0.112	70	0.85	4.86E-08	0.299285

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
129	6.65E-05	6.91E-04	1090	1	0.96	0.000001	7.22E-07	1.1	10	0.112	70	0.85	1.08E-08	0.01	0.066679
130	6.65E-05	8.17E-04	1090	1	0.96	0.000001	8.54E-07	1.1	10	0.112	70	0.85	1.28E-08	0.01	0.078874
131	6.65E-05	9.88E-04	1090	1	0.96	0.000001	1.03E-06	1.1	10	0.112	70	0.85	1.55E-08	0.02	0.095407
132	6.65E-05	1.23E-03	1090	1	0.96	0.000001	1.28E-06	1.1	10	0.112	70	0.85	1.93E-08	0.02	0.118542
133	6.65E-05	1.59E-03	1090	1	0.96	0.000001	1.66E-06	1.1	10	0.112	70	0.85	2.49E-08	0.02	0.153371
134	6.65E-05	2.20E-03	1090	1	0.96	0.000001	2.30E-06	1.1	10	0.112	70	0.85	3.46E-08	0.03	0.212793
135	6.65E-05	2.86E-03	1090	1	0.96	0.000001	2.99E-06	1.1	10	0.112	70	0.85	4.48E-08	0.04	0.276012
136	6.65E-05	7.30E-04	1090	1	0.96	0.000001	7.63E-07	1.1	10	0.112	70	0.85	1.14E-08	0.01	0.070482
137	6.65E-05	8.67E-04	1090	1	0.96	0.000001	9.06E-07	1.1	10	0.112	70	0.85	1.36E-08	0.01	0.083673
138	6.65E-05	1.05E-03	1090	1	0.96	0.000001	1.10E-06	1.1	10	0.112	70	0.85	1.64E-08	0.02	0.101252
139	6.65E-05	1.30E-03	1090	1	0.96	0.000001	1.36E-06	1.1	10	0.112	70	0.85	2.04E-08	0.02	0.125473
140	6.65E-05	1.70E-03	1090	1	0.96	0.000001	1.78E-06	1.1	10	0.112	70	0.85	2.67E-08	0.03	0.164551
141	6.65E-05	2.41E-03	1090	1	0.96	0.000001	2.51E-06	1.1	10	0.112	70	0.85	3.77E-08	0.04	0.232305
142	6.65E-05	2.96E-03	1090	1	0.96	0.000001	3.09E-06	1.1	10	0.112	70	0.85	4.64E-08	0.05	0.285726
143	6.65E-05	7.71E-04	1090	1	0.96	0.000001	8.05E-07	1.1	10	0.112	70	0.85	1.21E-08	0.01	0.074411
144	6.65E-05	9.14E-04	1090	1	0.96	0.000001	9.56E-07	1.1	10	0.112	70	0.85	1.43E-08	0.01	0.088291
145	6.65E-05	1.10E-03	1090	1	0.96	0.000001	1.15E-06	1.1	10	0.112	70	0.85	1.73E-08	0.02	0.106485
146	6.65E-05	1.39E-03	1090	1	0.96	0.000001	1.45E-06	1.1	10	0.112	70	0.85	2.18E-08	0.02	0.13407
147	6.65E-05	1.83E-03	1090	1	0.96	0.000001	1.91E-06	1.1	10	0.112	70	0.85	2.87E-08	0.03	0.176545
148	6.65E-05	2.64E-03	1090	1	0.96	0.000001	2.76E-06	1.1	10	0.112	70	0.85	4.14E-08	0.04	0.255085
149	6.65E-05	8.10E-04	1090	1	0.96	0.000001	8.46E-07	1.1	10	0.112	70	0.85	1.27E-08	0.01	0.078168
150	6.65E-05	9.58E-04	1090	1	0.96	0.000001	1.00E-06	1.1	10	0.112	70	0.85	1.50E-08	0.02	0.092476
151	6.65E-05	1.17E-03	1090	1	0.96	0.000001	1.22E-06	1.1	10	0.112	70	0.85	1.83E-08	0.02	0.112967
152	6.65E-05	1.47E-03	1090	1	0.96	0.000001	1.54E-06	1.1	10	0.112	70	0.85	2.31E-08	0.02	0.142233
153	6.65E-05	1.95E-03	1090	1	0.96	0.000001	2.04E-06	1.1	10	0.112	70	0.85	3.06E-08	0.03	0.188213
154	6.65E-05	2.92E-03	1090	1	0.96	0.000001	3.05E-06	1.1	10	0.112	70	0.85	4.58E-08	0.05	0.281761
155	6.65E-05	8.46E-04	1090	1	0.96	0.000001	8.85E-07	1.1	10	0.112	70	0.85	1.33E-08	0.01	0.081733
156	6.65E-05	1.01E-03	1090	1	0.96	0.000001	1.05E-06	1.1	10	0.112	70	0.85	1.58E-08	0.02	0.097357
157	6.65E-05	1.23E-03	1090	1	0.96	0.000001	1.28E-06	1.1	10	0.112	70	0.85	1.93E-08	0.02	0.118696
158	6.65E-05	1.55E-03	1090	1	0.96	0.000001	1.62E-06	1.1	10	0.112	70	0.85	2.44E-08	0.02	0.150103
159	6.65E-05	2.11E-03	1090	1	0.96	0.000001	2.21E-06	1.1	10	0.112	70	0.85	3.32E-08	0.03	0.204169
160	6.65E-05	3.24E-03	1090	1	0.96	0.000001	3.39E-06	1.1	10	0.112	70	0.85	5.08E-08	0.05	0.312988

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
161	6.65E-05	8.85E-04	1090	1	0.96	0.000001	9.25E-07	1.1	10	0.112	70	0.85	1.39E-08	0.01	0.085453
162	6.65E-05	1.05E-03	1090	1	0.96	0.000001	1.10E-06	1.1	10	0.112	70	0.85	1.65E-08	0.02	0.101637
163	6.65E-05	1.29E-03	1090	1	0.96	0.000001	1.35E-06	1.1	10	0.112	70	0.85	2.03E-08	0.02	0.124745
164	6.65E-05	1.65E-03	1090	1	0.96	0.000001	1.73E-06	1.1	10	0.112	70	0.85	2.59E-08	0.03	0.159515
165	6.65E-05	2.27E-03	1090	1	0.96	0.000001	2.37E-06	1.1	10	0.112	70	0.85	3.56E-08	0.04	0.219142
166	6.65E-05	2.89E-03	1090	1	0.96	0.000001	3.02E-06	1.1	10	0.112	70	0.85	4.53E-08	0.05	0.279146
167	6.65E-05	9.18E-04	1090	1	0.96	0.000001	9.60E-07	1.1	10	0.112	70	0.85	1.44E-08	0.01	0.08865
168	6.65E-05	1.11E-03	1090	1	0.96	0.000001	1.16E-06	1.1	10	0.112	70	0.85	1.73E-08	0.02	0.106743
169	6.65E-05	1.36E-03	1090	1	0.96	0.000001	1.43E-06	1.1	10	0.112	70	0.85	2.14E-08	0.02	0.131769
170	6.65E-05	1.77E-03	1090	1	0.96	0.000001	1.85E-06	1.1	10	0.112	70	0.85	2.77E-08	0.03	0.170468
171	6.65E-05	2.48E-03	1090	1	0.96	0.000001	2.59E-06	1.1	10	0.112	70	0.85	3.89E-08	0.04	0.239678
172	6.65E-05	2.39E-03	1090	1	0.96	0.000001	2.50E-06	1.1	10	0.112	70	0.85	3.75E-08	0.04	0.231089
173	6.65E-05	9.61E-04	1090	1	0.96	0.000001	1.00E-06	1.1	10	0.112	70	0.85	1.51E-08	0.02	0.092762
174	6.65E-05	1.15E-03	1090	1	0.96	0.000001	1.21E-06	1.1	10	0.112	70	0.85	1.81E-08	0.02	0.111473
175	6.65E-05	1.43E-03	1090	1	0.96	0.000001	1.50E-06	1.1	10	0.112	70	0.85	2.25E-08	0.02	0.138465
176	6.65E-05	1.88E-03	1090	1	0.96	0.000001	1.96E-06	1.1	10	0.112	70	0.85	2.95E-08	0.03	0.181455
177	6.65E-05	2.69E-03	1090	1	0.96	0.000001	2.81E-06	1.1	10	0.112	70	0.85	4.21E-08	0.04	0.259381
178	6.65E-05	9.97E-04	1090	1	0.96	0.000001	1.04E-06	1.1	10	0.112	70	0.85	1.56E-08	0.02	0.096269
179	6.65E-05	1.20E-03	1090	1	0.96	0.000001	1.25E-06	1.1	10	0.112	70	0.85	1.88E-08	0.02	0.115888
180	6.65E-05	1.51E-03	1090	1	0.96	0.000001	1.58E-06	1.1	10	0.112	70	0.85	2.37E-08	0.02	0.145778
181	6.65E-05	1.99E-03	1090	1	0.96	0.000001	2.07E-06	1.1	10	0.112	70	0.85	3.11E-08	0.03	0.191678
182	6.65E-05	2.98E-03	1090	1	0.96	0.000001	3.11E-06	1.1	10	0.112	70	0.85	4.67E-08	0.05	0.28752
183	6.65E-05	1.04E-03	1090	1	0.96	0.000001	1.08E-06	1.1	10	0.112	70	0.85	1.63E-08	0.02	0.100101
184	6.65E-05	1.25E-03	1090	1	0.96	0.000001	1.31E-06	1.1	10	0.112	70	0.85	1.96E-08	0.02	0.120676
185	6.65E-05	1.58E-03	1090	1	0.96	0.000001	1.65E-06	1.1	10	0.112	70	0.85	2.48E-08	0.02	0.152431
186	6.65E-05	2.14E-03	1090	1	0.96	0.000001	2.24E-06	1.1	10	0.112	70	0.85	3.36E-08	0.03	0.206707
187	6.65E-05	3.32E-03	1090	1	0.96	0.000001	3.47E-06	1.1	10	0.112	70	0.85	5.20E-08	0.05	0.320486
188	6.65E-05	1.07E-03	1090	1	0.96	0.000001	1.12E-06	1.1	10	0.112	70	0.85	1.68E-08	0.02	0.103636
189	6.65E-05	1.32E-03	1090	1	0.96	0.000001	1.38E-06	1.1	10	0.112	70	0.85	2.06E-08	0.02	0.127036
190	6.65E-05	1.67E-03	1090	1	0.96	0.000001	1.74E-06	1.1	10	0.112	70	0.85	2.61E-08	0.03	0.160965
191	6.65E-05	2.31E-03	1090	1	0.96	0.000001	2.41E-06	1.1	10	0.112	70	0.85	3.62E-08	0.04	0.222879
192	6.65E-05	2.88E-03	1090	1	0.96	0.000001	3.01E-06	1.1	10	0.112	70	0.85	4.52E-08	0.05	0.278448

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
193	6.65E-05	1.12E-03	1090	1	0.96	0.000001	1.17E-06	1.1	10	0.112	70	0.85	1.75E-08	0.107761
194	6.65E-05	1.38E-03	1090	1	0.96	0.000001	1.44E-06	1.1	10	0.112	70	0.85	2.16E-08	0.132777
195	6.65E-05	1.76E-03	1090	1	0.96	0.000001	1.84E-06	1.1	10	0.112	70	0.85	2.76E-08	0.169961
196	6.65E-05	2.50E-03	1090	1	0.96	0.000001	2.61E-06	1.1	10	0.112	70	0.85	3.92E-08	0.241571
197	6.65E-05	2.35E-03	1090	1	0.96	0.000001	2.46E-06	1.1	10	0.112	70	0.85	3.69E-08	0.227007
198	6.65E-05	1.16E-03	1090	1	0.96	0.000001	1.21E-06	1.1	10	0.112	70	0.85	1.81E-08	0.111729
199	6.65E-05	1.44E-03	1090	1	0.96	0.000001	1.50E-06	1.1	10	0.112	70	0.85	2.25E-08	0.13858
200	6.65E-05	1.87E-03	1090	1	0.96	0.000001	1.95E-06	1.1	10	0.112	70	0.85	2.93E-08	0.180435
201	6.65E-05	2.73E-03	1090	1	0.96	0.000001	2.86E-06	1.1	10	0.112	70	0.85	4.29E-08	0.26386
202	6.65E-05	1.20E-03	1090	1	0.96	0.000001	1.25E-06	1.1	10	0.112	70	0.85	1.88E-08	0.115661
203	6.65E-05	1.49E-03	1090	1	0.96	0.000001	1.56E-06	1.1	10	0.112	70	0.85	2.34E-08	0.143817
204	6.65E-05	2.00E-03	1090	1	0.96	0.000001	2.09E-06	1.1	10	0.112	70	0.85	3.14E-08	0.193223
205	6.65E-05	3.00E-03	1090	1	0.96	0.000001	3.13E-06	1.1	10	0.112	70	0.85	4.70E-08	0.289592
206	6.65E-05	1.23E-03	1090	1	0.96	0.000001	1.29E-06	1.1	10	0.112	70	0.85	1.93E-08	0.118965
207	6.65E-05	1.56E-03	1090	1	0.96	0.000001	1.64E-06	1.1	10	0.112	70	0.85	2.45E-08	0.151113
208	6.65E-05	2.12E-03	1090	1	0.96	0.000001	2.21E-06	1.1	10	0.112	70	0.85	3.32E-08	0.204528
209	6.65E-05	3.32E-03	1090	1	0.96	0.000001	3.47E-06	1.1	10	0.112	70	0.85	5.21E-08	0.320711
210	6.65E-05	1.04E-03	1090	1	0.96	0.000001	1.09E-06	1.1	10	0.112	70	0.85	1.63E-08	0.10041
211	6.65E-05	1.28E-03	1090	1	0.96	0.000001	1.34E-06	1.1	10	0.112	70	0.85	2.00E-08	0.123423
212	6.65E-05	1.64E-03	1090	1	0.96	0.000001	1.71E-06	1.1	10	0.112	70	0.85	2.57E-08	0.158173
213	6.65E-05	2.27E-03	1090	1	0.96	0.000001	2.38E-06	1.1	10	0.112	70	0.85	3.57E-08	0.219672
214	6.65E-05	2.81E-03	1090	1	0.96	0.000001	2.93E-06	1.1	10	0.112	70	0.85	4.40E-08	0.27086
215	6.65E-05	8.93E-04	1090	1	0.96	0.000001	9.33E-07	1.1	10	0.112	70	0.85	1.40E-08	0.08621
216	6.65E-05	1.06E-03	1090	1	0.96	0.000001	1.11E-06	1.1	10	0.112	70	0.85	1.67E-08	0.102694
217	6.65E-05	1.31E-03	1090	1	0.96	0.000001	1.37E-06	1.1	10	0.112	70	0.85	2.05E-08	0.126454
218	6.65E-05	1.70E-03	1090	1	0.96	0.000001	1.78E-06	1.1	10	0.112	70	0.85	2.66E-08	0.164076
219	6.65E-05	2.42E-03	1090	1	0.96	0.000001	2.53E-06	1.1	10	0.112	70	0.85	3.80E-08	0.233696
220	6.65E-05	9.04E-04	1090	1	0.96	0.000001	9.45E-07	1.1	10	0.112	70	0.85	1.42E-08	0.087332
221	6.65E-05	1.08E-03	1090	1	0.96	0.000001	1.13E-06	1.1	10	0.112	70	0.85	1.70E-08	0.104474
222	6.65E-05	1.34E-03	1090	1	0.96	0.000001	1.40E-06	1.1	10	0.112	70	0.85	2.11E-08	0.129705
223	6.65E-05	1.77E-03	1090	1	0.96	0.000001	1.85E-06	1.1	10	0.112	70	0.85	2.78E-08	0.170897
224	6.65E-05	2.60E-03	1090	1	0.96	0.000001	2.72E-06	1.1	10	0.112	70	0.85	4.08E-08	0.251438

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
225	6.65E-05	9.05E-04	1090	1	0.96	0.000001	9.46E-07	1.1	10	0.112	70	0.85	1.42E-08	0.087361
226	6.65E-05	1.09E-03	1090	1	0.96	0.000001	1.13E-06	1.1	10	0.112	70	0.85	1.70E-08	0.10479
227	6.65E-05	1.35E-03	1090	1	0.96	0.000001	1.42E-06	1.1	10	0.112	70	0.85	2.12E-08	0.130799
228	6.65E-05	1.81E-03	1090	1	0.96	0.000001	1.89E-06	1.1	10	0.112	70	0.85	2.83E-08	0.174318
229	6.65E-05	2.74E-03	1090	1	0.96	0.000001	2.87E-06	1.1	10	0.112	70	0.85	4.30E-08	0.26501
230	6.65E-05	8.92E-04	1090	1	0.96	0.000001	9.32E-07	1.1	10	0.112	70	0.85	1.40E-08	0.086085
231	6.65E-05	1.07E-03	1090	1	0.96	0.000001	1.12E-06	1.1	10	0.112	70	0.85	1.67E-08	0.103053
232	6.65E-05	1.33E-03	1090	1	0.96	0.000001	1.39E-06	1.1	10	0.112	70	0.85	2.08E-08	0.128083
233	6.65E-05	1.78E-03	1090	1	0.96	0.000001	1.86E-06	1.1	10	0.112	70	0.85	2.79E-08	0.171852
234	6.65E-05	2.75E-03	1090	1	0.96	0.000001	2.88E-06	1.1	10	0.112	70	0.85	4.32E-08	0.265896
235	6.65E-05	8.55E-04	1090	1	0.96	0.000001	8.93E-07	1.1	10	0.112	70	0.85	1.34E-08	0.08253
236	6.65E-05	1.00E-03	1090	1	0.96	0.000001	1.05E-06	1.1	10	0.112	70	0.85	1.57E-08	0.096819
237	6.65E-05	1.22E-03	1090	1	0.96	0.000001	1.27E-06	1.1	10	0.112	70	0.85	1.91E-08	0.117638
238	6.65E-05	1.54E-03	1090	1	0.96	0.000001	1.61E-06	1.1	10	0.112	70	0.85	2.41E-08	0.148514
239	6.65E-05	1.87E-03	1090	1	0.96	0.000001	1.96E-06	1.1	10	0.112	70	0.85	2.94E-08	0.181004
240	6.65E-05	7.81E-04	1090	1	0.96	0.000001	8.17E-07	1.1	10	0.112	70	0.85	1.23E-08	0.075458
241	6.65E-05	8.90E-04	1090	1	0.96	0.000001	9.30E-07	1.1	10	0.112	70	0.85	1.40E-08	0.085912
242	6.65E-05	1.00E-03	1090	1	0.96	0.000001	1.05E-06	1.1	10	0.112	70	0.85	1.57E-08	0.096672
243	6.65E-05	1.10E-03	1090	1	0.96	0.000001	1.15E-06	1.1	10	0.112	70	0.85	1.73E-08	0.106438
244	6.65E-05	6.27E-04	1090	1	0.96	0.000001	6.55E-07	1.1	10	0.112	70	0.85	9.82E-09	0.060496
245	6.65E-05	6.85E-04	1090	1	0.96	0.000001	7.16E-07	1.1	10	0.112	70	0.85	1.07E-08	0.066112
246	6.65E-05	7.41E-04	1090	1	0.96	0.000001	7.74E-07	1.1	10	0.112	70	0.85	1.16E-08	0.071506
247	6.65E-05	7.82E-04	1090	1	0.96	0.000001	8.18E-07	1.1	10	0.112	70	0.85	1.23E-08	0.07554
248	6.65E-05	7.85E-04	1090	1	0.96	0.000001	8.20E-07	1.1	10	0.112	70	0.85	1.23E-08	0.075795
249	6.65E-05	5.52E-04	1090	1	0.96	0.000001	5.77E-07	1.1	10	0.112	70	0.85	8.65E-09	0.053272
250	6.65E-05	5.84E-04	1090	1	0.96	0.000001	6.10E-07	1.1	10	0.112	70	0.85	9.16E-09	0.056381
251	6.65E-05	6.08E-04	1090	1	0.96	0.000001	6.36E-07	1.1	10	0.112	70	0.85	9.54E-09	0.058735
252	6.65E-05	6.15E-04	1090	1	0.96	0.000001	6.43E-07	1.1	10	0.112	70	0.85	9.64E-09	0.059357
253	6.65E-05	5.91E-04	1090	1	0.96	0.000001	6.18E-07	1.1	10	0.112	70	0.85	9.27E-09	0.057061
254	6.65E-05	4.60E-04	1090	1	0.96	0.000001	4.80E-07	1.1	10	0.112	70	0.85	7.21E-09	0.044388
255	6.65E-05	4.81E-04	1090	1	0.96	0.000001	5.02E-07	1.1	10	0.112	70	0.85	7.54E-09	0.046408
256	6.65E-05	4.97E-04	1090	1	0.96	0.000001	5.20E-07	1.1	10	0.112	70	0.85	7.79E-09	0.047994

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
257	6.65E-05	5.03E-04	1090	1	0.96	0.000001	5.26E-07	1.1	10	0.112	70	0.85	7.89E-09	0.01	0.048565
258	6.65E-05	4.94E-04	1090	1	0.96	0.000001	5.16E-07	1.1	10	0.112	70	0.85	7.74E-09	0.01	0.047655
259	6.65E-05	4.68E-04	1090	1	0.96	0.000001	4.89E-07	1.1	10	0.112	70	0.85	7.34E-09	0.01	0.04517
260	6.65E-05	4.07E-04	1090	1	0.96	0.000001	4.26E-07	1.1	10	0.112	70	0.85	6.39E-09	0.01	0.039328
261	6.65E-05	4.19E-04	1090	1	0.96	0.000001	4.38E-07	1.1	10	0.112	70	0.85	6.57E-09	0.01	0.040457
262	6.65E-05	4.25E-04	1090	1	0.96	0.000001	4.44E-07	1.1	10	0.112	70	0.85	6.66E-09	0.01	0.041002
263	6.65E-05	4.21E-04	1090	1	0.96	0.000001	4.40E-07	1.1	10	0.112	70	0.85	6.60E-09	0.01	0.04062
264	6.65E-05	4.07E-04	1090	1	0.96	0.000001	4.25E-07	1.1	10	0.112	70	0.85	6.38E-09	0.01	0.039286
265	6.65E-05	3.61E-04	1090	1	0.96	0.000001	3.78E-07	1.1	10	0.112	70	0.85	5.67E-09	0.01	0.034882
266	6.65E-05	3.66E-04	1090	1	0.96	0.000001	3.83E-07	1.1	10	0.112	70	0.85	5.74E-09	0.01	0.035368
267	6.65E-05	3.65E-04	1090	1	0.96	0.000001	3.81E-07	1.1	10	0.112	70	0.85	5.72E-09	0.01	0.03524
268	6.65E-05	3.58E-04	1090	1	0.96	0.000001	3.74E-07	1.1	10	0.112	70	0.85	5.61E-09	0.01	0.034524
269	6.65E-05	3.43E-04	1090	1	0.96	0.000001	3.59E-07	1.1	10	0.112	70	0.85	5.38E-09	0.01	0.033138
270	6.65E-05	3.21E-04	1090	1	0.96	0.000001	3.36E-07	1.1	10	0.112	70	0.85	5.04E-09	0.01	0.031003
271	6.65E-05	3.22E-04	1090	1	0.96	0.000001	3.36E-07	1.1	10	0.112	70	0.85	5.04E-09	0.01	0.03106
272	6.65E-05	3.17E-04	1090	1	0.96	0.000001	3.32E-07	1.1	10	0.112	70	0.85	4.97E-09	0.00	0.030629
273	6.65E-05	3.08E-04	1090	1	0.96	0.000001	3.22E-07	1.1	10	0.112	70	0.85	4.83E-09	0.00	0.029764
274	6.65E-05	2.85E-04	1090	1	0.96	0.000001	2.98E-07	1.1	10	0.112	70	0.85	4.47E-09	0.00	0.027536
275	6.65E-05	2.86E-04	1090	1	0.96	0.000001	2.99E-07	1.1	10	0.112	70	0.85	4.49E-09	0.00	0.027656
276	6.65E-05	2.84E-04	1090	1	0.96	0.000001	2.97E-07	1.1	10	0.112	70	0.85	4.46E-09	0.00	0.027442
277	6.65E-05	2.78E-04	1090	1	0.96	0.000001	2.91E-07	1.1	10	0.112	70	0.85	4.36E-09	0.00	0.026874
278	6.65E-05	2.69E-04	1090	1	0.96	0.000001	2.81E-07	1.1	10	0.112	70	0.85	4.22E-09	0.00	0.026
279	6.65E-05	2.57E-04	1090	1	0.96	0.000001	2.69E-07	1.1	10	0.112	70	0.85	4.04E-09	0.00	0.024854
280	6.65E-05	2.56E-04	1090	1	0.96	0.000001	2.68E-07	1.1	10	0.112	70	0.85	4.02E-09	0.00	0.024764
281	6.65E-05	2.53E-04	1090	1	0.96	0.000001	2.64E-07	1.1	10	0.112	70	0.85	3.96E-09	0.00	0.024402
282	6.65E-05	2.46E-04	1090	1	0.96	0.000001	2.58E-07	1.1	10	0.112	70	0.85	3.86E-09	0.00	0.023797
283	6.65E-05	2.33E-04	1090	1	0.96	0.000001	2.44E-07	1.1	10	0.112	70	0.85	3.66E-09	0.00	0.022524
284	6.65E-05	2.33E-04	1090	1	0.96	0.000001	2.44E-07	1.1	10	0.112	70	0.85	3.65E-09	0.00	0.022504
285	6.65E-05	2.31E-04	1090	1	0.96	0.000001	2.41E-07	1.1	10	0.112	70	0.85	3.62E-09	0.00	0.022279
286	6.65E-05	2.26E-04	1090	1	0.96	0.000001	2.37E-07	1.1	10	0.112	70	0.85	3.55E-09	0.00	0.021857
287	6.65E-05	2.20E-04	1090	1	0.96	0.000001	2.30E-07	1.1	10	0.112	70	0.85	3.45E-09	0.00	0.021253
288	6.65E-05	2.13E-04	1090	1	0.96	0.000001	2.22E-07	1.1	10	0.112	70	0.85	3.34E-09	0.00	0.020542

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
289	6.65E-05	2.13E-04	1090	1	0.96	0.000001	2.23E-07	1.1	10	0.112	70	0.85	3.34E-09	0.00	0.02057
290	6.65E-05	2.12E-04	1090	1	0.96	0.000001	2.21E-07	1.1	10	0.112	70	0.85	3.32E-09	0.00	0.020442
291	6.65E-05	2.09E-04	1090	1	0.96	0.000001	2.18E-07	1.1	10	0.112	70	0.85	3.27E-09	0.00	0.020149
292	6.65E-05	2.04E-04	1090	1	0.96	0.000001	2.13E-07	1.1	10	0.112	70	0.85	3.20E-09	0.00	0.019703
293	6.65E-05	1.95E-04	1090	1	0.96	0.000001	2.04E-07	1.1	10	0.112	70	0.85	3.06E-09	0.00	0.018848
294	6.65E-05	1.96E-04	1090	1	0.96	0.000001	2.05E-07	1.1	10	0.112	70	0.85	3.07E-09	0.00	0.018903
295	6.65E-05	1.95E-04	1090	1	0.96	0.000001	2.04E-07	1.1	10	0.112	70	0.85	3.06E-09	0.00	0.018829
296	6.65E-05	1.93E-04	1090	1	0.96	0.000001	2.02E-07	1.1	10	0.112	70	0.85	3.03E-09	0.00	0.018629
297	6.65E-05	1.90E-04	1090	1	0.96	0.000001	1.98E-07	1.1	10	0.112	70	0.85	2.97E-09	0.00	0.018311
298	6.65E-05	1.80E-04	1090	1	0.96	0.000001	1.88E-07	1.1	10	0.112	70	0.85	2.82E-09	0.00	0.017378
299	6.65E-05	1.81E-04	1090	1	0.96	0.000001	1.89E-07	1.1	10	0.112	70	0.85	2.83E-09	0.00	0.017452
300	6.65E-05	1.80E-04	1090	1	0.96	0.000001	1.89E-07	1.1	10	0.112	70	0.85	2.83E-09	0.00	0.01742
301	6.65E-05	1.79E-04	1090	1	0.96	0.000001	1.87E-07	1.1	10	0.112	70	0.85	2.81E-09	0.00	0.017286
302	6.65E-05	1.77E-04	1090	1	0.96	0.000001	1.85E-07	1.1	10	0.112	70	0.85	2.77E-09	0.00	0.01706
303	6.65E-05	1.73E-04	1090	1	0.96	0.000001	1.81E-07	1.1	10	0.112	70	0.85	2.72E-09	0.00	0.01672
304	6.65E-05	1.67E-04	1090	1	0.96	0.000001	1.74E-07	1.1	10	0.112	70	0.85	2.61E-09	0.00	0.016094
305	6.65E-05	1.68E-04	1090	1	0.96	0.000001	1.75E-07	1.1	10	0.112	70	0.85	2.63E-09	0.00	0.016178
306	6.65E-05	1.68E-04	1090	1	0.96	0.000001	1.75E-07	1.1	10	0.112	70	0.85	2.63E-09	0.00	0.016177
307	6.65E-05	1.67E-04	1090	1	0.96	0.000001	1.74E-07	1.1	10	0.112	70	0.85	2.61E-09	0.00	0.016096
308	6.65E-05	1.65E-04	1090	1	0.96	0.000001	1.72E-07	1.1	10	0.112	70	0.85	2.59E-09	0.00	0.015932
309	6.65E-05	1.62E-04	1090	1	0.96	0.000001	1.70E-07	1.1	10	0.112	70	0.85	2.55E-09	0.00	0.015673
310	6.65E-05	1.55E-04	1090	1	0.96	0.000001	1.62E-07	1.1	10	0.112	70	0.85	2.43E-09	0.00	0.014962
311	6.65E-05	1.56E-04	1090	1	0.96	0.000001	1.63E-07	1.1	10	0.112	70	0.85	2.44E-09	0.00	0.015052
312	6.65E-05	1.56E-04	1090	1	0.96	0.000001	1.63E-07	1.1	10	0.112	70	0.85	2.45E-09	0.00	0.015076
313	6.65E-05	1.56E-04	1090	1	0.96	0.000001	1.63E-07	1.1	10	0.112	70	0.85	2.44E-09	0.00	0.015034
314	6.65E-05	1.54E-04	1090	1	0.96	0.000001	1.61E-07	1.1	10	0.112	70	0.85	2.42E-09	0.00	0.014912
315	6.65E-05	1.52E-04	1090	1	0.96	0.000001	1.59E-07	1.1	10	0.112	70	0.85	2.39E-09	0.00	0.014716
316	6.65E-05	1.45E-04	1090	1	0.96	0.000001	1.51E-07	1.1	10	0.112	70	0.85	2.27E-09	0.00	0.013957
317	6.65E-05	1.46E-04	1090	1	0.96	0.000001	1.52E-07	1.1	10	0.112	70	0.85	2.28E-09	0.00	0.014051
318	6.65E-05	1.46E-04	1090	1	0.96	0.000001	1.52E-07	1.1	10	0.112	70	0.85	2.29E-09	0.00	0.014084
319	6.65E-05	1.46E-04	1090	1	0.96	0.000001	1.52E-07	1.1	10	0.112	70	0.85	2.28E-09	0.00	0.014066
320	6.65E-05	1.45E-04	1090	1	0.96	0.000001	1.51E-07	1.1	10	0.112	70	0.85	2.27E-09	0.00	0.013992

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
321	6.65E-05	1.43E-04	1090	1	0.96	0.000001	1.50E-07	1.1	10	0.112	70	0.85	2.25E-09	0.00	0.013844
322	6.65E-05	1.41E-04	1090	1	0.96	0.000001	1.48E-07	1.1	10	0.112	70	0.85	2.21E-09	0.00	0.013637
323	6.65E-05	1.35E-04	1090	1	0.96	0.000001	1.41E-07	1.1	10	0.112	70	0.85	2.12E-09	0.00	0.013061
324	6.65E-05	1.36E-04	1090	1	0.96	0.000001	1.42E-07	1.1	10	0.112	70	0.85	2.14E-09	0.00	0.013156
325	6.65E-05	1.37E-04	1090	1	0.96	0.000001	1.43E-07	1.1	10	0.112	70	0.85	2.14E-09	0.00	0.013201
326	6.65E-05	1.37E-04	1090	1	0.96	0.000001	1.43E-07	1.1	10	0.112	70	0.85	2.14E-09	0.00	0.0132
327	6.65E-05	1.36E-04	1090	1	0.96	0.000001	1.42E-07	1.1	10	0.112	70	0.85	2.14E-09	0.00	0.013155
328	6.65E-05	1.35E-04	1090	1	0.96	0.000001	1.41E-07	1.1	10	0.112	70	0.85	2.12E-09	0.00	0.013047
329	6.65E-05	1.33E-04	1090	1	0.96	0.000001	1.39E-07	1.1	10	0.112	70	0.85	2.09E-09	0.00	0.012886
330	6.65E-05	1.27E-04	1090	1	0.96	0.000001	1.33E-07	1.1	10	0.112	70	0.85	1.99E-09	0.00	0.012251
331	6.65E-05	1.28E-04	1090	1	0.96	0.000001	1.34E-07	1.1	10	0.112	70	0.85	2.00E-09	0.00	0.012344
332	6.65E-05	1.28E-04	1090	1	0.96	0.000001	1.34E-07	1.1	10	0.112	70	0.85	2.01E-09	0.00	0.012402
333	6.65E-05	1.29E-04	1090	1	0.96	0.000001	1.34E-07	1.1	10	0.112	70	0.85	2.02E-09	0.00	0.012418
334	6.65E-05	1.28E-04	1090	1	0.96	0.000001	1.34E-07	1.1	10	0.112	70	0.85	2.01E-09	0.00	0.012388
335	6.65E-05	1.28E-04	1090	1	0.96	0.000001	1.33E-07	1.1	10	0.112	70	0.85	2.00E-09	0.00	0.012312
336	6.65E-05	1.26E-04	1090	1	0.96	0.000001	1.32E-07	1.1	10	0.112	70	0.85	1.98E-09	0.00	0.012192
337	6.65E-05	1.19E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.87E-09	0.00	0.011532
338	6.65E-05	1.20E-04	1090	1	0.96	0.000001	1.26E-07	1.1	10	0.112	70	0.85	1.89E-09	0.00	0.011624
339	6.65E-05	1.21E-04	1090	1	0.96	0.000001	1.26E-07	1.1	10	0.112	70	0.85	1.90E-09	0.00	0.011685
340	6.65E-05	1.21E-04	1090	1	0.96	0.000001	1.27E-07	1.1	10	0.112	70	0.85	1.90E-09	0.00	0.01171
341	6.65E-05	1.21E-04	1090	1	0.96	0.000001	1.27E-07	1.1	10	0.112	70	0.85	1.90E-09	0.00	0.011699
342	6.65E-05	1.21E-04	1090	1	0.96	0.000001	1.26E-07	1.1	10	0.112	70	0.85	1.89E-09	0.00	0.011646
343	6.65E-05	1.20E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.88E-09	0.00	0.01155
344	6.65E-05	1.13E-04	1090	1	0.96	0.000001	1.18E-07	1.1	10	0.112	70	0.85	1.77E-09	0.00	0.010874
345	6.65E-05	1.14E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.78E-09	0.00	0.010964
346	6.65E-05	1.14E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.79E-09	0.00	0.011029
347	6.65E-05	1.15E-04	1090	1	0.96	0.000001	1.20E-07	1.1	10	0.112	70	0.85	1.80E-09	0.00	0.011063
348	6.65E-05	1.15E-04	1090	1	0.96	0.000001	1.20E-07	1.1	10	0.112	70	0.85	1.80E-09	0.00	0.011064
349	6.65E-05	1.14E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.79E-09	0.00	0.011029
350	6.65E-05	1.13E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.78E-09	0.00	0.010958
351	6.65E-05	1.06E-04	1090	1	0.96	0.000001	1.11E-07	1.1	10	0.112	70	0.85	1.67E-09	0.00	0.010277
352	6.65E-05	1.07E-04	1090	1	0.96	0.000001	1.12E-07	1.1	10	0.112	70	0.85	1.68E-09	0.00	0.010364

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
353	6.65E-05	1.08E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.69E-09	0.01043
354	6.65E-05	1.08E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.70E-09	0.010469
355	6.65E-05	1.09E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.70E-09	0.01048
356	6.65E-05	1.08E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.70E-09	0.010461
357	6.65E-05	1.08E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.69E-09	0.010409
358	6.65E-05	1.01E-04	1090	1	0.96	0.000001	1.05E-07	1.1	10	0.112	70	0.85	1.58E-09	0.009731
359	6.65E-05	1.02E-04	1090	1	0.96	0.000001	1.06E-07	1.1	10	0.112	70	0.85	1.59E-09	0.009816
360	6.65E-05	1.02E-04	1090	1	0.96	0.000001	1.07E-07	1.1	10	0.112	70	0.85	1.60E-09	0.009882
361	6.65E-05	1.03E-04	1090	1	0.96	0.000001	1.07E-07	1.1	10	0.112	70	0.85	1.61E-09	0.009926
362	6.65E-05	1.03E-04	1090	1	0.96	0.000001	1.08E-07	1.1	10	0.112	70	0.85	1.62E-09	0.009944
363	6.65E-05	1.03E-04	1090	1	0.96	0.000001	1.08E-07	1.1	10	0.112	70	0.85	1.61E-09	0.009937
364	6.65E-05	1.03E-04	1090	1	0.96	0.000001	1.07E-07	1.1	10	0.112	70	0.85	1.61E-09	0.009901
365	6.65E-05	9.56E-05	1090	1	0.96	0.000001	9.99E-08	1.1	10	0.112	70	0.85	1.50E-09	0.009232
366	6.65E-05	9.65E-05	1090	1	0.96	0.000001	1.01E-07	1.1	10	0.112	70	0.85	1.51E-09	0.009314
367	6.65E-05	9.71E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.52E-09	0.009379
368	6.65E-05	9.76E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.009425
369	6.65E-05	9.79E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.00945
370	6.65E-05	9.79E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.00945
371	6.65E-05	9.76E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.009429
372	6.65E-05	9.09E-05	1090	1	0.96	0.000001	9.50E-08	1.1	10	0.112	70	0.85	1.42E-09	0.008773
373	6.65E-05	9.17E-05	1090	1	0.96	0.000001	9.58E-08	1.1	10	0.112	70	0.85	1.44E-09	0.008852
374	6.65E-05	9.23E-05	1090	1	0.96	0.000001	9.65E-08	1.1	10	0.112	70	0.85	1.45E-09	0.008916
375	6.65E-05	9.28E-05	1090	1	0.96	0.000001	9.70E-08	1.1	10	0.112	70	0.85	1.46E-09	0.008964
376	6.65E-05	9.31E-05	1090	1	0.96	0.000001	9.74E-08	1.1	10	0.112	70	0.85	1.46E-09	0.008994
377	6.65E-05	9.32E-05	1090	1	0.96	0.000001	9.74E-08	1.1	10	0.112	70	0.85	1.46E-09	0.009002
378	6.65E-05	9.31E-05	1090	1	0.96	0.000001	9.73E-08	1.1	10	0.112	70	0.85	1.46E-09	0.00899
379	6.65E-05	2.30E-04	1090	1	0.96	0.000001	2.41E-07	1.1	10	0.112	70	0.85	3.61E-09	0.022251
380	6.65E-05	2.25E-04	1090	1	0.96	0.000001	2.35E-07	1.1	10	0.112	70	0.85	3.53E-09	0.021724
381	6.65E-05	2.20E-04	1090	1	0.96	0.000001	2.30E-07	1.1	10	0.112	70	0.85	3.45E-09	0.021267
382	6.65E-05	2.13E-04	1090	1	0.96	0.000001	2.23E-07	1.1	10	0.112	70	0.85	3.34E-09	0.020589
383	6.65E-05	2.02E-04	1090	1	0.96	0.000001	2.11E-07	1.1	10	0.112	70	0.85	3.17E-09	0.019508
384	6.65E-05	1.91E-04	1090	1	0.96	0.000001	2.00E-07	1.1	10	0.112	70	0.85	3.00E-09	0.018491

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
385	6.65E-05	1.81E-04	1090	1	0.96	0.000001	1.90E-07	1.1	10	0.112	70	0.85	2.84E-09	0.00	0.017514
386	6.65E-05	1.70E-04	1090	1	0.96	0.000001	1.77E-07	1.1	10	0.112	70	0.85	2.66E-09	0.00	0.016398
387	6.65E-05	1.60E-04	1090	1	0.96	0.000001	1.67E-07	1.1	10	0.112	70	0.85	2.51E-09	0.00	0.015449
388	6.65E-05	1.52E-04	1090	1	0.96	0.000001	1.58E-07	1.1	10	0.112	70	0.85	2.38E-09	0.00	0.014642
389	6.65E-05	1.45E-04	1090	1	0.96	0.000001	1.51E-07	1.1	10	0.112	70	0.85	2.27E-09	0.00	0.013956
390	6.65E-05	1.38E-04	1090	1	0.96	0.000001	1.45E-07	1.1	10	0.112	70	0.85	2.17E-09	0.00	0.013363

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI	Max
1	3.79E-03	5	7.57E-04	5.31E-03
2	5.02E-03	5	1.00E-03	
3	2.67E-03	5	5.34E-04	
4	3.32E-03	5	6.63E-04	
5	4.22E-03	5	8.45E-04	
6	5.60E-03	5	1.12E-03	
7	2.42E-03	5	4.84E-04	
8	2.94E-03	5	5.87E-04	
9	3.64E-03	5	7.28E-04	
10	4.64E-03	5	9.27E-04	
11	6.14E-03	5	1.23E-03	
12	2.62E-03	5	5.25E-04	
13	3.18E-03	5	6.35E-04	
14	3.93E-03	5	7.87E-04	
15	5.02E-03	5	1.00E-03	
16	6.66E-03	5	1.33E-03	
17	2.81E-03	5	5.62E-04	
18	3.40E-03	5	6.80E-04	
19	4.21E-03	5	8.42E-04	
20	5.37E-03	5	1.07E-03	
21	7.20E-03	5	1.44E-03	
22	2.97E-03	5	5.94E-04	
23	3.60E-03	5	7.19E-04	
24	4.45E-03	5	8.91E-04	
25	5.71E-03	5	1.14E-03	
26	7.68E-03	5	1.54E-03	
27	3.11E-03	5	6.22E-04	
28	3.76E-03	5	7.53E-04	
29	4.68E-03	5	9.36E-04	
30	6.03E-03	5	1.21E-03	
31	8.23E-03	5	1.65E-03	
32	3.22E-03	5	6.45E-04	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
33	3.90E-03	5	7.81E-04
34	4.86E-03	5	9.72E-04
35	6.28E-03	5	1.26E-03
36	8.76E-03	5	1.75E-03
37	3.30E-03	5	6.59E-04
38	3.99E-03	5	7.98E-04
39	4.97E-03	5	9.94E-04
40	6.51E-03	5	1.30E-03
41	3.33E-03	5	6.66E-04
42	4.02E-03	5	8.05E-04
43	5.02E-03	5	1.00E-03
44	6.57E-03	5	1.31E-03
45	3.28E-03	5	6.56E-04
46	3.93E-03	5	7.86E-04
47	4.85E-03	5	9.71E-04
48	6.25E-03	5	1.25E-03
49	3.67E-03	5	7.34E-04
50	4.36E-03	5	8.71E-04
51	2.84E-03	5	5.69E-04
52	3.20E-03	5	6.40E-04
53	3.57E-03	5	7.14E-04
54	2.26E-03	5	4.53E-04
55	2.47E-03	5	4.94E-04
56	2.67E-03	5	5.35E-04
57	2.85E-03	5	5.70E-04
58	1.85E-03	5	3.71E-04
59	1.99E-03	5	3.97E-04
60	2.11E-03	5	4.23E-04
61	2.22E-03	5	4.45E-04
62	1.55E-03	5	3.10E-04
63	1.64E-03	5	3.29E-04
64	1.73E-03	5	3.46E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
65	1.81E-03	5	3.62E-04
66	1.86E-03	5	3.72E-04
67	1.32E-03	5	2.65E-04
68	1.39E-03	5	2.78E-04
69	1.46E-03	5	2.91E-04
70	1.51E-03	5	3.03E-04
71	1.55E-03	5	3.11E-04
72	1.15E-03	5	2.29E-04
73	1.20E-03	5	2.39E-04
74	1.25E-03	5	2.49E-04
75	1.29E-03	5	2.58E-04
76	1.33E-03	5	2.65E-04
77	1.00E-03	5	2.01E-04
78	1.04E-03	5	2.09E-04
79	1.08E-03	5	2.17E-04
80	1.12E-03	5	2.24E-04
81	1.15E-03	5	2.30E-04
82	8.89E-04	5	1.78E-04
83	9.22E-04	5	1.84E-04
84	9.55E-04	5	1.91E-04
85	9.84E-04	5	1.97E-04
86	1.01E-03	5	2.02E-04
87	7.94E-04	5	1.59E-04
88	8.22E-04	5	1.64E-04
89	8.49E-04	5	1.70E-04
90	8.74E-04	5	1.75E-04
91	8.95E-04	5	1.79E-04
92	7.15E-04	5	1.43E-04
93	7.38E-04	5	1.48E-04
94	7.61E-04	5	1.52E-04
95	7.83E-04	5	1.57E-04
96	8.01E-04	5	1.60E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
97	6.48E-04	5	1.30E-04
98	6.68E-04	5	1.34E-04
99	6.87E-04	5	1.37E-04
100	7.06E-04	5	1.41E-04
101	7.22E-04	5	1.44E-04
102	1.78E-02	5	3.57E-03
103	1.60E-02	5	3.20E-03
104	2.63E-02	5	5.27E-03
105	9.24E-03	5	1.85E-03
106	1.24E-02	5	2.48E-03
107	1.79E-02	5	3.59E-03
108	2.25E-02	5	4.50E-03
109	7.93E-03	5	1.59E-03
110	1.01E-02	5	2.03E-03
111	1.36E-02	5	2.72E-03
112	1.99E-02	5	3.98E-03
113	1.80E-02	5	3.61E-03
114	5.74E-03	5	1.15E-03
115	6.93E-03	5	1.39E-03
116	8.56E-03	5	1.71E-03
117	1.10E-02	5	2.19E-03
118	1.48E-02	5	2.97E-03
119	2.22E-02	5	4.44E-03
120	2.07E-02	5	4.13E-03
121	4.45E-03	5	8.89E-04
122	5.19E-03	5	1.04E-03
123	6.14E-03	5	1.23E-03
124	7.40E-03	5	1.48E-03
125	9.18E-03	5	1.84E-03
126	1.18E-02	5	2.37E-03
127	1.61E-02	5	3.22E-03
128	2.48E-02	5	4.96E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
129	5.52E-03	5	1.10E-03
130	6.53E-03	5	1.31E-03
131	7.90E-03	5	1.58E-03
132	9.82E-03	5	1.96E-03
133	1.27E-02	5	2.54E-03
134	1.76E-02	5	3.52E-03
135	2.29E-02	5	4.57E-03
136	5.84E-03	5	1.17E-03
137	6.93E-03	5	1.39E-03
138	8.39E-03	5	1.68E-03
139	1.04E-02	5	2.08E-03
140	1.36E-02	5	2.73E-03
141	1.92E-02	5	3.85E-03
142	2.37E-02	5	4.73E-03
143	6.16E-03	5	1.23E-03
144	7.31E-03	5	1.46E-03
145	8.82E-03	5	1.76E-03
146	1.11E-02	5	2.22E-03
147	1.46E-02	5	2.92E-03
148	2.11E-02	5	4.23E-03
149	6.47E-03	5	1.29E-03
150	7.66E-03	5	1.53E-03
151	9.36E-03	5	1.87E-03
152	1.18E-02	5	2.36E-03
153	1.56E-02	5	3.12E-03
154	2.33E-02	5	4.67E-03
155	6.77E-03	5	1.35E-03
156	8.06E-03	5	1.61E-03
157	9.83E-03	5	1.97E-03
158	1.24E-02	5	2.49E-03
159	1.69E-02	5	3.38E-03
160	2.59E-02	5	5.18E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
161	7.08E-03	5	1.42E-03
162	8.42E-03	5	1.68E-03
163	1.03E-02	5	2.07E-03
164	1.32E-02	5	2.64E-03
165	1.81E-02	5	3.63E-03
166	2.31E-02	5	4.62E-03
167	7.34E-03	5	1.47E-03
168	8.84E-03	5	1.77E-03
169	1.09E-02	5	2.18E-03
170	1.41E-02	5	2.82E-03
171	1.98E-02	5	3.97E-03
172	1.91E-02	5	3.83E-03
173	7.68E-03	5	1.54E-03
174	9.23E-03	5	1.85E-03
175	1.15E-02	5	2.29E-03
176	1.50E-02	5	3.01E-03
177	2.15E-02	5	4.30E-03
178	7.97E-03	5	1.59E-03
179	9.60E-03	5	1.92E-03
180	1.21E-02	5	2.41E-03
181	1.59E-02	5	3.17E-03
182	2.38E-02	5	4.76E-03
183	8.29E-03	5	1.66E-03
184	9.99E-03	5	2.00E-03
185	1.26E-02	5	2.52E-03
186	1.71E-02	5	3.42E-03
187	2.65E-02	5	5.31E-03
188	8.58E-03	5	1.72E-03
189	1.05E-02	5	2.10E-03
190	1.33E-02	5	2.67E-03
191	1.85E-02	5	3.69E-03
192	2.31E-02	5	4.61E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
193	8.92E-03	5	1.78E-03
194	1.10E-02	5	2.20E-03
195	1.41E-02	5	2.82E-03
196	2.00E-02	5	4.00E-03
197	1.88E-02	5	3.76E-03
198	9.25E-03	5	1.85E-03
199	1.15E-02	5	2.30E-03
200	1.49E-02	5	2.99E-03
201	2.19E-02	5	4.37E-03
202	9.58E-03	5	1.92E-03
203	1.19E-02	5	2.38E-03
204	1.60E-02	5	3.20E-03
205	2.40E-02	5	4.80E-03
206	9.85E-03	5	1.97E-03
207	1.25E-02	5	2.50E-03
208	1.69E-02	5	3.39E-03
209	2.66E-02	5	5.31E-03
210	8.32E-03	5	1.66E-03
211	1.02E-02	5	2.04E-03
212	1.31E-02	5	2.62E-03
213	1.82E-02	5	3.64E-03
214	2.24E-02	5	4.49E-03
215	7.14E-03	5	1.43E-03
216	8.50E-03	5	1.70E-03
217	1.05E-02	5	2.09E-03
218	1.36E-02	5	2.72E-03
219	1.94E-02	5	3.87E-03
220	7.23E-03	5	1.45E-03
221	8.65E-03	5	1.73E-03
222	1.07E-02	5	2.15E-03
223	1.42E-02	5	2.83E-03
224	2.08E-02	5	4.16E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
225	7.23E-03	5	1.45E-03
226	8.68E-03	5	1.74E-03
227	1.08E-02	5	2.17E-03
228	1.44E-02	5	2.89E-03
229	2.19E-02	5	4.39E-03
230	7.13E-03	5	1.43E-03
231	8.53E-03	5	1.71E-03
232	1.06E-02	5	2.12E-03
233	1.42E-02	5	2.85E-03
234	2.20E-02	5	4.40E-03
235	6.83E-03	5	1.37E-03
236	8.02E-03	5	1.60E-03
237	9.74E-03	5	1.95E-03
238	1.23E-02	5	2.46E-03
239	1.50E-02	5	3.00E-03
240	6.25E-03	5	1.25E-03
241	7.11E-03	5	1.42E-03
242	8.01E-03	5	1.60E-03
243	8.81E-03	5	1.76E-03
244	5.01E-03	5	1.00E-03
245	5.48E-03	5	1.10E-03
246	5.92E-03	5	1.18E-03
247	6.26E-03	5	1.25E-03
248	6.28E-03	5	1.26E-03
249	4.41E-03	5	8.82E-04
250	4.67E-03	5	9.34E-04
251	4.86E-03	5	9.73E-04
252	4.92E-03	5	9.83E-04
253	4.73E-03	5	9.45E-04
254	3.68E-03	5	7.35E-04
255	3.84E-03	5	7.69E-04
256	3.97E-03	5	7.95E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
257	4.02E-03	5	8.04E-04
258	3.95E-03	5	7.89E-04
259	3.74E-03	5	7.48E-04
260	3.26E-03	5	6.51E-04
261	3.35E-03	5	6.70E-04
262	3.40E-03	5	6.79E-04
263	3.36E-03	5	6.73E-04
264	3.25E-03	5	6.51E-04
265	2.89E-03	5	5.78E-04
266	2.93E-03	5	5.86E-04
267	2.92E-03	5	5.84E-04
268	2.86E-03	5	5.72E-04
269	2.74E-03	5	5.49E-04
270	2.57E-03	5	5.14E-04
271	2.57E-03	5	5.14E-04
272	2.54E-03	5	5.07E-04
273	2.46E-03	5	4.93E-04
274	2.28E-03	5	4.56E-04
275	2.29E-03	5	4.58E-04
276	2.27E-03	5	4.55E-04
277	2.23E-03	5	4.45E-04
278	2.15E-03	5	4.31E-04
279	2.06E-03	5	4.12E-04
280	2.05E-03	5	4.10E-04
281	2.02E-03	5	4.04E-04
282	1.97E-03	5	3.94E-04
283	1.87E-03	5	3.73E-04
284	1.86E-03	5	3.73E-04
285	1.85E-03	5	3.69E-04
286	1.81E-03	5	3.62E-04
287	1.76E-03	5	3.52E-04
288	1.70E-03	5	3.40E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
289	1.70E-03	5	3.41E-04
290	1.69E-03	5	3.39E-04
291	1.67E-03	5	3.34E-04
292	1.63E-03	5	3.26E-04
293	1.56E-03	5	3.12E-04
294	1.57E-03	5	3.13E-04
295	1.56E-03	5	3.12E-04
296	1.54E-03	5	3.09E-04
297	1.52E-03	5	3.03E-04
298	1.44E-03	5	2.88E-04
299	1.45E-03	5	2.89E-04
300	1.44E-03	5	2.89E-04
301	1.43E-03	5	2.86E-04
302	1.41E-03	5	2.83E-04
303	1.38E-03	5	2.77E-04
304	1.33E-03	5	2.67E-04
305	1.34E-03	5	2.68E-04
306	1.34E-03	5	2.68E-04
307	1.33E-03	5	2.67E-04
308	1.32E-03	5	2.64E-04
309	1.30E-03	5	2.60E-04
310	1.24E-03	5	2.48E-04
311	1.25E-03	5	2.49E-04
312	1.25E-03	5	2.50E-04
313	1.25E-03	5	2.49E-04
314	1.23E-03	5	2.47E-04
315	1.22E-03	5	2.44E-04
316	1.16E-03	5	2.31E-04
317	1.16E-03	5	2.33E-04
318	1.17E-03	5	2.33E-04
319	1.16E-03	5	2.33E-04
320	1.16E-03	5	2.32E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
321	1.15E-03	5	2.29E-04
322	1.13E-03	5	2.26E-04
323	1.08E-03	5	2.16E-04
324	1.09E-03	5	2.18E-04
325	1.09E-03	5	2.19E-04
326	1.09E-03	5	2.19E-04
327	1.09E-03	5	2.18E-04
328	1.08E-03	5	2.16E-04
329	1.07E-03	5	2.13E-04
330	1.01E-03	5	2.03E-04
331	1.02E-03	5	2.04E-04
332	1.03E-03	5	2.05E-04
333	1.03E-03	5	2.06E-04
334	1.03E-03	5	2.05E-04
335	1.02E-03	5	2.04E-04
336	1.01E-03	5	2.02E-04
337	9.55E-04	5	1.91E-04
338	9.63E-04	5	1.93E-04
339	9.68E-04	5	1.94E-04
340	9.70E-04	5	1.94E-04
341	9.69E-04	5	1.94E-04
342	9.64E-04	5	1.93E-04
343	9.57E-04	5	1.91E-04
344	9.01E-04	5	1.80E-04
345	9.08E-04	5	1.82E-04
346	9.13E-04	5	1.83E-04
347	9.16E-04	5	1.83E-04
348	9.16E-04	5	1.83E-04
349	9.13E-04	5	1.83E-04
350	9.07E-04	5	1.81E-04
351	8.51E-04	5	1.70E-04
352	8.58E-04	5	1.72E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
353	8.64E-04	5	1.73E-04
354	8.67E-04	5	1.73E-04
355	8.68E-04	5	1.74E-04
356	8.66E-04	5	1.73E-04
357	8.62E-04	5	1.72E-04
358	8.06E-04	5	1.61E-04
359	8.13E-04	5	1.63E-04
360	8.18E-04	5	1.64E-04
361	8.22E-04	5	1.64E-04
362	8.24E-04	5	1.65E-04
363	8.23E-04	5	1.65E-04
364	8.20E-04	5	1.64E-04
365	7.65E-04	5	1.53E-04
366	7.71E-04	5	1.54E-04
367	7.77E-04	5	1.55E-04
368	7.80E-04	5	1.56E-04
369	7.83E-04	5	1.57E-04
370	7.83E-04	5	1.57E-04
371	7.81E-04	5	1.56E-04
372	7.27E-04	5	1.45E-04
373	7.33E-04	5	1.47E-04
374	7.38E-04	5	1.48E-04
375	7.42E-04	5	1.48E-04
376	7.45E-04	5	1.49E-04
377	7.45E-04	5	1.49E-04
378	7.45E-04	5	1.49E-04
379	1.84E-03	5	3.69E-04
380	1.80E-03	5	3.60E-04
381	1.76E-03	5	3.52E-04
382	1.71E-03	5	3.41E-04
383	1.62E-03	5	3.23E-04
384	1.53E-03	5	3.06E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
385	1.45E-03	5	2.90E-04
386	1.36E-03	5	2.72E-04
387	1.28E-03	5	2.56E-04
388	1.21E-03	5	2.43E-04
389	1.16E-03	5	2.31E-04
390	1.11E-03	5	2.21E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
1	1.0696	1.25E-04	1.33E-04	361	1	0.96	0.000001	4.61E-08	1.1	10	0.25	70	0.85	1.54E-09	0.00		
2	1.15678	1.25E-04	1.44E-04	361	1	0.96	0.000001	4.99E-08	1.1	10	0.25	70	0.85	1.67E-09	0.00		
3	1.04187	1.25E-04	1.30E-04	361	1	0.96	0.000001	4.49E-08	1.1	10	0.25	70	0.85	1.50E-09	0.00		
4	1.13277	1.25E-04	1.41E-04	361	1	0.96	0.000001	4.89E-08	1.1	10	0.25	70	0.85	1.63E-09	0.00		
5	1.23378	1.25E-04	1.54E-04	361	1	0.96	0.000001	5.32E-08	1.1	10	0.25	70	0.85	1.78E-09	0.00		
6	1.34505	1.25E-04	1.68E-04	361	1	0.96	0.000001	5.80E-08	1.1	10	0.25	70	0.85	1.94E-09	0.00		
7	1.09709	1.25E-04	1.37E-04	361	1	0.96	0.000001	4.73E-08	1.1	10	0.25	70	0.85	1.58E-09	0.00		
8	1.19799	1.25E-04	1.49E-04	361	1	0.96	0.000001	5.17E-08	1.1	10	0.25	70	0.85	1.73E-09	0.00		
9	1.31213	1.25E-04	1.63E-04	361	1	0.96	0.000001	5.66E-08	1.1	10	0.25	70	0.85	1.89E-09	0.00		
10	1.44164	1.25E-04	1.80E-04	361	1	0.96	0.000001	6.22E-08	1.1	10	0.25	70	0.85	2.08E-09	0.00		
11	1.58861	1.25E-04	1.98E-04	361	1	0.96	0.000001	6.85E-08	1.1	10	0.25	70	0.85	2.29E-09	0.00		
12	1.26099	1.25E-04	1.57E-04	361	1	0.96	0.000001	5.44E-08	1.1	10	0.25	70	0.85	1.82E-09	0.00		
13	1.39001	1.25E-04	1.73E-04	361	1	0.96	0.000001	6.00E-08	1.1	10	0.25	70	0.85	2.00E-09	0.00		
14	1.5389	1.25E-04	1.92E-04	361	1	0.96	0.000001	6.64E-08	1.1	10	0.25	70	0.85	2.22E-09	0.00		
15	1.71109	1.25E-04	2.13E-04	361	1	0.96	0.000001	7.38E-08	1.1	10	0.25	70	0.85	2.46E-09	0.00		
16	1.90647	1.25E-04	2.38E-04	361	1	0.96	0.000001	8.22E-08	1.1	10	0.25	70	0.85	2.75E-09	0.00		
17	1.4692	1.25E-04	1.83E-04	361	1	0.96	0.000001	6.34E-08	1.1	10	0.25	70	0.85	2.12E-09	0.00		
18	1.63959	1.25E-04	2.04E-04	361	1	0.96	0.000001	7.07E-08	1.1	10	0.25	70	0.85	2.36E-09	0.00		
19	1.83847	1.25E-04	2.29E-04	361	1	0.96	0.000001	7.93E-08	1.1	10	0.25	70	0.85	2.65E-09	0.00		
20	2.07122	1.25E-04	2.58E-04	361	1	0.96	0.000001	8.93E-08	1.1	10	0.25	70	0.85	2.98E-09	0.00		
21	2.34948	1.25E-04	2.93E-04	361	1	0.96	0.000001	1.01E-07	1.1	10	0.25	70	0.85	3.38E-09	0.00		
22	1.73717	1.25E-04	2.16E-04	361	1	0.96	0.000001	7.49E-08	1.1	10	0.25	70	0.85	2.50E-09	0.00		
23	1.96535	1.25E-04	2.45E-04	361	1	0.96	0.000001	8.48E-08	1.1	10	0.25	70	0.85	2.83E-09	0.00		
24	2.23666	1.25E-04	2.79E-04	361	1	0.96	0.000001	9.65E-08	1.1	10	0.25	70	0.85	3.22E-09	0.00		
25	2.57059	1.25E-04	3.20E-04	361	1	0.96	0.000001	1.11E-07	1.1	10	0.25	70	0.85	3.70E-09	0.00		
26	2.97498	1.25E-04	3.71E-04	361	1	0.96	0.000001	1.28E-07	1.1	10	0.25	70	0.85	4.28E-09	0.00		
27	2.08655	1.25E-04	2.60E-04	361	1	0.96	0.000001	9.00E-08	1.1	10	0.25	70	0.85	3.01E-09	0.00		
28	2.39869	1.25E-04	2.99E-04	361	1	0.96	0.000001	1.03E-07	1.1	10	0.25	70	0.85	3.45E-09	0.00		
29	2.79443	1.25E-04	3.48E-04	361	1	0.96	0.000001	1.21E-07	1.1	10	0.25	70	0.85	4.02E-09	0.00		
30	3.2938	1.25E-04	4.10E-04	361	1	0.96	0.000001	1.42E-07	1.1	10	0.25	70	0.85	4.74E-09	0.00		
31	3.93243	1.25E-04	4.90E-04	361	1	0.96	0.000001	1.70E-07	1.1	10	0.25	70	0.85	5.66E-09	0.01		
32	2.55199	1.25E-04	3.18E-04	361	1	0.96	0.000001	1.10E-07	1.1	10	0.25	70	0.85	3.68E-09	0.00		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
33	3.00441	1.25E-04	3.74E-04	361	1	0.96	0.000001	1.30E-07	1.1	10	0.25	70	0.85	4.33E-09	0.00		
34	3.59885	1.25E-04	4.48E-04	361	1	0.96	0.000001	1.55E-07	1.1	10	0.25	70	0.85	5.18E-09	0.01		
35	4.38408	1.25E-04	5.46E-04	361	1	0.96	0.000001	1.89E-07	1.1	10	0.25	70	0.85	6.31E-09	0.01		
36	5.49118	1.25E-04	6.84E-04	361	1	0.96	0.000001	2.37E-07	1.1	10	0.25	70	0.85	7.91E-09	0.01		
37	3.19114	1.25E-04	3.98E-04	361	1	0.96	0.000001	1.38E-07	1.1	10	0.25	70	0.85	4.60E-09	0.00		
38	3.8707	1.25E-04	4.82E-04	361	1	0.96	0.000001	1.67E-07	1.1	10	0.25	70	0.85	5.57E-09	0.01		
39	4.81086	1.25E-04	5.99E-04	361	1	0.96	0.000001	2.07E-07	1.1	10	0.25	70	0.85	6.93E-09	0.01		
40	6.19303	1.25E-04	7.72E-04	361	1	0.96	0.000001	2.67E-07	1.1	10	0.25	70	0.85	8.92E-09	0.01		
41	4.11183	1.25E-04	5.12E-04	361	1	0.96	0.000001	1.77E-07	1.1	10	0.25	70	0.85	5.92E-09	0.01		
42	5.18306	1.25E-04	6.46E-04	361	1	0.96	0.000001	2.24E-07	1.1	10	0.25	70	0.85	7.46E-09	0.01		
43	6.79025	1.25E-04	8.46E-04	361	1	0.96	0.000001	2.93E-07	1.1	10	0.25	70	0.85	9.78E-09	0.01		
44	9.40712	1.25E-04	1.17E-03	361	1	0.96	0.000001	4.06E-07	1.1	10	0.25	70	0.85	1.35E-08	0.01		
45	5.42243	1.25E-04	6.76E-04	361	1	0.96	0.000001	2.34E-07	1.1	10	0.25	70	0.85	7.81E-09	0.01		
46	7.16904	1.25E-04	8.93E-04	361	1	0.96	0.000001	3.09E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01		
47	10.06069	1.25E-04	1.25E-03	361	1	0.96	0.000001	4.34E-07	1.1	10	0.25	70	0.85	1.45E-08	0.01		
48	15.43612	1.25E-04	1.92E-03	361	1	0.96	0.000001	6.66E-07	1.1	10	0.25	70	0.85	2.22E-08	0.02		
49	10.05692	1.25E-04	1.25E-03	361	1	0.96	0.000001	4.34E-07	1.1	10	0.25	70	0.85	1.45E-08	0.01		
50	14.81502	1.25E-04	1.85E-03	361	1	0.96	0.000001	6.39E-07	1.1	10	0.25	70	0.85	2.13E-08	0.02		
51	9.43355	1.25E-04	1.18E-03	361	1	0.96	0.000001	4.07E-07	1.1	10	0.25	70	0.85	1.36E-08	0.01		
52	13.14507	1.25E-04	1.64E-03	361	1	0.96	0.000001	5.67E-07	1.1	10	0.25	70	0.85	1.89E-08	0.02		
53	19.14621	1.25E-04	2.39E-03	361	1	0.96	0.000001	8.26E-07	1.1	10	0.25	70	0.85	2.76E-08	0.03		
54	8.45779	1.25E-04	1.05E-03	361	1	0.96	0.000001	3.65E-07	1.1	10	0.25	70	0.85	1.22E-08	0.01		
55	11.1538	1.25E-04	1.39E-03	361	1	0.96	0.000001	4.81E-07	1.1	10	0.25	70	0.85	1.61E-08	0.02		
56	15.16885	1.25E-04	1.89E-03	361	1	0.96	0.000001	6.54E-07	1.1	10	0.25	70	0.85	2.18E-08	0.02		
57	21.18886	1.25E-04	2.64E-03	361	1	0.96	0.000001	9.14E-07	1.1	10	0.25	70	0.85	3.05E-08	0.03		
58	7.3322	1.25E-04	9.14E-04	361	1	0.96	0.000001	3.16E-07	1.1	10	0.25	70	0.85	1.06E-08	0.01		
59	9.24195	1.25E-04	1.15E-03	361	1	0.96	0.000001	3.99E-07	1.1	10	0.25	70	0.85	1.33E-08	0.01		
60	11.80759	1.25E-04	1.47E-03	361	1	0.96	0.000001	5.09E-07	1.1	10	0.25	70	0.85	1.70E-08	0.02		
61	15.26345	1.25E-04	1.90E-03	361	1	0.96	0.000001	6.58E-07	1.1	10	0.25	70	0.85	2.20E-08	0.02		
62	6.28319	1.25E-04	7.83E-04	361	1	0.96	0.000001	2.71E-07	1.1	10	0.25	70	0.85	9.05E-09	0.01		
63	7.57582	1.25E-04	9.44E-04	361	1	0.96	0.000001	3.27E-07	1.1	10	0.25	70	0.85	1.09E-08	0.01		
64	9.15543	1.25E-04	1.14E-03	361	1	0.96	0.000001	3.95E-07	1.1	10	0.25	70	0.85	1.32E-08	0.01		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
65	11.06465	1.25E-04	1.38E-03	361	1	0.96	0.000001	4.77E-07	1.1	10	0.25	70	0.85	1.59E-08	0.02
66	13.31328	1.25E-04	1.66E-03	361	1	0.96	0.000001	5.74E-07	1.1	10	0.25	70	0.85	1.92E-08	0.02
67	5.3135	1.25E-04	6.62E-04	361	1	0.96	0.000001	2.29E-07	1.1	10	0.25	70	0.85	7.65E-09	0.01
68	6.18619	1.25E-04	7.71E-04	361	1	0.96	0.000001	2.67E-07	1.1	10	0.25	70	0.85	8.91E-09	0.01
69	7.18562	1.25E-04	8.95E-04	361	1	0.96	0.000001	3.10E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01
70	8.29172	1.25E-04	1.03E-03	361	1	0.96	0.000001	3.58E-07	1.1	10	0.25	70	0.85	1.19E-08	0.01
71	9.52622	1.25E-04	1.19E-03	361	1	0.96	0.000001	4.11E-07	1.1	10	0.25	70	0.85	1.37E-08	0.01
72	4.49867	1.25E-04	5.61E-04	361	1	0.96	0.000001	1.94E-07	1.1	10	0.25	70	0.85	6.48E-09	0.01
73	5.09356	1.25E-04	6.35E-04	361	1	0.96	0.000001	2.20E-07	1.1	10	0.25	70	0.85	7.34E-09	0.01
74	5.75191	1.25E-04	7.17E-04	361	1	0.96	0.000001	2.48E-07	1.1	10	0.25	70	0.85	8.28E-09	0.01
75	6.43732	1.25E-04	8.02E-04	361	1	0.96	0.000001	2.78E-07	1.1	10	0.25	70	0.85	9.27E-09	0.01
76	7.18721	1.25E-04	8.95E-04	361	1	0.96	0.000001	3.10E-07	1.1	10	0.25	70	0.85	1.04E-08	0.01
77	3.8277	1.25E-04	4.77E-04	361	1	0.96	0.000001	1.65E-07	1.1	10	0.25	70	0.85	5.51E-09	0.01
78	4.24219	1.25E-04	5.29E-04	361	1	0.96	0.000001	1.83E-07	1.1	10	0.25	70	0.85	6.11E-09	0.01
79	4.69038	1.25E-04	5.84E-04	361	1	0.96	0.000001	2.02E-07	1.1	10	0.25	70	0.85	6.76E-09	0.01
80	5.14038	1.25E-04	6.40E-04	361	1	0.96	0.000001	2.22E-07	1.1	10	0.25	70	0.85	7.40E-09	0.01
81	5.62856	1.25E-04	7.01E-04	361	1	0.96	0.000001	2.43E-07	1.1	10	0.25	70	0.85	8.11E-09	0.01
82	3.2843	1.25E-04	4.09E-04	361	1	0.96	0.000001	1.42E-07	1.1	10	0.25	70	0.85	4.73E-09	0.00
83	3.58155	1.25E-04	4.46E-04	361	1	0.96	0.000001	1.54E-07	1.1	10	0.25	70	0.85	5.16E-09	0.01
84	3.88641	1.25E-04	4.84E-04	361	1	0.96	0.000001	1.68E-07	1.1	10	0.25	70	0.85	5.60E-09	0.01
85	4.20185	1.25E-04	5.24E-04	361	1	0.96	0.000001	1.81E-07	1.1	10	0.25	70	0.85	6.05E-09	0.01
86	4.53442	1.25E-04	5.65E-04	361	1	0.96	0.000001	1.96E-07	1.1	10	0.25	70	0.85	6.53E-09	0.01
87	2.83963	1.25E-04	3.54E-04	361	1	0.96	0.000001	1.22E-07	1.1	10	0.25	70	0.85	4.09E-09	0.00
88	3.05904	1.25E-04	3.81E-04	361	1	0.96	0.000001	1.32E-07	1.1	10	0.25	70	0.85	4.41E-09	0.00
89	3.28039	1.25E-04	4.09E-04	361	1	0.96	0.000001	1.41E-07	1.1	10	0.25	70	0.85	4.72E-09	0.00
90	3.51883	1.25E-04	4.38E-04	361	1	0.96	0.000001	1.52E-07	1.1	10	0.25	70	0.85	5.07E-09	0.01
91	3.76161	1.25E-04	4.69E-04	361	1	0.96	0.000001	1.62E-07	1.1	10	0.25	70	0.85	5.42E-09	0.01
92	2.47861	1.25E-04	3.09E-04	361	1	0.96	0.000001	1.07E-07	1.1	10	0.25	70	0.85	3.57E-09	0.00
93	2.64404	1.25E-04	3.29E-04	361	1	0.96	0.000001	1.14E-07	1.1	10	0.25	70	0.85	3.81E-09	0.00
94	2.81165	1.25E-04	3.50E-04	361	1	0.96	0.000001	1.21E-07	1.1	10	0.25	70	0.85	4.05E-09	0.00
95	2.98629	1.25E-04	3.72E-04	361	1	0.96	0.000001	1.29E-07	1.1	10	0.25	70	0.85	4.30E-09	0.00
96	3.16933	1.25E-04	3.95E-04	361	1	0.96	0.000001	1.37E-07	1.1	10	0.25	70	0.85	4.56E-09	0.00

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
97	2.18036	1.25E-04	2.72E-04	361	1	0.96	0.000001	9.40E-08	1.1	10	0.25	70	0.85	3.14E-09	0.00
98	2.30952	1.25E-04	2.88E-04	361	1	0.96	0.000001	9.96E-08	1.1	10	0.25	70	0.85	3.33E-09	0.00
99	2.43954	1.25E-04	3.04E-04	361	1	0.96	0.000001	1.05E-07	1.1	10	0.25	70	0.85	3.51E-09	0.00
100	2.57161	1.25E-04	3.20E-04	361	1	0.96	0.000001	1.11E-07	1.1	10	0.25	70	0.85	3.70E-09	0.00
101	2.71373	1.25E-04	3.38E-04	361	1	0.96	0.000001	1.17E-07	1.1	10	0.25	70	0.85	3.91E-09	0.00
102	1.02416	1.25E-04	1.28E-04	361	1	0.96	0.000001	4.42E-08	1.1	10	0.25	70	0.85	1.48E-09	0.00
103	1.03139	1.25E-04	1.29E-04	361	1	0.96	0.000001	4.45E-08	1.1	10	0.25	70	0.85	1.49E-09	0.00
104	1.06531	1.25E-04	1.33E-04	361	1	0.96	0.000001	4.59E-08	1.1	10	0.25	70	0.85	1.53E-09	0.00
105	1.03323	1.25E-04	1.29E-04	361	1	0.96	0.000001	4.46E-08	1.1	10	0.25	70	0.85	1.49E-09	0.00
106	1.06991	1.25E-04	1.33E-04	361	1	0.96	0.000001	4.61E-08	1.1	10	0.25	70	0.85	1.54E-09	0.00
107	1.10577	1.25E-04	1.38E-04	361	1	0.96	0.000001	4.77E-08	1.1	10	0.25	70	0.85	1.59E-09	0.00
108	1.14215	1.25E-04	1.42E-04	361	1	0.96	0.000001	4.93E-08	1.1	10	0.25	70	0.85	1.64E-09	0.00
109	1.07108	1.25E-04	1.33E-04	361	1	0.96	0.000001	4.62E-08	1.1	10	0.25	70	0.85	1.54E-09	0.00
110	1.10856	1.25E-04	1.38E-04	361	1	0.96	0.000001	4.78E-08	1.1	10	0.25	70	0.85	1.60E-09	0.00
111	1.14756	1.25E-04	1.43E-04	361	1	0.96	0.000001	4.95E-08	1.1	10	0.25	70	0.85	1.65E-09	0.00
112	1.18841	1.25E-04	1.48E-04	361	1	0.96	0.000001	5.13E-08	1.1	10	0.25	70	0.85	1.71E-09	0.00
113	1.2283	1.25E-04	1.53E-04	361	1	0.96	0.000001	5.30E-08	1.1	10	0.25	70	0.85	1.77E-09	0.00
114	1.06874	1.25E-04	1.33E-04	361	1	0.96	0.000001	4.61E-08	1.1	10	0.25	70	0.85	1.54E-09	0.00
115	1.10795	1.25E-04	1.38E-04	361	1	0.96	0.000001	4.78E-08	1.1	10	0.25	70	0.85	1.60E-09	0.00
116	1.14942	1.25E-04	1.43E-04	361	1	0.96	0.000001	4.96E-08	1.1	10	0.25	70	0.85	1.66E-09	0.00
117	1.19184	1.25E-04	1.48E-04	361	1	0.96	0.000001	5.14E-08	1.1	10	0.25	70	0.85	1.72E-09	0.00
118	1.23557	1.25E-04	1.54E-04	361	1	0.96	0.000001	5.33E-08	1.1	10	0.25	70	0.85	1.78E-09	0.00
119	1.28128	1.25E-04	1.60E-04	361	1	0.96	0.000001	5.53E-08	1.1	10	0.25	70	0.85	1.85E-09	0.00
120	1.32619	1.25E-04	1.65E-04	361	1	0.96	0.000001	5.72E-08	1.1	10	0.25	70	0.85	1.91E-09	0.00
121	1.063	1.25E-04	1.32E-04	361	1	0.96	0.000001	4.58E-08	1.1	10	0.25	70	0.85	1.53E-09	0.00
122	1.10365	1.25E-04	1.38E-04	361	1	0.96	0.000001	4.76E-08	1.1	10	0.25	70	0.85	1.59E-09	0.00
123	1.14663	1.25E-04	1.43E-04	361	1	0.96	0.000001	4.95E-08	1.1	10	0.25	70	0.85	1.65E-09	0.00
124	1.1913	1.25E-04	1.48E-04	361	1	0.96	0.000001	5.14E-08	1.1	10	0.25	70	0.85	1.72E-09	0.00
125	1.23734	1.25E-04	1.54E-04	361	1	0.96	0.000001	5.34E-08	1.1	10	0.25	70	0.85	1.78E-09	0.00
126	1.28479	1.25E-04	1.60E-04	361	1	0.96	0.000001	5.54E-08	1.1	10	0.25	70	0.85	1.85E-09	0.00
127	1.33519	1.25E-04	1.66E-04	361	1	0.96	0.000001	5.76E-08	1.1	10	0.25	70	0.85	1.92E-09	0.00
128	1.38423	1.25E-04	1.72E-04	361	1	0.96	0.000001	5.97E-08	1.1	10	0.25	70	0.85	1.99E-09	0.00

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
129	1.18585	1.25E-04	1.48E-04	361	1	0.96	0.000001	5.11E-08	1.1	10	0.25	70	0.85	1.71E-09	0.00
130	1.23426	1.25E-04	1.54E-04	361	1	0.96	0.000001	5.32E-08	1.1	10	0.25	70	0.85	1.78E-09	0.00
131	1.28421	1.25E-04	1.60E-04	361	1	0.96	0.000001	5.54E-08	1.1	10	0.25	70	0.85	1.85E-09	0.00
132	1.33632	1.25E-04	1.66E-04	361	1	0.96	0.000001	5.76E-08	1.1	10	0.25	70	0.85	1.92E-09	0.00
133	1.38992	1.25E-04	1.73E-04	361	1	0.96	0.000001	5.99E-08	1.1	10	0.25	70	0.85	2.00E-09	0.00
134	1.44634	1.25E-04	1.80E-04	361	1	0.96	0.000001	6.24E-08	1.1	10	0.25	70	0.85	2.08E-09	0.00
135	1.50466	1.25E-04	1.87E-04	361	1	0.96	0.000001	6.49E-08	1.1	10	0.25	70	0.85	2.17E-09	0.00
136	1.27848	1.25E-04	1.59E-04	361	1	0.96	0.000001	5.51E-08	1.1	10	0.25	70	0.85	1.84E-09	0.00
137	1.33248	1.25E-04	1.66E-04	361	1	0.96	0.000001	5.75E-08	1.1	10	0.25	70	0.85	1.92E-09	0.00
138	1.38958	1.25E-04	1.73E-04	361	1	0.96	0.000001	5.99E-08	1.1	10	0.25	70	0.85	2.00E-09	0.00
139	1.44702	1.25E-04	1.80E-04	361	1	0.96	0.000001	6.24E-08	1.1	10	0.25	70	0.85	2.08E-09	0.00
140	1.5107	1.25E-04	1.88E-04	361	1	0.96	0.000001	6.52E-08	1.1	10	0.25	70	0.85	2.18E-09	0.00
141	1.57629	1.25E-04	1.96E-04	361	1	0.96	0.000001	6.80E-08	1.1	10	0.25	70	0.85	2.27E-09	0.00
142	1.64179	1.25E-04	2.05E-04	361	1	0.96	0.000001	7.08E-08	1.1	10	0.25	70	0.85	2.36E-09	0.00
143	1.38232	1.25E-04	1.72E-04	361	1	0.96	0.000001	5.96E-08	1.1	10	0.25	70	0.85	1.99E-09	0.00
144	1.44442	1.25E-04	1.80E-04	361	1	0.96	0.000001	6.23E-08	1.1	10	0.25	70	0.85	2.08E-09	0.00
145	1.50731	1.25E-04	1.88E-04	361	1	0.96	0.000001	6.50E-08	1.1	10	0.25	70	0.85	2.17E-09	0.00
146	1.57773	1.25E-04	1.97E-04	361	1	0.96	0.000001	6.80E-08	1.1	10	0.25	70	0.85	2.27E-09	0.00
147	1.64977	1.25E-04	2.06E-04	361	1	0.96	0.000001	7.12E-08	1.1	10	0.25	70	0.85	2.38E-09	0.00
148	1.72383	1.25E-04	2.15E-04	361	1	0.96	0.000001	7.43E-08	1.1	10	0.25	70	0.85	2.48E-09	0.00
149	1.50018	1.25E-04	1.87E-04	361	1	0.96	0.000001	6.47E-08	1.1	10	0.25	70	0.85	2.16E-09	0.00
150	1.57005	1.25E-04	1.96E-04	361	1	0.96	0.000001	6.77E-08	1.1	10	0.25	70	0.85	2.26E-09	0.00
151	1.64735	1.25E-04	2.05E-04	361	1	0.96	0.000001	7.11E-08	1.1	10	0.25	70	0.85	2.37E-09	0.00
152	1.7263	1.25E-04	2.15E-04	361	1	0.96	0.000001	7.45E-08	1.1	10	0.25	70	0.85	2.49E-09	0.00
153	1.80795	1.25E-04	2.25E-04	361	1	0.96	0.000001	7.80E-08	1.1	10	0.25	70	0.85	2.60E-09	0.00
154	1.89675	1.25E-04	2.36E-04	361	1	0.96	0.000001	8.18E-08	1.1	10	0.25	70	0.85	2.73E-09	0.00
155	1.63541	1.25E-04	2.04E-04	361	1	0.96	0.000001	7.05E-08	1.1	10	0.25	70	0.85	2.36E-09	0.00
156	1.71866	1.25E-04	2.14E-04	361	1	0.96	0.000001	7.41E-08	1.1	10	0.25	70	0.85	2.48E-09	0.00
157	1.80591	1.25E-04	2.25E-04	361	1	0.96	0.000001	7.79E-08	1.1	10	0.25	70	0.85	2.60E-09	0.00
158	1.89775	1.25E-04	2.36E-04	361	1	0.96	0.000001	8.19E-08	1.1	10	0.25	70	0.85	2.73E-09	0.00
159	1.99696	1.25E-04	2.49E-04	361	1	0.96	0.000001	8.61E-08	1.1	10	0.25	70	0.85	2.88E-09	0.00
160	2.09828	1.25E-04	2.61E-04	361	1	0.96	0.000001	9.05E-08	1.1	10	0.25	70	0.85	3.02E-09	0.00

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
161	1.793	1.25E-04	2.23E-04	361	1	0.96	0.000001	7.73E-08	1.1	10	0.25	70	0.85	2.58E-09	0.00		
162	1.88839	1.25E-04	2.35E-04	361	1	0.96	0.000001	8.14E-08	1.1	10	0.25	70	0.85	2.72E-09	0.00		
163	1.99175	1.25E-04	2.48E-04	361	1	0.96	0.000001	8.59E-08	1.1	10	0.25	70	0.85	2.87E-09	0.00		
164	2.10087	1.25E-04	2.62E-04	361	1	0.96	0.000001	9.06E-08	1.1	10	0.25	70	0.85	3.03E-09	0.00		
165	2.21603	1.25E-04	2.76E-04	361	1	0.96	0.000001	9.56E-08	1.1	10	0.25	70	0.85	3.19E-09	0.00		
166	2.33783	1.25E-04	2.91E-04	361	1	0.96	0.000001	1.01E-07	1.1	10	0.25	70	0.85	3.37E-09	0.00		
167	1.97324	1.25E-04	2.46E-04	361	1	0.96	0.000001	8.51E-08	1.1	10	0.25	70	0.85	2.84E-09	0.00		
168	2.09085	1.25E-04	2.61E-04	361	1	0.96	0.000001	9.02E-08	1.1	10	0.25	70	0.85	3.01E-09	0.00		
169	2.21338	1.25E-04	2.76E-04	361	1	0.96	0.000001	9.55E-08	1.1	10	0.25	70	0.85	3.19E-09	0.00		
170	2.3435	1.25E-04	2.92E-04	361	1	0.96	0.000001	1.01E-07	1.1	10	0.25	70	0.85	3.38E-09	0.00		
171	2.48158	1.25E-04	3.09E-04	361	1	0.96	0.000001	1.07E-07	1.1	10	0.25	70	0.85	3.57E-09	0.00		
172	2.62461	1.25E-04	3.27E-04	361	1	0.96	0.000001	1.13E-07	1.1	10	0.25	70	0.85	3.78E-09	0.00		
173	2.19117	1.25E-04	2.73E-04	361	1	0.96	0.000001	9.45E-08	1.1	10	0.25	70	0.85	3.16E-09	0.00		
174	2.32727	1.25E-04	2.90E-04	361	1	0.96	0.000001	1.00E-07	1.1	10	0.25	70	0.85	3.35E-09	0.00		
175	2.47383	1.25E-04	3.08E-04	361	1	0.96	0.000001	1.07E-07	1.1	10	0.25	70	0.85	3.56E-09	0.00		
176	2.63134	1.25E-04	3.28E-04	361	1	0.96	0.000001	1.13E-07	1.1	10	0.25	70	0.85	3.79E-09	0.00		
177	2.79618	1.25E-04	3.48E-04	361	1	0.96	0.000001	1.21E-07	1.1	10	0.25	70	0.85	4.03E-09	0.00		
178	2.44487	1.25E-04	3.05E-04	361	1	0.96	0.000001	1.05E-07	1.1	10	0.25	70	0.85	3.52E-09	0.00		
179	2.60774	1.25E-04	3.25E-04	361	1	0.96	0.000001	1.12E-07	1.1	10	0.25	70	0.85	3.76E-09	0.00		
180	2.78931	1.25E-04	3.48E-04	361	1	0.96	0.000001	1.20E-07	1.1	10	0.25	70	0.85	4.02E-09	0.00		
181	2.97736	1.25E-04	3.71E-04	361	1	0.96	0.000001	1.28E-07	1.1	10	0.25	70	0.85	4.29E-09	0.00		
182	3.18799	1.25E-04	3.97E-04	361	1	0.96	0.000001	1.37E-07	1.1	10	0.25	70	0.85	4.59E-09	0.00		
183	2.75228	1.25E-04	3.43E-04	361	1	0.96	0.000001	1.19E-07	1.1	10	0.25	70	0.85	3.96E-09	0.00		
184	2.949	1.25E-04	3.67E-04	361	1	0.96	0.000001	1.27E-07	1.1	10	0.25	70	0.85	4.25E-09	0.00		
185	3.1704	1.25E-04	3.95E-04	361	1	0.96	0.000001	1.37E-07	1.1	10	0.25	70	0.85	4.57E-09	0.00		
186	3.41389	1.25E-04	4.25E-04	361	1	0.96	0.000001	1.47E-07	1.1	10	0.25	70	0.85	4.92E-09	0.00		
187	3.67541	1.25E-04	4.58E-04	361	1	0.96	0.000001	1.59E-07	1.1	10	0.25	70	0.85	5.29E-09	0.01		
188	3.12322	1.25E-04	3.89E-04	361	1	0.96	0.000001	1.35E-07	1.1	10	0.25	70	0.85	4.50E-09	0.00		
189	3.37892	1.25E-04	4.21E-04	361	1	0.96	0.000001	1.46E-07	1.1	10	0.25	70	0.85	4.87E-09	0.00		
190	3.65119	1.25E-04	4.55E-04	361	1	0.96	0.000001	1.57E-07	1.1	10	0.25	70	0.85	5.26E-09	0.01		
191	3.96181	1.25E-04	4.94E-04	361	1	0.96	0.000001	1.71E-07	1.1	10	0.25	70	0.85	5.71E-09	0.01		
192	4.29471	1.25E-04	5.35E-04	361	1	0.96	0.000001	1.85E-07	1.1	10	0.25	70	0.85	6.19E-09	0.01		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
193	3.58827	1.25E-04	4.47E-04	361	1	0.96	0.000001	1.55E-07	1.1	10	0.25	70	0.85	5.17E-09	0.01
194	3.91143	1.25E-04	4.87E-04	361	1	0.96	0.000001	1.69E-07	1.1	10	0.25	70	0.85	5.63E-09	0.01
195	4.26106	1.25E-04	5.31E-04	361	1	0.96	0.000001	1.84E-07	1.1	10	0.25	70	0.85	6.14E-09	0.01
196	4.66917	1.25E-04	5.82E-04	361	1	0.96	0.000001	2.01E-07	1.1	10	0.25	70	0.85	6.72E-09	0.01
197	5.10732	1.25E-04	6.36E-04	361	1	0.96	0.000001	2.20E-07	1.1	10	0.25	70	0.85	7.36E-09	0.01
198	4.17254	1.25E-04	5.20E-04	361	1	0.96	0.000001	1.80E-07	1.1	10	0.25	70	0.85	6.01E-09	0.01
199	4.5911	1.25E-04	5.72E-04	361	1	0.96	0.000001	1.98E-07	1.1	10	0.25	70	0.85	6.61E-09	0.01
200	5.0605	1.25E-04	6.31E-04	361	1	0.96	0.000001	2.18E-07	1.1	10	0.25	70	0.85	7.29E-09	0.01
201	5.61236	1.25E-04	6.99E-04	361	1	0.96	0.000001	2.42E-07	1.1	10	0.25	70	0.85	8.08E-09	0.01
202	4.92407	1.25E-04	6.14E-04	361	1	0.96	0.000001	2.12E-07	1.1	10	0.25	70	0.85	7.09E-09	0.01
203	5.47531	1.25E-04	6.82E-04	361	1	0.96	0.000001	2.36E-07	1.1	10	0.25	70	0.85	7.89E-09	0.01
204	6.15108	1.25E-04	7.66E-04	361	1	0.96	0.000001	2.65E-07	1.1	10	0.25	70	0.85	8.86E-09	0.01
205	6.91024	1.25E-04	8.61E-04	361	1	0.96	0.000001	2.98E-07	1.1	10	0.25	70	0.85	9.95E-09	0.01
206	5.90473	1.25E-04	7.36E-04	361	1	0.96	0.000001	2.55E-07	1.1	10	0.25	70	0.85	8.50E-09	0.01
207	6.70371	1.25E-04	8.35E-04	361	1	0.96	0.000001	2.89E-07	1.1	10	0.25	70	0.85	9.65E-09	0.01
208	7.64594	1.25E-04	9.53E-04	361	1	0.96	0.000001	3.30E-07	1.1	10	0.25	70	0.85	1.10E-08	0.01
209	8.78906	1.25E-04	1.10E-03	361	1	0.96	0.000001	3.79E-07	1.1	10	0.25	70	0.85	1.27E-08	0.01
210	6.3265	1.25E-04	7.88E-04	361	1	0.96	0.000001	2.73E-07	1.1	10	0.25	70	0.85	9.11E-09	0.01
211	7.28184	1.25E-04	9.07E-04	361	1	0.96	0.000001	3.14E-07	1.1	10	0.25	70	0.85	1.05E-08	0.01
212	8.44374	1.25E-04	1.05E-03	361	1	0.96	0.000001	3.64E-07	1.1	10	0.25	70	0.85	1.22E-08	0.01
213	9.89456	1.25E-04	1.23E-03	361	1	0.96	0.000001	4.27E-07	1.1	10	0.25	70	0.85	1.43E-08	0.01
214	11.70465	1.25E-04	1.46E-03	361	1	0.96	0.000001	5.05E-07	1.1	10	0.25	70	0.85	1.69E-08	0.02
215	6.73876	1.25E-04	8.40E-04	361	1	0.96	0.000001	2.91E-07	1.1	10	0.25	70	0.85	9.71E-09	0.01
216	7.81701	1.25E-04	9.74E-04	361	1	0.96	0.000001	3.37E-07	1.1	10	0.25	70	0.85	1.13E-08	0.01
217	9.19324	1.25E-04	1.15E-03	361	1	0.96	0.000001	3.97E-07	1.1	10	0.25	70	0.85	1.32E-08	0.01
218	10.99378	1.25E-04	1.37E-03	361	1	0.96	0.000001	4.74E-07	1.1	10	0.25	70	0.85	1.58E-08	0.02
219	13.41235	1.25E-04	1.67E-03	361	1	0.96	0.000001	5.78E-07	1.1	10	0.25	70	0.85	1.93E-08	0.02
220	8.34677	1.25E-04	1.04E-03	361	1	0.96	0.000001	3.60E-07	1.1	10	0.25	70	0.85	1.20E-08	0.01
221	9.94119	1.25E-04	1.24E-03	361	1	0.96	0.000001	4.29E-07	1.1	10	0.25	70	0.85	1.43E-08	0.01
222	12.09844	1.25E-04	1.51E-03	361	1	0.96	0.000001	5.22E-07	1.1	10	0.25	70	0.85	1.74E-08	0.02
223	15.1481	1.25E-04	1.89E-03	361	1	0.96	0.000001	6.53E-07	1.1	10	0.25	70	0.85	2.18E-08	0.02
224	19.73468	1.25E-04	2.46E-03	361	1	0.96	0.000001	8.51E-07	1.1	10	0.25	70	0.85	2.84E-08	0.03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
225	10.56997	1.25E-04	1.32E-03	361	1	0.96	0.000001	4.56E-07	1.1	10	0.25	70	0.85	1.52E-08	0.02
226	13.03536	1.25E-04	1.62E-03	361	1	0.96	0.000001	5.62E-07	1.1	10	0.25	70	0.85	1.88E-08	0.02
227	16.63569	1.25E-04	2.07E-03	361	1	0.96	0.000001	7.18E-07	1.1	10	0.25	70	0.85	2.40E-08	0.02
228	22.33373	1.25E-04	2.78E-03	361	1	0.96	0.000001	9.63E-07	1.1	10	0.25	70	0.85	3.22E-08	0.03
229	32.62137	1.25E-04	4.06E-03	361	1	0.96	0.000001	1.41E-06	1.1	10	0.25	70	0.85	4.70E-08	0.05
230	13.74083	1.25E-04	1.71E-03	361	1	0.96	0.000001	5.93E-07	1.1	10	0.25	70	0.85	1.98E-08	0.02
231	17.71321	1.25E-04	2.21E-03	361	1	0.96	0.000001	7.64E-07	1.1	10	0.25	70	0.85	2.55E-08	0.03
232	23.98181	1.25E-04	2.99E-03	361	1	0.96	0.000001	1.03E-06	1.1	10	0.25	70	0.85	3.45E-08	0.03
233	35.75652	1.25E-04	4.46E-03	361	1	0.96	0.000001	1.54E-06	1.1	10	0.25	70	0.85	5.15E-08	0.05
234	63.36339	1.25E-04	7.89E-03	361	1	0.96	0.000001	2.73E-06	1.1	10	0.25	70	0.85	9.13E-08	0.09
235	18.07381	1.25E-04	2.25E-03	361	1	0.96	0.000001	7.80E-07	1.1	10	0.25	70	0.85	2.60E-08	0.03
236	24.07809	1.25E-04	3.00E-03	361	1	0.96	0.000001	1.04E-06	1.1	10	0.25	70	0.85	3.47E-08	0.03
237	34.42402	1.25E-04	4.29E-03	361	1	0.96	0.000001	1.48E-06	1.1	10	0.25	70	0.85	4.96E-08	0.05
238	53.48805	1.25E-04	6.66E-03	361	1	0.96	0.000001	2.31E-06	1.1	10	0.25	70	0.85	7.70E-08	0.08
239	87.94839	1.25E-04	1.10E-02	361	1	0.96	0.000001	3.79E-06	1.1	10	0.25	70	0.85	1.27E-07	0.13
240	23.04175	1.25E-04	2.87E-03	361	1	0.96	0.000001	9.94E-07	1.1	10	0.25	70	0.85	3.32E-08	0.03
241	31.43293	1.25E-04	3.92E-03	361	1	0.96	0.000001	1.36E-06	1.1	10	0.25	70	0.85	4.53E-08	0.05
242	43.66183	1.25E-04	5.44E-03	361	1	0.96	0.000001	1.88E-06	1.1	10	0.25	70	0.85	6.29E-08	0.06
243	64.93814	1.25E-04	8.09E-03	361	1	0.96	0.000001	2.80E-06	1.1	10	0.25	70	0.85	9.35E-08	0.09
244	21.37231	1.25E-04	2.66E-03	361	1	0.96	0.000001	9.22E-07	1.1	10	0.25	70	0.85	3.08E-08	0.03
245	27.97058	1.25E-04	3.48E-03	361	1	0.96	0.000001	1.21E-06	1.1	10	0.25	70	0.85	4.03E-08	0.04
246	37.22215	1.25E-04	4.64E-03	361	1	0.96	0.000001	1.61E-06	1.1	10	0.25	70	0.85	5.36E-08	0.05
247	50.92165	1.25E-04	6.34E-03	361	1	0.96	0.000001	2.20E-06	1.1	10	0.25	70	0.85	7.33E-08	0.07
248	75.17356	1.25E-04	9.37E-03	361	1	0.96	0.000001	3.24E-06	1.1	10	0.25	70	0.85	1.08E-07	0.11
249	24.71828	1.25E-04	3.08E-03	361	1	0.96	0.000001	1.07E-06	1.1	10	0.25	70	0.85	3.56E-08	0.04
250	31.79559	1.25E-04	3.96E-03	361	1	0.96	0.000001	1.37E-06	1.1	10	0.25	70	0.85	4.58E-08	0.05
251	41.65027	1.25E-04	5.19E-03	361	1	0.96	0.000001	1.80E-06	1.1	10	0.25	70	0.85	6.00E-08	0.06
252	57.51758	1.25E-04	7.17E-03	361	1	0.96	0.000001	2.48E-06	1.1	10	0.25	70	0.85	8.28E-08	0.08
253	84.75563	1.25E-04	1.06E-02	361	1	0.96	0.000001	3.66E-06	1.1	10	0.25	70	0.85	1.22E-07	0.12
254	21.77299	1.25E-04	2.71E-03	361	1	0.96	0.000001	9.39E-07	1.1	10	0.25	70	0.85	3.14E-08	0.03
255	27.04687	1.25E-04	3.37E-03	361	1	0.96	0.000001	1.17E-06	1.1	10	0.25	70	0.85	3.90E-08	0.04
256	34.71722	1.25E-04	4.33E-03	361	1	0.96	0.000001	1.50E-06	1.1	10	0.25	70	0.85	5.00E-08	0.05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
257	45.23761	1.25E-04	5.64E-03	361	1	0.96	0.000001	1.95E-06	1.1	10	0.25	70	0.85	6.52E-08	0.07
258	62.66449	1.25E-04	7.81E-03	361	1	0.96	0.000001	2.70E-06	1.1	10	0.25	70	0.85	9.03E-08	0.09
259	91.47486	1.25E-04	1.14E-02	361	1	0.96	0.000001	3.95E-06	1.1	10	0.25	70	0.85	1.32E-07	0.13
260	23.1793	1.25E-04	2.89E-03	361	1	0.96	0.000001	1.00E-06	1.1	10	0.25	70	0.85	3.34E-08	0.03
261	28.76706	1.25E-04	3.58E-03	361	1	0.96	0.000001	1.24E-06	1.1	10	0.25	70	0.85	4.14E-08	0.04
262	36.40289	1.25E-04	4.54E-03	361	1	0.96	0.000001	1.57E-06	1.1	10	0.25	70	0.85	5.24E-08	0.05
263	46.75602	1.25E-04	5.83E-03	361	1	0.96	0.000001	2.02E-06	1.1	10	0.25	70	0.85	6.73E-08	0.07
264	64.54317	1.25E-04	8.04E-03	361	1	0.96	0.000001	2.78E-06	1.1	10	0.25	70	0.85	9.30E-08	0.09
265	23.87475	1.25E-04	2.97E-03	361	1	0.96	0.000001	1.03E-06	1.1	10	0.25	70	0.85	3.44E-08	0.03
266	29.02426	1.25E-04	3.62E-03	361	1	0.96	0.000001	1.25E-06	1.1	10	0.25	70	0.85	4.18E-08	0.04
267	35.48536	1.25E-04	4.42E-03	361	1	0.96	0.000001	1.53E-06	1.1	10	0.25	70	0.85	5.11E-08	0.05
268	45.15515	1.25E-04	5.63E-03	361	1	0.96	0.000001	1.95E-06	1.1	10	0.25	70	0.85	6.50E-08	0.07
269	58.03312	1.25E-04	7.23E-03	361	1	0.96	0.000001	2.50E-06	1.1	10	0.25	70	0.85	8.36E-08	0.08
270	23.40747	1.25E-04	2.92E-03	361	1	0.96	0.000001	1.01E-06	1.1	10	0.25	70	0.85	3.37E-08	0.03
271	27.55015	1.25E-04	3.43E-03	361	1	0.96	0.000001	1.19E-06	1.1	10	0.25	70	0.85	3.97E-08	0.04
272	32.608	1.25E-04	4.06E-03	361	1	0.96	0.000001	1.41E-06	1.1	10	0.25	70	0.85	4.70E-08	0.05
273	39.08403	1.25E-04	4.87E-03	361	1	0.96	0.000001	1.69E-06	1.1	10	0.25	70	0.85	5.63E-08	0.06
274	18.94474	1.25E-04	2.36E-03	361	1	0.96	0.000001	8.17E-07	1.1	10	0.25	70	0.85	2.73E-08	0.03
275	21.61125	1.25E-04	2.69E-03	361	1	0.96	0.000001	9.32E-07	1.1	10	0.25	70	0.85	3.11E-08	0.03
276	24.64634	1.25E-04	3.07E-03	361	1	0.96	0.000001	1.06E-06	1.1	10	0.25	70	0.85	3.55E-08	0.04
277	27.7939	1.25E-04	3.46E-03	361	1	0.96	0.000001	1.20E-06	1.1	10	0.25	70	0.85	4.00E-08	0.04
278	31.32645	1.25E-04	3.90E-03	361	1	0.96	0.000001	1.35E-06	1.1	10	0.25	70	0.85	4.51E-08	0.05
279	17.32953	1.25E-04	2.16E-03	361	1	0.96	0.000001	7.47E-07	1.1	10	0.25	70	0.85	2.50E-08	0.02
280	19.23473	1.25E-04	2.40E-03	361	1	0.96	0.000001	8.30E-07	1.1	10	0.25	70	0.85	2.77E-08	0.03
281	21.06063	1.25E-04	2.62E-03	361	1	0.96	0.000001	9.08E-07	1.1	10	0.25	70	0.85	3.03E-08	0.03
282	23.22386	1.25E-04	2.89E-03	361	1	0.96	0.000001	1.00E-06	1.1	10	0.25	70	0.85	3.34E-08	0.03
283	14.05531	1.25E-04	1.75E-03	361	1	0.96	0.000001	6.06E-07	1.1	10	0.25	70	0.85	2.02E-08	0.02
284	15.33521	1.25E-04	1.91E-03	361	1	0.96	0.000001	6.61E-07	1.1	10	0.25	70	0.85	2.21E-08	0.02
285	16.63518	1.25E-04	2.07E-03	361	1	0.96	0.000001	7.17E-07	1.1	10	0.25	70	0.85	2.40E-08	0.02
286	17.94378	1.25E-04	2.24E-03	361	1	0.96	0.000001	7.74E-07	1.1	10	0.25	70	0.85	2.58E-08	0.03
287	19.07174	1.25E-04	2.38E-03	361	1	0.96	0.000001	8.23E-07	1.1	10	0.25	70	0.85	2.75E-08	0.03
288	11.7563	1.25E-04	1.46E-03	361	1	0.96	0.000001	5.07E-07	1.1	10	0.25	70	0.85	1.69E-08	0.02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	
289	12.6677	1.25E-04	1.58E-03	361	1	0.96	0.000001	5.46E-07	1.1	10	0.25	70	0.85	1.82E-08	0.02
290	13.59915	1.25E-04	1.69E-03	361	1	0.96	0.000001	5.87E-07	1.1	10	0.25	70	0.85	1.96E-08	0.02
291	14.52068	1.25E-04	1.81E-03	361	1	0.96	0.000001	6.26E-07	1.1	10	0.25	70	0.85	2.09E-08	0.02
292	15.3158	1.25E-04	1.91E-03	361	1	0.96	0.000001	6.61E-07	1.1	10	0.25	70	0.85	2.21E-08	0.02
293	9.90958	1.25E-04	1.23E-03	361	1	0.96	0.000001	4.27E-07	1.1	10	0.25	70	0.85	1.43E-08	0.01
294	10.57824	1.25E-04	1.32E-03	361	1	0.96	0.000001	4.56E-07	1.1	10	0.25	70	0.85	1.52E-08	0.02
295	11.24453	1.25E-04	1.40E-03	361	1	0.96	0.000001	4.85E-07	1.1	10	0.25	70	0.85	1.62E-08	0.02
296	11.91522	1.25E-04	1.48E-03	361	1	0.96	0.000001	5.14E-07	1.1	10	0.25	70	0.85	1.72E-08	0.02
297	12.54783	1.25E-04	1.56E-03	361	1	0.96	0.000001	5.41E-07	1.1	10	0.25	70	0.85	1.81E-08	0.02
298	8.53916	1.25E-04	1.06E-03	361	1	0.96	0.000001	3.68E-07	1.1	10	0.25	70	0.85	1.23E-08	0.01
299	9.04519	1.25E-04	1.13E-03	361	1	0.96	0.000001	3.90E-07	1.1	10	0.25	70	0.85	1.30E-08	0.01
300	9.52957	1.25E-04	1.19E-03	361	1	0.96	0.000001	4.11E-07	1.1	10	0.25	70	0.85	1.37E-08	0.01
301	10.04035	1.25E-04	1.25E-03	361	1	0.96	0.000001	4.33E-07	1.1	10	0.25	70	0.85	1.45E-08	0.01
302	10.5582	1.25E-04	1.32E-03	361	1	0.96	0.000001	4.55E-07	1.1	10	0.25	70	0.85	1.52E-08	0.02
303	10.90737	1.25E-04	1.36E-03	361	1	0.96	0.000001	4.70E-07	1.1	10	0.25	70	0.85	1.57E-08	0.02
304	7.41564	1.25E-04	9.24E-04	361	1	0.96	0.000001	3.20E-07	1.1	10	0.25	70	0.85	1.07E-08	0.01
305	7.81983	1.25E-04	9.74E-04	361	1	0.96	0.000001	3.37E-07	1.1	10	0.25	70	0.85	1.13E-08	0.01
306	8.20297	1.25E-04	1.02E-03	361	1	0.96	0.000001	3.54E-07	1.1	10	0.25	70	0.85	1.18E-08	0.01
307	8.61002	1.25E-04	1.07E-03	361	1	0.96	0.000001	3.71E-07	1.1	10	0.25	70	0.85	1.24E-08	0.01
308	9.01487	1.25E-04	1.12E-03	361	1	0.96	0.000001	3.89E-07	1.1	10	0.25	70	0.85	1.30E-08	0.01
309	9.30659	1.25E-04	1.16E-03	361	1	0.96	0.000001	4.01E-07	1.1	10	0.25	70	0.85	1.34E-08	0.01
310	6.51643	1.25E-04	8.12E-04	361	1	0.96	0.000001	2.81E-07	1.1	10	0.25	70	0.85	9.39E-09	0.01
311	6.84096	1.25E-04	8.52E-04	361	1	0.96	0.000001	2.95E-07	1.1	10	0.25	70	0.85	9.85E-09	0.01
312	7.15393	1.25E-04	8.91E-04	361	1	0.96	0.000001	3.09E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01
313	7.49257	1.25E-04	9.34E-04	361	1	0.96	0.000001	3.23E-07	1.1	10	0.25	70	0.85	1.08E-08	0.01
314	7.82028	1.25E-04	9.74E-04	361	1	0.96	0.000001	3.37E-07	1.1	10	0.25	70	0.85	1.13E-08	0.01
315	8.07564	1.25E-04	1.01E-03	361	1	0.96	0.000001	3.48E-07	1.1	10	0.25	70	0.85	1.16E-08	0.01
316	5.78642	1.25E-04	7.21E-04	361	1	0.96	0.000001	2.50E-07	1.1	10	0.25	70	0.85	8.33E-09	0.01
317	6.04435	1.25E-04	7.53E-04	361	1	0.96	0.000001	2.61E-07	1.1	10	0.25	70	0.85	8.71E-09	0.01
318	6.2875	1.25E-04	7.83E-04	361	1	0.96	0.000001	2.71E-07	1.1	10	0.25	70	0.85	9.06E-09	0.01
319	6.55535	1.25E-04	8.17E-04	361	1	0.96	0.000001	2.83E-07	1.1	10	0.25	70	0.85	9.44E-09	0.01
320	6.82818	1.25E-04	8.51E-04	361	1	0.96	0.000001	2.95E-07	1.1	10	0.25	70	0.85	9.83E-09	0.01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
321	7.03723	1.25E-04	8.77E-04	361	1	0.96	0.000001	3.04E-07	1.1	10	0.25	70	0.85	1.01E-08	0.01
322	7.20086	1.25E-04	8.97E-04	361	1	0.96	0.000001	3.11E-07	1.1	10	0.25	70	0.85	1.04E-08	0.01
323	5.16543	1.25E-04	6.44E-04	361	1	0.96	0.000001	2.23E-07	1.1	10	0.25	70	0.85	7.44E-09	0.01
324	5.38462	1.25E-04	6.71E-04	361	1	0.96	0.000001	2.32E-07	1.1	10	0.25	70	0.85	7.76E-09	0.01
325	5.58713	1.25E-04	6.96E-04	361	1	0.96	0.000001	2.41E-07	1.1	10	0.25	70	0.85	8.05E-09	0.01
326	5.80608	1.25E-04	7.23E-04	361	1	0.96	0.000001	2.50E-07	1.1	10	0.25	70	0.85	8.36E-09	0.01
327	6.03663	1.25E-04	7.52E-04	361	1	0.96	0.000001	2.60E-07	1.1	10	0.25	70	0.85	8.69E-09	0.01
328	6.22157	1.25E-04	7.75E-04	361	1	0.96	0.000001	2.68E-07	1.1	10	0.25	70	0.85	8.96E-09	0.01
329	6.36627	1.25E-04	7.93E-04	361	1	0.96	0.000001	2.75E-07	1.1	10	0.25	70	0.85	9.17E-09	0.01
330	4.63743	1.25E-04	5.78E-04	361	1	0.96	0.000001	2.00E-07	1.1	10	0.25	70	0.85	6.68E-09	0.01
331	4.81607	1.25E-04	6.00E-04	361	1	0.96	0.000001	2.08E-07	1.1	10	0.25	70	0.85	6.94E-09	0.01
332	5.00023	1.25E-04	6.23E-04	361	1	0.96	0.000001	2.16E-07	1.1	10	0.25	70	0.85	7.20E-09	0.01
333	5.18714	1.25E-04	6.46E-04	361	1	0.96	0.000001	2.24E-07	1.1	10	0.25	70	0.85	7.47E-09	0.01
334	5.36699	1.25E-04	6.69E-04	361	1	0.96	0.000001	2.31E-07	1.1	10	0.25	70	0.85	7.73E-09	0.01
335	5.5303	1.25E-04	6.89E-04	361	1	0.96	0.000001	2.39E-07	1.1	10	0.25	70	0.85	7.96E-09	0.01
336	5.67501	1.25E-04	7.07E-04	361	1	0.96	0.000001	2.45E-07	1.1	10	0.25	70	0.85	8.17E-09	0.01
337	4.21299	1.25E-04	5.25E-04	361	1	0.96	0.000001	1.82E-07	1.1	10	0.25	70	0.85	6.07E-09	0.01
338	4.36452	1.25E-04	5.44E-04	361	1	0.96	0.000001	1.88E-07	1.1	10	0.25	70	0.85	6.29E-09	0.01
339	4.51769	1.25E-04	5.63E-04	361	1	0.96	0.000001	1.95E-07	1.1	10	0.25	70	0.85	6.51E-09	0.01
340	4.67175	1.25E-04	5.82E-04	361	1	0.96	0.000001	2.01E-07	1.1	10	0.25	70	0.85	6.73E-09	0.01
341	4.83601	1.25E-04	6.03E-04	361	1	0.96	0.000001	2.09E-07	1.1	10	0.25	70	0.85	6.97E-09	0.01
342	4.9788	1.25E-04	6.20E-04	361	1	0.96	0.000001	2.15E-07	1.1	10	0.25	70	0.85	7.17E-09	0.01
343	5.09828	1.25E-04	6.35E-04	361	1	0.96	0.000001	2.20E-07	1.1	10	0.25	70	0.85	7.34E-09	0.01
344	3.83756	1.25E-04	4.78E-04	361	1	0.96	0.000001	1.66E-07	1.1	10	0.25	70	0.85	5.53E-09	0.01
345	3.9676	1.25E-04	4.94E-04	361	1	0.96	0.000001	1.71E-07	1.1	10	0.25	70	0.85	5.71E-09	0.01
346	4.09849	1.25E-04	5.11E-04	361	1	0.96	0.000001	1.77E-07	1.1	10	0.25	70	0.85	5.90E-09	0.01
347	4.23582	1.25E-04	5.28E-04	361	1	0.96	0.000001	1.83E-07	1.1	10	0.25	70	0.85	6.10E-09	0.01
348	4.36726	1.25E-04	5.44E-04	361	1	0.96	0.000001	1.88E-07	1.1	10	0.25	70	0.85	6.29E-09	0.01
349	4.4884	1.25E-04	5.59E-04	361	1	0.96	0.000001	1.94E-07	1.1	10	0.25	70	0.85	6.46E-09	0.01
350	4.60214	1.25E-04	5.73E-04	361	1	0.96	0.000001	1.98E-07	1.1	10	0.25	70	0.85	6.63E-09	0.01
351	3.51033	1.25E-04	4.37E-04	361	1	0.96	0.000001	1.51E-07	1.1	10	0.25	70	0.85	5.06E-09	0.01
352	3.62399	1.25E-04	4.52E-04	361	1	0.96	0.000001	1.56E-07	1.1	10	0.25	70	0.85	5.22E-09	0.01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
353	3.73471	1.25E-04	4.65E-04	361	1	0.96	0.000001	1.61E-07	1.1	10	0.25	70	0.85	5.38E-09	0.01
354	3.8488	1.25E-04	4.80E-04	361	1	0.96	0.000001	1.66E-07	1.1	10	0.25	70	0.85	5.54E-09	0.01
355	3.97228	1.25E-04	4.95E-04	361	1	0.96	0.000001	1.71E-07	1.1	10	0.25	70	0.85	5.72E-09	0.01
356	4.07973	1.25E-04	5.08E-04	361	1	0.96	0.000001	1.76E-07	1.1	10	0.25	70	0.85	5.88E-09	0.01
357	4.17704	1.25E-04	5.20E-04	361	1	0.96	0.000001	1.80E-07	1.1	10	0.25	70	0.85	6.02E-09	0.01
358	3.22247	1.25E-04	4.02E-04	361	1	0.96	0.000001	1.39E-07	1.1	10	0.25	70	0.85	4.64E-09	0.00
359	3.31967	1.25E-04	4.14E-04	361	1	0.96	0.000001	1.43E-07	1.1	10	0.25	70	0.85	4.78E-09	0.00
360	3.42211	1.25E-04	4.26E-04	361	1	0.96	0.000001	1.48E-07	1.1	10	0.25	70	0.85	4.93E-09	0.00
361	3.5243	1.25E-04	4.39E-04	361	1	0.96	0.000001	1.52E-07	1.1	10	0.25	70	0.85	5.08E-09	0.01
362	3.62789	1.25E-04	4.52E-04	361	1	0.96	0.000001	1.56E-07	1.1	10	0.25	70	0.85	5.23E-09	0.01
363	3.72178	1.25E-04	4.64E-04	361	1	0.96	0.000001	1.61E-07	1.1	10	0.25	70	0.85	5.36E-09	0.01
364	3.80963	1.25E-04	4.75E-04	361	1	0.96	0.000001	1.64E-07	1.1	10	0.25	70	0.85	5.49E-09	0.01
365	2.97816	1.25E-04	3.71E-04	361	1	0.96	0.000001	1.28E-07	1.1	10	0.25	70	0.85	4.29E-09	0.00
366	3.06234	1.25E-04	3.82E-04	361	1	0.96	0.000001	1.32E-07	1.1	10	0.25	70	0.85	4.41E-09	0.00
367	3.15057	1.25E-04	3.93E-04	361	1	0.96	0.000001	1.36E-07	1.1	10	0.25	70	0.85	4.54E-09	0.00
368	3.24124	1.25E-04	4.04E-04	361	1	0.96	0.000001	1.40E-07	1.1	10	0.25	70	0.85	4.67E-09	0.00
369	3.32899	1.25E-04	4.15E-04	361	1	0.96	0.000001	1.44E-07	1.1	10	0.25	70	0.85	4.79E-09	0.00
370	3.41643	1.25E-04	4.26E-04	361	1	0.96	0.000001	1.47E-07	1.1	10	0.25	70	0.85	4.92E-09	0.00
371	3.49163	1.25E-04	4.35E-04	361	1	0.96	0.000001	1.51E-07	1.1	10	0.25	70	0.85	5.03E-09	0.01
372	2.75686	1.25E-04	3.43E-04	361	1	0.96	0.000001	1.19E-07	1.1	10	0.25	70	0.85	3.97E-09	0.00
373	2.83193	1.25E-04	3.53E-04	361	1	0.96	0.000001	1.22E-07	1.1	10	0.25	70	0.85	4.08E-09	0.00
374	2.90869	1.25E-04	3.62E-04	361	1	0.96	0.000001	1.25E-07	1.1	10	0.25	70	0.85	4.19E-09	0.00
375	2.98837	1.25E-04	3.72E-04	361	1	0.96	0.000001	1.29E-07	1.1	10	0.25	70	0.85	4.30E-09	0.00
376	3.06602	1.25E-04	3.82E-04	361	1	0.96	0.000001	1.32E-07	1.1	10	0.25	70	0.85	4.42E-09	0.00
377	3.14456	1.25E-04	3.92E-04	361	1	0.96	0.000001	1.36E-07	1.1	10	0.25	70	0.85	4.53E-09	0.00
378	3.21348	1.25E-04	4.00E-04	361	1	0.96	0.000001	1.39E-07	1.1	10	0.25	70	0.85	4.63E-09	0.00
379	26.13406	1.25E-04	3.26E-03	361	1	0.96	0.000001	1.13E-06	1.1	10	0.25	70	0.85	3.76E-08	0.04
380	26.51349	1.25E-04	3.30E-03	361	1	0.96	0.000001	1.14E-06	1.1	10	0.25	70	0.85	3.82E-08	0.04
381	22.46641	1.25E-04	2.80E-03	361	1	0.96	0.000001	9.69E-07	1.1	10	0.25	70	0.85	3.24E-08	0.03
382	21.69199	1.25E-04	2.70E-03	361	1	0.96	0.000001	9.36E-07	1.1	10	0.25	70	0.85	3.12E-08	0.03
383	18.21719	1.25E-04	2.27E-03	361	1	0.96	0.000001	7.86E-07	1.1	10	0.25	70	0.85	2.62E-08	0.03
384	15.38697	1.25E-04	1.92E-03	361	1	0.96	0.000001	6.64E-07	1.1	10	0.25	70	0.85	2.22E-08	0.02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
385	13.40161	1.25E-04	1.67E-03	361	1	0.96	0.000001	5.78E-07	1.1	10	0.25	70	0.85	1.93E-08	0.02
386	11.4762	1.25E-04	1.43E-03	361	1	0.96	0.000001	4.95E-07	1.1	10	0.25	70	0.85	1.65E-08	0.02
387	10.0255	1.25E-04	1.25E-03	361	1	0.96	0.000001	4.32E-07	1.1	10	0.25	70	0.85	1.44E-08	0.01
388	8.89918	1.25E-04	1.11E-03	361	1	0.96	0.000001	3.84E-07	1.1	10	0.25	70	0.85	1.28E-08	0.01
389	7.97844	1.25E-04	9.94E-04	361	1	0.96	0.000001	3.44E-07	1.1	10	0.25	70	0.85	1.15E-08	0.01
390	7.28899	1.25E-04	9.08E-04	361	1	0.96	0.000001	3.14E-07	1.1	10	0.25	70	0.85	1.05E-08	0.01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total		
1	1.19E-05	1.27E-05	1090	1	0.96	0.000001	1.33E-08	1.1	10	0.112	70	0.85	2.00E-10	0.00	0.00174	Max 0.149
2	1.19E-05	1.38E-05	1090	1	0.96	0.000001	1.44E-08	1.1	10	0.112	70	0.85	2.16E-10	0.00	0.001882	
3	1.19E-05	1.24E-05	1090	1	0.96	0.000001	1.30E-08	1.1	10	0.112	70	0.85	1.95E-10	0.00	0.001695	
4	1.19E-05	1.35E-05	1090	1	0.96	0.000001	1.41E-08	1.1	10	0.112	70	0.85	2.11E-10	0.00	0.001843	
5	1.19E-05	1.47E-05	1090	1	0.96	0.000001	1.54E-08	1.1	10	0.112	70	0.85	2.30E-10	0.00	0.002007	
6	1.19E-05	1.60E-05	1090	1	0.96	0.000001	1.67E-08	1.1	10	0.112	70	0.85	2.51E-10	0.00	0.002188	
7	1.19E-05	1.31E-05	1090	1	0.96	0.000001	1.37E-08	1.1	10	0.112	70	0.85	2.05E-10	0.00	0.001785	
8	1.19E-05	1.43E-05	1090	1	0.96	0.000001	1.49E-08	1.1	10	0.112	70	0.85	2.24E-10	0.00	0.001949	
9	1.19E-05	1.56E-05	1090	1	0.96	0.000001	1.63E-08	1.1	10	0.112	70	0.85	2.45E-10	0.00	0.002135	
10	1.19E-05	1.72E-05	1090	1	0.96	0.000001	1.79E-08	1.1	10	0.112	70	0.85	2.69E-10	0.00	0.002345	
11	1.19E-05	1.89E-05	1090	1	0.96	0.000001	1.98E-08	1.1	10	0.112	70	0.85	2.97E-10	0.00	0.002585	
12	1.19E-05	1.50E-05	1090	1	0.96	0.000001	1.57E-08	1.1	10	0.112	70	0.85	2.35E-10	0.00	0.002052	
13	1.19E-05	1.65E-05	1090	1	0.96	0.000001	1.73E-08	1.1	10	0.112	70	0.85	2.60E-10	0.00	0.002261	
14	1.19E-05	1.83E-05	1090	1	0.96	0.000001	1.91E-08	1.1	10	0.112	70	0.85	2.87E-10	0.00	0.002504	
15	1.19E-05	2.04E-05	1090	1	0.96	0.000001	2.13E-08	1.1	10	0.112	70	0.85	3.19E-10	0.00	0.002784	
16	1.19E-05	2.27E-05	1090	1	0.96	0.000001	2.37E-08	1.1	10	0.112	70	0.85	3.56E-10	0.00	0.003102	
17	1.19E-05	1.75E-05	1090	1	0.96	0.000001	1.83E-08	1.1	10	0.112	70	0.85	2.74E-10	0.00	0.00239	
18	1.19E-05	1.95E-05	1090	1	0.96	0.000001	2.04E-08	1.1	10	0.112	70	0.85	3.06E-10	0.00	0.002668	
19	1.19E-05	2.19E-05	1090	1	0.96	0.000001	2.29E-08	1.1	10	0.112	70	0.85	3.43E-10	0.00	0.002991	
20	1.19E-05	2.47E-05	1090	1	0.96	0.000001	2.58E-08	1.1	10	0.112	70	0.85	3.87E-10	0.00	0.00337	
21	1.19E-05	2.80E-05	1090	1	0.96	0.000001	2.92E-08	1.1	10	0.112	70	0.85	4.39E-10	0.00	0.003822	
22	1.19E-05	2.07E-05	1090	1	0.96	0.000001	2.16E-08	1.1	10	0.112	70	0.85	3.24E-10	0.00	0.002826	
23	1.19E-05	2.34E-05	1090	1	0.96	0.000001	2.45E-08	1.1	10	0.112	70	0.85	3.67E-10	0.00	0.003198	
24	1.19E-05	2.66E-05	1090	1	0.96	0.000001	2.78E-08	1.1	10	0.112	70	0.85	4.18E-10	0.00	0.003639	
25	1.19E-05	3.06E-05	1090	1	0.96	0.000001	3.20E-08	1.1	10	0.112	70	0.85	4.80E-10	0.00	0.004182	
26	1.19E-05	3.54E-05	1090	1	0.96	0.000001	3.70E-08	1.1	10	0.112	70	0.85	5.55E-10	0.00	0.00484	
27	1.19E-05	2.48E-05	1090	1	0.96	0.000001	2.60E-08	1.1	10	0.112	70	0.85	3.90E-10	0.00	0.003395	
28	1.19E-05	2.86E-05	1090	1	0.96	0.000001	2.98E-08	1.1	10	0.112	70	0.85	4.48E-10	0.00	0.003903	
29	1.19E-05	3.33E-05	1090	1	0.96	0.000001	3.48E-08	1.1	10	0.112	70	0.85	5.22E-10	0.00	0.004546	
30	1.19E-05	3.92E-05	1090	1	0.96	0.000001	4.10E-08	1.1	10	0.112	70	0.85	6.15E-10	0.00	0.005359	
31	1.19E-05	4.68E-05	1090	1	0.96	0.000001	4.89E-08	1.1	10	0.112	70	0.85	7.34E-10	0.00	0.006398	
32	1.19E-05	3.04E-05	1090	1	0.96	0.000001	3.18E-08	1.1	10	0.112	70	0.85	4.76E-10	0.00	0.004152	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
33	1.19E-05	3.58E-05	1090	1	0.96	0.000001	3.74E-08	1.1	10	0.112	70	0.85	5.61E-10	0.004888
34	1.19E-05	4.28E-05	1090	1	0.96	0.000001	4.48E-08	1.1	10	0.112	70	0.85	6.72E-10	0.005855
35	1.19E-05	5.22E-05	1090	1	0.96	0.000001	5.46E-08	1.1	10	0.112	70	0.85	8.18E-10	0.007133
36	1.19E-05	6.54E-05	1090	1	0.96	0.000001	6.83E-08	1.1	10	0.112	70	0.85	1.03E-09	0.008934
37	1.19E-05	3.80E-05	1090	1	0.96	0.000001	3.97E-08	1.1	10	0.112	70	0.85	5.96E-10	0.005192
38	1.19E-05	4.61E-05	1090	1	0.96	0.000001	4.82E-08	1.1	10	0.112	70	0.85	7.23E-10	0.006297
39	1.19E-05	5.73E-05	1090	1	0.96	0.000001	5.99E-08	1.1	10	0.112	70	0.85	8.98E-10	0.007827
40	1.19E-05	7.37E-05	1090	1	0.96	0.000001	7.71E-08	1.1	10	0.112	70	0.85	1.16E-09	0.010076
41	1.19E-05	4.90E-05	1090	1	0.96	0.000001	5.12E-08	1.1	10	0.112	70	0.85	7.68E-10	0.00669
42	1.19E-05	6.17E-05	1090	1	0.96	0.000001	6.45E-08	1.1	10	0.112	70	0.85	9.68E-10	0.008433
43	1.19E-05	8.08E-05	1090	1	0.96	0.000001	8.45E-08	1.1	10	0.112	70	0.85	1.27E-09	0.011047
44	1.19E-05	1.12E-04	1090	1	0.96	0.000001	1.17E-07	1.1	10	0.112	70	0.85	1.76E-09	0.015305
45	1.19E-05	6.46E-05	1090	1	0.96	0.000001	6.75E-08	1.1	10	0.112	70	0.85	1.01E-09	0.008822
46	1.19E-05	8.53E-05	1090	1	0.96	0.000001	8.92E-08	1.1	10	0.112	70	0.85	1.34E-09	0.011664
47	1.19E-05	1.20E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.88E-09	0.016368
48	1.19E-05	1.84E-04	1090	1	0.96	0.000001	1.92E-07	1.1	10	0.112	70	0.85	2.88E-09	0.025114
49	1.19E-05	1.20E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.88E-09	0.016362
50	1.19E-05	1.76E-04	1090	1	0.96	0.000001	1.84E-07	1.1	10	0.112	70	0.85	2.77E-09	0.024103
51	1.19E-05	1.12E-04	1090	1	0.96	0.000001	1.17E-07	1.1	10	0.112	70	0.85	1.76E-09	0.015348
52	1.19E-05	1.56E-04	1090	1	0.96	0.000001	1.64E-07	1.1	10	0.112	70	0.85	2.45E-09	0.021386
53	1.19E-05	2.28E-04	1090	1	0.96	0.000001	2.38E-07	1.1	10	0.112	70	0.85	3.57E-09	0.03115
54	1.19E-05	1.01E-04	1090	1	0.96	0.000001	1.05E-07	1.1	10	0.112	70	0.85	1.58E-09	0.01376
55	1.19E-05	1.33E-04	1090	1	0.96	0.000001	1.39E-07	1.1	10	0.112	70	0.85	2.08E-09	0.018147
56	1.19E-05	1.81E-04	1090	1	0.96	0.000001	1.89E-07	1.1	10	0.112	70	0.85	2.83E-09	0.024679
57	1.19E-05	2.52E-04	1090	1	0.96	0.000001	2.64E-07	1.1	10	0.112	70	0.85	3.96E-09	0.034473
58	1.19E-05	8.73E-05	1090	1	0.96	0.000001	9.12E-08	1.1	10	0.112	70	0.85	1.37E-09	0.011929
59	1.19E-05	1.10E-04	1090	1	0.96	0.000001	1.15E-07	1.1	10	0.112	70	0.85	1.73E-09	0.015036
60	1.19E-05	1.41E-04	1090	1	0.96	0.000001	1.47E-07	1.1	10	0.112	70	0.85	2.20E-09	0.01921
61	1.19E-05	1.82E-04	1090	1	0.96	0.000001	1.90E-07	1.1	10	0.112	70	0.85	2.85E-09	0.024833
62	1.19E-05	7.48E-05	1090	1	0.96	0.000001	7.82E-08	1.1	10	0.112	70	0.85	1.17E-09	0.010222
63	1.19E-05	9.02E-05	1090	1	0.96	0.000001	9.43E-08	1.1	10	0.112	70	0.85	1.41E-09	0.012325
64	1.19E-05	1.09E-04	1090	1	0.96	0.000001	1.14E-07	1.1	10	0.112	70	0.85	1.71E-09	0.014895

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
65	1.19E-05	1.32E-04	1090	1	0.96	0.000001	1.38E-07	1.1	10	0.112	70	0.85	2.07E-09	0.00	0.018002
66	1.19E-05	1.58E-04	1090	1	0.96	0.000001	1.66E-07	1.1	10	0.112	70	0.85	2.49E-09	0.00	0.02166
67	1.19E-05	6.33E-05	1090	1	0.96	0.000001	6.61E-08	1.1	10	0.112	70	0.85	9.92E-10	0.00	0.008645
68	1.19E-05	7.36E-05	1090	1	0.96	0.000001	7.70E-08	1.1	10	0.112	70	0.85	1.15E-09	0.00	0.010065
69	1.19E-05	8.55E-05	1090	1	0.96	0.000001	8.94E-08	1.1	10	0.112	70	0.85	1.34E-09	0.00	0.011691
70	1.19E-05	9.87E-05	1090	1	0.96	0.000001	1.03E-07	1.1	10	0.112	70	0.85	1.55E-09	0.00	0.01349
71	1.19E-05	1.13E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.78E-09	0.00	0.015499
72	1.19E-05	5.36E-05	1090	1	0.96	0.000001	5.60E-08	1.1	10	0.112	70	0.85	8.40E-10	0.00	0.007319
73	1.19E-05	6.06E-05	1090	1	0.96	0.000001	6.34E-08	1.1	10	0.112	70	0.85	9.51E-10	0.00	0.008287
74	1.19E-05	6.85E-05	1090	1	0.96	0.000001	7.16E-08	1.1	10	0.112	70	0.85	1.07E-09	0.00	0.009358
75	1.19E-05	7.66E-05	1090	1	0.96	0.000001	8.01E-08	1.1	10	0.112	70	0.85	1.20E-09	0.00	0.010473
76	1.19E-05	8.56E-05	1090	1	0.96	0.000001	8.94E-08	1.1	10	0.112	70	0.85	1.34E-09	0.00	0.011693
77	1.19E-05	4.56E-05	1090	1	0.96	0.000001	4.76E-08	1.1	10	0.112	70	0.85	7.15E-10	0.00	0.006227
78	1.19E-05	5.05E-05	1090	1	0.96	0.000001	5.28E-08	1.1	10	0.112	70	0.85	7.92E-10	0.00	0.006902
79	1.19E-05	5.58E-05	1090	1	0.96	0.000001	5.84E-08	1.1	10	0.112	70	0.85	8.76E-10	0.00	0.007631
80	1.19E-05	6.12E-05	1090	1	0.96	0.000001	6.40E-08	1.1	10	0.112	70	0.85	9.60E-10	0.00	0.008363
81	1.19E-05	6.70E-05	1090	1	0.96	0.000001	7.00E-08	1.1	10	0.112	70	0.85	1.05E-09	0.00	0.009157
82	1.19E-05	3.91E-05	1090	1	0.96	0.000001	4.09E-08	1.1	10	0.112	70	0.85	6.13E-10	0.00	0.005343
83	1.19E-05	4.26E-05	1090	1	0.96	0.000001	4.46E-08	1.1	10	0.112	70	0.85	6.69E-10	0.00	0.005827
84	1.19E-05	4.63E-05	1090	1	0.96	0.000001	4.84E-08	1.1	10	0.112	70	0.85	7.26E-10	0.00	0.006323
85	1.19E-05	5.00E-05	1090	1	0.96	0.000001	5.23E-08	1.1	10	0.112	70	0.85	7.84E-10	0.00	0.006836
86	1.19E-05	5.40E-05	1090	1	0.96	0.000001	5.64E-08	1.1	10	0.112	70	0.85	8.47E-10	0.00	0.007377
87	1.19E-05	3.38E-05	1090	1	0.96	0.000001	3.53E-08	1.1	10	0.112	70	0.85	5.30E-10	0.00	0.00462
88	1.19E-05	3.64E-05	1090	1	0.96	0.000001	3.81E-08	1.1	10	0.112	70	0.85	5.71E-10	0.00	0.004977
89	1.19E-05	3.91E-05	1090	1	0.96	0.000001	4.08E-08	1.1	10	0.112	70	0.85	6.12E-10	0.00	0.005337
90	1.19E-05	4.19E-05	1090	1	0.96	0.000001	4.38E-08	1.1	10	0.112	70	0.85	6.57E-10	0.00	0.005725
91	1.19E-05	4.48E-05	1090	1	0.96	0.000001	4.68E-08	1.1	10	0.112	70	0.85	7.02E-10	0.00	0.00612
92	1.19E-05	2.95E-05	1090	1	0.96	0.000001	3.08E-08	1.1	10	0.112	70	0.85	4.63E-10	0.00	0.004033
93	1.19E-05	3.15E-05	1090	1	0.96	0.000001	3.29E-08	1.1	10	0.112	70	0.85	4.94E-10	0.00	0.004302
94	1.19E-05	3.35E-05	1090	1	0.96	0.000001	3.50E-08	1.1	10	0.112	70	0.85	5.25E-10	0.00	0.004574
95	1.19E-05	3.56E-05	1090	1	0.96	0.000001	3.72E-08	1.1	10	0.112	70	0.85	5.58E-10	0.00	0.004859
96	1.19E-05	3.77E-05	1090	1	0.96	0.000001	3.94E-08	1.1	10	0.112	70	0.85	5.92E-10	0.00	0.005156

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
97	1.19E-05	2.60E-05	1090	1	0.96	0.000001	2.71E-08	1.1	10	0.112	70	0.85	4.07E-10	0.003547
98	1.19E-05	2.75E-05	1090	1	0.96	0.000001	2.87E-08	1.1	10	0.112	70	0.85	4.31E-10	0.003757
99	1.19E-05	2.90E-05	1090	1	0.96	0.000001	3.04E-08	1.1	10	0.112	70	0.85	4.55E-10	0.003969
100	1.19E-05	3.06E-05	1090	1	0.96	0.000001	3.20E-08	1.1	10	0.112	70	0.85	4.80E-10	0.004184
101	1.19E-05	3.23E-05	1090	1	0.96	0.000001	3.38E-08	1.1	10	0.112	70	0.85	5.07E-10	0.004415
102	1.19E-05	1.22E-05	1090	1	0.96	0.000001	1.27E-08	1.1	10	0.112	70	0.85	1.91E-10	0.001666
103	1.19E-05	1.23E-05	1090	1	0.96	0.000001	1.28E-08	1.1	10	0.112	70	0.85	1.93E-10	0.001678
104	1.19E-05	1.27E-05	1090	1	0.96	0.000001	1.33E-08	1.1	10	0.112	70	0.85	1.99E-10	0.001733
105	1.19E-05	1.23E-05	1090	1	0.96	0.000001	1.29E-08	1.1	10	0.112	70	0.85	1.93E-10	0.001681
106	1.19E-05	1.27E-05	1090	1	0.96	0.000001	1.33E-08	1.1	10	0.112	70	0.85	2.00E-10	0.001741
107	1.19E-05	1.32E-05	1090	1	0.96	0.000001	1.38E-08	1.1	10	0.112	70	0.85	2.06E-10	0.001799
108	1.19E-05	1.36E-05	1090	1	0.96	0.000001	1.42E-08	1.1	10	0.112	70	0.85	2.13E-10	0.001858
109	1.19E-05	1.28E-05	1090	1	0.96	0.000001	1.33E-08	1.1	10	0.112	70	0.85	2.00E-10	0.001743
110	1.19E-05	1.32E-05	1090	1	0.96	0.000001	1.38E-08	1.1	10	0.112	70	0.85	2.07E-10	0.001804
111	1.19E-05	1.37E-05	1090	1	0.96	0.000001	1.43E-08	1.1	10	0.112	70	0.85	2.14E-10	0.001867
112	1.19E-05	1.41E-05	1090	1	0.96	0.000001	1.48E-08	1.1	10	0.112	70	0.85	2.22E-10	0.001933
113	1.19E-05	1.46E-05	1090	1	0.96	0.000001	1.53E-08	1.1	10	0.112	70	0.85	2.29E-10	0.001998
114	1.19E-05	1.27E-05	1090	1	0.96	0.000001	1.33E-08	1.1	10	0.112	70	0.85	2.00E-10	0.001739
115	1.19E-05	1.32E-05	1090	1	0.96	0.000001	1.38E-08	1.1	10	0.112	70	0.85	2.07E-10	0.001803
116	1.19E-05	1.37E-05	1090	1	0.96	0.000001	1.43E-08	1.1	10	0.112	70	0.85	2.15E-10	0.00187
117	1.19E-05	1.42E-05	1090	1	0.96	0.000001	1.48E-08	1.1	10	0.112	70	0.85	2.23E-10	0.001939
118	1.19E-05	1.47E-05	1090	1	0.96	0.000001	1.54E-08	1.1	10	0.112	70	0.85	2.31E-10	0.00201
119	1.19E-05	1.53E-05	1090	1	0.96	0.000001	1.59E-08	1.1	10	0.112	70	0.85	2.39E-10	0.002085
120	1.19E-05	1.58E-05	1090	1	0.96	0.000001	1.65E-08	1.1	10	0.112	70	0.85	2.48E-10	0.002158
121	1.19E-05	1.27E-05	1090	1	0.96	0.000001	1.32E-08	1.1	10	0.112	70	0.85	1.98E-10	0.001729
122	1.19E-05	1.31E-05	1090	1	0.96	0.000001	1.37E-08	1.1	10	0.112	70	0.85	2.06E-10	0.001796
123	1.19E-05	1.37E-05	1090	1	0.96	0.000001	1.43E-08	1.1	10	0.112	70	0.85	2.14E-10	0.001865
124	1.19E-05	1.42E-05	1090	1	0.96	0.000001	1.48E-08	1.1	10	0.112	70	0.85	2.22E-10	0.001938
125	1.19E-05	1.47E-05	1090	1	0.96	0.000001	1.54E-08	1.1	10	0.112	70	0.85	2.31E-10	0.002013
126	1.19E-05	1.53E-05	1090	1	0.96	0.000001	1.60E-08	1.1	10	0.112	70	0.85	2.40E-10	0.00209
127	1.19E-05	1.59E-05	1090	1	0.96	0.000001	1.66E-08	1.1	10	0.112	70	0.85	2.49E-10	0.002172
128	1.19E-05	1.65E-05	1090	1	0.96	0.000001	1.72E-08	1.1	10	0.112	70	0.85	2.58E-10	0.002252

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
129	1.19E-05	1.41E-05	1090	1	0.96	0.000001	1.48E-08	1.1	10	0.112	70	0.85	2.21E-10	0.001929
130	1.19E-05	1.47E-05	1090	1	0.96	0.000001	1.54E-08	1.1	10	0.112	70	0.85	2.30E-10	0.002008
131	1.19E-05	1.53E-05	1090	1	0.96	0.000001	1.60E-08	1.1	10	0.112	70	0.85	2.40E-10	0.002089
132	1.19E-05	1.59E-05	1090	1	0.96	0.000001	1.66E-08	1.1	10	0.112	70	0.85	2.49E-10	0.002174
133	1.19E-05	1.65E-05	1090	1	0.96	0.000001	1.73E-08	1.1	10	0.112	70	0.85	2.59E-10	0.002261
134	1.19E-05	1.72E-05	1090	1	0.96	0.000001	1.80E-08	1.1	10	0.112	70	0.85	2.70E-10	0.002353
135	1.19E-05	1.79E-05	1090	1	0.96	0.000001	1.87E-08	1.1	10	0.112	70	0.85	2.81E-10	0.002448
136	1.19E-05	1.52E-05	1090	1	0.96	0.000001	1.59E-08	1.1	10	0.112	70	0.85	2.39E-10	0.00208
137	1.19E-05	1.59E-05	1090	1	0.96	0.000001	1.66E-08	1.1	10	0.112	70	0.85	2.49E-10	0.002168
138	1.19E-05	1.65E-05	1090	1	0.96	0.000001	1.73E-08	1.1	10	0.112	70	0.85	2.59E-10	0.002261
139	1.19E-05	1.72E-05	1090	1	0.96	0.000001	1.80E-08	1.1	10	0.112	70	0.85	2.70E-10	0.002354
140	1.19E-05	1.80E-05	1090	1	0.96	0.000001	1.88E-08	1.1	10	0.112	70	0.85	2.82E-10	0.002458
141	1.19E-05	1.88E-05	1090	1	0.96	0.000001	1.96E-08	1.1	10	0.112	70	0.85	2.94E-10	0.002565
142	1.19E-05	1.95E-05	1090	1	0.96	0.000001	2.04E-08	1.1	10	0.112	70	0.85	3.07E-10	0.002671
143	1.19E-05	1.65E-05	1090	1	0.96	0.000001	1.72E-08	1.1	10	0.112	70	0.85	2.58E-10	0.002249
144	1.19E-05	1.72E-05	1090	1	0.96	0.000001	1.80E-08	1.1	10	0.112	70	0.85	2.70E-10	0.00235
145	1.19E-05	1.79E-05	1090	1	0.96	0.000001	1.88E-08	1.1	10	0.112	70	0.85	2.81E-10	0.002452
146	1.19E-05	1.88E-05	1090	1	0.96	0.000001	1.96E-08	1.1	10	0.112	70	0.85	2.95E-10	0.002567
147	1.19E-05	1.96E-05	1090	1	0.96	0.000001	2.05E-08	1.1	10	0.112	70	0.85	3.08E-10	0.002684
148	1.19E-05	2.05E-05	1090	1	0.96	0.000001	2.14E-08	1.1	10	0.112	70	0.85	3.22E-10	0.002805
149	1.19E-05	1.79E-05	1090	1	0.96	0.000001	1.87E-08	1.1	10	0.112	70	0.85	2.80E-10	0.002441
150	1.19E-05	1.87E-05	1090	1	0.96	0.000001	1.95E-08	1.1	10	0.112	70	0.85	2.93E-10	0.002554
151	1.19E-05	1.96E-05	1090	1	0.96	0.000001	2.05E-08	1.1	10	0.112	70	0.85	3.08E-10	0.00268
152	1.19E-05	2.06E-05	1090	1	0.96	0.000001	2.15E-08	1.1	10	0.112	70	0.85	3.22E-10	0.002809
153	1.19E-05	2.15E-05	1090	1	0.96	0.000001	2.25E-08	1.1	10	0.112	70	0.85	3.38E-10	0.002941
154	1.19E-05	2.26E-05	1090	1	0.96	0.000001	2.36E-08	1.1	10	0.112	70	0.85	3.54E-10	0.003086
155	1.19E-05	1.95E-05	1090	1	0.96	0.000001	2.03E-08	1.1	10	0.112	70	0.85	3.05E-10	0.002661
156	1.19E-05	2.05E-05	1090	1	0.96	0.000001	2.14E-08	1.1	10	0.112	70	0.85	3.21E-10	0.002796
157	1.19E-05	2.15E-05	1090	1	0.96	0.000001	2.25E-08	1.1	10	0.112	70	0.85	3.37E-10	0.002938
158	1.19E-05	2.26E-05	1090	1	0.96	0.000001	2.36E-08	1.1	10	0.112	70	0.85	3.54E-10	0.003088
159	1.19E-05	2.38E-05	1090	1	0.96	0.000001	2.48E-08	1.1	10	0.112	70	0.85	3.73E-10	0.003249
160	1.19E-05	2.50E-05	1090	1	0.96	0.000001	2.61E-08	1.1	10	0.112	70	0.85	3.92E-10	0.003414

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
161	1.19E-05	2.13E-05	1090	1	0.96	0.000001	2.23E-08	1.1	10	0.112	70	0.85	3.35E-10	0.00	0.002917
162	1.19E-05	2.25E-05	1090	1	0.96	0.000001	2.35E-08	1.1	10	0.112	70	0.85	3.53E-10	0.00	0.003072
163	1.19E-05	2.37E-05	1090	1	0.96	0.000001	2.48E-08	1.1	10	0.112	70	0.85	3.72E-10	0.00	0.00324
164	1.19E-05	2.50E-05	1090	1	0.96	0.000001	2.61E-08	1.1	10	0.112	70	0.85	3.92E-10	0.00	0.003418
165	1.19E-05	2.64E-05	1090	1	0.96	0.000001	2.76E-08	1.1	10	0.112	70	0.85	4.14E-10	0.00	0.003605
166	1.19E-05	2.78E-05	1090	1	0.96	0.000001	2.91E-08	1.1	10	0.112	70	0.85	4.36E-10	0.00	0.003804
167	1.19E-05	2.35E-05	1090	1	0.96	0.000001	2.46E-08	1.1	10	0.112	70	0.85	3.68E-10	0.00	0.00321
168	1.19E-05	2.49E-05	1090	1	0.96	0.000001	2.60E-08	1.1	10	0.112	70	0.85	3.90E-10	0.00	0.003402
169	1.19E-05	2.64E-05	1090	1	0.96	0.000001	2.75E-08	1.1	10	0.112	70	0.85	4.13E-10	0.00	0.003601
170	1.19E-05	2.79E-05	1090	1	0.96	0.000001	2.92E-08	1.1	10	0.112	70	0.85	4.38E-10	0.00	0.003813
171	1.19E-05	2.95E-05	1090	1	0.96	0.000001	3.09E-08	1.1	10	0.112	70	0.85	4.63E-10	0.00	0.004037
172	1.19E-05	3.12E-05	1090	1	0.96	0.000001	3.27E-08	1.1	10	0.112	70	0.85	4.90E-10	0.00	0.00427
173	1.19E-05	2.61E-05	1090	1	0.96	0.000001	2.73E-08	1.1	10	0.112	70	0.85	4.09E-10	0.00	0.003565
174	1.19E-05	2.77E-05	1090	1	0.96	0.000001	2.90E-08	1.1	10	0.112	70	0.85	4.34E-10	0.00	0.003786
175	1.19E-05	2.95E-05	1090	1	0.96	0.000001	3.08E-08	1.1	10	0.112	70	0.85	4.62E-10	0.00	0.004025
176	1.19E-05	3.13E-05	1090	1	0.96	0.000001	3.27E-08	1.1	10	0.112	70	0.85	4.91E-10	0.00	0.004281
177	1.19E-05	3.33E-05	1090	1	0.96	0.000001	3.48E-08	1.1	10	0.112	70	0.85	5.22E-10	0.00	0.004549
178	1.19E-05	2.91E-05	1090	1	0.96	0.000001	3.04E-08	1.1	10	0.112	70	0.85	4.56E-10	0.00	0.003978
179	1.19E-05	3.10E-05	1090	1	0.96	0.000001	3.24E-08	1.1	10	0.112	70	0.85	4.87E-10	0.00	0.004243
180	1.19E-05	3.32E-05	1090	1	0.96	0.000001	3.47E-08	1.1	10	0.112	70	0.85	5.21E-10	0.00	0.004538
181	1.19E-05	3.54E-05	1090	1	0.96	0.000001	3.70E-08	1.1	10	0.112	70	0.85	5.56E-10	0.00	0.004844
182	1.19E-05	3.80E-05	1090	1	0.96	0.000001	3.97E-08	1.1	10	0.112	70	0.85	5.95E-10	0.00	0.005187
183	1.19E-05	3.28E-05	1090	1	0.96	0.000001	3.42E-08	1.1	10	0.112	70	0.85	5.14E-10	0.00	0.004478
184	1.19E-05	3.51E-05	1090	1	0.96	0.000001	3.67E-08	1.1	10	0.112	70	0.85	5.51E-10	0.00	0.004798
185	1.19E-05	3.77E-05	1090	1	0.96	0.000001	3.94E-08	1.1	10	0.112	70	0.85	5.92E-10	0.00	0.005158
186	1.19E-05	4.06E-05	1090	1	0.96	0.000001	4.25E-08	1.1	10	0.112	70	0.85	6.37E-10	0.00	0.005554
187	1.19E-05	4.38E-05	1090	1	0.96	0.000001	4.57E-08	1.1	10	0.112	70	0.85	6.86E-10	0.00	0.00598
188	1.19E-05	3.72E-05	1090	1	0.96	0.000001	3.89E-08	1.1	10	0.112	70	0.85	5.83E-10	0.00	0.005081
189	1.19E-05	4.02E-05	1090	1	0.96	0.000001	4.20E-08	1.1	10	0.112	70	0.85	6.31E-10	0.00	0.005497
190	1.19E-05	4.35E-05	1090	1	0.96	0.000001	4.54E-08	1.1	10	0.112	70	0.85	6.82E-10	0.00	0.00594
191	1.19E-05	4.72E-05	1090	1	0.96	0.000001	4.93E-08	1.1	10	0.112	70	0.85	7.40E-10	0.00	0.006446
192	1.19E-05	5.11E-05	1090	1	0.96	0.000001	5.34E-08	1.1	10	0.112	70	0.85	8.02E-10	0.00	0.006987

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
193	1.19E-05	4.27E-05	1090	1	0.96	0.000001	4.46E-08	1.1	10	0.112	70	0.85	6.70E-10	0.005838
194	1.19E-05	4.66E-05	1090	1	0.96	0.000001	4.87E-08	1.1	10	0.112	70	0.85	7.30E-10	0.006364
195	1.19E-05	5.07E-05	1090	1	0.96	0.000001	5.30E-08	1.1	10	0.112	70	0.85	7.96E-10	0.006932
196	1.19E-05	5.56E-05	1090	1	0.96	0.000001	5.81E-08	1.1	10	0.112	70	0.85	8.72E-10	0.007596
197	1.19E-05	6.08E-05	1090	1	0.96	0.000001	6.36E-08	1.1	10	0.112	70	0.85	9.54E-10	0.008309
198	1.19E-05	4.97E-05	1090	1	0.96	0.000001	5.19E-08	1.1	10	0.112	70	0.85	7.79E-10	0.006788
199	1.19E-05	5.47E-05	1090	1	0.96	0.000001	5.71E-08	1.1	10	0.112	70	0.85	8.57E-10	0.007469
200	1.19E-05	6.02E-05	1090	1	0.96	0.000001	6.30E-08	1.1	10	0.112	70	0.85	9.45E-10	0.008233
201	1.19E-05	6.68E-05	1090	1	0.96	0.000001	6.98E-08	1.1	10	0.112	70	0.85	1.05E-09	0.009131
202	1.19E-05	5.86E-05	1090	1	0.96	0.000001	6.13E-08	1.1	10	0.112	70	0.85	9.19E-10	0.008011
203	1.19E-05	6.52E-05	1090	1	0.96	0.000001	6.81E-08	1.1	10	0.112	70	0.85	1.02E-09	0.008908
204	1.19E-05	7.32E-05	1090	1	0.96	0.000001	7.65E-08	1.1	10	0.112	70	0.85	1.15E-09	0.010007
205	1.19E-05	8.23E-05	1090	1	0.96	0.000001	8.60E-08	1.1	10	0.112	70	0.85	1.29E-09	0.011243
206	1.19E-05	7.03E-05	1090	1	0.96	0.000001	7.35E-08	1.1	10	0.112	70	0.85	1.10E-09	0.009607
207	1.19E-05	7.98E-05	1090	1	0.96	0.000001	8.34E-08	1.1	10	0.112	70	0.85	1.25E-09	0.010907
208	1.19E-05	9.10E-05	1090	1	0.96	0.000001	9.51E-08	1.1	10	0.112	70	0.85	1.43E-09	0.012439
209	1.19E-05	1.05E-04	1090	1	0.96	0.000001	1.09E-07	1.1	10	0.112	70	0.85	1.64E-09	0.014299
210	1.19E-05	7.53E-05	1090	1	0.96	0.000001	7.87E-08	1.1	10	0.112	70	0.85	1.18E-09	0.010293
211	1.19E-05	8.67E-05	1090	1	0.96	0.000001	9.06E-08	1.1	10	0.112	70	0.85	1.36E-09	0.011847
212	1.19E-05	1.01E-04	1090	1	0.96	0.000001	1.05E-07	1.1	10	0.112	70	0.85	1.58E-09	0.013737
213	1.19E-05	1.18E-04	1090	1	0.96	0.000001	1.23E-07	1.1	10	0.112	70	0.85	1.85E-09	0.016098
214	1.19E-05	1.39E-04	1090	1	0.96	0.000001	1.46E-07	1.1	10	0.112	70	0.85	2.19E-09	0.019043
215	1.19E-05	8.02E-05	1090	1	0.96	0.000001	8.39E-08	1.1	10	0.112	70	0.85	1.26E-09	0.010964
216	1.19E-05	9.31E-05	1090	1	0.96	0.000001	9.73E-08	1.1	10	0.112	70	0.85	1.46E-09	0.012718
217	1.19E-05	1.09E-04	1090	1	0.96	0.000001	1.14E-07	1.1	10	0.112	70	0.85	1.72E-09	0.014957
218	1.19E-05	1.31E-04	1090	1	0.96	0.000001	1.37E-07	1.1	10	0.112	70	0.85	2.05E-09	0.017886
219	1.19E-05	1.60E-04	1090	1	0.96	0.000001	1.67E-07	1.1	10	0.112	70	0.85	2.50E-09	0.021821
220	1.19E-05	9.94E-05	1090	1	0.96	0.000001	1.04E-07	1.1	10	0.112	70	0.85	1.56E-09	0.01358
221	1.19E-05	1.18E-04	1090	1	0.96	0.000001	1.24E-07	1.1	10	0.112	70	0.85	1.86E-09	0.016174
222	1.19E-05	1.44E-04	1090	1	0.96	0.000001	1.51E-07	1.1	10	0.112	70	0.85	2.26E-09	0.019683
223	1.19E-05	1.80E-04	1090	1	0.96	0.000001	1.88E-07	1.1	10	0.112	70	0.85	2.83E-09	0.024645
224	1.19E-05	2.35E-04	1090	1	0.96	0.000001	2.46E-07	1.1	10	0.112	70	0.85	3.68E-09	0.032107

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
225	1.19E-05	1.26E-04	1090	1	0.96	0.000001	1.32E-07	1.1	10	0.112	70	0.85	1.97E-09	0.00	0.017197
226	1.19E-05	1.55E-04	1090	1	0.96	0.000001	1.62E-07	1.1	10	0.112	70	0.85	2.43E-09	0.00	0.021208
227	1.19E-05	1.98E-04	1090	1	0.96	0.000001	2.07E-07	1.1	10	0.112	70	0.85	3.11E-09	0.00	0.027065
228	1.19E-05	2.66E-04	1090	1	0.96	0.000001	2.78E-07	1.1	10	0.112	70	0.85	4.17E-09	0.00	0.036336
229	1.19E-05	3.88E-04	1090	1	0.96	0.000001	4.06E-07	1.1	10	0.112	70	0.85	6.09E-09	0.01	0.053073
230	1.19E-05	1.64E-04	1090	1	0.96	0.000001	1.71E-07	1.1	10	0.112	70	0.85	2.57E-09	0.00	0.022356
231	1.19E-05	2.11E-04	1090	1	0.96	0.000001	2.20E-07	1.1	10	0.112	70	0.85	3.31E-09	0.00	0.028818
232	1.19E-05	2.86E-04	1090	1	0.96	0.000001	2.98E-07	1.1	10	0.112	70	0.85	4.48E-09	0.00	0.039017
233	1.19E-05	4.26E-04	1090	1	0.96	0.000001	4.45E-07	1.1	10	0.112	70	0.85	6.68E-09	0.01	0.058174
234	1.19E-05	7.54E-04	1090	1	0.96	0.000001	7.88E-07	1.1	10	0.112	70	0.85	1.18E-08	0.01	0.103089
235	1.19E-05	2.15E-04	1090	1	0.96	0.000001	2.25E-07	1.1	10	0.112	70	0.85	3.37E-09	0.00	0.029405
236	1.19E-05	2.87E-04	1090	1	0.96	0.000001	3.00E-07	1.1	10	0.112	70	0.85	4.50E-09	0.00	0.039174
237	1.19E-05	4.10E-04	1090	1	0.96	0.000001	4.28E-07	1.1	10	0.112	70	0.85	6.43E-09	0.01	0.056006
238	1.19E-05	6.37E-04	1090	1	0.96	0.000001	6.66E-07	1.1	10	0.112	70	0.85	9.99E-09	0.01	0.087022
239	1.19E-05	1.05E-03	1090	1	0.96	0.000001	1.09E-06	1.1	10	0.112	70	0.85	1.64E-08	0.02	0.143087
240	1.19E-05	2.74E-04	1090	1	0.96	0.000001	2.87E-07	1.1	10	0.112	70	0.85	4.30E-09	0.00	0.037488
241	1.19E-05	3.74E-04	1090	1	0.96	0.000001	3.91E-07	1.1	10	0.112	70	0.85	5.87E-09	0.01	0.05114
242	1.19E-05	5.20E-04	1090	1	0.96	0.000001	5.43E-07	1.1	10	0.112	70	0.85	8.15E-09	0.01	0.071035
243	1.19E-05	7.73E-04	1090	1	0.96	0.000001	8.08E-07	1.1	10	0.112	70	0.85	1.21E-08	0.01	0.105651
244	1.19E-05	2.54E-04	1090	1	0.96	0.000001	2.66E-07	1.1	10	0.112	70	0.85	3.99E-09	0.00	0.034771
245	1.19E-05	3.33E-04	1090	1	0.96	0.000001	3.48E-07	1.1	10	0.112	70	0.85	5.22E-09	0.01	0.045506
246	1.19E-05	4.43E-04	1090	1	0.96	0.000001	4.63E-07	1.1	10	0.112	70	0.85	6.95E-09	0.01	0.060558
247	1.19E-05	6.06E-04	1090	1	0.96	0.000001	6.34E-07	1.1	10	0.112	70	0.85	9.51E-09	0.01	0.082847
248	1.19E-05	8.95E-04	1090	1	0.96	0.000001	9.35E-07	1.1	10	0.112	70	0.85	1.40E-08	0.01	0.122303
249	1.19E-05	2.94E-04	1090	1	0.96	0.000001	3.08E-07	1.1	10	0.112	70	0.85	4.61E-09	0.00	0.040215
250	1.19E-05	3.79E-04	1090	1	0.96	0.000001	3.96E-07	1.1	10	0.112	70	0.85	5.94E-09	0.01	0.05173
251	1.19E-05	4.96E-04	1090	1	0.96	0.000001	5.18E-07	1.1	10	0.112	70	0.85	7.78E-09	0.01	0.067763
252	1.19E-05	6.85E-04	1090	1	0.96	0.000001	7.16E-07	1.1	10	0.112	70	0.85	1.07E-08	0.01	0.093578
253	1.19E-05	1.01E-03	1090	1	0.96	0.000001	1.05E-06	1.1	10	0.112	70	0.85	1.58E-08	0.02	0.137892
254	1.19E-05	2.59E-04	1090	1	0.96	0.000001	2.71E-07	1.1	10	0.112	70	0.85	4.06E-09	0.00	0.035423
255	1.19E-05	3.22E-04	1090	1	0.96	0.000001	3.37E-07	1.1	10	0.112	70	0.85	5.05E-09	0.01	0.044004
256	1.19E-05	4.13E-04	1090	1	0.96	0.000001	4.32E-07	1.1	10	0.112	70	0.85	6.48E-09	0.01	0.056483

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
257	1.19E-05	5.39E-04	1090	1	0.96	0.000001	5.63E-07	1.1	10	0.112	70	0.85	8.45E-09	0.01	0.073599
258	1.19E-05	7.46E-04	1090	1	0.96	0.000001	7.80E-07	1.1	10	0.112	70	0.85	1.17E-08	0.01	0.101951
259	1.19E-05	1.09E-03	1090	1	0.96	0.000001	1.14E-06	1.1	10	0.112	70	0.85	1.71E-08	0.02	0.148824
260	1.19E-05	2.76E-04	1090	1	0.96	0.000001	2.88E-07	1.1	10	0.112	70	0.85	4.33E-09	0.00	0.037711
261	1.19E-05	3.42E-04	1090	1	0.96	0.000001	3.58E-07	1.1	10	0.112	70	0.85	5.37E-09	0.01	0.046802
262	1.19E-05	4.33E-04	1090	1	0.96	0.000001	4.53E-07	1.1	10	0.112	70	0.85	6.80E-09	0.01	0.059225
263	1.19E-05	5.57E-04	1090	1	0.96	0.000001	5.82E-07	1.1	10	0.112	70	0.85	8.73E-09	0.01	0.076069
264	1.19E-05	7.68E-04	1090	1	0.96	0.000001	8.03E-07	1.1	10	0.112	70	0.85	1.20E-08	0.01	0.105008
265	1.19E-05	2.84E-04	1090	1	0.96	0.000001	2.97E-07	1.1	10	0.112	70	0.85	4.46E-09	0.00	0.038843
266	1.19E-05	3.46E-04	1090	1	0.96	0.000001	3.61E-07	1.1	10	0.112	70	0.85	5.42E-09	0.01	0.047221
267	1.19E-05	4.22E-04	1090	1	0.96	0.000001	4.42E-07	1.1	10	0.112	70	0.85	6.62E-09	0.01	0.057733
268	1.19E-05	5.38E-04	1090	1	0.96	0.000001	5.62E-07	1.1	10	0.112	70	0.85	8.43E-09	0.01	0.073465
269	1.19E-05	6.91E-04	1090	1	0.96	0.000001	7.22E-07	1.1	10	0.112	70	0.85	1.08E-08	0.01	0.094416
270	1.19E-05	2.79E-04	1090	1	0.96	0.000001	2.91E-07	1.1	10	0.112	70	0.85	4.37E-09	0.00	0.038083
271	1.19E-05	3.28E-04	1090	1	0.96	0.000001	3.43E-07	1.1	10	0.112	70	0.85	5.14E-09	0.01	0.044822
272	1.19E-05	3.88E-04	1090	1	0.96	0.000001	4.06E-07	1.1	10	0.112	70	0.85	6.09E-09	0.01	0.053051
273	1.19E-05	4.65E-04	1090	1	0.96	0.000001	4.86E-07	1.1	10	0.112	70	0.85	7.30E-09	0.01	0.063587
274	1.19E-05	2.26E-04	1090	1	0.96	0.000001	2.36E-07	1.1	10	0.112	70	0.85	3.54E-09	0.00	0.030822
275	1.19E-05	2.57E-04	1090	1	0.96	0.000001	2.69E-07	1.1	10	0.112	70	0.85	4.03E-09	0.00	0.03516
276	1.19E-05	2.93E-04	1090	1	0.96	0.000001	3.07E-07	1.1	10	0.112	70	0.85	4.60E-09	0.00	0.040098
277	1.19E-05	3.31E-04	1090	1	0.96	0.000001	3.46E-07	1.1	10	0.112	70	0.85	5.19E-09	0.01	0.045219
278	1.19E-05	3.73E-04	1090	1	0.96	0.000001	3.90E-07	1.1	10	0.112	70	0.85	5.85E-09	0.01	0.050966
279	1.19E-05	2.06E-04	1090	1	0.96	0.000001	2.16E-07	1.1	10	0.112	70	0.85	3.24E-09	0.00	0.028194
280	1.19E-05	2.29E-04	1090	1	0.96	0.000001	2.39E-07	1.1	10	0.112	70	0.85	3.59E-09	0.00	0.031294
281	1.19E-05	2.51E-04	1090	1	0.96	0.000001	2.62E-07	1.1	10	0.112	70	0.85	3.93E-09	0.00	0.034264
282	1.19E-05	2.76E-04	1090	1	0.96	0.000001	2.89E-07	1.1	10	0.112	70	0.85	4.34E-09	0.00	0.037784
283	1.19E-05	1.67E-04	1090	1	0.96	0.000001	1.75E-07	1.1	10	0.112	70	0.85	2.62E-09	0.00	0.022867
284	1.19E-05	1.83E-04	1090	1	0.96	0.000001	1.91E-07	1.1	10	0.112	70	0.85	2.86E-09	0.00	0.024949
285	1.19E-05	1.98E-04	1090	1	0.96	0.000001	2.07E-07	1.1	10	0.112	70	0.85	3.11E-09	0.00	0.027064
286	1.19E-05	2.14E-04	1090	1	0.96	0.000001	2.23E-07	1.1	10	0.112	70	0.85	3.35E-09	0.00	0.029193
287	1.19E-05	2.27E-04	1090	1	0.96	0.000001	2.37E-07	1.1	10	0.112	70	0.85	3.56E-09	0.00	0.031029
288	1.19E-05	1.40E-04	1090	1	0.96	0.000001	1.46E-07	1.1	10	0.112	70	0.85	2.19E-09	0.00	0.019127

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
289	1.19E-05	1.51E-04	1090	1	0.96	0.000001	1.58E-07	1.1	10	0.112	70	0.85	2.36E-09	0.00	0.02061
290	1.19E-05	1.62E-04	1090	1	0.96	0.000001	1.69E-07	1.1	10	0.112	70	0.85	2.54E-09	0.00	0.022125
291	1.19E-05	1.73E-04	1090	1	0.96	0.000001	1.81E-07	1.1	10	0.112	70	0.85	2.71E-09	0.00	0.023624
292	1.19E-05	1.82E-04	1090	1	0.96	0.000001	1.91E-07	1.1	10	0.112	70	0.85	2.86E-09	0.00	0.024918
293	1.19E-05	1.18E-04	1090	1	0.96	0.000001	1.23E-07	1.1	10	0.112	70	0.85	1.85E-09	0.00	0.016122
294	1.19E-05	1.26E-04	1090	1	0.96	0.000001	1.32E-07	1.1	10	0.112	70	0.85	1.97E-09	0.00	0.01721
295	1.19E-05	1.34E-04	1090	1	0.96	0.000001	1.40E-07	1.1	10	0.112	70	0.85	2.10E-09	0.00	0.018294
296	1.19E-05	1.42E-04	1090	1	0.96	0.000001	1.48E-07	1.1	10	0.112	70	0.85	2.22E-09	0.00	0.019385
297	1.19E-05	1.49E-04	1090	1	0.96	0.000001	1.56E-07	1.1	10	0.112	70	0.85	2.34E-09	0.00	0.020415
298	1.19E-05	1.02E-04	1090	1	0.96	0.000001	1.06E-07	1.1	10	0.112	70	0.85	1.59E-09	0.00	0.013893
299	1.19E-05	1.08E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.69E-09	0.00	0.014716
300	1.19E-05	1.13E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.78E-09	0.00	0.015504
301	1.19E-05	1.20E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.87E-09	0.00	0.016335
302	1.19E-05	1.26E-04	1090	1	0.96	0.000001	1.31E-07	1.1	10	0.112	70	0.85	1.97E-09	0.00	0.017178
303	1.19E-05	1.30E-04	1090	1	0.96	0.000001	1.36E-07	1.1	10	0.112	70	0.85	2.04E-09	0.00	0.017746
304	1.19E-05	8.83E-05	1090	1	0.96	0.000001	9.23E-08	1.1	10	0.112	70	0.85	1.38E-09	0.00	0.012065
305	1.19E-05	9.31E-05	1090	1	0.96	0.000001	9.73E-08	1.1	10	0.112	70	0.85	1.46E-09	0.00	0.012722
306	1.19E-05	9.77E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.00	0.013346
307	1.19E-05	1.03E-04	1090	1	0.96	0.000001	1.07E-07	1.1	10	0.112	70	0.85	1.61E-09	0.00	0.014008
308	1.19E-05	1.07E-04	1090	1	0.96	0.000001	1.12E-07	1.1	10	0.112	70	0.85	1.68E-09	0.00	0.014667
309	1.19E-05	1.11E-04	1090	1	0.96	0.000001	1.16E-07	1.1	10	0.112	70	0.85	1.74E-09	0.00	0.015141
310	1.19E-05	7.76E-05	1090	1	0.96	0.000001	8.11E-08	1.1	10	0.112	70	0.85	1.22E-09	0.00	0.010602
311	1.19E-05	8.14E-05	1090	1	0.96	0.000001	8.51E-08	1.1	10	0.112	70	0.85	1.28E-09	0.00	0.01113
312	1.19E-05	8.52E-05	1090	1	0.96	0.000001	8.90E-08	1.1	10	0.112	70	0.85	1.34E-09	0.00	0.011639
313	1.19E-05	8.92E-05	1090	1	0.96	0.000001	9.32E-08	1.1	10	0.112	70	0.85	1.40E-09	0.00	0.01219
314	1.19E-05	9.31E-05	1090	1	0.96	0.000001	9.73E-08	1.1	10	0.112	70	0.85	1.46E-09	0.00	0.012723
315	1.19E-05	9.61E-05	1090	1	0.96	0.000001	1.00E-07	1.1	10	0.112	70	0.85	1.51E-09	0.00	0.013139
316	1.19E-05	6.89E-05	1090	1	0.96	0.000001	7.20E-08	1.1	10	0.112	70	0.85	1.08E-09	0.00	0.009414
317	1.19E-05	7.20E-05	1090	1	0.96	0.000001	7.52E-08	1.1	10	0.112	70	0.85	1.13E-09	0.00	0.009834
318	1.19E-05	7.49E-05	1090	1	0.96	0.000001	7.82E-08	1.1	10	0.112	70	0.85	1.17E-09	0.00	0.010229
319	1.19E-05	7.80E-05	1090	1	0.96	0.000001	8.16E-08	1.1	10	0.112	70	0.85	1.22E-09	0.00	0.010665
320	1.19E-05	8.13E-05	1090	1	0.96	0.000001	8.50E-08	1.1	10	0.112	70	0.85	1.27E-09	0.00	0.011109

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
321	1.19E-05	8.38E-05	1090	1	0.96	0.000001	8.76E-08	1.1	10	0.112	70	0.85	1.31E-09	0.00	0.011449
322	1.19E-05	8.57E-05	1090	1	0.96	0.000001	8.96E-08	1.1	10	0.112	70	0.85	1.34E-09	0.00	0.011715
323	1.19E-05	6.15E-05	1090	1	0.96	0.000001	6.43E-08	1.1	10	0.112	70	0.85	9.64E-10	0.00	0.008404
324	1.19E-05	6.41E-05	1090	1	0.96	0.000001	6.70E-08	1.1	10	0.112	70	0.85	1.01E-09	0.00	0.00876
325	1.19E-05	6.65E-05	1090	1	0.96	0.000001	6.95E-08	1.1	10	0.112	70	0.85	1.04E-09	0.00	0.00909
326	1.19E-05	6.91E-05	1090	1	0.96	0.000001	7.22E-08	1.1	10	0.112	70	0.85	1.08E-09	0.00	0.009446
327	1.19E-05	7.19E-05	1090	1	0.96	0.000001	7.51E-08	1.1	10	0.112	70	0.85	1.13E-09	0.00	0.009821
328	1.19E-05	7.41E-05	1090	1	0.96	0.000001	7.74E-08	1.1	10	0.112	70	0.85	1.16E-09	0.00	0.010122
329	1.19E-05	7.58E-05	1090	1	0.96	0.000001	7.92E-08	1.1	10	0.112	70	0.85	1.19E-09	0.00	0.010358
330	1.19E-05	5.52E-05	1090	1	0.96	0.000001	5.77E-08	1.1	10	0.112	70	0.85	8.66E-10	0.00	0.007545
331	1.19E-05	5.73E-05	1090	1	0.96	0.000001	5.99E-08	1.1	10	0.112	70	0.85	8.99E-10	0.00	0.007835
332	1.19E-05	5.95E-05	1090	1	0.96	0.000001	6.22E-08	1.1	10	0.112	70	0.85	9.34E-10	0.00	0.008135
333	1.19E-05	6.18E-05	1090	1	0.96	0.000001	6.45E-08	1.1	10	0.112	70	0.85	9.68E-10	0.00	0.008439
334	1.19E-05	6.39E-05	1090	1	0.96	0.000001	6.68E-08	1.1	10	0.112	70	0.85	1.00E-09	0.00	0.008732
335	1.19E-05	6.58E-05	1090	1	0.96	0.000001	6.88E-08	1.1	10	0.112	70	0.85	1.03E-09	0.00	0.008997
336	1.19E-05	6.76E-05	1090	1	0.96	0.000001	7.06E-08	1.1	10	0.112	70	0.85	1.06E-09	0.00	0.009233
337	1.19E-05	5.02E-05	1090	1	0.96	0.000001	5.24E-08	1.1	10	0.112	70	0.85	7.87E-10	0.00	0.006854
338	1.19E-05	5.20E-05	1090	1	0.96	0.000001	5.43E-08	1.1	10	0.112	70	0.85	8.15E-10	0.00	0.007101
339	1.19E-05	5.38E-05	1090	1	0.96	0.000001	5.62E-08	1.1	10	0.112	70	0.85	8.43E-10	0.00	0.00735
340	1.19E-05	5.56E-05	1090	1	0.96	0.000001	5.81E-08	1.1	10	0.112	70	0.85	8.72E-10	0.00	0.007601
341	1.19E-05	5.76E-05	1090	1	0.96	0.000001	6.02E-08	1.1	10	0.112	70	0.85	9.03E-10	0.00	0.007868
342	1.19E-05	5.93E-05	1090	1	0.96	0.000001	6.20E-08	1.1	10	0.112	70	0.85	9.30E-10	0.00	0.0081
343	1.19E-05	6.07E-05	1090	1	0.96	0.000001	6.34E-08	1.1	10	0.112	70	0.85	9.52E-10	0.00	0.008295
344	1.19E-05	4.57E-05	1090	1	0.96	0.000001	4.78E-08	1.1	10	0.112	70	0.85	7.16E-10	0.00	0.006243
345	1.19E-05	4.72E-05	1090	1	0.96	0.000001	4.94E-08	1.1	10	0.112	70	0.85	7.41E-10	0.00	0.006455
346	1.19E-05	4.88E-05	1090	1	0.96	0.000001	5.10E-08	1.1	10	0.112	70	0.85	7.65E-10	0.00	0.006668
347	1.19E-05	5.04E-05	1090	1	0.96	0.000001	5.27E-08	1.1	10	0.112	70	0.85	7.91E-10	0.00	0.006891
348	1.19E-05	5.20E-05	1090	1	0.96	0.000001	5.43E-08	1.1	10	0.112	70	0.85	8.15E-10	0.00	0.007105
349	1.19E-05	5.34E-05	1090	1	0.96	0.000001	5.58E-08	1.1	10	0.112	70	0.85	8.38E-10	0.00	0.007302
350	1.19E-05	5.48E-05	1090	1	0.96	0.000001	5.73E-08	1.1	10	0.112	70	0.85	8.59E-10	0.00	0.007487
351	1.19E-05	4.18E-05	1090	1	0.96	0.000001	4.37E-08	1.1	10	0.112	70	0.85	6.55E-10	0.00	0.005711
352	1.19E-05	4.31E-05	1090	1	0.96	0.000001	4.51E-08	1.1	10	0.112	70	0.85	6.77E-10	0.00	0.005896

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
353	1.19E-05	4.45E-05	1090	1	0.96	0.000001	4.65E-08	1.1	10	0.112	70	0.85	6.97E-10	0.00	0.006076
354	1.19E-05	4.58E-05	1090	1	0.96	0.000001	4.79E-08	1.1	10	0.112	70	0.85	7.19E-10	0.00	0.006262
355	1.19E-05	4.73E-05	1090	1	0.96	0.000001	4.94E-08	1.1	10	0.112	70	0.85	7.42E-10	0.00	0.006463
356	1.19E-05	4.86E-05	1090	1	0.96	0.000001	5.08E-08	1.1	10	0.112	70	0.85	7.62E-10	0.00	0.006637
357	1.19E-05	4.97E-05	1090	1	0.96	0.000001	5.20E-08	1.1	10	0.112	70	0.85	7.80E-10	0.00	0.006796
358	1.19E-05	3.84E-05	1090	1	0.96	0.000001	4.01E-08	1.1	10	0.112	70	0.85	6.02E-10	0.00	0.005243
359	1.19E-05	3.95E-05	1090	1	0.96	0.000001	4.13E-08	1.1	10	0.112	70	0.85	6.20E-10	0.00	0.005401
360	1.19E-05	4.07E-05	1090	1	0.96	0.000001	4.26E-08	1.1	10	0.112	70	0.85	6.39E-10	0.00	0.005568
361	1.19E-05	4.20E-05	1090	1	0.96	0.000001	4.39E-08	1.1	10	0.112	70	0.85	6.58E-10	0.00	0.005734
362	1.19E-05	4.32E-05	1090	1	0.96	0.000001	4.51E-08	1.1	10	0.112	70	0.85	6.77E-10	0.00	0.005902
363	1.19E-05	4.43E-05	1090	1	0.96	0.000001	4.63E-08	1.1	10	0.112	70	0.85	6.95E-10	0.00	0.006055
364	1.19E-05	4.54E-05	1090	1	0.96	0.000001	4.74E-08	1.1	10	0.112	70	0.85	7.11E-10	0.00	0.006198
365	1.19E-05	3.55E-05	1090	1	0.96	0.000001	3.71E-08	1.1	10	0.112	70	0.85	5.56E-10	0.00	0.004845
366	1.19E-05	3.65E-05	1090	1	0.96	0.000001	3.81E-08	1.1	10	0.112	70	0.85	5.72E-10	0.00	0.004982
367	1.19E-05	3.75E-05	1090	1	0.96	0.000001	3.92E-08	1.1	10	0.112	70	0.85	5.88E-10	0.00	0.005126
368	1.19E-05	3.86E-05	1090	1	0.96	0.000001	4.03E-08	1.1	10	0.112	70	0.85	6.05E-10	0.00	0.005273
369	1.19E-05	3.96E-05	1090	1	0.96	0.000001	4.14E-08	1.1	10	0.112	70	0.85	6.22E-10	0.00	0.005416
370	1.19E-05	4.07E-05	1090	1	0.96	0.000001	4.25E-08	1.1	10	0.112	70	0.85	6.38E-10	0.00	0.005558
371	1.19E-05	4.16E-05	1090	1	0.96	0.000001	4.34E-08	1.1	10	0.112	70	0.85	6.52E-10	0.00	0.005681
372	1.19E-05	3.28E-05	1090	1	0.96	0.000001	3.43E-08	1.1	10	0.112	70	0.85	5.15E-10	0.00	0.004485
373	1.19E-05	3.37E-05	1090	1	0.96	0.000001	3.52E-08	1.1	10	0.112	70	0.85	5.29E-10	0.00	0.004607
374	1.19E-05	3.46E-05	1090	1	0.96	0.000001	3.62E-08	1.1	10	0.112	70	0.85	5.43E-10	0.00	0.004732
375	1.19E-05	3.56E-05	1090	1	0.96	0.000001	3.72E-08	1.1	10	0.112	70	0.85	5.58E-10	0.00	0.004862
376	1.19E-05	3.65E-05	1090	1	0.96	0.000001	3.82E-08	1.1	10	0.112	70	0.85	5.72E-10	0.00	0.004988
377	1.19E-05	3.74E-05	1090	1	0.96	0.000001	3.91E-08	1.1	10	0.112	70	0.85	5.87E-10	0.00	0.005116
378	1.19E-05	3.83E-05	1090	1	0.96	0.000001	4.00E-08	1.1	10	0.112	70	0.85	6.00E-10	0.00	0.005228
379	1.19E-05	3.11E-04	1090	1	0.96	0.000001	3.25E-07	1.1	10	0.112	70	0.85	4.88E-09	0.00	0.042519
380	1.19E-05	3.16E-04	1090	1	0.96	0.000001	3.30E-07	1.1	10	0.112	70	0.85	4.95E-09	0.00	0.043136
381	1.19E-05	2.67E-04	1090	1	0.96	0.000001	2.80E-07	1.1	10	0.112	70	0.85	4.19E-09	0.00	0.036552
382	1.19E-05	2.58E-04	1090	1	0.96	0.000001	2.70E-07	1.1	10	0.112	70	0.85	4.05E-09	0.00	0.035292
383	1.19E-05	2.17E-04	1090	1	0.96	0.000001	2.27E-07	1.1	10	0.112	70	0.85	3.40E-09	0.00	0.029638
384	1.19E-05	1.83E-04	1090	1	0.96	0.000001	1.91E-07	1.1	10	0.112	70	0.85	2.87E-09	0.00	0.025034

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Unmitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
385	1.19E-05	1.60E-04	1090	1	0.96	0.000001	1.67E-07	1.1	10	0.112	70	0.85	2.50E-09	0.00	0.021804
386	1.19E-05	1.37E-04	1090	1	0.96	0.000001	1.43E-07	1.1	10	0.112	70	0.85	2.14E-09	0.00	0.018671
387	1.19E-05	1.19E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.87E-09	0.00	0.016311
388	1.19E-05	1.06E-04	1090	1	0.96	0.000001	1.11E-07	1.1	10	0.112	70	0.85	1.66E-09	0.00	0.014478
389	1.19E-05	9.50E-05	1090	1	0.96	0.000001	9.93E-08	1.1	10	0.112	70	0.85	1.49E-09	0.00	0.01298
390	1.19E-05	8.68E-05	1090	1	0.96	0.000001	9.07E-08	1.1	10	0.112	70	0.85	1.36E-09	0.00	0.011859

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI	
1	1.46E-04	5	2.92E-05	Max
2	1.58E-04	5	3.16E-05	2.50E-03
3	1.42E-04	5	2.84E-05	
4	1.55E-04	5	3.09E-05	
5	1.68E-04	5	3.37E-05	
6	1.84E-04	5	3.67E-05	
7	1.50E-04	5	3.00E-05	
8	1.64E-04	5	3.27E-05	
9	1.79E-04	5	3.58E-05	
10	1.97E-04	5	3.94E-05	
11	2.17E-04	5	4.34E-05	
12	1.72E-04	5	3.44E-05	
13	1.90E-04	5	3.79E-05	
14	2.10E-04	5	4.20E-05	
15	2.34E-04	5	4.67E-05	
16	2.60E-04	5	5.20E-05	
17	2.01E-04	5	4.01E-05	
18	2.24E-04	5	4.48E-05	
19	2.51E-04	5	5.02E-05	
20	2.83E-04	5	5.65E-05	
21	3.21E-04	5	6.41E-05	
22	2.37E-04	5	4.74E-05	
23	2.68E-04	5	5.37E-05	
24	3.05E-04	5	6.11E-05	
25	3.51E-04	5	7.02E-05	
26	4.06E-04	5	8.12E-05	
27	2.85E-04	5	5.70E-05	
28	3.27E-04	5	6.55E-05	
29	3.81E-04	5	7.63E-05	
30	4.50E-04	5	8.99E-05	
31	5.37E-04	5	1.07E-04	
32	3.48E-04	5	6.97E-05	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
33	4.10E-04	5	8.20E-05
34	4.91E-04	5	9.82E-05
35	5.98E-04	5	1.20E-04
36	7.50E-04	5	1.50E-04
37	4.36E-04	5	8.71E-05
38	5.28E-04	5	1.06E-04
39	6.57E-04	5	1.31E-04
40	8.45E-04	5	1.69E-04
41	5.61E-04	5	1.12E-04
42	7.07E-04	5	1.41E-04
43	9.27E-04	5	1.85E-04
44	1.28E-03	5	2.57E-04
45	7.40E-04	5	1.48E-04
46	9.79E-04	5	1.96E-04
47	1.37E-03	5	2.75E-04
48	2.11E-03	5	4.21E-04
49	1.37E-03	5	2.75E-04
50	2.02E-03	5	4.04E-04
51	1.29E-03	5	2.58E-04
52	1.79E-03	5	3.59E-04
53	2.61E-03	5	5.23E-04
54	1.15E-03	5	2.31E-04
55	1.52E-03	5	3.04E-04
56	2.07E-03	5	4.14E-04
57	2.89E-03	5	5.78E-04
58	1.00E-03	5	2.00E-04
59	1.26E-03	5	2.52E-04
60	1.61E-03	5	3.22E-04
61	2.08E-03	5	4.17E-04
62	8.58E-04	5	1.72E-04
63	1.03E-03	5	2.07E-04
64	1.25E-03	5	2.50E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
65	1.51E-03	5	3.02E-04
66	1.82E-03	5	3.63E-04
67	7.25E-04	5	1.45E-04
68	8.44E-04	5	1.69E-04
69	9.81E-04	5	1.96E-04
70	1.13E-03	5	2.26E-04
71	1.30E-03	5	2.60E-04
72	6.14E-04	5	1.23E-04
73	6.95E-04	5	1.39E-04
74	7.85E-04	5	1.57E-04
75	8.79E-04	5	1.76E-04
76	9.81E-04	5	1.96E-04
77	5.22E-04	5	1.04E-04
78	5.79E-04	5	1.16E-04
79	6.40E-04	5	1.28E-04
80	7.02E-04	5	1.40E-04
81	7.68E-04	5	1.54E-04
82	4.48E-04	5	8.97E-05
83	4.89E-04	5	9.78E-05
84	5.30E-04	5	1.06E-04
85	5.74E-04	5	1.15E-04
86	6.19E-04	5	1.24E-04
87	3.88E-04	5	7.75E-05
88	4.18E-04	5	8.35E-05
89	4.48E-04	5	8.96E-05
90	4.80E-04	5	9.61E-05
91	5.13E-04	5	1.03E-04
92	3.38E-04	5	6.77E-05
93	3.61E-04	5	7.22E-05
94	3.84E-04	5	7.68E-05
95	4.08E-04	5	8.15E-05
96	4.33E-04	5	8.65E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
97	2.98E-04	5	5.95E-05
98	3.15E-04	5	6.30E-05
99	3.33E-04	5	6.66E-05
100	3.51E-04	5	7.02E-05
101	3.70E-04	5	7.41E-05
102	1.40E-04	5	2.80E-05
103	1.41E-04	5	2.82E-05
104	1.45E-04	5	2.91E-05
105	1.41E-04	5	2.82E-05
106	1.46E-04	5	2.92E-05
107	1.51E-04	5	3.02E-05
108	1.56E-04	5	3.12E-05
109	1.46E-04	5	2.92E-05
110	1.51E-04	5	3.03E-05
111	1.57E-04	5	3.13E-05
112	1.62E-04	5	3.24E-05
113	1.68E-04	5	3.35E-05
114	1.46E-04	5	2.92E-05
115	1.51E-04	5	3.02E-05
116	1.57E-04	5	3.14E-05
117	1.63E-04	5	3.25E-05
118	1.69E-04	5	3.37E-05
119	1.75E-04	5	3.50E-05
120	1.81E-04	5	3.62E-05
121	1.45E-04	5	2.90E-05
122	1.51E-04	5	3.01E-05
123	1.57E-04	5	3.13E-05
124	1.63E-04	5	3.25E-05
125	1.69E-04	5	3.38E-05
126	1.75E-04	5	3.51E-05
127	1.82E-04	5	3.65E-05
128	1.89E-04	5	3.78E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
129	1.62E-04	5	3.24E-05
130	1.68E-04	5	3.37E-05
131	1.75E-04	5	3.51E-05
132	1.82E-04	5	3.65E-05
133	1.90E-04	5	3.79E-05
134	1.97E-04	5	3.95E-05
135	2.05E-04	5	4.11E-05
136	1.75E-04	5	3.49E-05
137	1.82E-04	5	3.64E-05
138	1.90E-04	5	3.79E-05
139	1.98E-04	5	3.95E-05
140	2.06E-04	5	4.12E-05
141	2.15E-04	5	4.30E-05
142	2.24E-04	5	4.48E-05
143	1.89E-04	5	3.77E-05
144	1.97E-04	5	3.94E-05
145	2.06E-04	5	4.11E-05
146	2.15E-04	5	4.31E-05
147	2.25E-04	5	4.50E-05
148	2.35E-04	5	4.71E-05
149	2.05E-04	5	4.10E-05
150	2.14E-04	5	4.29E-05
151	2.25E-04	5	4.50E-05
152	2.36E-04	5	4.71E-05
153	2.47E-04	5	4.94E-05
154	2.59E-04	5	5.18E-05
155	2.23E-04	5	4.46E-05
156	2.35E-04	5	4.69E-05
157	2.47E-04	5	4.93E-05
158	2.59E-04	5	5.18E-05
159	2.73E-04	5	5.45E-05
160	2.86E-04	5	5.73E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
161	2.45E-04	5	4.89E-05
162	2.58E-04	5	5.16E-05
163	2.72E-04	5	5.44E-05
164	2.87E-04	5	5.74E-05
165	3.02E-04	5	6.05E-05
166	3.19E-04	5	6.38E-05
167	2.69E-04	5	5.39E-05
168	2.85E-04	5	5.71E-05
169	3.02E-04	5	6.04E-05
170	3.20E-04	5	6.40E-05
171	3.39E-04	5	6.77E-05
172	3.58E-04	5	7.17E-05
173	2.99E-04	5	5.98E-05
174	3.18E-04	5	6.35E-05
175	3.38E-04	5	6.75E-05
176	3.59E-04	5	7.18E-05
177	3.82E-04	5	7.63E-05
178	3.34E-04	5	6.67E-05
179	3.56E-04	5	7.12E-05
180	3.81E-04	5	7.61E-05
181	4.06E-04	5	8.13E-05
182	4.35E-04	5	8.70E-05
183	3.76E-04	5	7.51E-05
184	4.03E-04	5	8.05E-05
185	4.33E-04	5	8.66E-05
186	4.66E-04	5	9.32E-05
187	5.02E-04	5	1.00E-04
188	4.26E-04	5	8.53E-05
189	4.61E-04	5	9.22E-05
190	4.98E-04	5	9.97E-05
191	5.41E-04	5	1.08E-04
192	5.86E-04	5	1.17E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
193	4.90E-04	5	9.80E-05
194	5.34E-04	5	1.07E-04
195	5.82E-04	5	1.16E-04
196	6.37E-04	5	1.27E-04
197	6.97E-04	5	1.39E-04
198	5.70E-04	5	1.14E-04
199	6.27E-04	5	1.25E-04
200	6.91E-04	5	1.38E-04
201	7.66E-04	5	1.53E-04
202	6.72E-04	5	1.34E-04
203	7.47E-04	5	1.49E-04
204	8.40E-04	5	1.68E-04
205	9.43E-04	5	1.89E-04
206	8.06E-04	5	1.61E-04
207	9.15E-04	5	1.83E-04
208	1.04E-03	5	2.09E-04
209	1.20E-03	5	2.40E-04
210	8.64E-04	5	1.73E-04
211	9.94E-04	5	1.99E-04
212	1.15E-03	5	2.31E-04
213	1.35E-03	5	2.70E-04
214	1.60E-03	5	3.20E-04
215	9.20E-04	5	1.84E-04
216	1.07E-03	5	2.13E-04
217	1.25E-03	5	2.51E-04
218	1.50E-03	5	3.00E-04
219	1.83E-03	5	3.66E-04
220	1.14E-03	5	2.28E-04
221	1.36E-03	5	2.71E-04
222	1.65E-03	5	3.30E-04
223	2.07E-03	5	4.14E-04
224	2.69E-03	5	5.39E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
225	1.44E-03	5	2.89E-04
226	1.78E-03	5	3.56E-04
227	2.27E-03	5	4.54E-04
228	3.05E-03	5	6.10E-04
229	4.45E-03	5	8.91E-04
230	1.88E-03	5	3.75E-04
231	2.42E-03	5	4.84E-04
232	3.27E-03	5	6.55E-04
233	4.88E-03	5	9.76E-04
234	8.65E-03	5	1.73E-03
235	2.47E-03	5	4.93E-04
236	3.29E-03	5	6.57E-04
237	4.70E-03	5	9.40E-04
238	7.30E-03	5	1.46E-03
239	1.20E-02	5	2.40E-03
240	3.15E-03	5	6.29E-04
241	4.29E-03	5	8.58E-04
242	5.96E-03	5	1.19E-03
243	8.86E-03	5	1.77E-03
244	2.92E-03	5	5.83E-04
245	3.82E-03	5	7.64E-04
246	5.08E-03	5	1.02E-03
247	6.95E-03	5	1.39E-03
248	1.03E-02	5	2.05E-03
249	3.37E-03	5	6.75E-04
250	4.34E-03	5	8.68E-04
251	5.69E-03	5	1.14E-03
252	7.85E-03	5	1.57E-03
253	1.16E-02	5	2.31E-03
254	2.97E-03	5	5.94E-04
255	3.69E-03	5	7.38E-04
256	4.74E-03	5	9.48E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
257	6.17E-03	5	1.23E-03
258	8.55E-03	5	1.71E-03
259	1.25E-02	5	2.50E-03
260	3.16E-03	5	6.33E-04
261	3.93E-03	5	7.85E-04
262	4.97E-03	5	9.94E-04
263	6.38E-03	5	1.28E-03
264	8.81E-03	5	1.76E-03
265	3.26E-03	5	6.52E-04
266	3.96E-03	5	7.92E-04
267	4.84E-03	5	9.69E-04
268	6.16E-03	5	1.23E-03
269	7.92E-03	5	1.58E-03
270	3.20E-03	5	6.39E-04
271	3.76E-03	5	7.52E-04
272	4.45E-03	5	8.90E-04
273	5.33E-03	5	1.07E-03
274	2.59E-03	5	5.17E-04
275	2.95E-03	5	5.90E-04
276	3.36E-03	5	6.73E-04
277	3.79E-03	5	7.59E-04
278	4.28E-03	5	8.55E-04
279	2.37E-03	5	4.73E-04
280	2.63E-03	5	5.25E-04
281	2.87E-03	5	5.75E-04
282	3.17E-03	5	6.34E-04
283	1.92E-03	5	3.84E-04
284	2.09E-03	5	4.19E-04
285	2.27E-03	5	4.54E-04
286	2.45E-03	5	4.90E-04
287	2.60E-03	5	5.21E-04
288	1.60E-03	5	3.21E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
289	1.73E-03	5	3.46E-04
290	1.86E-03	5	3.71E-04
291	1.98E-03	5	3.96E-04
292	2.09E-03	5	4.18E-04
293	1.35E-03	5	2.71E-04
294	1.44E-03	5	2.89E-04
295	1.53E-03	5	3.07E-04
296	1.63E-03	5	3.25E-04
297	1.71E-03	5	3.43E-04
298	1.17E-03	5	2.33E-04
299	1.23E-03	5	2.47E-04
300	1.30E-03	5	2.60E-04
301	1.37E-03	5	2.74E-04
302	1.44E-03	5	2.88E-04
303	1.49E-03	5	2.98E-04
304	1.01E-03	5	2.02E-04
305	1.07E-03	5	2.13E-04
306	1.12E-03	5	2.24E-04
307	1.18E-03	5	2.35E-04
308	1.23E-03	5	2.46E-04
309	1.27E-03	5	2.54E-04
310	8.89E-04	5	1.78E-04
311	9.34E-04	5	1.87E-04
312	9.77E-04	5	1.95E-04
313	1.02E-03	5	2.05E-04
314	1.07E-03	5	2.13E-04
315	1.10E-03	5	2.20E-04
316	7.90E-04	5	1.58E-04
317	8.25E-04	5	1.65E-04
318	8.58E-04	5	1.72E-04
319	8.95E-04	5	1.79E-04
320	9.32E-04	5	1.86E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
321	9.61E-04	5	1.92E-04
322	9.83E-04	5	1.97E-04
323	7.05E-04	5	1.41E-04
324	7.35E-04	5	1.47E-04
325	7.63E-04	5	1.53E-04
326	7.93E-04	5	1.59E-04
327	8.24E-04	5	1.65E-04
328	8.49E-04	5	1.70E-04
329	8.69E-04	5	1.74E-04
330	6.33E-04	5	1.27E-04
331	6.57E-04	5	1.31E-04
332	6.83E-04	5	1.37E-04
333	7.08E-04	5	1.42E-04
334	7.33E-04	5	1.47E-04
335	7.55E-04	5	1.51E-04
336	7.75E-04	5	1.55E-04
337	5.75E-04	5	1.15E-04
338	5.96E-04	5	1.19E-04
339	6.17E-04	5	1.23E-04
340	6.38E-04	5	1.28E-04
341	6.60E-04	5	1.32E-04
342	6.80E-04	5	1.36E-04
343	6.96E-04	5	1.39E-04
344	5.24E-04	5	1.05E-04
345	5.42E-04	5	1.08E-04
346	5.59E-04	5	1.12E-04
347	5.78E-04	5	1.16E-04
348	5.96E-04	5	1.19E-04
349	6.13E-04	5	1.23E-04
350	6.28E-04	5	1.26E-04
351	4.79E-04	5	9.58E-05
352	4.95E-04	5	9.89E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
353	5.10E-04	5	1.02E-04
354	5.25E-04	5	1.05E-04
355	5.42E-04	5	1.08E-04
356	5.57E-04	5	1.11E-04
357	5.70E-04	5	1.14E-04
358	4.40E-04	5	8.80E-05
359	4.53E-04	5	9.06E-05
360	4.67E-04	5	9.34E-05
361	4.81E-04	5	9.62E-05
362	4.95E-04	5	9.90E-05
363	5.08E-04	5	1.02E-04
364	5.20E-04	5	1.04E-04
365	4.07E-04	5	8.13E-05
366	4.18E-04	5	8.36E-05
367	4.30E-04	5	8.60E-05
368	4.42E-04	5	8.85E-05
369	4.54E-04	5	9.09E-05
370	4.66E-04	5	9.33E-05
371	4.77E-04	5	9.53E-05
372	3.76E-04	5	7.53E-05
373	3.87E-04	5	7.73E-05
374	3.97E-04	5	7.94E-05
375	4.08E-04	5	8.16E-05
376	4.19E-04	5	8.37E-05
377	4.29E-04	5	8.58E-05
378	4.39E-04	5	8.77E-05
379	3.57E-03	5	7.13E-04
380	3.62E-03	5	7.24E-04
381	3.07E-03	5	6.13E-04
382	2.96E-03	5	5.92E-04
383	2.49E-03	5	4.97E-04
384	2.10E-03	5	4.20E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
385	1.83E-03	5	3.66E-04
386	1.57E-03	5	3.13E-04
387	1.37E-03	5	2.74E-04
388	1.21E-03	5	2.43E-04
389	1.09E-03	5	2.18E-04
390	9.95E-04	5	1.99E-04

Mitigated Assumptions and Risk Summary

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
AERMOD Mitigated Risk Assumptions

		Days per Age group			lbs/day	lbs/mile
		# Days	3rd	0-2		
Phase 1	Onsite	45	45	0	0.177383	
	Offsite H	18	18	0	1.105	0.05525
	Offsite V	45	45	0	0.0138	0.002
Phase 2	Onsite	24	24	0	0.171231	
	Offsite H	13	13	0	0.6517	0.032585
	Offsite V	24	24	0	0.0276	0.004
Phase 3	Onsite	30	19	11	0.0879	
	Offsite H	19	19	0	0.5893	0.029465
	Offsite V	30	19	11	0.0138	0.002
Phase 4	Onsite	30	0	30	0.01929	
	Offsite H	30	0	30	0	0
	Offsite V	30	0	30	0.0415	0.006014493
Total			88	700		

Distance

P2TR1 0.730518

P2TR2 0.178901

		lbs/day	hrs/day	gr/sec	3rd	0-2
Phase 1	Onsite	0.177383	8	0.00268292	0.120731	
	P2TR1	0.041822	8	0.00063256	0.011386	
	P2TR2	0.010242	8	0.00015491	0.006971	
Phase 2	Onsite	0.171231	8	0.00258987	0.062157	
	P2TR1	0.026726	8	0.00040423	0.005255	
	P2TR2	0.006545	8	0.00009899	0.002376	
Phase 3	Onsite	0.0879	8	0.00132949	0.02526	0.01462439
	P2TR1	0.022986	8	0.00034766	0.006606	
	P2TR2	0.005629	8	0.00008514	0.001618	
Phase 4	Onsite	0.01929	8	0.00029176	0	0.0087528
	P2TR1	0.004394	8	0.00006645	0	0.0019935
	P2TR2	0.001076	8	0.00001627	0	0.0004881

Weighted average

Onsite	0.002365	0.000570175
P2TR1	0.000465	0.00006645
P2TR2	0.000125	1.19049E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
AERMOD Mitigated Risk Assumptions

	3rd	0-2	2-16	>16	Units
DBR	361	1090	861	290	L/kg
A	1	1	1	1	no units
EF	0.958904	0.958904	0.958904	0.95890411	years
Constant 1	0.000001	0.000001	0.000001	0.000001	no units
CPF	1.1	1.1	1.1	1.1	mg/kg-day-1
ASF	10	10	3	1	no units
ED	0.25	0.112329	0	0	years
AT	70	70	70	70	years
FAH	0.85	0.85	0.72	0.73	day
Constant 2	1,000,000	1,000,000	1,000,000	1,000,000	no units

Dose = (Cair X DBR X A X EF X Constant 1)

Cancer Risk = Dose X CPF x ASF x (ED/AT) X FAH

Risk per Million = Cancer Risk X Constant 2

OCSD - Plant No. 2 GWRS Conveyance Facilities Project **Mitigated Risk Summary**

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2	Max	Receptor #
1	410571	3722482	0.080974	0.033508	0.045726	0.00174	3.118295	380
2	410631	3722482	0.098557	0.036076	0.060599	0.001882		
3	410511	3722542	0.066481	0.03256	0.032226	0.001695		
4	410571	3722542	0.077104	0.035205	0.040055	0.001843		
5	410631	3722542	0.091145	0.038139	0.050999	0.002007		
6	410691	3722542	0.111115	0.041342	0.067584	0.002188		
7	410511	3722602	0.065114	0.034089	0.02924	0.001785		
8	410571	3722602	0.07438	0.036963	0.035468	0.001949		
9	410631	3722602	0.086265	0.040191	0.043939	0.002135		
10	410691	3722602	0.102167	0.043843	0.055979	0.002345		
11	410751	3722602	0.124723	0.047989	0.074149	0.002585		
12	410571	3722662	0.072343	0.038614	0.031677	0.002052		
13	410631	3722662	0.082822	0.042196	0.038364	0.002261		
14	410691	3722662	0.096313	0.046298	0.047512	0.002504		
15	410751	3722662	0.114417	0.051013	0.06062	0.002784		
16	410811	3722662	0.139803	0.056322	0.08038	0.003102		
17	410631	3722722	0.080539	0.044247	0.033901	0.00239		
18	410691	3722722	0.092577	0.04885	0.041059	0.002668		
19	410751	3722722	0.107986	0.054141	0.050854	0.002991		
20	410811	3722722	0.128501	0.060253	0.064879	0.00337		
21	410871	3722722	0.15831	0.067536	0.086951	0.003822		
22	410691	3722782	0.090005	0.051296	0.035883	0.002826		
23	410751	3722782	0.103859	0.057226	0.043436	0.003198		
24	410811	3722782	0.121529	0.06411	0.05378	0.003639		
25	410871	3722782	0.145604	0.072484	0.068938	0.004182		
26	410931	3722782	0.180083	0.082475	0.092767	0.00484		
27	410751	3722842	0.101119	0.060146	0.037578	0.003395		
28	410811	3722842	0.117203	0.067852	0.045449	0.003903		
29	410871	3722842	0.138464	0.077418	0.056499	0.004546		
30	410931	3722842	0.167307	0.089153	0.072795	0.005359		
31	410991	3722842	0.209612	0.103791	0.099423	0.006398		
32	410811	3722902	0.114492	0.071411	0.038929	0.004152		
33	410871	3722902	0.134008	0.081996	0.047124	0.004888		
34	410931	3722902	0.159928	0.095379	0.058694	0.005855		
35	410991	3722902	0.195172	0.11223	0.07581	0.007133		
36	411051	3722902	0.249691	0.135015	0.105742	0.008934		
37	410871	3722962	0.131091	0.08611	0.03979	0.005192		
38	410931	3722962	0.155402	0.100924	0.048181	0.006297		
39	410991	3722962	0.18806	0.120198	0.060035	0.007827		
40	411051	3722962	0.235211	0.146546	0.078589	0.010076		
41	410931	3723022	0.152982	0.106077	0.040215	0.00669		
42	410991	3723022	0.184431	0.127402	0.048596	0.008433		
43	411051	3723022	0.228115	0.156511	0.060557	0.011047		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Mitigated Risk Summary

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
44	411111	3723022	0.292717	0.198124	0.079288	0.015305
45	410991	3723082	0.180763	0.132343	0.039598	0.008822
46	411051	3723082	0.222591	0.163457	0.047471	0.011664
47	411111	3723082	0.283235	0.208263	0.058603	0.016368
48	411171	3723082	0.376318	0.27573	0.075474	0.025114
49	411111	3723142	0.273358	0.212687	0.044309	0.016362
50	411171	3723142	0.355538	0.278848	0.052587	0.024103
51	411111	3723202	0.26065	0.210974	0.034328	0.015348
52	411171	3723202	0.333143	0.273129	0.038627	0.021386
53	411231	3723202	0.440134	0.365877	0.043107	0.03115
54	411111	3723262	0.245329	0.20422	0.027349	0.01376
55	411171	3723262	0.307992	0.260001	0.029845	0.018147
56	411231	3723262	0.400552	0.343596	0.032277	0.024679
57	411291	3723262	0.540819	0.471926	0.03442	0.034473
58	411111	3723322	0.226888	0.192583	0.022376	0.011929
59	411171	3723322	0.280868	0.241847	0.023984	0.015036
60	411231	3723322	0.357599	0.312873	0.025517	0.01921
61	411291	3723322	0.472411	0.420719	0.026859	0.024833
62	411111	3723382	0.208285	0.179328	0.018735	0.010222
63	411171	3723382	0.252184	0.220011	0.019848	0.012325
64	411231	3723382	0.311381	0.275574	0.020912	0.014895
65	411291	3723382	0.394526	0.354677	0.021848	0.018002
66	411351	3723382	0.516331	0.472208	0.022463	0.02166
67	411111	3723442	0.18745	0.162831	0.015974	0.008645
68	411171	3723442	0.221849	0.194991	0.016794	0.010065
69	411231	3723442	0.26583	0.236563	0.017577	0.011691
70	411291	3723442	0.321751	0.289988	0.018273	0.01349
71	411351	3723442	0.394404	0.360132	0.018773	0.015499
72	411111	3723502	0.166959	0.145813	0.013827	0.007319
73	411171	3723502	0.192913	0.17017	0.014456	0.008287
74	411231	3723502	0.224633	0.200217	0.015058	0.009358
75	411291	3723502	0.261048	0.234973	0.015603	0.010473
76	411351	3723502	0.304137	0.276427	0.016017	0.011693
77	411111	3723562	0.147528	0.129181	0.012119	0.006227
78	411171	3723562	0.166685	0.147167	0.012616	0.006902
79	411231	3723562	0.1891	0.168374	0.013095	0.007631
80	411291	3723562	0.212879	0.190981	0.013535	0.008363
81	411351	3723562	0.239401	0.216359	0.013885	0.009157
82	411111	3723622	0.130048	0.11397	0.010735	0.005343
83	411171	3723622	0.144176	0.127211	0.011138	0.005827
84	411231	3723622	0.159439	0.141589	0.011527	0.006323
85	411291	3723622	0.175742	0.15702	0.011887	0.006836
86	411351	3723622	0.192799	0.173237	0.012185	0.007377

OCSD - Plant No. 2 GWRS Conveyance Facilities Project **Mitigated Risk Summary**

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
87	411111	3723682	0.114539	0.100328	0.009591	0.00462
88	411171	3723682	0.125082	0.11018	0.009924	0.004977
89	411231	3723682	0.136093	0.120509	0.010247	0.005337
90	411291	3723682	0.148206	0.131928	0.010553	0.005725
91	411351	3723682	0.160176	0.143243	0.010813	0.00612
92	411111	3723742	0.101314	0.088646	0.008635	0.004033
93	411171	3723742	0.109282	0.096065	0.008915	0.004302
94	411231	3723742	0.117545	0.103782	0.009189	0.004574
95	411291	3723742	0.126158	0.11185	0.009449	0.004859
96	411351	3723742	0.134888	0.120055	0.009676	0.005156
97	411111	3723802	0.089972	0.0786	0.007825	0.003547
98	411171	3723802	0.096199	0.084377	0.008064	0.003757
99	411231	3723802	0.102544	0.090276	0.008299	0.003969
100	411291	3723802	0.108882	0.096176	0.008522	0.004184
101	411351	3723802	0.115496	0.102358	0.008722	0.004415
102	410709.5	3722302	0.249646	0.032707	0.215273	0.001666
103	410679.5	3722332	0.227445	0.032813	0.192953	0.001678
104	410709.5	3722332	0.353535	0.03389	0.317912	0.001733
105	410649.5	3722362	0.146043	0.032748	0.111614	0.001681
106	410679.5	3722362	0.185389	0.033901	0.149747	0.001741
107	410709.5	3722362	0.253279	0.035012	0.216468	0.001799
108	410739.5	3722362	0.309575	0.036142	0.271575	0.001858
109	410649.5	3722392	0.131304	0.033821	0.09574	0.001743
110	410679.5	3722392	0.159251	0.034958	0.12249	0.001804
111	410709.5	3722392	0.202495	0.036154	0.164474	0.001867
112	410739.5	3722392	0.279875	0.037426	0.240516	0.001933
113	410769.5	3722392	0.258542	0.03865	0.217893	0.001998
114	410619.5	3722422	0.10464	0.033649	0.069253	0.001739
115	410649.5	3722422	0.120321	0.034823	0.083696	0.001803
116	410679.5	3722422	0.141282	0.036084	0.103327	0.00187
117	410709.5	3722422	0.171695	0.037369	0.132387	0.001939
118	410739.5	3722422	0.219994	0.038699	0.179284	0.00201
119	410769.5	3722422	0.310184	0.040111	0.267988	0.002085
120	410799.5	3722422	0.293182	0.041484	0.24954	0.002158
121	410589.5	3722452	0.088814	0.033388	0.053697	0.001729
122	410619.5	3722452	0.099083	0.034594	0.062693	0.001796
123	410649.5	3722452	0.111917	0.035881	0.07417	0.001865
124	410679.5	3722452	0.12856	0.037222	0.0894	0.001938
125	410709.5	3722452	0.151482	0.038596	0.110873	0.002013
126	410739.5	3722452	0.18494	0.040017	0.142832	0.00209
127	410769.5	3722452	0.238263	0.041556	0.194534	0.002172
128	410799.5	3722452	0.344568	0.043032	0.299285	0.002252
129	410649.5	3722482	0.105543	0.036935	0.066679	0.001929

OCSD - Plant No. 2 GWRS Conveyance Facilities Project **Mitigated Risk Summary**

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
130	410679.5	3722482	0.119253	0.038371	0.078874	0.002008
131	410709.5	3722482	0.137341	0.039844	0.095407	0.002089
132	410739.5	3722482	0.162106	0.041389	0.118542	0.002174
133	410769.5	3722482	0.198615	0.042982	0.153371	0.002261
134	410799.5	3722482	0.259826	0.04468	0.212793	0.002353
135	410829.5	3722482	0.324912	0.046452	0.276012	0.002448
136	410679.5	3722512	0.112109	0.039547	0.070482	0.00208
137	410709.5	3722512	0.126956	0.041114	0.083673	0.002168
138	410739.5	3722512	0.146302	0.042789	0.101252	0.002261
139	410769.5	3722512	0.172289	0.044462	0.125473	0.002354
140	410799.5	3722512	0.213369	0.04636	0.164551	0.002458
141	410829.5	3722512	0.283198	0.048328	0.232305	0.002565
142	410859.5	3722512	0.33869	0.050293	0.285726	0.002671
143	410709.5	3722542	0.119077	0.042417	0.074411	0.002249
144	410739.5	3722542	0.134853	0.044212	0.088291	0.00235
145	410769.5	3722542	0.154954	0.046017	0.106485	0.002452
146	410799.5	3722542	0.184721	0.048084	0.13407	0.002567
147	410829.5	3722542	0.229432	0.050203	0.176545	0.002684
148	410859.5	3722542	0.310283	0.052393	0.255085	0.002805
149	410739.5	3722572	0.126242	0.045633	0.078168	0.002441
150	410769.5	3722572	0.142649	0.047619	0.092476	0.002554
151	410799.5	3722572	0.165497	0.04985	0.112967	0.00268
152	410829.5	3722572	0.197167	0.052125	0.142233	0.002809
153	410859.5	3722572	0.245643	0.054489	0.188213	0.002941
154	410889.5	3722572	0.341955	0.057108	0.281761	0.003086
155	410769.5	3722602	0.133668	0.049275	0.081733	0.002661
156	410799.5	3722602	0.151778	0.051625	0.097357	0.002796
157	410829.5	3722602	0.175727	0.054093	0.118696	0.002938
158	410859.5	3722602	0.209895	0.056704	0.150103	0.003088
159	410889.5	3722602	0.266984	0.059566	0.204169	0.003249
160	410919.5	3722602	0.378908	0.062506	0.312988	0.003414
161	410799.5	3722632	0.141831	0.053461	0.085453	0.002917
162	410829.5	3722632	0.16081	0.056101	0.101637	0.003072
163	410859.5	3722632	0.186972	0.058987	0.124745	0.00324
164	410889.5	3722632	0.224984	0.062051	0.159515	0.003418
165	410919.5	3722632	0.288064	0.065316	0.219142	0.003605
166	410949.5	3722632	0.35177	0.06882	0.279146	0.003804
167	410829.5	3722662	0.149995	0.058135	0.08865	0.00321
168	410859.5	3722662	0.171512	0.061367	0.106743	0.003402
169	410889.5	3722662	0.200099	0.06473	0.131769	0.003601
170	410919.5	3722662	0.242605	0.068324	0.170468	0.003813
171	410949.5	3722662	0.315898	0.072183	0.239678	0.004037
172	410979.5	3722662	0.311586	0.076227	0.231089	0.00427

OCSD - Plant No. 2 GWRS Conveyance Facilities Project **Mitigated Risk Summary**

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
173	410859.5	3722692	0.160043	0.063716	0.092762	0.003565
174	410889.5	3722692	0.182615	0.067356	0.111473	0.003786
175	410919.5	3722692	0.213785	0.071296	0.138465	0.004025
176	410949.5	3722692	0.261304	0.075568	0.181455	0.004281
177	410979.5	3722692	0.344011	0.080081	0.259381	0.004549
178	410889.5	3722722	0.170266	0.070019	0.096269	0.003978
179	410919.5	3722722	0.194398	0.074267	0.115888	0.004243
180	410949.5	3722722	0.229371	0.079054	0.145778	0.004538
181	410979.5	3722722	0.280543	0.084021	0.191678	0.004844
182	411009.5	3722722	0.382411	0.089704	0.28752	0.005187
183	410919.5	3722752	0.182044	0.077465	0.100101	0.004478
184	410949.5	3722752	0.207918	0.082444	0.120676	0.004798
185	410979.5	3722752	0.245698	0.088109	0.152431	0.005158
186	411009.5	3722752	0.306673	0.094412	0.206707	0.005554
187	411039.5	3722752	0.427755	0.10129	0.320486	0.00598
188	410949.5	3722782	0.194857	0.08614	0.103636	0.005081
189	410979.5	3722782	0.224991	0.092458	0.127036	0.005497
190	411009.5	3722782	0.266073	0.099168	0.160965	0.00594
191	411039.5	3722782	0.336281	0.106956	0.222879	0.006446
192	411069.5	3722782	0.40088	0.115445	0.278448	0.006987
193	410979.5	3722812	0.210248	0.09665	0.107761	0.005838
194	411009.5	3722812	0.243456	0.104315	0.132777	0.006364
195	411039.5	3722812	0.289479	0.112585	0.169961	0.006932
196	411069.5	3722812	0.371592	0.122425	0.241571	0.007596
197	411099.5	3722812	0.368505	0.133188	0.227007	0.008309
198	411009.5	3722842	0.227769	0.109252	0.111729	0.006788
199	411039.5	3722842	0.26474	0.118691	0.13858	0.007469
200	411069.5	3722842	0.317937	0.12927	0.180435	0.008233
201	411099.5	3722842	0.414916	0.141925	0.26386	0.009131
202	411039.5	3722872	0.248254	0.124582	0.115661	0.008011
203	411069.5	3722872	0.288957	0.136232	0.143817	0.008908
204	411099.5	3722872	0.353856	0.150626	0.193223	0.010007
205	411129.5	3722872	0.46766	0.166825	0.289592	0.011243
206	411069.5	3722902	0.271776	0.143205	0.118965	0.009607
207	411099.5	3722902	0.320955	0.158935	0.151113	0.010907
208	411129.5	3722902	0.394172	0.177205	0.204528	0.012439
209	411159.5	3722902	0.534487	0.199477	0.320711	0.014299
210	411069.5	3722932	0.260547	0.149844	0.10041	0.010293
211	411099.5	3722932	0.302732	0.167462	0.123423	0.011847
212	411129.5	3722932	0.35996	0.18805	0.158173	0.013737
213	411159.5	3722932	0.448757	0.212987	0.219672	0.016098
214	411189.5	3722932	0.533507	0.243605	0.27086	0.019043
215	411069.5	3722962	0.253487	0.156313	0.08621	0.010964

OCSD - Plant No. 2 GWRS Conveyance Facilities Project **Mitigated Risk Summary**

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
216	411099.5	3722962	0.29034	0.174928	0.102694	0.012718
217	411129.5	3722962	0.338802	0.197391	0.126454	0.014957
218	411159.5	3722962	0.407018	0.225055	0.164076	0.017886
219	411189.5	3722962	0.515497	0.25998	0.233696	0.021821
220	411099.5	3722992	0.283453	0.182541	0.087332	0.01358
221	411129.5	3722992	0.327547	0.2069	0.104474	0.016174
222	411159.5	3722992	0.386452	0.237064	0.129705	0.019683
223	411189.5	3722992	0.47091	0.275368	0.170897	0.024645
224	411219.5	3722992	0.609526	0.325981	0.251438	0.032107
225	411129.5	3723022	0.319294	0.214737	0.087361	0.017197
226	411159.5	3723022	0.372903	0.246905	0.10479	0.021208
227	411189.5	3723022	0.445542	0.287678	0.130799	0.027065
228	411219.5	3723022	0.551606	0.340952	0.174318	0.036336
229	411249.5	3723022	0.731777	0.413694	0.26501	0.053073
230	411159.5	3723052	0.363346	0.254905	0.086085	0.022356
231	411189.5	3723052	0.429439	0.297568	0.103053	0.028818
232	411219.5	3723052	0.518669	0.351568	0.128083	0.039017
233	411249.5	3723052	0.656089	0.426063	0.171852	0.058174
234	411279.5	3723052	0.897591	0.528606	0.265896	0.103089
235	411189.5	3723082	0.415279	0.303344	0.08253	0.029405
236	411219.5	3723082	0.492624	0.356631	0.096819	0.039174
237	411249.5	3723082	0.602696	0.429052	0.117638	0.056006
238	411279.5	3723082	0.763535	0.528	0.148514	0.087022
239	411309.5	3723082	0.984895	0.660804	0.181004	0.143087
240	411219.5	3723112	0.471189	0.358243	0.075458	0.037488
241	411249.5	3723112	0.566926	0.429875	0.085912	0.05114
242	411279.5	3723112	0.685297	0.51759	0.096672	0.071035
243	411309.5	3723112	0.855299	0.64321	0.106438	0.105651
244	411219.5	3723142	0.45126	0.355992	0.060496	0.034771
245	411249.5	3723142	0.536317	0.424699	0.066112	0.045506
246	411279.5	3723142	0.641974	0.50991	0.071506	0.060558
247	411309.5	3723142	0.777218	0.618831	0.07554	0.082847
248	411339.5	3723142	0.974403	0.776305	0.075795	0.122303
249	411249.5	3723172	0.509462	0.415975	0.053272	0.040215
250	411279.5	3723172	0.605418	0.497307	0.056381	0.05173
251	411309.5	3723172	0.725709	0.599211	0.058735	0.067763
252	411339.5	3723172	0.895672	0.742736	0.059357	0.093578
253	411369.5	3723172	1.141526	0.946572	0.057061	0.137892
254	411249.5	3723202	0.484699	0.404887	0.044388	0.035423
255	411279.5	3723202	0.569968	0.479557	0.046408	0.044004
256	411309.5	3723202	0.686452	0.581975	0.047994	0.056483
257	411339.5	3723202	0.834452	0.712288	0.048565	0.073599
258	411369.5	3723202	1.057235	0.907628	0.047655	0.101951

OCSD - Plant No. 2 GWRS Conveyance Facilities Project **Mitigated Risk Summary**

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
259	411399.5	3723202	1.381334	1.18734	0.04517	0.148824
260	411279.5	3723232	0.539527	0.462487	0.039328	0.037711
261	411309.5	3723232	0.645531	0.558271	0.040457	0.046802
262	411339.5	3723232	0.787075	0.686847	0.041002	0.059225
263	411369.5	3723232	0.977183	0.860493	0.04062	0.076069
264	411399.5	3723232	1.295776	1.151482	0.039286	0.105008
265	411309.5	3723262	0.605273	0.531548	0.034882	0.038843
266	411339.5	3723262	0.731732	0.649144	0.035368	0.047221
267	411369.5	3723262	0.902227	0.809254	0.03524	0.057733
268	411399.5	3723262	1.183399	1.075411	0.034524	0.073465
269	411429.5	3723262	1.652216	1.524662	0.033138	0.094416
270	411339.5	3723292	0.678246	0.609161	0.031003	0.038083
271	411369.5	3723292	0.830169	0.754286	0.03106	0.044822
272	411399.5	3723292	1.058531	0.974851	0.030629	0.053051
273	411429.5	3723292	1.458578	1.365227	0.029764	0.063587
274	411339.5	3723322	0.617462	0.559104	0.027536	0.030822
275	411369.5	3723322	0.745344	0.682527	0.027656	0.03516
276	411399.5	3723322	0.929687	0.862147	0.027442	0.040098
277	411429.5	3723322	1.202248	1.130155	0.026874	0.045219
278	411459.5	3723322	1.685444	1.608478	0.026	0.050966
279	411369.5	3723352	0.658144	0.605096	0.024854	0.028194
280	411399.5	3723352	0.79433	0.738272	0.024764	0.031294
281	411429.5	3723352	0.968988	0.910321	0.024402	0.034264
282	411459.5	3723352	1.247985	1.186404	0.023797	0.037784
283	411369.5	3723382	0.565052	0.51966	0.022524	0.022867
284	411399.5	3723382	0.659829	0.612375	0.022504	0.024949
285	411429.5	3723382	0.775373	0.726029	0.022279	0.027064
286	411459.5	3723382	0.919273	0.868223	0.021857	0.029193
287	411489.5	3723382	1.099	1.046718	0.021253	0.031029
288	411369.5	3723412	0.490212	0.450543	0.020542	0.019127
289	411399.5	3723412	0.556123	0.514943	0.02057	0.02061
290	411429.5	3723412	0.630997	0.58843	0.020442	0.022125
291	411459.5	3723412	0.715906	0.672132	0.020149	0.023624
292	411489.5	3723412	0.812898	0.768277	0.019703	0.024918
293	411369.5	3723442	0.419435	0.384465	0.018848	0.016122
294	411399.5	3723442	0.464574	0.428461	0.018903	0.01721
295	411429.5	3723442	0.512069	0.474946	0.018829	0.018294
296	411459.5	3723442	0.564355	0.526341	0.018629	0.019385
297	411489.5	3723442	0.625698	0.586972	0.018311	0.020415
298	411369.5	3723472	0.365019	0.333748	0.017378	0.013893
299	411399.5	3723472	0.396919	0.364751	0.017452	0.014716
300	411429.5	3723472	0.427978	0.395054	0.01742	0.015504
301	411459.5	3723472	0.4633	0.429679	0.017286	0.016335

OCSD - Plant No. 2 GWRS Conveyance Facilities Project **Mitigated Risk Summary**

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
302	411489.5	3723472	0.506612	0.472375	0.01706	0.017178
303	411519.5	3723472	0.549614	0.515148	0.01672	0.017746
304	411369.5	3723502	0.317668	0.289509	0.016094	0.012065
305	411399.5	3723502	0.341603	0.312702	0.016178	0.012722
306	411429.5	3723502	0.364201	0.334678	0.016177	0.013346
307	411459.5	3723502	0.389957	0.359853	0.016096	0.014008
308	411489.5	3723502	0.420188	0.389589	0.015932	0.014667
309	411519.5	3723502	0.449628	0.418813	0.015673	0.015141
310	411369.5	3723532	0.279285	0.253722	0.014962	0.010602
311	411399.5	3723532	0.297487	0.271305	0.015052	0.01113
312	411429.5	3723532	0.314832	0.288116	0.015076	0.011639
313	411459.5	3723532	0.335016	0.307791	0.015034	0.01219
314	411489.5	3723532	0.35759	0.329955	0.014912	0.012723
315	411519.5	3723532	0.379832	0.351978	0.014716	0.013139
316	411369.5	3723562	0.24807	0.2247	0.013957	0.009414
317	411399.5	3723562	0.261779	0.237894	0.014051	0.009834
318	411429.5	3723562	0.274371	0.250057	0.014084	0.010229
319	411459.5	3723562	0.289279	0.264547	0.014066	0.010665
320	411489.5	3723562	0.306536	0.281435	0.013992	0.011109
321	411519.5	3723562	0.322485	0.297192	0.013844	0.011449
322	411549.5	3723562	0.339707	0.314354	0.013637	0.011715
323	411369.5	3723592	0.221042	0.199577	0.013061	0.008404
324	411399.5	3723592	0.232361	0.210445	0.013156	0.00876
325	411429.5	3723592	0.242416	0.220125	0.013201	0.00909
326	411459.5	3723592	0.254009	0.231363	0.0132	0.009446
327	411489.5	3723592	0.267769	0.244792	0.013155	0.009821
328	411519.5	3723592	0.280599	0.257429	0.013047	0.010122
329	411549.5	3723592	0.293684	0.270441	0.012886	0.010358
330	411369.5	3723622	0.197981	0.178185	0.012251	0.007545
331	411399.5	3723622	0.206811	0.186631	0.012344	0.007835
332	411429.5	3723622	0.215909	0.195373	0.012402	0.008135
333	411459.5	3723622	0.225479	0.204622	0.012418	0.008439
334	411489.5	3723622	0.235467	0.214347	0.012388	0.008732
335	411519.5	3723622	0.245929	0.224619	0.012312	0.008997
336	411549.5	3723622	0.257431	0.236006	0.012192	0.009233
337	411369.5	3723652	0.179983	0.161597	0.011532	0.006854
338	411399.5	3723652	0.187292	0.168567	0.011624	0.007101
339	411429.5	3723652	0.194609	0.175574	0.011685	0.00735
340	411459.5	3723652	0.202181	0.18287	0.01171	0.007601
341	411489.5	3723652	0.211153	0.191586	0.011699	0.007868
342	411519.5	3723652	0.219803	0.200057	0.011646	0.0081
343	411549.5	3723652	0.228465	0.20862	0.01155	0.008295
344	411369.5	3723682	0.163841	0.146723	0.010874	0.006243

OCSD - Plant No. 2 GWRS Conveyance Facilities Project **Mitigated Risk Summary**

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
345	411399.5	3723682	0.169986	0.152567	0.010964	0.006455
346	411429.5	3723682	0.176089	0.158392	0.011029	0.006668
347	411459.5	3723682	0.182781	0.164827	0.011063	0.006891
348	411489.5	3723682	0.189522	0.171353	0.011064	0.007105
349	411519.5	3723682	0.196396	0.178065	0.011029	0.007302
350	411549.5	3723682	0.204059	0.185614	0.010958	0.007487
351	411369.5	3723712	0.149731	0.133743	0.010277	0.005711
352	411399.5	3723712	0.15504	0.13878	0.010364	0.005896
353	411429.5	3723712	0.16005	0.143544	0.01043	0.006076
354	411459.5	3723712	0.165384	0.148654	0.010469	0.006262
355	411489.5	3723712	0.17173	0.154787	0.01048	0.006463
356	411519.5	3723712	0.177573	0.160474	0.010461	0.006637
357	411549.5	3723712	0.183655	0.16645	0.010409	0.006796
358	411369.5	3723742	0.137286	0.122312	0.009731	0.005243
359	411399.5	3723742	0.141712	0.126495	0.009816	0.005401
360	411429.5	3723742	0.146416	0.130967	0.009882	0.005568
361	411459.5	3723742	0.151167	0.135507	0.009926	0.005734
362	411489.5	3723742	0.156279	0.140432	0.009944	0.005902
363	411519.5	3723742	0.161168	0.145176	0.009937	0.006055
364	411549.5	3723742	0.166359	0.15026	0.009901	0.006198
365	411369.5	3723772	0.126934	0.112857	0.009232	0.004845
366	411399.5	3723772	0.130697	0.116401	0.009314	0.004982
367	411429.5	3723772	0.134671	0.120167	0.009379	0.005126
368	411459.5	3723772	0.138858	0.12416	0.009425	0.005273
369	411489.5	3723772	0.143011	0.128145	0.00945	0.005416
370	411519.5	3723772	0.147533	0.132524	0.00945	0.005558
371	411549.5	3723772	0.151687	0.136577	0.009429	0.005681
372	411369.5	3723802	0.117433	0.104174	0.008773	0.004485
373	411399.5	3723802	0.120773	0.107314	0.008852	0.004607
374	411429.5	3723802	0.124166	0.110517	0.008916	0.004732
375	411459.5	3723802	0.127781	0.113955	0.008964	0.004862
376	411489.5	3723802	0.131388	0.117406	0.008994	0.004988
377	411519.5	3723802	0.135353	0.121235	0.009002	0.005116
378	411549.5	3723802	0.139033	0.124815	0.00899	0.005228
379	411549.5	3723802	2.347856	2.283087	0.022251	0.042519
380	411549.5	3723802	3.118295	3.053435	0.021724	0.043136
381	411549.5	3723802	1.737429	1.679611	0.021267	0.036552
382	411549.5	3723802	1.850824	1.794943	0.020589	0.035292
383	411549.5	3723802	1.294105	1.244959	0.019508	0.029638
384	411549.5	3723802	0.957328	0.913804	0.018491	0.025034
385	411549.5	3723802	0.78272	0.743403	0.017514	0.021804
386	411549.5	3723802	0.634334	0.599266	0.016398	0.018671
387	411549.5	3723802	0.531627	0.499868	0.015449	0.016311

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk Summary

Receptor #	X	Y	Total	Onsite	P2TR1	P2TR2
388	411549.5	3723802	0.456603	0.427482	0.014642	0.014478
389	411549.5	3723802	0.397195	0.370259	0.013956	0.01298
390	411549.5	3723802	0.35617	0.330948	0.013363	0.011859

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2	Max	Receptor #
1	0.001329	5.42E-04	7.57E-04	2.92E-05	0.008785	57
2	0.001619	5.84E-04	1.00E-03	3.16E-05		
3	0.001089	5.27E-04	5.34E-04	2.84E-05		
4	0.001264	5.70E-04	6.63E-04	3.09E-05		
5	0.001496	6.17E-04	8.45E-04	3.37E-05		
6	0.001825	6.69E-04	1.12E-03	3.67E-05		
7	0.001066	5.52E-04	4.84E-04	3.00E-05		
8	0.001218	5.98E-04	5.87E-04	3.27E-05		
9	0.001414	6.50E-04	7.28E-04	3.58E-05		
10	0.001676	7.09E-04	9.27E-04	3.94E-05		
11	0.002048	7.77E-04	1.23E-03	4.34E-05		
12	0.001184	6.25E-04	5.25E-04	3.44E-05		
13	0.001356	6.83E-04	6.35E-04	3.79E-05		
14	0.001578	7.49E-04	7.87E-04	4.20E-05		
15	0.001876	8.25E-04	1.00E-03	4.67E-05		
16	0.002295	9.11E-04	1.33E-03	5.20E-05		
17	0.001318	7.16E-04	5.62E-04	4.01E-05		
18	0.001515	7.90E-04	6.80E-04	4.48E-05		
19	0.001769	8.76E-04	8.42E-04	5.02E-05		
20	0.002106	9.75E-04	1.07E-03	5.65E-05		
21	0.002597	1.09E-03	1.44E-03	6.41E-05		
22	0.001472	8.30E-04	5.94E-04	4.74E-05		
23	0.001699	9.26E-04	7.19E-04	5.37E-05		
24	0.001989	1.04E-03	8.91E-04	6.11E-05		
25	0.002385	1.17E-03	1.14E-03	7.02E-05		
26	0.002952	1.33E-03	1.54E-03	8.12E-05		
27	0.001653	9.73E-04	6.22E-04	5.70E-05		
28	0.001916	1.10E-03	7.53E-04	6.55E-05		
29	0.002265	1.25E-03	9.36E-04	7.63E-05		
30	0.002738	1.44E-03	1.21E-03	8.99E-05		
31	0.003434	1.68E-03	1.65E-03	1.07E-04		
32	0.00187	1.16E-03	6.45E-04	6.97E-05		
33	0.002189	1.33E-03	7.81E-04	8.20E-05		
34	0.002614	1.54E-03	9.72E-04	9.82E-05		
35	0.003191	1.82E-03	1.26E-03	1.20E-04		
36	0.004086	2.18E-03	1.75E-03	1.50E-04		
37	0.00214	1.39E-03	6.59E-04	8.71E-05		
38	0.002537	1.63E-03	7.98E-04	1.06E-04		
39	0.003071	1.94E-03	9.94E-04	1.31E-04		
40	0.003842	2.37E-03	1.30E-03	1.69E-04		
41	0.002495	1.72E-03	6.66E-04	1.12E-04		
42	0.003008	2.06E-03	8.05E-04	1.41E-04		
43	0.003721	2.53E-03	1.00E-03	1.85E-04		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
44	0.004776	3.21E-03	1.31E-03	2.57E-04
45	0.002945	2.14E-03	6.56E-04	1.48E-04
46	0.003627	2.64E-03	7.86E-04	1.96E-04
47	0.004615	3.37E-03	9.71E-04	2.75E-04
48	0.006133	4.46E-03	1.25E-03	4.21E-04
49	0.00445	3.44E-03	7.34E-04	2.75E-04
50	0.005787	4.51E-03	8.71E-04	4.04E-04
51	0.00424	3.41E-03	5.69E-04	2.58E-04
52	0.005418	4.42E-03	6.40E-04	3.59E-04
53	0.007157	5.92E-03	7.14E-04	5.23E-04
54	0.003988	3.30E-03	4.53E-04	2.31E-04
55	0.005006	4.21E-03	4.94E-04	3.04E-04
56	0.006508	5.56E-03	5.35E-04	4.14E-04
57	0.008785	7.64E-03	5.70E-04	5.78E-04
58	0.003687	3.12E-03	3.71E-04	2.00E-04
59	0.004563	3.91E-03	3.97E-04	2.52E-04
60	0.005808	5.06E-03	4.23E-04	3.22E-04
61	0.007669	6.81E-03	4.45E-04	4.17E-04
62	0.003384	2.90E-03	3.10E-04	1.72E-04
63	0.004096	3.56E-03	3.29E-04	2.07E-04
64	0.005055	4.46E-03	3.46E-04	2.50E-04
65	0.006403	5.74E-03	3.62E-04	3.02E-04
66	0.008376	7.64E-03	3.72E-04	3.63E-04
67	0.003044	2.63E-03	2.65E-04	1.45E-04
68	0.003602	3.16E-03	2.78E-04	1.69E-04
69	0.004315	3.83E-03	2.91E-04	1.96E-04
70	0.005221	4.69E-03	3.03E-04	2.26E-04
71	0.006398	5.83E-03	3.11E-04	2.60E-04
72	0.002711	2.36E-03	2.29E-04	1.23E-04
73	0.003132	2.75E-03	2.39E-04	1.39E-04
74	0.003646	3.24E-03	2.49E-04	1.57E-04
75	0.004236	3.80E-03	2.58E-04	1.76E-04
76	0.004934	4.47E-03	2.65E-04	1.96E-04
77	0.002396	2.09E-03	2.01E-04	1.04E-04
78	0.002706	2.38E-03	2.09E-04	1.16E-04
79	0.003069	2.72E-03	2.17E-04	1.28E-04
80	0.003455	3.09E-03	2.24E-04	1.40E-04
81	0.003885	3.50E-03	2.30E-04	1.54E-04
82	0.002112	1.84E-03	1.78E-04	8.97E-05
83	0.002341	2.06E-03	1.84E-04	9.78E-05
84	0.002588	2.29E-03	1.91E-04	1.06E-04
85	0.002852	2.54E-03	1.97E-04	1.15E-04
86	0.003129	2.80E-03	2.02E-04	1.24E-04

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
87	0.00186	1.62E-03	1.59E-04	7.75E-05
88	0.002031	1.78E-03	1.64E-04	8.35E-05
89	0.002209	1.95E-03	1.70E-04	8.96E-05
90	0.002406	2.13E-03	1.75E-04	9.61E-05
91	0.0026	2.32E-03	1.79E-04	1.03E-04
92	0.001645	1.43E-03	1.43E-04	6.77E-05
93	0.001774	1.55E-03	1.48E-04	7.22E-05
94	0.001908	1.68E-03	1.52E-04	7.68E-05
95	0.002048	1.81E-03	1.57E-04	8.15E-05
96	0.002189	1.94E-03	1.60E-04	8.65E-05
97	0.001461	1.27E-03	1.30E-04	5.95E-05
98	0.001562	1.37E-03	1.34E-04	6.30E-05
99	0.001665	1.46E-03	1.37E-04	6.66E-05
100	0.001768	1.56E-03	1.41E-04	7.02E-05
101	0.001875	1.66E-03	1.44E-04	7.41E-05
102	0.004123	5.29E-04	3.57E-03	2.80E-05
103	0.003755	5.31E-04	3.20E-03	2.82E-05
104	0.005843	5.48E-04	5.27E-03	2.91E-05
105	0.002407	5.30E-04	1.85E-03	2.82E-05
106	0.003058	5.49E-04	2.48E-03	2.92E-05
107	0.004182	5.67E-04	3.59E-03	3.02E-05
108	0.005114	5.85E-04	4.50E-03	3.12E-05
109	0.002162	5.47E-04	1.59E-03	2.92E-05
110	0.002625	5.66E-04	2.03E-03	3.03E-05
111	0.003341	5.85E-04	2.72E-03	3.13E-05
112	0.004622	6.06E-04	3.98E-03	3.24E-05
113	0.004268	6.25E-04	3.61E-03	3.35E-05
114	0.001721	5.44E-04	1.15E-03	2.92E-05
115	0.00198	5.63E-04	1.39E-03	3.02E-05
116	0.002327	5.84E-04	1.71E-03	3.14E-05
117	0.00283	6.05E-04	2.19E-03	3.25E-05
118	0.003629	6.26E-04	2.97E-03	3.37E-05
119	0.005123	6.49E-04	4.44E-03	3.50E-05
120	0.004841	6.71E-04	4.13E-03	3.62E-05
121	0.001459	5.40E-04	8.89E-04	2.90E-05
122	0.001628	5.60E-04	1.04E-03	3.01E-05
123	0.00184	5.81E-04	1.23E-03	3.13E-05
124	0.002116	6.02E-04	1.48E-03	3.25E-05
125	0.002495	6.25E-04	1.84E-03	3.38E-05
126	0.003048	6.48E-04	2.37E-03	3.51E-05
127	0.003931	6.72E-04	3.22E-03	3.65E-05
128	0.005691	6.96E-04	4.96E-03	3.78E-05
129	0.001734	5.98E-04	1.10E-03	3.24E-05

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
130	0.001961	6.21E-04	1.31E-03	3.37E-05
131	0.00226	6.45E-04	1.58E-03	3.51E-05
132	0.00267	6.70E-04	1.96E-03	3.65E-05
133	0.003274	6.95E-04	2.54E-03	3.79E-05
134	0.004287	7.23E-04	3.52E-03	3.95E-05
135	0.005364	7.52E-04	4.57E-03	4.11E-05
136	0.001842	6.40E-04	1.17E-03	3.49E-05
137	0.002088	6.65E-04	1.39E-03	3.64E-05
138	0.002407	6.92E-04	1.68E-03	3.79E-05
139	0.002837	7.19E-04	2.08E-03	3.95E-05
140	0.003517	7.50E-04	2.73E-03	4.12E-05
141	0.004673	7.82E-04	3.85E-03	4.30E-05
142	0.005591	8.14E-04	4.73E-03	4.48E-05
143	0.001957	6.86E-04	1.23E-03	3.77E-05
144	0.002217	7.15E-04	1.46E-03	3.94E-05
145	0.002549	7.45E-04	1.76E-03	4.11E-05
146	0.003042	7.78E-04	2.22E-03	4.31E-05
147	0.003782	8.12E-04	2.92E-03	4.50E-05
148	0.00512	8.48E-04	4.23E-03	4.71E-05
149	0.002074	7.38E-04	1.29E-03	4.10E-05
150	0.002345	7.71E-04	1.53E-03	4.29E-05
151	0.002723	8.07E-04	1.87E-03	4.50E-05
152	0.003246	8.43E-04	2.36E-03	4.71E-05
153	0.004048	8.82E-04	3.12E-03	4.94E-05
154	0.005643	9.24E-04	4.67E-03	5.18E-05
155	0.002196	7.97E-04	1.35E-03	4.46E-05
156	0.002495	8.35E-04	1.61E-03	4.69E-05
157	0.002891	8.75E-04	1.97E-03	4.93E-05
158	0.003456	9.18E-04	2.49E-03	5.18E-05
159	0.0044	9.64E-04	3.38E-03	5.45E-05
160	0.006253	1.01E-03	5.18E-03	5.73E-05
161	0.002329	8.65E-04	1.42E-03	4.89E-05
162	0.002643	9.08E-04	1.68E-03	5.16E-05
163	0.003075	9.54E-04	2.07E-03	5.44E-05
164	0.003703	1.00E-03	2.64E-03	5.74E-05
165	0.004747	1.06E-03	3.63E-03	6.05E-05
166	0.005801	1.11E-03	4.62E-03	6.38E-05
167	0.002463	9.41E-04	1.47E-03	5.39E-05
168	0.002818	9.93E-04	1.77E-03	5.71E-05
169	0.00329	1.05E-03	2.18E-03	6.04E-05
170	0.003993	1.11E-03	2.82E-03	6.40E-05
171	0.005206	1.17E-03	3.97E-03	6.77E-05
172	0.005133	1.23E-03	3.83E-03	7.17E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
173	0.002627	1.03E-03	1.54E-03	5.98E-05
174	0.003	1.09E-03	1.85E-03	6.35E-05
175	0.003515	1.15E-03	2.29E-03	6.75E-05
176	0.0043	1.22E-03	3.01E-03	7.18E-05
177	0.005668	1.30E-03	4.30E-03	7.63E-05
178	0.002794	1.13E-03	1.59E-03	6.67E-05
179	0.003192	1.20E-03	1.92E-03	7.12E-05
180	0.00377	1.28E-03	2.41E-03	7.61E-05
181	0.004616	1.36E-03	3.17E-03	8.13E-05
182	0.006301	1.45E-03	4.76E-03	8.70E-05
183	0.002987	1.25E-03	1.66E-03	7.51E-05
184	0.003413	1.33E-03	2.00E-03	8.05E-05
185	0.004037	1.43E-03	2.52E-03	8.66E-05
186	0.005045	1.53E-03	3.42E-03	9.32E-05
187	0.007048	1.64E-03	5.31E-03	1.00E-04
188	0.003196	1.39E-03	1.72E-03	8.53E-05
189	0.003692	1.50E-03	2.10E-03	9.22E-05
190	0.00437	1.60E-03	2.67E-03	9.97E-05
191	0.00553	1.73E-03	3.69E-03	1.08E-04
192	0.006597	1.87E-03	4.61E-03	1.17E-04
193	0.003447	1.56E-03	1.78E-03	9.80E-05
194	0.003994	1.69E-03	2.20E-03	1.07E-04
195	0.004753	1.82E-03	2.82E-03	1.16E-04
196	0.00611	1.98E-03	4.00E-03	1.27E-04
197	0.006055	2.16E-03	3.76E-03	1.39E-04
198	0.003732	1.77E-03	1.85E-03	1.14E-04
199	0.004341	1.92E-03	2.30E-03	1.25E-04
200	0.005218	2.09E-03	2.99E-03	1.38E-04
201	0.00682	2.30E-03	4.37E-03	1.53E-04
202	0.004066	2.02E-03	1.92E-03	1.34E-04
203	0.004736	2.20E-03	2.38E-03	1.49E-04
204	0.005806	2.44E-03	3.20E-03	1.68E-04
205	0.007685	2.70E-03	4.80E-03	1.89E-04
206	0.004449	2.32E-03	1.97E-03	1.61E-04
207	0.005258	2.57E-03	2.50E-03	1.83E-04
208	0.006464	2.87E-03	3.39E-03	2.09E-04
209	0.00878	3.23E-03	5.31E-03	2.40E-04
210	0.00426	2.42E-03	1.66E-03	1.73E-04
211	0.004953	2.71E-03	2.04E-03	1.99E-04
212	0.005893	3.04E-03	2.62E-03	2.31E-04
213	0.007355	3.45E-03	3.64E-03	2.70E-04
214	0.008748	3.94E-03	4.49E-03	3.20E-04
215	0.004141	2.53E-03	1.43E-03	1.84E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
216	0.004745	2.83E-03	1.70E-03	2.13E-04
217	0.005539	3.19E-03	2.09E-03	2.51E-04
218	0.006659	3.64E-03	2.72E-03	3.00E-04
219	0.008444	4.21E-03	3.87E-03	3.66E-04
220	0.004628	2.95E-03	1.45E-03	2.28E-04
221	0.00535	3.35E-03	1.73E-03	2.71E-04
222	0.006315	3.84E-03	2.15E-03	3.30E-04
223	0.0077	4.46E-03	2.83E-03	4.14E-04
224	0.009978	5.27E-03	4.16E-03	5.39E-04
225	0.00521	3.47E-03	1.45E-03	2.89E-04
226	0.006087	4.00E-03	1.74E-03	3.56E-04
227	0.007276	4.65E-03	2.17E-03	4.54E-04
228	0.009014	5.52E-03	2.89E-03	6.10E-04
229	0.011974	6.69E-03	4.39E-03	8.91E-04
230	0.005926	4.12E-03	1.43E-03	3.75E-04
231	0.007005	4.81E-03	1.71E-03	4.84E-04
232	0.008465	5.69E-03	2.12E-03	6.55E-04
233	0.010717	6.89E-03	2.85E-03	9.76E-04
234	0.014687	8.55E-03	4.40E-03	1.73E-03
235	0.006769	4.91E-03	1.37E-03	4.93E-04
236	0.008032	5.77E-03	1.60E-03	6.57E-04
237	0.009831	6.94E-03	1.95E-03	9.40E-04
238	0.012464	8.54E-03	2.46E-03	1.46E-03
239	0.016091	1.07E-02	3.00E-03	2.40E-03
240	0.007676	5.80E-03	1.25E-03	6.29E-04
241	0.009237	6.96E-03	1.42E-03	8.58E-04
242	0.011168	8.38E-03	1.60E-03	1.19E-03
243	0.013944	1.04E-02	1.76E-03	1.77E-03
244	0.007346	5.76E-03	1.00E-03	5.83E-04
245	0.008731	6.87E-03	1.10E-03	7.64E-04
246	0.010451	8.25E-03	1.18E-03	1.02E-03
247	0.012655	1.00E-02	1.25E-03	1.39E-03
248	0.015869	1.26E-02	1.26E-03	2.05E-03
249	0.008288	6.73E-03	8.82E-04	6.75E-04
250	0.009849	8.05E-03	9.34E-04	8.68E-04
251	0.011806	9.70E-03	9.73E-04	1.14E-03
252	0.014572	1.20E-02	9.83E-04	1.57E-03
253	0.018575	1.53E-02	9.45E-04	2.31E-03
254	0.007881	6.55E-03	7.35E-04	5.94E-04
255	0.009267	7.76E-03	7.69E-04	7.38E-04
256	0.01116	9.42E-03	7.95E-04	9.48E-04
257	0.013565	1.15E-02	8.04E-04	1.23E-03
258	0.017186	1.47E-02	7.89E-04	1.71E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
259	0.022458	1.92E-02	7.48E-04	2.50E-03
260	0.008768	7.48E-03	6.51E-04	6.33E-04
261	0.010489	9.03E-03	6.70E-04	7.85E-04
262	0.012787	1.11E-02	6.79E-04	9.94E-04
263	0.015873	1.39E-02	6.73E-04	1.28E-03
264	0.021045	1.86E-02	6.51E-04	1.76E-03
265	0.009831	8.60E-03	5.78E-04	6.52E-04
266	0.011882	1.05E-02	5.86E-04	7.92E-04
267	0.014647	1.31E-02	5.84E-04	9.69E-04
268	0.019206	1.74E-02	5.72E-04	1.23E-03
269	0.026804	2.47E-02	5.49E-04	1.58E-03
270	0.011009	9.86E-03	5.14E-04	6.39E-04
271	0.013472	1.22E-02	5.14E-04	7.52E-04
272	0.017172	1.58E-02	5.07E-04	8.90E-04
273	0.023651	2.21E-02	4.93E-04	1.07E-03
274	0.01002	9.05E-03	4.56E-04	5.17E-04
275	0.012092	1.10E-02	4.58E-04	5.90E-04
276	0.015078	1.40E-02	4.55E-04	6.73E-04
277	0.019491	1.83E-02	4.45E-04	7.59E-04
278	0.027313	2.60E-02	4.31E-04	8.55E-04
279	0.010676	9.79E-03	4.12E-04	4.73E-04
280	0.012881	1.19E-02	4.10E-04	5.25E-04
281	0.015709	1.47E-02	4.04E-04	5.75E-04
282	0.020225	1.92E-02	3.94E-04	6.34E-04
283	0.009165	8.41E-03	3.73E-04	3.84E-04
284	0.0107	9.91E-03	3.73E-04	4.19E-04
285	0.012571	1.17E-02	3.69E-04	4.54E-04
286	0.014901	1.40E-02	3.62E-04	4.90E-04
287	0.01781	1.69E-02	3.52E-04	5.21E-04
288	0.007951	7.29E-03	3.40E-04	3.21E-04
289	0.009019	8.33E-03	3.41E-04	3.46E-04
290	0.010231	9.52E-03	3.39E-04	3.71E-04
291	0.011606	1.09E-02	3.34E-04	3.96E-04
292	0.013176	1.24E-02	3.26E-04	4.18E-04
293	0.006804	6.22E-03	3.12E-04	2.71E-04
294	0.007535	6.93E-03	3.13E-04	2.89E-04
295	0.008304	7.69E-03	3.12E-04	3.07E-04
296	0.009151	8.52E-03	3.09E-04	3.25E-04
297	0.010144	9.50E-03	3.03E-04	3.43E-04
298	0.005921	5.40E-03	2.88E-04	2.33E-04
299	0.006438	5.90E-03	2.89E-04	2.47E-04
300	0.006941	6.39E-03	2.89E-04	2.60E-04
301	0.007513	6.95E-03	2.86E-04	2.74E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
302	0.008214	7.64E-03	2.83E-04	2.88E-04
303	0.00891	8.34E-03	2.77E-04	2.98E-04
304	0.005154	4.68E-03	2.67E-04	2.02E-04
305	0.005541	5.06E-03	2.68E-04	2.13E-04
306	0.005907	5.42E-03	2.68E-04	2.24E-04
307	0.006324	5.82E-03	2.67E-04	2.35E-04
308	0.006814	6.30E-03	2.64E-04	2.46E-04
309	0.00729	6.78E-03	2.60E-04	2.54E-04
310	0.004531	4.11E-03	2.48E-04	1.78E-04
311	0.004826	4.39E-03	2.49E-04	1.87E-04
312	0.005107	4.66E-03	2.50E-04	1.95E-04
313	0.005434	4.98E-03	2.49E-04	2.05E-04
314	0.005799	5.34E-03	2.47E-04	2.13E-04
315	0.00616	5.70E-03	2.44E-04	2.20E-04
316	0.004025	3.64E-03	2.31E-04	1.58E-04
317	0.004247	3.85E-03	2.33E-04	1.65E-04
318	0.004451	4.05E-03	2.33E-04	1.72E-04
319	0.004693	4.28E-03	2.33E-04	1.79E-04
320	0.004972	4.55E-03	2.32E-04	1.86E-04
321	0.00523	4.81E-03	2.29E-04	1.92E-04
322	0.005509	5.09E-03	2.26E-04	1.97E-04
323	0.003587	3.23E-03	2.16E-04	1.41E-04
324	0.00377	3.41E-03	2.18E-04	1.47E-04
325	0.003933	3.56E-03	2.19E-04	1.53E-04
326	0.004121	3.74E-03	2.19E-04	1.59E-04
327	0.004344	3.96E-03	2.18E-04	1.65E-04
328	0.004551	4.17E-03	2.16E-04	1.70E-04
329	0.004763	4.38E-03	2.13E-04	1.74E-04
330	0.003213	2.88E-03	2.03E-04	1.27E-04
331	0.003356	3.02E-03	2.04E-04	1.31E-04
332	0.003503	3.16E-03	2.05E-04	1.37E-04
333	0.003658	3.31E-03	2.06E-04	1.42E-04
334	0.00382	3.47E-03	2.05E-04	1.47E-04
335	0.003989	3.63E-03	2.04E-04	1.51E-04
336	0.004176	3.82E-03	2.02E-04	1.55E-04
337	0.002921	2.61E-03	1.91E-04	1.15E-04
338	0.003039	2.73E-03	1.93E-04	1.19E-04
339	0.003158	2.84E-03	1.94E-04	1.23E-04
340	0.003281	2.96E-03	1.94E-04	1.28E-04
341	0.003426	3.10E-03	1.94E-04	1.32E-04
342	0.003566	3.24E-03	1.93E-04	1.36E-04
343	0.003706	3.38E-03	1.91E-04	1.39E-04
344	0.002659	2.37E-03	1.80E-04	1.05E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
345	0.002759	2.47E-03	1.82E-04	1.08E-04
346	0.002858	2.56E-03	1.83E-04	1.12E-04
347	0.002966	2.67E-03	1.83E-04	1.16E-04
348	0.003075	2.77E-03	1.83E-04	1.19E-04
349	0.003186	2.88E-03	1.83E-04	1.23E-04
350	0.003311	3.00E-03	1.81E-04	1.26E-04
351	0.00243	2.16E-03	1.70E-04	9.58E-05
352	0.002516	2.25E-03	1.72E-04	9.89E-05
353	0.002597	2.32E-03	1.73E-04	1.02E-04
354	0.002684	2.41E-03	1.73E-04	1.05E-04
355	0.002787	2.50E-03	1.74E-04	1.08E-04
356	0.002881	2.60E-03	1.73E-04	1.11E-04
357	0.00298	2.69E-03	1.72E-04	1.14E-04
358	0.002228	1.98E-03	1.61E-04	8.80E-05
359	0.0023	2.05E-03	1.63E-04	9.06E-05
360	0.002376	2.12E-03	1.64E-04	9.34E-05
361	0.002453	2.19E-03	1.64E-04	9.62E-05
362	0.002536	2.27E-03	1.65E-04	9.90E-05
363	0.002615	2.35E-03	1.65E-04	1.02E-04
364	0.002699	2.43E-03	1.64E-04	1.04E-04
365	0.00206	1.83E-03	1.53E-04	8.13E-05
366	0.002121	1.88E-03	1.54E-04	8.36E-05
367	0.002186	1.94E-03	1.55E-04	8.60E-05
368	0.002254	2.01E-03	1.56E-04	8.85E-05
369	0.002321	2.07E-03	1.57E-04	9.09E-05
370	0.002394	2.14E-03	1.57E-04	9.33E-05
371	0.002461	2.21E-03	1.56E-04	9.53E-05
372	0.001906	1.69E-03	1.45E-04	7.53E-05
373	0.00196	1.74E-03	1.47E-04	7.73E-05
374	0.002015	1.79E-03	1.48E-04	7.94E-05
375	0.002074	1.84E-03	1.48E-04	8.16E-05
376	0.002132	1.90E-03	1.49E-04	8.37E-05
377	0.002197	1.96E-03	1.49E-04	8.58E-05
378	0.002256	2.02E-03	1.49E-04	8.77E-05
379	0.038025	3.69E-02	3.69E-04	7.13E-04
380	0.050491	4.94E-02	3.60E-04	7.24E-04
381	0.028143	2.72E-02	3.52E-04	6.13E-04
382	0.029977	2.90E-02	3.41E-04	5.92E-04
383	0.020965	2.01E-02	3.23E-04	4.97E-04
384	0.015513	1.48E-02	3.06E-04	4.20E-04
385	0.012685	1.20E-02	2.90E-04	3.66E-04
386	0.010282	9.70E-03	2.72E-04	3.13E-04
387	0.008618	8.09E-03	2.56E-04	2.74E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Hazard Index Summary

Receptor #	Total	Onsite	P2TR1	P2TR2
388	0.007403	6.92E-03	2.43E-04	2.43E-04
389	0.00644	5.99E-03	2.31E-04	2.18E-04
390	0.005775	5.36E-03	2.21E-04	1.99E-04

Mitigated Risk Calculations

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Constant1	Risk from 3rd Trimester							(Risk/Mill)
								DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	
1	0.92351	0.00	0.00	361	1	0.96	0.000001	7.56E-07	1.1	10	0.25	70	0.85	2.53E-08	0.03
2	0.99428	0.00	0.00	361	1	0.96	0.000001	8.14E-07	1.1	10	0.25	70	0.85	2.72E-08	0.03
3	0.89737	0.00	0.00	361	1	0.96	0.000001	7.35E-07	1.1	10	0.25	70	0.85	2.45E-08	0.02
4	0.97029	0.00	0.00	361	1	0.96	0.000001	7.94E-07	1.1	10	0.25	70	0.85	2.65E-08	0.03
5	1.05113	0.00	0.00	361	1	0.96	0.000001	8.61E-07	1.1	10	0.25	70	0.85	2.87E-08	0.03
6	1.13943	0.00	0.00	361	1	0.96	0.000001	9.33E-07	1.1	10	0.25	70	0.85	3.12E-08	0.03
7	0.93952	0.00	0.00	361	1	0.96	0.000001	7.69E-07	1.1	10	0.25	70	0.85	2.57E-08	0.03
8	1.01872	0.00	0.00	361	1	0.96	0.000001	8.34E-07	1.1	10	0.25	70	0.85	2.79E-08	0.03
9	1.10771	0.00	0.00	361	1	0.96	0.000001	9.07E-07	1.1	10	0.25	70	0.85	3.03E-08	0.03
10	1.20834	0.00	0.00	361	1	0.96	0.000001	9.89E-07	1.1	10	0.25	70	0.85	3.30E-08	0.03
11	1.32261	0.00	0.00	361	1	0.96	0.000001	1.08E-06	1.1	10	0.25	70	0.85	3.62E-08	0.04
12	1.06424	0.00	0.00	361	1	0.96	0.000001	8.71E-07	1.1	10	0.25	70	0.85	2.91E-08	0.03
13	1.16297	0.00	0.00	361	1	0.96	0.000001	9.52E-07	1.1	10	0.25	70	0.85	3.18E-08	0.03
14	1.27601	0.00	0.00	361	1	0.96	0.000001	1.04E-06	1.1	10	0.25	70	0.85	3.49E-08	0.03
15	1.40596	0.00	0.00	361	1	0.96	0.000001	1.15E-06	1.1	10	0.25	70	0.85	3.84E-08	0.04
16	1.55227	0.00	0.00	361	1	0.96	0.000001	1.27E-06	1.1	10	0.25	70	0.85	4.24E-08	0.04
17	1.21949	0.00	0.00	361	1	0.96	0.000001	9.99E-07	1.1	10	0.25	70	0.85	3.33E-08	0.03
18	1.34636	0.00	0.00	361	1	0.96	0.000001	1.10E-06	1.1	10	0.25	70	0.85	3.68E-08	0.04
19	1.49218	0.00	0.00	361	1	0.96	0.000001	1.22E-06	1.1	10	0.25	70	0.85	4.08E-08	0.04
20	1.66061	0.00	0.00	361	1	0.96	0.000001	1.36E-06	1.1	10	0.25	70	0.85	4.54E-08	0.05
21	1.86136	0.00	0.00	361	1	0.96	0.000001	1.52E-06	1.1	10	0.25	70	0.85	5.09E-08	0.05
22	1.41376	0.00	0.00	361	1	0.96	0.000001	1.16E-06	1.1	10	0.25	70	0.85	3.87E-08	0.04
23	1.57719	0.00	0.00	361	1	0.96	0.000001	1.29E-06	1.1	10	0.25	70	0.85	4.31E-08	0.04
24	1.76693	0.00	0.00	361	1	0.96	0.000001	1.45E-06	1.1	10	0.25	70	0.85	4.83E-08	0.05
25	1.99771	0.00	0.00	361	1	0.96	0.000001	1.64E-06	1.1	10	0.25	70	0.85	5.46E-08	0.05
26	2.27309	0.00	0.01	361	1	0.96	0.000001	1.86E-06	1.1	10	0.25	70	0.85	6.22E-08	0.06
27	1.65767	0.00	0.00	361	1	0.96	0.000001	1.36E-06	1.1	10	0.25	70	0.85	4.53E-08	0.05
28	1.87006	0.00	0.00	361	1	0.96	0.000001	1.53E-06	1.1	10	0.25	70	0.85	5.11E-08	0.05
29	2.13371	0.00	0.01	361	1	0.96	0.000001	1.75E-06	1.1	10	0.25	70	0.85	5.83E-08	0.06
30	2.45713	0.00	0.01	361	1	0.96	0.000001	2.01E-06	1.1	10	0.25	70	0.85	6.72E-08	0.07
31	2.86056	0.00	0.01	361	1	0.96	0.000001	2.34E-06	1.1	10	0.25	70	0.85	7.82E-08	0.08
32	1.96815	0.00	0.00	361	1	0.96	0.000001	1.61E-06	1.1	10	0.25	70	0.85	5.38E-08	0.05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	
33	2.25988	0.00	0.01	361	1	0.96	0.000001	1.85E-06	1.1	10	0.25	70	0.85	6.18E-08	0.06
34	2.62873	0.00	0.01	361	1	0.96	0.000001	2.15E-06	1.1	10	0.25	70	0.85	7.19E-08	0.07
35	3.09314	0.00	0.01	361	1	0.96	0.000001	2.53E-06	1.1	10	0.25	70	0.85	8.46E-08	0.08
36	3.72112	0.00	0.01	361	1	0.96	0.000001	3.05E-06	1.1	10	0.25	70	0.85	1.02E-07	0.10
37	2.37325	0.00	0.01	361	1	0.96	0.000001	1.94E-06	1.1	10	0.25	70	0.85	6.49E-08	0.06
38	2.78155	0.00	0.01	361	1	0.96	0.000001	2.28E-06	1.1	10	0.25	70	0.85	7.61E-08	0.08
39	3.31275	0.00	0.01	361	1	0.96	0.000001	2.71E-06	1.1	10	0.25	70	0.85	9.06E-08	0.09
40	4.03894	0.00	0.01	361	1	0.96	0.000001	3.31E-06	1.1	10	0.25	70	0.85	1.10E-07	0.11
41	2.92357	0.00	0.01	361	1	0.96	0.000001	2.39E-06	1.1	10	0.25	70	0.85	7.99E-08	0.08
42	3.5113	0.00	0.01	361	1	0.96	0.000001	2.88E-06	1.1	10	0.25	70	0.85	9.60E-08	0.10
43	4.31357	0.00	0.01	361	1	0.96	0.000001	3.53E-06	1.1	10	0.25	70	0.85	1.18E-07	0.12
44	5.46047	0.00	0.01	361	1	0.96	0.000001	4.47E-06	1.1	10	0.25	70	0.85	1.49E-07	0.15
45	3.64748	0.00	0.01	361	1	0.96	0.000001	2.99E-06	1.1	10	0.25	70	0.85	9.97E-08	0.10
46	4.50502	0.00	0.01	361	1	0.96	0.000001	3.69E-06	1.1	10	0.25	70	0.85	1.23E-07	0.12
47	5.73991	0.00	0.01	361	1	0.96	0.000001	4.70E-06	1.1	10	0.25	70	0.85	1.57E-07	0.16
48	7.59936	0.00	0.02	361	1	0.96	0.000001	6.22E-06	1.1	10	0.25	70	0.85	2.08E-07	0.21
49	5.86184	0.00	0.01	361	1	0.96	0.000001	4.80E-06	1.1	10	0.25	70	0.85	1.60E-07	0.16
50	7.68528	0.00	0.02	361	1	0.96	0.000001	6.29E-06	1.1	10	0.25	70	0.85	2.10E-07	0.21
51	5.81462	0.00	0.01	361	1	0.96	0.000001	4.76E-06	1.1	10	0.25	70	0.85	1.59E-07	0.16
52	7.52767	0.00	0.02	361	1	0.96	0.000001	6.16E-06	1.1	10	0.25	70	0.85	2.06E-07	0.21
53	10.08388	0.00	0.02	361	1	0.96	0.000001	8.26E-06	1.1	10	0.25	70	0.85	2.76E-07	0.28
54	5.62847	0.00	0.01	361	1	0.96	0.000001	4.61E-06	1.1	10	0.25	70	0.85	1.54E-07	0.15
55	7.16584	0.00	0.02	361	1	0.96	0.000001	5.87E-06	1.1	10	0.25	70	0.85	1.96E-07	0.20
56	9.4698	0.00	0.02	361	1	0.96	0.000001	7.75E-06	1.1	10	0.25	70	0.85	2.59E-07	0.26
57	13.00667	0.00	0.03	361	1	0.96	0.000001	1.06E-05	1.1	10	0.25	70	0.85	3.56E-07	0.36
58	5.30775	0.00	0.01	361	1	0.96	0.000001	4.35E-06	1.1	10	0.25	70	0.85	1.45E-07	0.15
59	6.66551	0.00	0.02	361	1	0.96	0.000001	5.46E-06	1.1	10	0.25	70	0.85	1.82E-07	0.18
60	8.62303	0.00	0.02	361	1	0.96	0.000001	7.06E-06	1.1	10	0.25	70	0.85	2.36E-07	0.24
61	11.59538	0.00	0.03	361	1	0.96	0.000001	9.49E-06	1.1	10	0.25	70	0.85	3.17E-07	0.32
62	4.94243	0.00	0.01	361	1	0.96	0.000001	4.05E-06	1.1	10	0.25	70	0.85	1.35E-07	0.14
63	6.06368	0.00	0.01	361	1	0.96	0.000001	4.96E-06	1.1	10	0.25	70	0.85	1.66E-07	0.17
64	7.59505	0.00	0.02	361	1	0.96	0.000001	6.22E-06	1.1	10	0.25	70	0.85	2.08E-07	0.21

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
65	9.7752	0.00	0.02	361	1	0.96	0.000001	8.00E-06	1.1	10	0.25	70	0.85	2.67E-07	0.27
66	13.01445	0.00	0.03	361	1	0.96	0.000001	1.07E-05	1.1	10	0.25	70	0.85	3.56E-07	0.36
67	4.48777	0.00	0.01	361	1	0.96	0.000001	3.67E-06	1.1	10	0.25	70	0.85	1.23E-07	0.12
68	5.37411	0.00	0.01	361	1	0.96	0.000001	4.40E-06	1.1	10	0.25	70	0.85	1.47E-07	0.15
69	6.51987	0.00	0.02	361	1	0.96	0.000001	5.34E-06	1.1	10	0.25	70	0.85	1.78E-07	0.18
70	7.99231	0.00	0.02	361	1	0.96	0.000001	6.54E-06	1.1	10	0.25	70	0.85	2.19E-07	0.22
71	9.92554	0.00	0.02	361	1	0.96	0.000001	8.13E-06	1.1	10	0.25	70	0.85	2.71E-07	0.27
72	4.01872	0.00	0.01	361	1	0.96	0.000001	3.29E-06	1.1	10	0.25	70	0.85	1.10E-07	0.11
73	4.69003	0.00	0.01	361	1	0.96	0.000001	3.84E-06	1.1	10	0.25	70	0.85	1.28E-07	0.13
74	5.51814	0.00	0.01	361	1	0.96	0.000001	4.52E-06	1.1	10	0.25	70	0.85	1.51E-07	0.15
75	6.47604	0.00	0.02	361	1	0.96	0.000001	5.30E-06	1.1	10	0.25	70	0.85	1.77E-07	0.18
76	7.61855	0.00	0.02	361	1	0.96	0.000001	6.24E-06	1.1	10	0.25	70	0.85	2.08E-07	0.21
77	3.56034	0.00	0.01	361	1	0.96	0.000001	2.92E-06	1.1	10	0.25	70	0.85	9.73E-08	0.10
78	4.05604	0.00	0.01	361	1	0.96	0.000001	3.32E-06	1.1	10	0.25	70	0.85	1.11E-07	0.11
79	4.64053	0.00	0.01	361	1	0.96	0.000001	3.80E-06	1.1	10	0.25	70	0.85	1.27E-07	0.13
80	5.26361	0.00	0.01	361	1	0.96	0.000001	4.31E-06	1.1	10	0.25	70	0.85	1.44E-07	0.14
81	5.96303	0.00	0.01	361	1	0.96	0.000001	4.88E-06	1.1	10	0.25	70	0.85	1.63E-07	0.16
82	3.1411	0.00	0.01	361	1	0.96	0.000001	2.57E-06	1.1	10	0.25	70	0.85	8.59E-08	0.09
83	3.50605	0.00	0.01	361	1	0.96	0.000001	2.87E-06	1.1	10	0.25	70	0.85	9.59E-08	0.10
84	3.9023	0.00	0.01	361	1	0.96	0.000001	3.20E-06	1.1	10	0.25	70	0.85	1.07E-07	0.11
85	4.32759	0.00	0.01	361	1	0.96	0.000001	3.54E-06	1.1	10	0.25	70	0.85	1.18E-07	0.12
86	4.77455	0.00	0.01	361	1	0.96	0.000001	3.91E-06	1.1	10	0.25	70	0.85	1.31E-07	0.13
87	2.76513	0.00	0.01	361	1	0.96	0.000001	2.26E-06	1.1	10	0.25	70	0.85	7.56E-08	0.08
88	3.03666	0.00	0.01	361	1	0.96	0.000001	2.49E-06	1.1	10	0.25	70	0.85	8.30E-08	0.08
89	3.32132	0.00	0.01	361	1	0.96	0.000001	2.72E-06	1.1	10	0.25	70	0.85	9.08E-08	0.09
90	3.63605	0.00	0.01	361	1	0.96	0.000001	2.98E-06	1.1	10	0.25	70	0.85	9.94E-08	0.10
91	3.94789	0.00	0.01	361	1	0.96	0.000001	3.23E-06	1.1	10	0.25	70	0.85	1.08E-07	0.11
92	2.44315	0.00	0.01	361	1	0.96	0.000001	2.00E-06	1.1	10	0.25	70	0.85	6.68E-08	0.07
93	2.64763	0.00	0.01	361	1	0.96	0.000001	2.17E-06	1.1	10	0.25	70	0.85	7.24E-08	0.07
94	2.86031	0.00	0.01	361	1	0.96	0.000001	2.34E-06	1.1	10	0.25	70	0.85	7.82E-08	0.08
95	3.08269	0.00	0.01	361	1	0.96	0.000001	2.52E-06	1.1	10	0.25	70	0.85	8.43E-08	0.08
96	3.30883	0.00	0.01	361	1	0.96	0.000001	2.71E-06	1.1	10	0.25	70	0.85	9.05E-08	0.09

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
97	2.16628	0.00	0.01	361	1	0.96	0.000001	1.77E-06	1.1	10	0.25	70	0.85	5.92E-08	0.06
98	2.32551	0.00	0.01	361	1	0.96	0.000001	1.90E-06	1.1	10	0.25	70	0.85	6.36E-08	0.06
99	2.48807	0.00	0.01	361	1	0.96	0.000001	2.04E-06	1.1	10	0.25	70	0.85	6.80E-08	0.07
100	2.65069	0.00	0.01	361	1	0.96	0.000001	2.17E-06	1.1	10	0.25	70	0.85	7.25E-08	0.07
101	2.82108	0.00	0.01	361	1	0.96	0.000001	2.31E-06	1.1	10	0.25	70	0.85	7.71E-08	0.08
102	0.90143	0.00	0.00	361	1	0.96	0.000001	7.38E-07	1.1	10	0.25	70	0.85	2.46E-08	0.02
103	0.90436	0.00	0.00	361	1	0.96	0.000001	7.40E-07	1.1	10	0.25	70	0.85	2.47E-08	0.02
104	0.93405	0.00	0.00	361	1	0.96	0.000001	7.65E-07	1.1	10	0.25	70	0.85	2.55E-08	0.03
105	0.90256	0.00	0.00	361	1	0.96	0.000001	7.39E-07	1.1	10	0.25	70	0.85	2.47E-08	0.02
106	0.93434	0.00	0.00	361	1	0.96	0.000001	7.65E-07	1.1	10	0.25	70	0.85	2.55E-08	0.03
107	0.96496	0.00	0.00	361	1	0.96	0.000001	7.90E-07	1.1	10	0.25	70	0.85	2.64E-08	0.03
108	0.99611	0.00	0.00	361	1	0.96	0.000001	8.16E-07	1.1	10	0.25	70	0.85	2.72E-08	0.03
109	0.93214	0.00	0.00	361	1	0.96	0.000001	7.63E-07	1.1	10	0.25	70	0.85	2.55E-08	0.03
110	0.96347	0.00	0.00	361	1	0.96	0.000001	7.89E-07	1.1	10	0.25	70	0.85	2.63E-08	0.03
111	0.99643	0.00	0.00	361	1	0.96	0.000001	8.16E-07	1.1	10	0.25	70	0.85	2.72E-08	0.03
112	1.03148	0.00	0.00	361	1	0.96	0.000001	8.45E-07	1.1	10	0.25	70	0.85	2.82E-08	0.03
113	1.06523	0.00	0.00	361	1	0.96	0.000001	8.72E-07	1.1	10	0.25	70	0.85	2.91E-08	0.03
114	0.92739	0.00	0.00	361	1	0.96	0.000001	7.59E-07	1.1	10	0.25	70	0.85	2.54E-08	0.03
115	0.95974	0.00	0.00	361	1	0.96	0.000001	7.86E-07	1.1	10	0.25	70	0.85	2.62E-08	0.03
116	0.99451	0.00	0.00	361	1	0.96	0.000001	8.14E-07	1.1	10	0.25	70	0.85	2.72E-08	0.03
117	1.02992	0.00	0.00	361	1	0.96	0.000001	8.43E-07	1.1	10	0.25	70	0.85	2.82E-08	0.03
118	1.06658	0.00	0.00	361	1	0.96	0.000001	8.73E-07	1.1	10	0.25	70	0.85	2.92E-08	0.03
119	1.10549	0.00	0.00	361	1	0.96	0.000001	9.05E-07	1.1	10	0.25	70	0.85	3.02E-08	0.03
120	1.14334	0.00	0.00	361	1	0.96	0.000001	9.36E-07	1.1	10	0.25	70	0.85	3.13E-08	0.03
121	0.9202	0.00	0.00	361	1	0.96	0.000001	7.53E-07	1.1	10	0.25	70	0.85	2.52E-08	0.03
122	0.95343	0.00	0.00	361	1	0.96	0.000001	7.81E-07	1.1	10	0.25	70	0.85	2.61E-08	0.03
123	0.98892	0.00	0.00	361	1	0.96	0.000001	8.10E-07	1.1	10	0.25	70	0.85	2.70E-08	0.03
124	1.02587	0.00	0.00	361	1	0.96	0.000001	8.40E-07	1.1	10	0.25	70	0.85	2.80E-08	0.03
125	1.06375	0.00	0.00	361	1	0.96	0.000001	8.71E-07	1.1	10	0.25	70	0.85	2.91E-08	0.03
126	1.10291	0.00	0.00	361	1	0.96	0.000001	9.03E-07	1.1	10	0.25	70	0.85	3.02E-08	0.03
127	1.14533	0.00	0.00	361	1	0.96	0.000001	9.38E-07	1.1	10	0.25	70	0.85	3.13E-08	0.03
128	1.18599	0.00	0.00	361	1	0.96	0.000001	9.71E-07	1.1	10	0.25	70	0.85	3.24E-08	0.03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	
129	1.01795	0.00	0.00	361	1	0.96	0.000001	8.33E-07	1.1	10	0.25	70	0.85	2.78E-08	0.03
130	1.05754	0.00	0.00	361	1	0.96	0.000001	8.66E-07	1.1	10	0.25	70	0.85	2.89E-08	0.03
131	1.09814	0.00	0.00	361	1	0.96	0.000001	8.99E-07	1.1	10	0.25	70	0.85	3.00E-08	0.03
132	1.14072	0.00	0.00	361	1	0.96	0.000001	9.34E-07	1.1	10	0.25	70	0.85	3.12E-08	0.03
133	1.18463	0.00	0.00	361	1	0.96	0.000001	9.70E-07	1.1	10	0.25	70	0.85	3.24E-08	0.03
134	1.23143	0.00	0.00	361	1	0.96	0.000001	1.01E-06	1.1	10	0.25	70	0.85	3.37E-08	0.03
135	1.28025	0.00	0.00	361	1	0.96	0.000001	1.05E-06	1.1	10	0.25	70	0.85	3.50E-08	0.04
136	1.08996	0.00	0.00	361	1	0.96	0.000001	8.92E-07	1.1	10	0.25	70	0.85	2.98E-08	0.03
137	1.13315	0.00	0.00	361	1	0.96	0.000001	9.28E-07	1.1	10	0.25	70	0.85	3.10E-08	0.03
138	1.1793	0.00	0.00	361	1	0.96	0.000001	9.66E-07	1.1	10	0.25	70	0.85	3.22E-08	0.03
139	1.22541	0.00	0.00	361	1	0.96	0.000001	1.00E-06	1.1	10	0.25	70	0.85	3.35E-08	0.03
140	1.27772	0.00	0.00	361	1	0.96	0.000001	1.05E-06	1.1	10	0.25	70	0.85	3.49E-08	0.03
141	1.33197	0.00	0.00	361	1	0.96	0.000001	1.09E-06	1.1	10	0.25	70	0.85	3.64E-08	0.04
142	1.38613	0.00	0.00	361	1	0.96	0.000001	1.13E-06	1.1	10	0.25	70	0.85	3.79E-08	0.04
143	1.16906	0.00	0.00	361	1	0.96	0.000001	9.57E-07	1.1	10	0.25	70	0.85	3.20E-08	0.03
144	1.21852	0.00	0.00	361	1	0.96	0.000001	9.98E-07	1.1	10	0.25	70	0.85	3.33E-08	0.03
145	1.26826	0.00	0.00	361	1	0.96	0.000001	1.04E-06	1.1	10	0.25	70	0.85	3.47E-08	0.03
146	1.32524	0.00	0.00	361	1	0.96	0.000001	1.09E-06	1.1	10	0.25	70	0.85	3.62E-08	0.04
147	1.38365	0.00	0.00	361	1	0.96	0.000001	1.13E-06	1.1	10	0.25	70	0.85	3.78E-08	0.04
148	1.444	0.00	0.00	361	1	0.96	0.000001	1.18E-06	1.1	10	0.25	70	0.85	3.95E-08	0.04
149	1.25769	0.00	0.00	361	1	0.96	0.000001	1.03E-06	1.1	10	0.25	70	0.85	3.44E-08	0.03
150	1.31241	0.00	0.00	361	1	0.96	0.000001	1.07E-06	1.1	10	0.25	70	0.85	3.59E-08	0.04
151	1.3739	0.00	0.00	361	1	0.96	0.000001	1.12E-06	1.1	10	0.25	70	0.85	3.76E-08	0.04
152	1.4366	0.00	0.00	361	1	0.96	0.000001	1.18E-06	1.1	10	0.25	70	0.85	3.93E-08	0.04
153	1.50175	0.00	0.00	361	1	0.96	0.000001	1.23E-06	1.1	10	0.25	70	0.85	4.11E-08	0.04
154	1.57395	0.00	0.00	361	1	0.96	0.000001	1.29E-06	1.1	10	0.25	70	0.85	4.30E-08	0.04
155	1.35805	0.00	0.00	361	1	0.96	0.000001	1.11E-06	1.1	10	0.25	70	0.85	3.71E-08	0.04
156	1.42283	0.00	0.00	361	1	0.96	0.000001	1.17E-06	1.1	10	0.25	70	0.85	3.89E-08	0.04
157	1.49084	0.00	0.00	361	1	0.96	0.000001	1.22E-06	1.1	10	0.25	70	0.85	4.08E-08	0.04
158	1.56282	0.00	0.00	361	1	0.96	0.000001	1.28E-06	1.1	10	0.25	70	0.85	4.27E-08	0.04
159	1.64168	0.00	0.00	361	1	0.96	0.000001	1.34E-06	1.1	10	0.25	70	0.85	4.49E-08	0.04
160	1.72273	0.00	0.00	361	1	0.96	0.000001	1.41E-06	1.1	10	0.25	70	0.85	4.71E-08	0.05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	
161	1.47343	0.00	0.00	361	1	0.96	0.000001	1.21E-06	1.1	10	0.25	70	0.85	4.03E-08	0.04
162	1.54619	0.00	0.00	361	1	0.96	0.000001	1.27E-06	1.1	10	0.25	70	0.85	4.23E-08	0.04
163	1.62572	0.00	0.00	361	1	0.96	0.000001	1.33E-06	1.1	10	0.25	70	0.85	4.45E-08	0.04
164	1.71018	0.00	0.00	361	1	0.96	0.000001	1.40E-06	1.1	10	0.25	70	0.85	4.68E-08	0.05
165	1.80017	0.00	0.00	361	1	0.96	0.000001	1.47E-06	1.1	10	0.25	70	0.85	4.92E-08	0.05
166	1.89674	0.00	0.00	361	1	0.96	0.000001	1.55E-06	1.1	10	0.25	70	0.85	5.19E-08	0.05
167	1.60225	0.00	0.00	361	1	0.96	0.000001	1.31E-06	1.1	10	0.25	70	0.85	4.38E-08	0.04
168	1.69132	0.00	0.00	361	1	0.96	0.000001	1.38E-06	1.1	10	0.25	70	0.85	4.62E-08	0.05
169	1.78401	0.00	0.00	361	1	0.96	0.000001	1.46E-06	1.1	10	0.25	70	0.85	4.88E-08	0.05
170	1.88308	0.00	0.00	361	1	0.96	0.000001	1.54E-06	1.1	10	0.25	70	0.85	5.15E-08	0.05
171	1.98942	0.00	0.00	361	1	0.96	0.000001	1.63E-06	1.1	10	0.25	70	0.85	5.44E-08	0.05
172	2.10088	0.00	0.00	361	1	0.96	0.000001	1.72E-06	1.1	10	0.25	70	0.85	5.74E-08	0.06
173	1.75607	0.00	0.00	361	1	0.96	0.000001	1.44E-06	1.1	10	0.25	70	0.85	4.80E-08	0.05
174	1.85639	0.00	0.00	361	1	0.96	0.000001	1.52E-06	1.1	10	0.25	70	0.85	5.08E-08	0.05
175	1.96498	0.00	0.00	361	1	0.96	0.000001	1.61E-06	1.1	10	0.25	70	0.85	5.37E-08	0.05
176	2.08272	0.00	0.00	361	1	0.96	0.000001	1.71E-06	1.1	10	0.25	70	0.85	5.69E-08	0.06
177	2.20711	0.00	0.01	361	1	0.96	0.000001	1.81E-06	1.1	10	0.25	70	0.85	6.03E-08	0.06
178	1.92977	0.00	0.00	361	1	0.96	0.000001	1.58E-06	1.1	10	0.25	70	0.85	5.28E-08	0.05
179	2.04686	0.00	0.00	361	1	0.96	0.000001	1.68E-06	1.1	10	0.25	70	0.85	5.60E-08	0.06
180	2.1788	0.00	0.01	361	1	0.96	0.000001	1.78E-06	1.1	10	0.25	70	0.85	5.96E-08	0.06
181	2.31568	0.00	0.01	361	1	0.96	0.000001	1.90E-06	1.1	10	0.25	70	0.85	6.33E-08	0.06
182	2.47233	0.00	0.01	361	1	0.96	0.000001	2.02E-06	1.1	10	0.25	70	0.85	6.76E-08	0.07
183	2.13501	0.00	0.01	361	1	0.96	0.000001	1.75E-06	1.1	10	0.25	70	0.85	5.84E-08	0.06
184	2.27223	0.00	0.01	361	1	0.96	0.000001	1.86E-06	1.1	10	0.25	70	0.85	6.21E-08	0.06
185	2.42837	0.00	0.01	361	1	0.96	0.000001	1.99E-06	1.1	10	0.25	70	0.85	6.64E-08	0.07
186	2.60208	0.00	0.01	361	1	0.96	0.000001	2.13E-06	1.1	10	0.25	70	0.85	7.11E-08	0.07
187	2.79163	0.00	0.01	361	1	0.96	0.000001	2.29E-06	1.1	10	0.25	70	0.85	7.63E-08	0.08
188	2.37408	0.00	0.01	361	1	0.96	0.000001	1.94E-06	1.1	10	0.25	70	0.85	6.49E-08	0.06
189	2.54821	0.00	0.01	361	1	0.96	0.000001	2.09E-06	1.1	10	0.25	70	0.85	6.97E-08	0.07
190	2.73315	0.00	0.01	361	1	0.96	0.000001	2.24E-06	1.1	10	0.25	70	0.85	7.47E-08	0.07
191	2.94781	0.00	0.01	361	1	0.96	0.000001	2.41E-06	1.1	10	0.25	70	0.85	8.06E-08	0.08
192	3.18176	0.00	0.01	361	1	0.96	0.000001	2.61E-06	1.1	10	0.25	70	0.85	8.70E-08	0.09

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	
193	2.66375	0.00	0.01	361	1	0.96	0.000001	2.18E-06	1.1	10	0.25	70	0.85	7.28E-08	0.07
194	2.875	0.00	0.01	361	1	0.96	0.000001	2.35E-06	1.1	10	0.25	70	0.85	7.86E-08	0.08
195	3.10293	0.00	0.01	361	1	0.96	0.000001	2.54E-06	1.1	10	0.25	70	0.85	8.48E-08	0.08
196	3.37413	0.00	0.01	361	1	0.96	0.000001	2.76E-06	1.1	10	0.25	70	0.85	9.23E-08	0.09
197	3.67077	0.00	0.01	361	1	0.96	0.000001	3.01E-06	1.1	10	0.25	70	0.85	1.00E-07	0.10
198	3.01108	0.00	0.01	361	1	0.96	0.000001	2.47E-06	1.1	10	0.25	70	0.85	8.23E-08	0.08
199	3.27121	0.00	0.01	361	1	0.96	0.000001	2.68E-06	1.1	10	0.25	70	0.85	8.94E-08	0.09
200	3.56278	0.00	0.01	361	1	0.96	0.000001	2.92E-06	1.1	10	0.25	70	0.85	9.74E-08	0.10
201	3.91156	0.00	0.01	361	1	0.96	0.000001	3.20E-06	1.1	10	0.25	70	0.85	1.07E-07	0.11
202	3.43359	0.00	0.01	361	1	0.96	0.000001	2.81E-06	1.1	10	0.25	70	0.85	9.39E-08	0.09
203	3.75467	0.00	0.01	361	1	0.96	0.000001	3.07E-06	1.1	10	0.25	70	0.85	1.03E-07	0.10
204	4.15137	0.00	0.01	361	1	0.96	0.000001	3.40E-06	1.1	10	0.25	70	0.85	1.14E-07	0.11
205	4.59785	0.00	0.01	361	1	0.96	0.000001	3.76E-06	1.1	10	0.25	70	0.85	1.26E-07	0.13
206	3.94684	0.00	0.01	361	1	0.96	0.000001	3.23E-06	1.1	10	0.25	70	0.85	1.08E-07	0.11
207	4.38038	0.00	0.01	361	1	0.96	0.000001	3.59E-06	1.1	10	0.25	70	0.85	1.20E-07	0.12
208	4.88393	0.00	0.01	361	1	0.96	0.000001	4.00E-06	1.1	10	0.25	70	0.85	1.34E-07	0.13
209	5.49774	0.00	0.01	361	1	0.96	0.000001	4.50E-06	1.1	10	0.25	70	0.85	1.50E-07	0.15
210	4.12983	0.00	0.01	361	1	0.96	0.000001	3.38E-06	1.1	10	0.25	70	0.85	1.13E-07	0.11
211	4.61539	0.00	0.01	361	1	0.96	0.000001	3.78E-06	1.1	10	0.25	70	0.85	1.26E-07	0.13
212	5.18281	0.00	0.01	361	1	0.96	0.000001	4.24E-06	1.1	10	0.25	70	0.85	1.42E-07	0.14
213	5.87009	0.00	0.01	361	1	0.96	0.000001	4.81E-06	1.1	10	0.25	70	0.85	1.60E-07	0.16
214	6.71395	0.00	0.02	361	1	0.96	0.000001	5.50E-06	1.1	10	0.25	70	0.85	1.84E-07	0.18
215	4.30813	0.00	0.01	361	1	0.96	0.000001	3.53E-06	1.1	10	0.25	70	0.85	1.18E-07	0.12
216	4.82115	0.00	0.01	361	1	0.96	0.000001	3.95E-06	1.1	10	0.25	70	0.85	1.32E-07	0.13
217	5.44025	0.00	0.01	361	1	0.96	0.000001	4.45E-06	1.1	10	0.25	70	0.85	1.49E-07	0.15
218	6.20271	0.00	0.01	361	1	0.96	0.000001	5.08E-06	1.1	10	0.25	70	0.85	1.70E-07	0.17
219	7.16527	0.00	0.02	361	1	0.96	0.000001	5.87E-06	1.1	10	0.25	70	0.85	1.96E-07	0.20
220	5.03099	0.00	0.01	361	1	0.96	0.000001	4.12E-06	1.1	10	0.25	70	0.85	1.38E-07	0.14
221	5.70233	0.00	0.01	361	1	0.96	0.000001	4.67E-06	1.1	10	0.25	70	0.85	1.56E-07	0.16
222	6.53367	0.00	0.02	361	1	0.96	0.000001	5.35E-06	1.1	10	0.25	70	0.85	1.79E-07	0.18
223	7.58936	0.00	0.02	361	1	0.96	0.000001	6.21E-06	1.1	10	0.25	70	0.85	2.08E-07	0.21
224	8.9843	0.00	0.02	361	1	0.96	0.000001	7.36E-06	1.1	10	0.25	70	0.85	2.46E-07	0.25

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	
225	5.91832	0.00	0.01	361	1	0.96	0.000001	4.85E-06	1.1	10	0.25	70	0.85	1.62E-07	0.16
226	6.80491	0.00	0.02	361	1	0.96	0.000001	5.57E-06	1.1	10	0.25	70	0.85	1.86E-07	0.19
227	7.92864	0.00	0.02	361	1	0.96	0.000001	6.49E-06	1.1	10	0.25	70	0.85	2.17E-07	0.22
228	9.39693	0.00	0.02	361	1	0.96	0.000001	7.69E-06	1.1	10	0.25	70	0.85	2.57E-07	0.26
229	11.40174	0.00	0.03	361	1	0.96	0.000001	9.34E-06	1.1	10	0.25	70	0.85	3.12E-07	0.31
230	7.0254	0.00	0.02	361	1	0.96	0.000001	5.75E-06	1.1	10	0.25	70	0.85	1.92E-07	0.19
231	8.20122	0.00	0.02	361	1	0.96	0.000001	6.72E-06	1.1	10	0.25	70	0.85	2.24E-07	0.22
232	9.68952	0.00	0.02	361	1	0.96	0.000001	7.93E-06	1.1	10	0.25	70	0.85	2.65E-07	0.26
233	11.74266	0.00	0.03	361	1	0.96	0.000001	9.61E-06	1.1	10	0.25	70	0.85	3.21E-07	0.32
234	14.56883	0.00	0.03	361	1	0.96	0.000001	1.19E-05	1.1	10	0.25	70	0.85	3.98E-07	0.40
235	8.36042	0.00	0.02	361	1	0.96	0.000001	6.85E-06	1.1	10	0.25	70	0.85	2.29E-07	0.23
236	9.82906	0.00	0.02	361	1	0.96	0.000001	8.05E-06	1.1	10	0.25	70	0.85	2.69E-07	0.27
237	11.82504	0.00	0.03	361	1	0.96	0.000001	9.68E-06	1.1	10	0.25	70	0.85	3.23E-07	0.32
238	14.55211	0.00	0.03	361	1	0.96	0.000001	1.19E-05	1.1	10	0.25	70	0.85	3.98E-07	0.40
239	18.21231	0.00	0.04	361	1	0.96	0.000001	1.49E-05	1.1	10	0.25	70	0.85	4.98E-07	0.50
240	9.87348	0.00	0.02	361	1	0.96	0.000001	8.08E-06	1.1	10	0.25	70	0.85	2.70E-07	0.27
241	11.84772	0.00	0.03	361	1	0.96	0.000001	9.70E-06	1.1	10	0.25	70	0.85	3.24E-07	0.32
242	14.26521	0.00	0.03	361	1	0.96	0.000001	1.17E-05	1.1	10	0.25	70	0.85	3.90E-07	0.39
243	17.72742	0.00	0.04	361	1	0.96	0.000001	1.45E-05	1.1	10	0.25	70	0.85	4.85E-07	0.48
244	9.81145	0.00	0.02	361	1	0.96	0.000001	8.03E-06	1.1	10	0.25	70	0.85	2.68E-07	0.27
245	11.70505	0.00	0.03	361	1	0.96	0.000001	9.58E-06	1.1	10	0.25	70	0.85	3.20E-07	0.32
246	14.05355	0.00	0.03	361	1	0.96	0.000001	1.15E-05	1.1	10	0.25	70	0.85	3.84E-07	0.38
247	17.05549	0.00	0.04	361	1	0.96	0.000001	1.40E-05	1.1	10	0.25	70	0.85	4.66E-07	0.47
248	21.39562	0.00	0.05	361	1	0.96	0.000001	1.75E-05	1.1	10	0.25	70	0.85	5.85E-07	0.58
249	11.46461	0.00	0.03	361	1	0.96	0.000001	9.39E-06	1.1	10	0.25	70	0.85	3.13E-07	0.31
250	13.70621	0.00	0.03	361	1	0.96	0.000001	1.12E-05	1.1	10	0.25	70	0.85	3.75E-07	0.37
251	16.51477	0.00	0.04	361	1	0.96	0.000001	1.35E-05	1.1	10	0.25	70	0.85	4.52E-07	0.45
252	20.47044	0.00	0.05	361	1	0.96	0.000001	1.68E-05	1.1	10	0.25	70	0.85	5.60E-07	0.56
253	26.08833	0.00	0.06	361	1	0.96	0.000001	2.14E-05	1.1	10	0.25	70	0.85	7.13E-07	0.71
254	11.15902	0.00	0.03	361	1	0.96	0.000001	9.14E-06	1.1	10	0.25	70	0.85	3.05E-07	0.31
255	13.21699	0.00	0.03	361	1	0.96	0.000001	1.08E-05	1.1	10	0.25	70	0.85	3.61E-07	0.36
256	16.03973	0.00	0.04	361	1	0.96	0.000001	1.31E-05	1.1	10	0.25	70	0.85	4.39E-07	0.44

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
257	19.63125	0.00	0.05	361	1	0.96	0.000001	1.61E-05	1.1	10	0.25	70	0.85	5.37E-07	0.54
258	25.015	0.00	0.06	361	1	0.96	0.000001	2.05E-05	1.1	10	0.25	70	0.85	6.84E-07	0.68
259	32.72408	0.00	0.08	361	1	0.96	0.000001	2.68E-05	1.1	10	0.25	70	0.85	8.95E-07	0.89
260	12.74653	0.00	0.03	361	1	0.96	0.000001	1.04E-05	1.1	10	0.25	70	0.85	3.49E-07	0.35
261	15.38643	0.00	0.04	361	1	0.96	0.000001	1.26E-05	1.1	10	0.25	70	0.85	4.21E-07	0.42
262	18.93009	0.00	0.04	361	1	0.96	0.000001	1.55E-05	1.1	10	0.25	70	0.85	5.18E-07	0.52
263	23.71591	0.00	0.06	361	1	0.96	0.000001	1.94E-05	1.1	10	0.25	70	0.85	6.48E-07	0.65
264	31.73581	0.00	0.08	361	1	0.96	0.000001	2.60E-05	1.1	10	0.25	70	0.85	8.68E-07	0.87
265	14.64992	0.00	0.03	361	1	0.96	0.000001	1.20E-05	1.1	10	0.25	70	0.85	4.01E-07	0.40
266	17.89094	0.00	0.04	361	1	0.96	0.000001	1.46E-05	1.1	10	0.25	70	0.85	4.89E-07	0.49
267	22.30373	0.00	0.05	361	1	0.96	0.000001	1.83E-05	1.1	10	0.25	70	0.85	6.10E-07	0.61
268	29.63923	0.00	0.07	361	1	0.96	0.000001	2.43E-05	1.1	10	0.25	70	0.85	8.10E-07	0.81
269	42.02096	0.00	0.10	361	1	0.96	0.000001	3.44E-05	1.1	10	0.25	70	0.85	1.15E-06	1.15
270	16.78899	0.00	0.04	361	1	0.96	0.000001	1.37E-05	1.1	10	0.25	70	0.85	4.59E-07	0.46
271	20.78876	0.00	0.05	361	1	0.96	0.000001	1.70E-05	1.1	10	0.25	70	0.85	5.68E-07	0.57
272	26.86772	0.00	0.06	361	1	0.96	0.000001	2.20E-05	1.1	10	0.25	70	0.85	7.35E-07	0.73
273	37.62679	0.00	0.09	361	1	0.96	0.000001	3.08E-05	1.1	10	0.25	70	0.85	1.03E-06	1.03
274	15.40937	0.00	0.04	361	1	0.96	0.000001	1.26E-05	1.1	10	0.25	70	0.85	4.21E-07	0.42
275	18.81102	0.00	0.04	361	1	0.96	0.000001	1.54E-05	1.1	10	0.25	70	0.85	5.14E-07	0.51
276	23.76149	0.00	0.06	361	1	0.96	0.000001	1.95E-05	1.1	10	0.25	70	0.85	6.50E-07	0.65
277	31.14801	0.00	0.07	361	1	0.96	0.000001	2.55E-05	1.1	10	0.25	70	0.85	8.52E-07	0.85
278	44.33099	0.00	0.10	361	1	0.96	0.000001	3.63E-05	1.1	10	0.25	70	0.85	1.21E-06	1.21
279	16.67695	0.00	0.04	361	1	0.96	0.000001	1.37E-05	1.1	10	0.25	70	0.85	4.56E-07	0.46
280	20.3474	0.00	0.05	361	1	0.96	0.000001	1.67E-05	1.1	10	0.25	70	0.85	5.56E-07	0.56
281	25.08922	0.00	0.06	361	1	0.96	0.000001	2.05E-05	1.1	10	0.25	70	0.85	6.86E-07	0.69
282	32.69829	0.00	0.08	361	1	0.96	0.000001	2.68E-05	1.1	10	0.25	70	0.85	8.94E-07	0.89
283	14.32227	0.00	0.03	361	1	0.96	0.000001	1.17E-05	1.1	10	0.25	70	0.85	3.92E-07	0.39
284	16.87758	0.00	0.04	361	1	0.96	0.000001	1.38E-05	1.1	10	0.25	70	0.85	4.61E-07	0.46
285	20.00997	0.00	0.05	361	1	0.96	0.000001	1.64E-05	1.1	10	0.25	70	0.85	5.47E-07	0.55
286	23.92894	0.00	0.06	361	1	0.96	0.000001	1.96E-05	1.1	10	0.25	70	0.85	6.54E-07	0.65
287	28.84843	0.00	0.07	361	1	0.96	0.000001	2.36E-05	1.1	10	0.25	70	0.85	7.89E-07	0.79
288	12.41733	0.00	0.03	361	1	0.96	0.000001	1.02E-05	1.1	10	0.25	70	0.85	3.40E-07	0.34

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
289	14.19225	0.00	0.03	361	1	0.96	0.000001	1.16E-05	1.1	10	0.25	70	0.85	3.88E-07	0.39
290	16.21762	0.00	0.04	361	1	0.96	0.000001	1.33E-05	1.1	10	0.25	70	0.85	4.43E-07	0.44
291	18.52453	0.00	0.04	361	1	0.96	0.000001	1.52E-05	1.1	10	0.25	70	0.85	5.06E-07	0.51
292	21.17436	0.00	0.05	361	1	0.96	0.000001	1.73E-05	1.1	10	0.25	70	0.85	5.79E-07	0.58
293	10.59617	0.00	0.03	361	1	0.96	0.000001	8.68E-06	1.1	10	0.25	70	0.85	2.90E-07	0.29
294	11.80874	0.00	0.03	361	1	0.96	0.000001	9.67E-06	1.1	10	0.25	70	0.85	3.23E-07	0.32
295	13.0899	0.00	0.03	361	1	0.96	0.000001	1.07E-05	1.1	10	0.25	70	0.85	3.58E-07	0.36
296	14.50639	0.00	0.03	361	1	0.96	0.000001	1.19E-05	1.1	10	0.25	70	0.85	3.97E-07	0.40
297	16.17745	0.00	0.04	361	1	0.96	0.000001	1.32E-05	1.1	10	0.25	70	0.85	4.42E-07	0.44
298	9.19837	0.00	0.02	361	1	0.96	0.000001	7.53E-06	1.1	10	0.25	70	0.85	2.51E-07	0.25
299	10.05283	0.00	0.02	361	1	0.96	0.000001	8.23E-06	1.1	10	0.25	70	0.85	2.75E-07	0.27
300	10.88803	0.00	0.03	361	1	0.96	0.000001	8.92E-06	1.1	10	0.25	70	0.85	2.98E-07	0.30
301	11.8423	0.00	0.03	361	1	0.96	0.000001	9.70E-06	1.1	10	0.25	70	0.85	3.24E-07	0.32
302	13.01904	0.00	0.03	361	1	0.96	0.000001	1.07E-05	1.1	10	0.25	70	0.85	3.56E-07	0.36
303	14.19792	0.00	0.03	361	1	0.96	0.000001	1.16E-05	1.1	10	0.25	70	0.85	3.88E-07	0.39
304	7.97911	0.00	0.02	361	1	0.96	0.000001	6.53E-06	1.1	10	0.25	70	0.85	2.18E-07	0.22
305	8.61834	0.00	0.02	361	1	0.96	0.000001	7.06E-06	1.1	10	0.25	70	0.85	2.36E-07	0.24
306	9.224	0.00	0.02	361	1	0.96	0.000001	7.55E-06	1.1	10	0.25	70	0.85	2.52E-07	0.25
307	9.91786	0.00	0.02	361	1	0.96	0.000001	8.12E-06	1.1	10	0.25	70	0.85	2.71E-07	0.27
308	10.73741	0.00	0.03	361	1	0.96	0.000001	8.79E-06	1.1	10	0.25	70	0.85	2.94E-07	0.29
309	11.54285	0.00	0.03	361	1	0.96	0.000001	9.45E-06	1.1	10	0.25	70	0.85	3.16E-07	0.32
310	6.99278	0.00	0.02	361	1	0.96	0.000001	5.73E-06	1.1	10	0.25	70	0.85	1.91E-07	0.19
311	7.47738	0.00	0.02	361	1	0.96	0.000001	6.12E-06	1.1	10	0.25	70	0.85	2.04E-07	0.20
312	7.94073	0.00	0.02	361	1	0.96	0.000001	6.50E-06	1.1	10	0.25	70	0.85	2.17E-07	0.22
313	8.48299	0.00	0.02	361	1	0.96	0.000001	6.95E-06	1.1	10	0.25	70	0.85	2.32E-07	0.23
314	9.09383	0.00	0.02	361	1	0.96	0.000001	7.45E-06	1.1	10	0.25	70	0.85	2.49E-07	0.25
315	9.7008	0.00	0.02	361	1	0.96	0.000001	7.94E-06	1.1	10	0.25	70	0.85	2.65E-07	0.27
316	6.19291	0.00	0.01	361	1	0.96	0.000001	5.07E-06	1.1	10	0.25	70	0.85	1.69E-07	0.17
317	6.55656	0.00	0.02	361	1	0.96	0.000001	5.37E-06	1.1	10	0.25	70	0.85	1.79E-07	0.18
318	6.89178	0.00	0.02	361	1	0.96	0.000001	5.64E-06	1.1	10	0.25	70	0.85	1.88E-07	0.19
319	7.29115	0.00	0.02	361	1	0.96	0.000001	5.97E-06	1.1	10	0.25	70	0.85	1.99E-07	0.20
320	7.75659	0.00	0.02	361	1	0.96	0.000001	6.35E-06	1.1	10	0.25	70	0.85	2.12E-07	0.21

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	
321	8.19085	0.00	0.02	361	1	0.96	0.000001	6.71E-06	1.1	10	0.25	70	0.85	2.24E-07	0.22
322	8.66385	0.00	0.02	361	1	0.96	0.000001	7.09E-06	1.1	10	0.25	70	0.85	2.37E-07	0.24
323	5.5005	0.00	0.01	361	1	0.96	0.000001	4.50E-06	1.1	10	0.25	70	0.85	1.50E-07	0.15
324	5.80003	0.00	0.01	361	1	0.96	0.000001	4.75E-06	1.1	10	0.25	70	0.85	1.59E-07	0.16
325	6.06684	0.00	0.01	361	1	0.96	0.000001	4.97E-06	1.1	10	0.25	70	0.85	1.66E-07	0.17
326	6.37655	0.00	0.02	361	1	0.96	0.000001	5.22E-06	1.1	10	0.25	70	0.85	1.74E-07	0.17
327	6.74668	0.00	0.02	361	1	0.96	0.000001	5.52E-06	1.1	10	0.25	70	0.85	1.84E-07	0.18
328	7.09497	0.00	0.02	361	1	0.96	0.000001	5.81E-06	1.1	10	0.25	70	0.85	1.94E-07	0.19
329	7.45358	0.00	0.02	361	1	0.96	0.000001	6.10E-06	1.1	10	0.25	70	0.85	2.04E-07	0.20
330	4.91092	0.00	0.01	361	1	0.96	0.000001	4.02E-06	1.1	10	0.25	70	0.85	1.34E-07	0.13
331	5.1437	0.00	0.01	361	1	0.96	0.000001	4.21E-06	1.1	10	0.25	70	0.85	1.41E-07	0.14
332	5.38464	0.00	0.01	361	1	0.96	0.000001	4.41E-06	1.1	10	0.25	70	0.85	1.47E-07	0.15
333	5.63956	0.00	0.01	361	1	0.96	0.000001	4.62E-06	1.1	10	0.25	70	0.85	1.54E-07	0.15
334	5.90758	0.00	0.01	361	1	0.96	0.000001	4.84E-06	1.1	10	0.25	70	0.85	1.62E-07	0.16
335	6.1907	0.00	0.01	361	1	0.96	0.000001	5.07E-06	1.1	10	0.25	70	0.85	1.69E-07	0.17
336	6.50453	0.00	0.02	361	1	0.96	0.000001	5.33E-06	1.1	10	0.25	70	0.85	1.78E-07	0.18
337	4.45376	0.00	0.01	361	1	0.96	0.000001	3.65E-06	1.1	10	0.25	70	0.85	1.22E-07	0.12
338	4.64585	0.00	0.01	361	1	0.96	0.000001	3.80E-06	1.1	10	0.25	70	0.85	1.27E-07	0.13
339	4.83896	0.00	0.01	361	1	0.96	0.000001	3.96E-06	1.1	10	0.25	70	0.85	1.32E-07	0.13
340	5.04006	0.00	0.01	361	1	0.96	0.000001	4.13E-06	1.1	10	0.25	70	0.85	1.38E-07	0.14
341	5.28027	0.00	0.01	361	1	0.96	0.000001	4.32E-06	1.1	10	0.25	70	0.85	1.44E-07	0.14
342	5.51375	0.00	0.01	361	1	0.96	0.000001	4.51E-06	1.1	10	0.25	70	0.85	1.51E-07	0.15
343	5.74975	0.00	0.01	361	1	0.96	0.000001	4.71E-06	1.1	10	0.25	70	0.85	1.57E-07	0.16
344	4.04382	0.00	0.01	361	1	0.96	0.000001	3.31E-06	1.1	10	0.25	70	0.85	1.11E-07	0.11
345	4.20487	0.00	0.01	361	1	0.96	0.000001	3.44E-06	1.1	10	0.25	70	0.85	1.15E-07	0.11
346	4.36542	0.00	0.01	361	1	0.96	0.000001	3.57E-06	1.1	10	0.25	70	0.85	1.19E-07	0.12
347	4.54276	0.00	0.01	361	1	0.96	0.000001	3.72E-06	1.1	10	0.25	70	0.85	1.24E-07	0.12
348	4.72262	0.00	0.01	361	1	0.96	0.000001	3.87E-06	1.1	10	0.25	70	0.85	1.29E-07	0.13
349	4.90761	0.00	0.01	361	1	0.96	0.000001	4.02E-06	1.1	10	0.25	70	0.85	1.34E-07	0.13
350	5.11568	0.00	0.01	361	1	0.96	0.000001	4.19E-06	1.1	10	0.25	70	0.85	1.40E-07	0.14
351	3.68606	0.00	0.01	361	1	0.96	0.000001	3.02E-06	1.1	10	0.25	70	0.85	1.01E-07	0.10
352	3.82488	0.00	0.01	361	1	0.96	0.000001	3.13E-06	1.1	10	0.25	70	0.85	1.05E-07	0.10

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	
353	3.95619	0.00	0.01	361	1	0.96	0.000001	3.24E-06	1.1	10	0.25	70	0.85	1.08E-07	0.11
354	4.09702	0.00	0.01	361	1	0.96	0.000001	3.35E-06	1.1	10	0.25	70	0.85	1.12E-07	0.11
355	4.26607	0.00	0.01	361	1	0.96	0.000001	3.49E-06	1.1	10	0.25	70	0.85	1.17E-07	0.12
356	4.42281	0.00	0.01	361	1	0.96	0.000001	3.62E-06	1.1	10	0.25	70	0.85	1.21E-07	0.12
357	4.5875	0.00	0.01	361	1	0.96	0.000001	3.76E-06	1.1	10	0.25	70	0.85	1.25E-07	0.13
358	3.37102	0.00	0.01	361	1	0.96	0.000001	2.76E-06	1.1	10	0.25	70	0.85	9.22E-08	0.09
359	3.48632	0.00	0.01	361	1	0.96	0.000001	2.85E-06	1.1	10	0.25	70	0.85	9.53E-08	0.10
360	3.60955	0.00	0.01	361	1	0.96	0.000001	2.96E-06	1.1	10	0.25	70	0.85	9.87E-08	0.10
361	3.7347	0.00	0.01	361	1	0.96	0.000001	3.06E-06	1.1	10	0.25	70	0.85	1.02E-07	0.10
362	3.87043	0.00	0.01	361	1	0.96	0.000001	3.17E-06	1.1	10	0.25	70	0.85	1.06E-07	0.11
363	4.00117	0.00	0.01	361	1	0.96	0.000001	3.28E-06	1.1	10	0.25	70	0.85	1.09E-07	0.11
364	4.1413	0.00	0.01	361	1	0.96	0.000001	3.39E-06	1.1	10	0.25	70	0.85	1.13E-07	0.11
365	3.11044	0.00	0.01	361	1	0.96	0.000001	2.55E-06	1.1	10	0.25	70	0.85	8.50E-08	0.09
366	3.20812	0.00	0.01	361	1	0.96	0.000001	2.63E-06	1.1	10	0.25	70	0.85	8.77E-08	0.09
367	3.31189	0.00	0.01	361	1	0.96	0.000001	2.71E-06	1.1	10	0.25	70	0.85	9.06E-08	0.09
368	3.42196	0.00	0.01	361	1	0.96	0.000001	2.80E-06	1.1	10	0.25	70	0.85	9.36E-08	0.09
369	3.53178	0.00	0.01	361	1	0.96	0.000001	2.89E-06	1.1	10	0.25	70	0.85	9.66E-08	0.10
370	3.65247	0.00	0.01	361	1	0.96	0.000001	2.99E-06	1.1	10	0.25	70	0.85	9.99E-08	0.10
371	3.76418	0.00	0.01	361	1	0.96	0.000001	3.08E-06	1.1	10	0.25	70	0.85	1.03E-07	0.10
372	2.87113	0.00	0.01	361	1	0.96	0.000001	2.35E-06	1.1	10	0.25	70	0.85	7.85E-08	0.08
373	2.95765	0.00	0.01	361	1	0.96	0.000001	2.42E-06	1.1	10	0.25	70	0.85	8.09E-08	0.08
374	3.04595	0.00	0.01	361	1	0.96	0.000001	2.49E-06	1.1	10	0.25	70	0.85	8.33E-08	0.08
375	3.14069	0.00	0.01	361	1	0.96	0.000001	2.57E-06	1.1	10	0.25	70	0.85	8.59E-08	0.09
376	3.23581	0.00	0.01	361	1	0.96	0.000001	2.65E-06	1.1	10	0.25	70	0.85	8.85E-08	0.09
377	3.34134	0.00	0.01	361	1	0.96	0.000001	2.74E-06	1.1	10	0.25	70	0.85	9.14E-08	0.09
378	3.44001	0.00	0.01	361	1	0.96	0.000001	2.82E-06	1.1	10	0.25	70	0.85	9.41E-08	0.09
379	62.92378	0.00	0.15	361	1	0.96	0.000001	5.15E-05	1.1	10	0.25	70	0.85	1.72E-06	1.72
380	84.15523	0.00	0.20	361	1	0.96	0.000001	6.89E-05	1.1	10	0.25	70	0.85	2.30E-06	2.30
381	46.29148	0.00	0.11	361	1	0.96	0.000001	3.79E-05	1.1	10	0.25	70	0.85	1.27E-06	1.27
382	49.47014	0.00	0.12	361	1	0.96	0.000001	4.05E-05	1.1	10	0.25	70	0.85	1.35E-06	1.35
383	34.31211	0.00	0.08	361	1	0.96	0.000001	2.81E-05	1.1	10	0.25	70	0.85	9.38E-07	0.94
384	25.18519	0.00	0.06	361	1	0.96	0.000001	2.06E-05	1.1	10	0.25	70	0.85	6.89E-07	0.69

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Constant1	Risk from 3rd Trimester							(3rd Tri)	(Risk/Mill)
								DOSE	CPF	ASF	ED	AT	FAH			
385	20.48881	0.00	0.05	361	1	0.96	0.000001	1.68E-05	1.1	10	0.25	70	0.85	5.60E-07	0.56	
386	16.51626	0.00	0.04	361	1	0.96	0.000001	1.35E-05	1.1	10	0.25	70	0.85	4.52E-07	0.45	
387	13.77677	0.00	0.03	361	1	0.96	0.000001	1.13E-05	1.1	10	0.25	70	0.85	3.77E-07	0.38	
388	11.78176	0.00	0.03	361	1	0.96	0.000001	9.65E-06	1.1	10	0.25	70	0.85	3.22E-07	0.32	
389	10.20464	0.00	0.02	361	1	0.96	0.000001	8.36E-06	1.1	10	0.25	70	0.85	2.79E-07	0.28	
390	9.12121	0.00	0.02	361	1	0.96	0.000001	7.47E-06	1.1	10	0.25	70	0.85	2.49E-07	0.25	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total	
1	0.00057	0.00	1090	1	0.96	0.000001	5.50E-07	1.1	10	0.11	70	0.85	8.26E-09	0.01	0.033508	Max 3.053
2	0.00057	0.00	1090	1	0.96	0.000001	5.93E-07	1.1	10	0.11	70	0.85	8.89E-09	0.01	0.036076	
3	0.00057	0.00	1090	1	0.96	0.000001	5.35E-07	1.1	10	0.11	70	0.85	8.02E-09	0.01	0.03256	
4	0.00057	0.00	1090	1	0.96	0.000001	5.78E-07	1.1	10	0.11	70	0.85	8.68E-09	0.01	0.035205	
5	0.00057	0.00	1090	1	0.96	0.000001	6.26E-07	1.1	10	0.11	70	0.85	9.40E-09	0.01	0.038139	
6	0.00057	0.00	1090	1	0.96	0.000001	6.79E-07	1.1	10	0.11	70	0.85	1.02E-08	0.01	0.041342	
7	0.00057	0.00	1090	1	0.96	0.000001	5.60E-07	1.1	10	0.11	70	0.85	8.40E-09	0.01	0.034089	
8	0.00057	0.00	1090	1	0.96	0.000001	6.07E-07	1.1	10	0.11	70	0.85	9.11E-09	0.01	0.036963	
9	0.00057	0.00	1090	1	0.96	0.000001	6.60E-07	1.1	10	0.11	70	0.85	9.90E-09	0.01	0.040191	
10	0.00057	0.00	1090	1	0.96	0.000001	7.20E-07	1.1	10	0.11	70	0.85	1.08E-08	0.01	0.043843	
11	0.00057	0.00	1090	1	0.96	0.000001	7.88E-07	1.1	10	0.11	70	0.85	1.18E-08	0.01	0.047989	
12	0.00057	0.00	1090	1	0.96	0.000001	6.34E-07	1.1	10	0.11	70	0.85	9.52E-09	0.01	0.038614	
13	0.00057	0.00	1090	1	0.96	0.000001	6.93E-07	1.1	10	0.11	70	0.85	1.04E-08	0.01	0.042196	
14	0.00057	0.00	1090	1	0.96	0.000001	7.60E-07	1.1	10	0.11	70	0.85	1.14E-08	0.01	0.046298	
15	0.00057	0.00	1090	1	0.96	0.000001	8.38E-07	1.1	10	0.11	70	0.85	1.26E-08	0.01	0.051013	
16	0.00057	0.00	1090	1	0.96	0.000001	9.25E-07	1.1	10	0.11	70	0.85	1.39E-08	0.01	0.056322	
17	0.00057	0.00	1090	1	0.96	0.000001	7.27E-07	1.1	10	0.11	70	0.85	1.09E-08	0.01	0.044247	
18	0.00057	0.00	1090	1	0.96	0.000001	8.02E-07	1.1	10	0.11	70	0.85	1.20E-08	0.01	0.04885	
19	0.00057	0.00	1090	1	0.96	0.000001	8.89E-07	1.1	10	0.11	70	0.85	1.33E-08	0.01	0.054141	
20	0.00057	0.00	1090	1	0.96	0.000001	9.90E-07	1.1	10	0.11	70	0.85	1.48E-08	0.01	0.060253	
21	0.00057	0.00	1090	1	0.96	0.000001	1.11E-06	1.1	10	0.11	70	0.85	1.66E-08	0.02	0.067536	
22	0.00057	0.00	1090	1	0.96	0.000001	8.43E-07	1.1	10	0.11	70	0.85	1.26E-08	0.01	0.051296	
23	0.00057	0.00	1090	1	0.96	0.000001	9.40E-07	1.1	10	0.11	70	0.85	1.41E-08	0.01	0.057226	
24	0.00057	0.00	1090	1	0.96	0.000001	1.05E-06	1.1	10	0.11	70	0.85	1.58E-08	0.02	0.06411	
25	0.00057	0.00	1090	1	0.96	0.000001	1.19E-06	1.1	10	0.11	70	0.85	1.79E-08	0.02	0.072484	
26	0.00057	0.00	1090	1	0.96	0.000001	1.35E-06	1.1	10	0.11	70	0.85	2.03E-08	0.02	0.082475	
27	0.00057	0.00	1090	1	0.96	0.000001	9.88E-07	1.1	10	0.11	70	0.85	1.48E-08	0.01	0.060146	
28	0.00057	0.00	1090	1	0.96	0.000001	1.11E-06	1.1	10	0.11	70	0.85	1.67E-08	0.02	0.067852	
29	0.00057	0.00	1090	1	0.96	0.000001	1.27E-06	1.1	10	0.11	70	0.85	1.91E-08	0.02	0.077418	
30	0.00057	0.00	1090	1	0.96	0.000001	1.46E-06	1.1	10	0.11	70	0.85	2.20E-08	0.02	0.089153	
31	0.00057	0.00	1090	1	0.96	0.000001	1.70E-06	1.1	10	0.11	70	0.85	2.56E-08	0.03	0.103791	
32	0.00057	0.00	1090	1	0.96	0.000001	1.17E-06	1.1	10	0.11	70	0.85	1.76E-08	0.02	0.071411	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
33	0.00057	0.00	1090	1	0.96	0.000001	1.35E-06	1.1	10	0.11	70	0.85	2.02E-08	0.02	0.081996
34	0.00057	0.00	1090	1	0.96	0.000001	1.57E-06	1.1	10	0.11	70	0.85	2.35E-08	0.02	0.095379
35	0.00057	0.00	1090	1	0.96	0.000001	1.84E-06	1.1	10	0.11	70	0.85	2.77E-08	0.03	0.11223
36	0.00057	0.00	1090	1	0.96	0.000001	2.22E-06	1.1	10	0.11	70	0.85	3.33E-08	0.03	0.135015
37	0.00057	0.00	1090	1	0.96	0.000001	1.41E-06	1.1	10	0.11	70	0.85	2.12E-08	0.02	0.08611
38	0.00057	0.00	1090	1	0.96	0.000001	1.66E-06	1.1	10	0.11	70	0.85	2.49E-08	0.02	0.100924
39	0.00057	0.00	1090	1	0.96	0.000001	1.97E-06	1.1	10	0.11	70	0.85	2.96E-08	0.03	0.120198
40	0.00057	0.00	1090	1	0.96	0.000001	2.41E-06	1.1	10	0.11	70	0.85	3.61E-08	0.04	0.146546
41	0.00057	0.00	1090	1	0.96	0.000001	1.74E-06	1.1	10	0.11	70	0.85	2.61E-08	0.03	0.106077
42	0.00057	0.00	1090	1	0.96	0.000001	2.09E-06	1.1	10	0.11	70	0.85	3.14E-08	0.03	0.127402
43	0.00057	0.00	1090	1	0.96	0.000001	2.57E-06	1.1	10	0.11	70	0.85	3.86E-08	0.04	0.156511
44	0.00057	0.00	1090	1	0.96	0.000001	3.25E-06	1.1	10	0.11	70	0.85	4.88E-08	0.05	0.198124
45	0.00057	0.00	1090	1	0.96	0.000001	2.17E-06	1.1	10	0.11	70	0.85	3.26E-08	0.03	0.132343
46	0.00057	0.00	1090	1	0.96	0.000001	2.68E-06	1.1	10	0.11	70	0.85	4.03E-08	0.04	0.163457
47	0.00057	0.00	1090	1	0.96	0.000001	3.42E-06	1.1	10	0.11	70	0.85	5.13E-08	0.05	0.208263
48	0.00057	0.00	1090	1	0.96	0.000001	4.53E-06	1.1	10	0.11	70	0.85	6.80E-08	0.07	0.27573
49	0.00057	0.00	1090	1	0.96	0.000001	3.49E-06	1.1	10	0.11	70	0.85	5.24E-08	0.05	0.212687
50	0.00057	0.00	1090	1	0.96	0.000001	4.58E-06	1.1	10	0.11	70	0.85	6.87E-08	0.07	0.278848
51	0.00057	0.00	1090	1	0.96	0.000001	3.47E-06	1.1	10	0.11	70	0.85	5.20E-08	0.05	0.210974
52	0.00057	0.00	1090	1	0.96	0.000001	4.49E-06	1.1	10	0.11	70	0.85	6.73E-08	0.07	0.273129
53	0.00057	0.01	1090	1	0.96	0.000001	6.01E-06	1.1	10	0.11	70	0.85	9.02E-08	0.09	0.365877
54	0.00057	0.00	1090	1	0.96	0.000001	3.35E-06	1.1	10	0.11	70	0.85	5.03E-08	0.05	0.20422
55	0.00057	0.00	1090	1	0.96	0.000001	4.27E-06	1.1	10	0.11	70	0.85	6.41E-08	0.06	0.260001
56	0.00057	0.01	1090	1	0.96	0.000001	5.64E-06	1.1	10	0.11	70	0.85	8.47E-08	0.08	0.343596
57	0.00057	0.01	1090	1	0.96	0.000001	7.75E-06	1.1	10	0.11	70	0.85	1.16E-07	0.12	0.471926
58	0.00057	0.00	1090	1	0.96	0.000001	3.16E-06	1.1	10	0.11	70	0.85	4.75E-08	0.05	0.192583
59	0.00057	0.00	1090	1	0.96	0.000001	3.97E-06	1.1	10	0.11	70	0.85	5.96E-08	0.06	0.241847
60	0.00057	0.00	1090	1	0.96	0.000001	5.14E-06	1.1	10	0.11	70	0.85	7.71E-08	0.08	0.312873
61	0.00057	0.01	1090	1	0.96	0.000001	6.91E-06	1.1	10	0.11	70	0.85	1.04E-07	0.10	0.420719
62	0.00057	0.00	1090	1	0.96	0.000001	2.95E-06	1.1	10	0.11	70	0.85	4.42E-08	0.04	0.179328
63	0.00057	0.00	1090	1	0.96	0.000001	3.61E-06	1.1	10	0.11	70	0.85	5.42E-08	0.05	0.220011
64	0.00057	0.00	1090	1	0.96	0.000001	4.53E-06	1.1	10	0.11	70	0.85	6.79E-08	0.07	0.275574

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
65	0.00057	0.01	1090	1	0.96	0.000001	5.83E-06	1.1	10	0.11	70	0.85	8.74E-08	0.354677
66	0.00057	0.01	1090	1	0.96	0.000001	7.76E-06	1.1	10	0.11	70	0.85	1.16E-07	0.472208
67	0.00057	0.00	1090	1	0.96	0.000001	2.67E-06	1.1	10	0.11	70	0.85	4.01E-08	0.162831
68	0.00057	0.00	1090	1	0.96	0.000001	3.20E-06	1.1	10	0.11	70	0.85	4.81E-08	0.194991
69	0.00057	0.00	1090	1	0.96	0.000001	3.89E-06	1.1	10	0.11	70	0.85	5.83E-08	0.236563
70	0.00057	0.00	1090	1	0.96	0.000001	4.76E-06	1.1	10	0.11	70	0.85	7.15E-08	0.289988
71	0.00057	0.01	1090	1	0.96	0.000001	5.92E-06	1.1	10	0.11	70	0.85	8.88E-08	0.360132
72	0.00057	0.00	1090	1	0.96	0.000001	2.39E-06	1.1	10	0.11	70	0.85	3.59E-08	0.145813
73	0.00057	0.00	1090	1	0.96	0.000001	2.80E-06	1.1	10	0.11	70	0.85	4.19E-08	0.17017
74	0.00057	0.00	1090	1	0.96	0.000001	3.29E-06	1.1	10	0.11	70	0.85	4.93E-08	0.200217
75	0.00057	0.00	1090	1	0.96	0.000001	3.86E-06	1.1	10	0.11	70	0.85	5.79E-08	0.234973
76	0.00057	0.00	1090	1	0.96	0.000001	4.54E-06	1.1	10	0.11	70	0.85	6.81E-08	0.276427
77	0.00057	0.00	1090	1	0.96	0.000001	2.12E-06	1.1	10	0.11	70	0.85	3.18E-08	0.129181
78	0.00057	0.00	1090	1	0.96	0.000001	2.42E-06	1.1	10	0.11	70	0.85	3.63E-08	0.147167
79	0.00057	0.00	1090	1	0.96	0.000001	2.77E-06	1.1	10	0.11	70	0.85	4.15E-08	0.168374
80	0.00057	0.00	1090	1	0.96	0.000001	3.14E-06	1.1	10	0.11	70	0.85	4.71E-08	0.190981
81	0.00057	0.00	1090	1	0.96	0.000001	3.55E-06	1.1	10	0.11	70	0.85	5.33E-08	0.216359
82	0.00057	0.00	1090	1	0.96	0.000001	1.87E-06	1.1	10	0.11	70	0.85	2.81E-08	0.11397
83	0.00057	0.00	1090	1	0.96	0.000001	2.09E-06	1.1	10	0.11	70	0.85	3.13E-08	0.127211
84	0.00057	0.00	1090	1	0.96	0.000001	2.33E-06	1.1	10	0.11	70	0.85	3.49E-08	0.141589
85	0.00057	0.00	1090	1	0.96	0.000001	2.58E-06	1.1	10	0.11	70	0.85	3.87E-08	0.15702
86	0.00057	0.00	1090	1	0.96	0.000001	2.85E-06	1.1	10	0.11	70	0.85	4.27E-08	0.173237
87	0.00057	0.00	1090	1	0.96	0.000001	1.65E-06	1.1	10	0.11	70	0.85	2.47E-08	0.100328
88	0.00057	0.00	1090	1	0.96	0.000001	1.81E-06	1.1	10	0.11	70	0.85	2.72E-08	0.11018
89	0.00057	0.00	1090	1	0.96	0.000001	1.98E-06	1.1	10	0.11	70	0.85	2.97E-08	0.120509
90	0.00057	0.00	1090	1	0.96	0.000001	2.17E-06	1.1	10	0.11	70	0.85	3.25E-08	0.131928
91	0.00057	0.00	1090	1	0.96	0.000001	2.35E-06	1.1	10	0.11	70	0.85	3.53E-08	0.143243
92	0.00057	0.00	1090	1	0.96	0.000001	1.46E-06	1.1	10	0.11	70	0.85	2.18E-08	0.088646
93	0.00057	0.00	1090	1	0.96	0.000001	1.58E-06	1.1	10	0.11	70	0.85	2.37E-08	0.096065
94	0.00057	0.00	1090	1	0.96	0.000001	1.70E-06	1.1	10	0.11	70	0.85	2.56E-08	0.103782
95	0.00057	0.00	1090	1	0.96	0.000001	1.84E-06	1.1	10	0.11	70	0.85	2.76E-08	0.11185
96	0.00057	0.00	1090	1	0.96	0.000001	1.97E-06	1.1	10	0.11	70	0.85	2.96E-08	0.120055

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
97	0.00057	0.00	1090	1	0.96	0.000001	1.29E-06	1.1	10	0.11	70	0.85	1.94E-08	0.02	0.0786
98	0.00057	0.00	1090	1	0.96	0.000001	1.39E-06	1.1	10	0.11	70	0.85	2.08E-08	0.02	0.084377
99	0.00057	0.00	1090	1	0.96	0.000001	1.48E-06	1.1	10	0.11	70	0.85	2.22E-08	0.02	0.090276
100	0.00057	0.00	1090	1	0.96	0.000001	1.58E-06	1.1	10	0.11	70	0.85	2.37E-08	0.02	0.096176
101	0.00057	0.00	1090	1	0.96	0.000001	1.68E-06	1.1	10	0.11	70	0.85	2.52E-08	0.03	0.102358
102	0.00057	0.00	1090	1	0.96	0.000001	5.37E-07	1.1	10	0.11	70	0.85	8.06E-09	0.01	0.032707
103	0.00057	0.00	1090	1	0.96	0.000001	5.39E-07	1.1	10	0.11	70	0.85	8.09E-09	0.01	0.032813
104	0.00057	0.00	1090	1	0.96	0.000001	5.57E-07	1.1	10	0.11	70	0.85	8.35E-09	0.01	0.03389
105	0.00057	0.00	1090	1	0.96	0.000001	5.38E-07	1.1	10	0.11	70	0.85	8.07E-09	0.01	0.032748
106	0.00057	0.00	1090	1	0.96	0.000001	5.57E-07	1.1	10	0.11	70	0.85	8.35E-09	0.01	0.033901
107	0.00057	0.00	1090	1	0.96	0.000001	5.75E-07	1.1	10	0.11	70	0.85	8.63E-09	0.01	0.035012
108	0.00057	0.00	1090	1	0.96	0.000001	5.94E-07	1.1	10	0.11	70	0.85	8.91E-09	0.01	0.036142
109	0.00057	0.00	1090	1	0.96	0.000001	5.56E-07	1.1	10	0.11	70	0.85	8.33E-09	0.01	0.033821
110	0.00057	0.00	1090	1	0.96	0.000001	5.74E-07	1.1	10	0.11	70	0.85	8.61E-09	0.01	0.034958
111	0.00057	0.00	1090	1	0.96	0.000001	5.94E-07	1.1	10	0.11	70	0.85	8.91E-09	0.01	0.036154
112	0.00057	0.00	1090	1	0.96	0.000001	6.15E-07	1.1	10	0.11	70	0.85	9.22E-09	0.01	0.037426
113	0.00057	0.00	1090	1	0.96	0.000001	6.35E-07	1.1	10	0.11	70	0.85	9.52E-09	0.01	0.03865
114	0.00057	0.00	1090	1	0.96	0.000001	5.53E-07	1.1	10	0.11	70	0.85	8.29E-09	0.01	0.033649
115	0.00057	0.00	1090	1	0.96	0.000001	5.72E-07	1.1	10	0.11	70	0.85	8.58E-09	0.01	0.034823
116	0.00057	0.00	1090	1	0.96	0.000001	5.93E-07	1.1	10	0.11	70	0.85	8.89E-09	0.01	0.036084
117	0.00057	0.00	1090	1	0.96	0.000001	6.14E-07	1.1	10	0.11	70	0.85	9.21E-09	0.01	0.037369
118	0.00057	0.00	1090	1	0.96	0.000001	6.36E-07	1.1	10	0.11	70	0.85	9.54E-09	0.01	0.038699
119	0.00057	0.00	1090	1	0.96	0.000001	6.59E-07	1.1	10	0.11	70	0.85	9.88E-09	0.01	0.040111
120	0.00057	0.00	1090	1	0.96	0.000001	6.81E-07	1.1	10	0.11	70	0.85	1.02E-08	0.01	0.041484
121	0.00057	0.00	1090	1	0.96	0.000001	5.48E-07	1.1	10	0.11	70	0.85	8.23E-09	0.01	0.033388
122	0.00057	0.00	1090	1	0.96	0.000001	5.68E-07	1.1	10	0.11	70	0.85	8.53E-09	0.01	0.034594
123	0.00057	0.00	1090	1	0.96	0.000001	5.89E-07	1.1	10	0.11	70	0.85	8.84E-09	0.01	0.035881
124	0.00057	0.00	1090	1	0.96	0.000001	6.11E-07	1.1	10	0.11	70	0.85	9.17E-09	0.01	0.037222
125	0.00057	0.00	1090	1	0.96	0.000001	6.34E-07	1.1	10	0.11	70	0.85	9.51E-09	0.01	0.038596
126	0.00057	0.00	1090	1	0.96	0.000001	6.57E-07	1.1	10	0.11	70	0.85	9.86E-09	0.01	0.040017
127	0.00057	0.00	1090	1	0.96	0.000001	6.83E-07	1.1	10	0.11	70	0.85	1.02E-08	0.01	0.041556
128	0.00057	0.00	1090	1	0.96	0.000001	7.07E-07	1.1	10	0.11	70	0.85	1.06E-08	0.01	0.043032

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
129	0.00057	0.00	1090	1	0.96	0.000001	6.07E-07	1.1	10	0.11	70	0.85	9.10E-09	0.01	0.036935
130	0.00057	0.00	1090	1	0.96	0.000001	6.30E-07	1.1	10	0.11	70	0.85	9.46E-09	0.01	0.038371
131	0.00057	0.00	1090	1	0.96	0.000001	6.54E-07	1.1	10	0.11	70	0.85	9.82E-09	0.01	0.039844
132	0.00057	0.00	1090	1	0.96	0.000001	6.80E-07	1.1	10	0.11	70	0.85	1.02E-08	0.01	0.041389
133	0.00057	0.00	1090	1	0.96	0.000001	7.06E-07	1.1	10	0.11	70	0.85	1.06E-08	0.01	0.042982
134	0.00057	0.00	1090	1	0.96	0.000001	7.34E-07	1.1	10	0.11	70	0.85	1.10E-08	0.01	0.04468
135	0.00057	0.00	1090	1	0.96	0.000001	7.63E-07	1.1	10	0.11	70	0.85	1.14E-08	0.01	0.046452
136	0.00057	0.00	1090	1	0.96	0.000001	6.50E-07	1.1	10	0.11	70	0.85	9.75E-09	0.01	0.039547
137	0.00057	0.00	1090	1	0.96	0.000001	6.75E-07	1.1	10	0.11	70	0.85	1.01E-08	0.01	0.041114
138	0.00057	0.00	1090	1	0.96	0.000001	7.03E-07	1.1	10	0.11	70	0.85	1.05E-08	0.01	0.042789
139	0.00057	0.00	1090	1	0.96	0.000001	7.30E-07	1.1	10	0.11	70	0.85	1.10E-08	0.01	0.044462
140	0.00057	0.00	1090	1	0.96	0.000001	7.61E-07	1.1	10	0.11	70	0.85	1.14E-08	0.01	0.04636
141	0.00057	0.00	1090	1	0.96	0.000001	7.94E-07	1.1	10	0.11	70	0.85	1.19E-08	0.01	0.048328
142	0.00057	0.00	1090	1	0.96	0.000001	8.26E-07	1.1	10	0.11	70	0.85	1.24E-08	0.01	0.050293
143	0.00057	0.00	1090	1	0.96	0.000001	6.97E-07	1.1	10	0.11	70	0.85	1.05E-08	0.01	0.042417
144	0.00057	0.00	1090	1	0.96	0.000001	7.26E-07	1.1	10	0.11	70	0.85	1.09E-08	0.01	0.044212
145	0.00057	0.00	1090	1	0.96	0.000001	7.56E-07	1.1	10	0.11	70	0.85	1.13E-08	0.01	0.046017
146	0.00057	0.00	1090	1	0.96	0.000001	7.90E-07	1.1	10	0.11	70	0.85	1.18E-08	0.01	0.048084
147	0.00057	0.00	1090	1	0.96	0.000001	8.25E-07	1.1	10	0.11	70	0.85	1.24E-08	0.01	0.050203
148	0.00057	0.00	1090	1	0.96	0.000001	8.61E-07	1.1	10	0.11	70	0.85	1.29E-08	0.01	0.052393
149	0.00057	0.00	1090	1	0.96	0.000001	7.50E-07	1.1	10	0.11	70	0.85	1.12E-08	0.01	0.045633
150	0.00057	0.00	1090	1	0.96	0.000001	7.82E-07	1.1	10	0.11	70	0.85	1.17E-08	0.01	0.047619
151	0.00057	0.00	1090	1	0.96	0.000001	8.19E-07	1.1	10	0.11	70	0.85	1.23E-08	0.01	0.04985
152	0.00057	0.00	1090	1	0.96	0.000001	8.56E-07	1.1	10	0.11	70	0.85	1.28E-08	0.01	0.052125
153	0.00057	0.00	1090	1	0.96	0.000001	8.95E-07	1.1	10	0.11	70	0.85	1.34E-08	0.01	0.054489
154	0.00057	0.00	1090	1	0.96	0.000001	9.38E-07	1.1	10	0.11	70	0.85	1.41E-08	0.01	0.057108
155	0.00057	0.00	1090	1	0.96	0.000001	8.09E-07	1.1	10	0.11	70	0.85	1.21E-08	0.01	0.049275
156	0.00057	0.00	1090	1	0.96	0.000001	8.48E-07	1.1	10	0.11	70	0.85	1.27E-08	0.01	0.051625
157	0.00057	0.00	1090	1	0.96	0.000001	8.88E-07	1.1	10	0.11	70	0.85	1.33E-08	0.01	0.054093
158	0.00057	0.00	1090	1	0.96	0.000001	9.31E-07	1.1	10	0.11	70	0.85	1.40E-08	0.01	0.056704
159	0.00057	0.00	1090	1	0.96	0.000001	9.78E-07	1.1	10	0.11	70	0.85	1.47E-08	0.01	0.059566
160	0.00057	0.00	1090	1	0.96	0.000001	1.03E-06	1.1	10	0.11	70	0.85	1.54E-08	0.02	0.062506

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
161	0.00057	0.00	1090	1	0.96	0.000001	8.78E-07	1.1	10	0.11	70	0.85	1.32E-08	0.01	0.053461
162	0.00057	0.00	1090	1	0.96	0.000001	9.21E-07	1.1	10	0.11	70	0.85	1.38E-08	0.01	0.056101
163	0.00057	0.00	1090	1	0.96	0.000001	9.69E-07	1.1	10	0.11	70	0.85	1.45E-08	0.01	0.058987
164	0.00057	0.00	1090	1	0.96	0.000001	1.02E-06	1.1	10	0.11	70	0.85	1.53E-08	0.02	0.062051
165	0.00057	0.00	1090	1	0.96	0.000001	1.07E-06	1.1	10	0.11	70	0.85	1.61E-08	0.02	0.065316
166	0.00057	0.00	1090	1	0.96	0.000001	1.13E-06	1.1	10	0.11	70	0.85	1.70E-08	0.02	0.06882
167	0.00057	0.00	1090	1	0.96	0.000001	9.55E-07	1.1	10	0.11	70	0.85	1.43E-08	0.01	0.058135
168	0.00057	0.00	1090	1	0.96	0.000001	1.01E-06	1.1	10	0.11	70	0.85	1.51E-08	0.02	0.061367
169	0.00057	0.00	1090	1	0.96	0.000001	1.06E-06	1.1	10	0.11	70	0.85	1.60E-08	0.02	0.06473
170	0.00057	0.00	1090	1	0.96	0.000001	1.12E-06	1.1	10	0.11	70	0.85	1.68E-08	0.02	0.068324
171	0.00057	0.00	1090	1	0.96	0.000001	1.19E-06	1.1	10	0.11	70	0.85	1.78E-08	0.02	0.072183
172	0.00057	0.00	1090	1	0.96	0.000001	1.25E-06	1.1	10	0.11	70	0.85	1.88E-08	0.02	0.076227
173	0.00057	0.00	1090	1	0.96	0.000001	1.05E-06	1.1	10	0.11	70	0.85	1.57E-08	0.02	0.063716
174	0.00057	0.00	1090	1	0.96	0.000001	1.11E-06	1.1	10	0.11	70	0.85	1.66E-08	0.02	0.067356
175	0.00057	0.00	1090	1	0.96	0.000001	1.17E-06	1.1	10	0.11	70	0.85	1.76E-08	0.02	0.071296
176	0.00057	0.00	1090	1	0.96	0.000001	1.24E-06	1.1	10	0.11	70	0.85	1.86E-08	0.02	0.075568
177	0.00057	0.00	1090	1	0.96	0.000001	1.32E-06	1.1	10	0.11	70	0.85	1.97E-08	0.02	0.080081
178	0.00057	0.00	1090	1	0.96	0.000001	1.15E-06	1.1	10	0.11	70	0.85	1.73E-08	0.02	0.070019
179	0.00057	0.00	1090	1	0.96	0.000001	1.22E-06	1.1	10	0.11	70	0.85	1.83E-08	0.02	0.074267
180	0.00057	0.00	1090	1	0.96	0.000001	1.30E-06	1.1	10	0.11	70	0.85	1.95E-08	0.02	0.079054
181	0.00057	0.00	1090	1	0.96	0.000001	1.38E-06	1.1	10	0.11	70	0.85	2.07E-08	0.02	0.084021
182	0.00057	0.00	1090	1	0.96	0.000001	1.47E-06	1.1	10	0.11	70	0.85	2.21E-08	0.02	0.089704
183	0.00057	0.00	1090	1	0.96	0.000001	1.27E-06	1.1	10	0.11	70	0.85	1.91E-08	0.02	0.077465
184	0.00057	0.00	1090	1	0.96	0.000001	1.35E-06	1.1	10	0.11	70	0.85	2.03E-08	0.02	0.082444
185	0.00057	0.00	1090	1	0.96	0.000001	1.45E-06	1.1	10	0.11	70	0.85	2.17E-08	0.02	0.088109
186	0.00057	0.00	1090	1	0.96	0.000001	1.55E-06	1.1	10	0.11	70	0.85	2.33E-08	0.02	0.094412
187	0.00057	0.00	1090	1	0.96	0.000001	1.66E-06	1.1	10	0.11	70	0.85	2.50E-08	0.02	0.10129
188	0.00057	0.00	1090	1	0.96	0.000001	1.41E-06	1.1	10	0.11	70	0.85	2.12E-08	0.02	0.08614
189	0.00057	0.00	1090	1	0.96	0.000001	1.52E-06	1.1	10	0.11	70	0.85	2.28E-08	0.02	0.092458
190	0.00057	0.00	1090	1	0.96	0.000001	1.63E-06	1.1	10	0.11	70	0.85	2.44E-08	0.02	0.099168
191	0.00057	0.00	1090	1	0.96	0.000001	1.76E-06	1.1	10	0.11	70	0.85	2.64E-08	0.03	0.106956
192	0.00057	0.00	1090	1	0.96	0.000001	1.90E-06	1.1	10	0.11	70	0.85	2.84E-08	0.03	0.115445

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
193	0.00057	0.00	1090	1	0.96	0.000001	1.59E-06	1.1	10	0.11	70	0.85	2.38E-08	0.02	0.09665
194	0.00057	0.00	1090	1	0.96	0.000001	1.71E-06	1.1	10	0.11	70	0.85	2.57E-08	0.03	0.104315
195	0.00057	0.00	1090	1	0.96	0.000001	1.85E-06	1.1	10	0.11	70	0.85	2.77E-08	0.03	0.112585
196	0.00057	0.00	1090	1	0.96	0.000001	2.01E-06	1.1	10	0.11	70	0.85	3.02E-08	0.03	0.122425
197	0.00057	0.00	1090	1	0.96	0.000001	2.19E-06	1.1	10	0.11	70	0.85	3.28E-08	0.03	0.133188
198	0.00057	0.00	1090	1	0.96	0.000001	1.79E-06	1.1	10	0.11	70	0.85	2.69E-08	0.03	0.109252
199	0.00057	0.00	1090	1	0.96	0.000001	1.95E-06	1.1	10	0.11	70	0.85	2.92E-08	0.03	0.118691
200	0.00057	0.00	1090	1	0.96	0.000001	2.12E-06	1.1	10	0.11	70	0.85	3.19E-08	0.03	0.12927
201	0.00057	0.00	1090	1	0.96	0.000001	2.33E-06	1.1	10	0.11	70	0.85	3.50E-08	0.03	0.141925
202	0.00057	0.00	1090	1	0.96	0.000001	2.05E-06	1.1	10	0.11	70	0.85	3.07E-08	0.03	0.124582
203	0.00057	0.00	1090	1	0.96	0.000001	2.24E-06	1.1	10	0.11	70	0.85	3.36E-08	0.03	0.136232
204	0.00057	0.00	1090	1	0.96	0.000001	2.47E-06	1.1	10	0.11	70	0.85	3.71E-08	0.04	0.150626
205	0.00057	0.00	1090	1	0.96	0.000001	2.74E-06	1.1	10	0.11	70	0.85	4.11E-08	0.04	0.166825
206	0.00057	0.00	1090	1	0.96	0.000001	2.35E-06	1.1	10	0.11	70	0.85	3.53E-08	0.04	0.143205
207	0.00057	0.00	1090	1	0.96	0.000001	2.61E-06	1.1	10	0.11	70	0.85	3.92E-08	0.04	0.158935
208	0.00057	0.00	1090	1	0.96	0.000001	2.91E-06	1.1	10	0.11	70	0.85	4.37E-08	0.04	0.177205
209	0.00057	0.00	1090	1	0.96	0.000001	3.28E-06	1.1	10	0.11	70	0.85	4.92E-08	0.05	0.199477
210	0.00057	0.00	1090	1	0.96	0.000001	2.46E-06	1.1	10	0.11	70	0.85	3.69E-08	0.04	0.149844
211	0.00057	0.00	1090	1	0.96	0.000001	2.75E-06	1.1	10	0.11	70	0.85	4.13E-08	0.04	0.167462
212	0.00057	0.00	1090	1	0.96	0.000001	3.09E-06	1.1	10	0.11	70	0.85	4.63E-08	0.05	0.18805
213	0.00057	0.00	1090	1	0.96	0.000001	3.50E-06	1.1	10	0.11	70	0.85	5.25E-08	0.05	0.212987
214	0.00057	0.00	1090	1	0.96	0.000001	4.00E-06	1.1	10	0.11	70	0.85	6.00E-08	0.06	0.243605
215	0.00057	0.00	1090	1	0.96	0.000001	2.57E-06	1.1	10	0.11	70	0.85	3.85E-08	0.04	0.156313
216	0.00057	0.00	1090	1	0.96	0.000001	2.87E-06	1.1	10	0.11	70	0.85	4.31E-08	0.04	0.174928
217	0.00057	0.00	1090	1	0.96	0.000001	3.24E-06	1.1	10	0.11	70	0.85	4.86E-08	0.05	0.197391
218	0.00057	0.00	1090	1	0.96	0.000001	3.70E-06	1.1	10	0.11	70	0.85	5.55E-08	0.06	0.225055
219	0.00057	0.00	1090	1	0.96	0.000001	4.27E-06	1.1	10	0.11	70	0.85	6.41E-08	0.06	0.25998
220	0.00057	0.00	1090	1	0.96	0.000001	3.00E-06	1.1	10	0.11	70	0.85	4.50E-08	0.04	0.182541
221	0.00057	0.00	1090	1	0.96	0.000001	3.40E-06	1.1	10	0.11	70	0.85	5.10E-08	0.05	0.2069
222	0.00057	0.00	1090	1	0.96	0.000001	3.89E-06	1.1	10	0.11	70	0.85	5.84E-08	0.06	0.237064
223	0.00057	0.00	1090	1	0.96	0.000001	4.52E-06	1.1	10	0.11	70	0.85	6.79E-08	0.07	0.275368
224	0.00057	0.01	1090	1	0.96	0.000001	5.35E-06	1.1	10	0.11	70	0.85	8.03E-08	0.08	0.325981

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
225	0.00057	0.00	1090	1	0.96	0.000001	3.53E-06	1.1	10	0.11	70	0.85	5.29E-08	0.05	0.214737
226	0.00057	0.00	1090	1	0.96	0.000001	4.06E-06	1.1	10	0.11	70	0.85	6.08E-08	0.06	0.246905
227	0.00057	0.00	1090	1	0.96	0.000001	4.73E-06	1.1	10	0.11	70	0.85	7.09E-08	0.07	0.287678
228	0.00057	0.01	1090	1	0.96	0.000001	5.60E-06	1.1	10	0.11	70	0.85	8.40E-08	0.08	0.340952
229	0.00057	0.01	1090	1	0.96	0.000001	6.79E-06	1.1	10	0.11	70	0.85	1.02E-07	0.10	0.413694
230	0.00057	0.00	1090	1	0.96	0.000001	4.19E-06	1.1	10	0.11	70	0.85	6.28E-08	0.06	0.254905
231	0.00057	0.00	1090	1	0.96	0.000001	4.89E-06	1.1	10	0.11	70	0.85	7.33E-08	0.07	0.297568
232	0.00057	0.01	1090	1	0.96	0.000001	5.77E-06	1.1	10	0.11	70	0.85	8.66E-08	0.09	0.351568
233	0.00057	0.01	1090	1	0.96	0.000001	7.00E-06	1.1	10	0.11	70	0.85	1.05E-07	0.10	0.426063
234	0.00057	0.01	1090	1	0.96	0.000001	8.68E-06	1.1	10	0.11	70	0.85	1.30E-07	0.13	0.528606
235	0.00057	0.00	1090	1	0.96	0.000001	4.98E-06	1.1	10	0.11	70	0.85	7.48E-08	0.07	0.303344
236	0.00057	0.01	1090	1	0.96	0.000001	5.86E-06	1.1	10	0.11	70	0.85	8.79E-08	0.09	0.356631
237	0.00057	0.01	1090	1	0.96	0.000001	7.05E-06	1.1	10	0.11	70	0.85	1.06E-07	0.11	0.429052
238	0.00057	0.01	1090	1	0.96	0.000001	8.67E-06	1.1	10	0.11	70	0.85	1.30E-07	0.13	0.528
239	0.00057	0.01	1090	1	0.96	0.000001	1.09E-05	1.1	10	0.11	70	0.85	1.63E-07	0.16	0.660804
240	0.00057	0.01	1090	1	0.96	0.000001	5.88E-06	1.1	10	0.11	70	0.85	8.83E-08	0.09	0.358243
241	0.00057	0.01	1090	1	0.96	0.000001	7.06E-06	1.1	10	0.11	70	0.85	1.06E-07	0.11	0.429875
242	0.00057	0.01	1090	1	0.96	0.000001	8.50E-06	1.1	10	0.11	70	0.85	1.28E-07	0.13	0.51759
243	0.00057	0.01	1090	1	0.96	0.000001	1.06E-05	1.1	10	0.11	70	0.85	1.59E-07	0.16	0.64321
244	0.00057	0.01	1090	1	0.96	0.000001	5.85E-06	1.1	10	0.11	70	0.85	8.77E-08	0.09	0.355992
245	0.00057	0.01	1090	1	0.96	0.000001	6.98E-06	1.1	10	0.11	70	0.85	1.05E-07	0.10	0.424699
246	0.00057	0.01	1090	1	0.96	0.000001	8.38E-06	1.1	10	0.11	70	0.85	1.26E-07	0.13	0.50991
247	0.00057	0.01	1090	1	0.96	0.000001	1.02E-05	1.1	10	0.11	70	0.85	1.53E-07	0.15	0.618831
248	0.00057	0.01	1090	1	0.96	0.000001	1.28E-05	1.1	10	0.11	70	0.85	1.91E-07	0.19	0.776305
249	0.00057	0.01	1090	1	0.96	0.000001	6.83E-06	1.1	10	0.11	70	0.85	1.03E-07	0.10	0.415975
250	0.00057	0.01	1090	1	0.96	0.000001	8.17E-06	1.1	10	0.11	70	0.85	1.23E-07	0.12	0.497307
251	0.00057	0.01	1090	1	0.96	0.000001	9.84E-06	1.1	10	0.11	70	0.85	1.48E-07	0.15	0.599211
252	0.00057	0.01	1090	1	0.96	0.000001	1.22E-05	1.1	10	0.11	70	0.85	1.83E-07	0.18	0.742736
253	0.00057	0.01	1090	1	0.96	0.000001	1.55E-05	1.1	10	0.11	70	0.85	2.33E-07	0.23	0.946572
254	0.00057	0.01	1090	1	0.96	0.000001	6.65E-06	1.1	10	0.11	70	0.85	9.98E-08	0.10	0.404887
255	0.00057	0.01	1090	1	0.96	0.000001	7.88E-06	1.1	10	0.11	70	0.85	1.18E-07	0.12	0.479557
256	0.00057	0.01	1090	1	0.96	0.000001	9.56E-06	1.1	10	0.11	70	0.85	1.43E-07	0.14	0.581975

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
257	0.00057	0.01	1090	1	0.96	0.000001	1.17E-05	1.1	10	0.11	70	0.85	1.76E-07	0.18	0.712288
258	0.00057	0.01	1090	1	0.96	0.000001	1.49E-05	1.1	10	0.11	70	0.85	2.24E-07	0.22	0.907628
259	0.00057	0.02	1090	1	0.96	0.000001	1.95E-05	1.1	10	0.11	70	0.85	2.93E-07	0.29	1.18734
260	0.00057	0.01	1090	1	0.96	0.000001	7.60E-06	1.1	10	0.11	70	0.85	1.14E-07	0.11	0.462487
261	0.00057	0.01	1090	1	0.96	0.000001	9.17E-06	1.1	10	0.11	70	0.85	1.38E-07	0.14	0.558271
262	0.00057	0.01	1090	1	0.96	0.000001	1.13E-05	1.1	10	0.11	70	0.85	1.69E-07	0.17	0.686847
263	0.00057	0.01	1090	1	0.96	0.000001	1.41E-05	1.1	10	0.11	70	0.85	2.12E-07	0.21	0.860493
264	0.00057	0.02	1090	1	0.96	0.000001	1.89E-05	1.1	10	0.11	70	0.85	2.84E-07	0.28	1.151482
265	0.00057	0.01	1090	1	0.96	0.000001	8.73E-06	1.1	10	0.11	70	0.85	1.31E-07	0.13	0.531548
266	0.00057	0.01	1090	1	0.96	0.000001	1.07E-05	1.1	10	0.11	70	0.85	1.60E-07	0.16	0.649144
267	0.00057	0.01	1090	1	0.96	0.000001	1.33E-05	1.1	10	0.11	70	0.85	1.99E-07	0.20	0.809254
268	0.00057	0.02	1090	1	0.96	0.000001	1.77E-05	1.1	10	0.11	70	0.85	2.65E-07	0.27	1.075411
269	0.00057	0.02	1090	1	0.96	0.000001	2.50E-05	1.1	10	0.11	70	0.85	3.76E-07	0.38	1.524662
270	0.00057	0.01	1090	1	0.96	0.000001	1.00E-05	1.1	10	0.11	70	0.85	1.50E-07	0.15	0.609161
271	0.00057	0.01	1090	1	0.96	0.000001	1.24E-05	1.1	10	0.11	70	0.85	1.86E-07	0.19	0.754286
272	0.00057	0.02	1090	1	0.96	0.000001	1.60E-05	1.1	10	0.11	70	0.85	2.40E-07	0.24	0.974851
273	0.00057	0.02	1090	1	0.96	0.000001	2.24E-05	1.1	10	0.11	70	0.85	3.36E-07	0.34	1.365227
274	0.00057	0.01	1090	1	0.96	0.000001	9.18E-06	1.1	10	0.11	70	0.85	1.38E-07	0.14	0.559104
275	0.00057	0.01	1090	1	0.96	0.000001	1.12E-05	1.1	10	0.11	70	0.85	1.68E-07	0.17	0.682527
276	0.00057	0.01	1090	1	0.96	0.000001	1.42E-05	1.1	10	0.11	70	0.85	2.12E-07	0.21	0.862147
277	0.00057	0.02	1090	1	0.96	0.000001	1.86E-05	1.1	10	0.11	70	0.85	2.79E-07	0.28	1.130155
278	0.00057	0.03	1090	1	0.96	0.000001	2.64E-05	1.1	10	0.11	70	0.85	3.96E-07	0.40	1.608478
279	0.00057	0.01	1090	1	0.96	0.000001	9.94E-06	1.1	10	0.11	70	0.85	1.49E-07	0.15	0.605096
280	0.00057	0.01	1090	1	0.96	0.000001	1.21E-05	1.1	10	0.11	70	0.85	1.82E-07	0.18	0.738272
281	0.00057	0.01	1090	1	0.96	0.000001	1.50E-05	1.1	10	0.11	70	0.85	2.24E-07	0.22	0.910321
282	0.00057	0.02	1090	1	0.96	0.000001	1.95E-05	1.1	10	0.11	70	0.85	2.92E-07	0.29	1.186404
283	0.00057	0.01	1090	1	0.96	0.000001	8.54E-06	1.1	10	0.11	70	0.85	1.28E-07	0.13	0.51966
284	0.00057	0.01	1090	1	0.96	0.000001	1.01E-05	1.1	10	0.11	70	0.85	1.51E-07	0.15	0.612375
285	0.00057	0.01	1090	1	0.96	0.000001	1.19E-05	1.1	10	0.11	70	0.85	1.79E-07	0.18	0.726029
286	0.00057	0.01	1090	1	0.96	0.000001	1.43E-05	1.1	10	0.11	70	0.85	2.14E-07	0.21	0.868223
287	0.00057	0.02	1090	1	0.96	0.000001	1.72E-05	1.1	10	0.11	70	0.85	2.58E-07	0.26	1.046718
288	0.00057	0.01	1090	1	0.96	0.000001	7.40E-06	1.1	10	0.11	70	0.85	1.11E-07	0.11	0.450543

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
289	0.00057	0.01	1090	1	0.96	0.000001	8.46E-06	1.1	10	0.11	70	0.85	1.27E-07	0.13	0.514943
290	0.00057	0.01	1090	1	0.96	0.000001	9.66E-06	1.1	10	0.11	70	0.85	1.45E-07	0.15	0.58843
291	0.00057	0.01	1090	1	0.96	0.000001	1.10E-05	1.1	10	0.11	70	0.85	1.66E-07	0.17	0.672132
292	0.00057	0.01	1090	1	0.96	0.000001	1.26E-05	1.1	10	0.11	70	0.85	1.89E-07	0.19	0.768277
293	0.00057	0.01	1090	1	0.96	0.000001	6.31E-06	1.1	10	0.11	70	0.85	9.47E-08	0.09	0.384465
294	0.00057	0.01	1090	1	0.96	0.000001	7.04E-06	1.1	10	0.11	70	0.85	1.06E-07	0.11	0.428461
295	0.00057	0.01	1090	1	0.96	0.000001	7.80E-06	1.1	10	0.11	70	0.85	1.17E-07	0.12	0.474946
296	0.00057	0.01	1090	1	0.96	0.000001	8.65E-06	1.1	10	0.11	70	0.85	1.30E-07	0.13	0.526341
297	0.00057	0.01	1090	1	0.96	0.000001	9.64E-06	1.1	10	0.11	70	0.85	1.45E-07	0.14	0.586972
298	0.00057	0.01	1090	1	0.96	0.000001	5.48E-06	1.1	10	0.11	70	0.85	8.22E-08	0.08	0.333748
299	0.00057	0.01	1090	1	0.96	0.000001	5.99E-06	1.1	10	0.11	70	0.85	8.99E-08	0.09	0.364751
300	0.00057	0.01	1090	1	0.96	0.000001	6.49E-06	1.1	10	0.11	70	0.85	9.74E-08	0.10	0.395054
301	0.00057	0.01	1090	1	0.96	0.000001	7.06E-06	1.1	10	0.11	70	0.85	1.06E-07	0.11	0.429679
302	0.00057	0.01	1090	1	0.96	0.000001	7.76E-06	1.1	10	0.11	70	0.85	1.16E-07	0.12	0.472375
303	0.00057	0.01	1090	1	0.96	0.000001	8.46E-06	1.1	10	0.11	70	0.85	1.27E-07	0.13	0.515148
304	0.00057	0.00	1090	1	0.96	0.000001	4.76E-06	1.1	10	0.11	70	0.85	7.13E-08	0.07	0.289509
305	0.00057	0.00	1090	1	0.96	0.000001	5.14E-06	1.1	10	0.11	70	0.85	7.71E-08	0.08	0.312702
306	0.00057	0.01	1090	1	0.96	0.000001	5.50E-06	1.1	10	0.11	70	0.85	8.25E-08	0.08	0.334678
307	0.00057	0.01	1090	1	0.96	0.000001	5.91E-06	1.1	10	0.11	70	0.85	8.87E-08	0.09	0.359853
308	0.00057	0.01	1090	1	0.96	0.000001	6.40E-06	1.1	10	0.11	70	0.85	9.60E-08	0.10	0.389589
309	0.00057	0.01	1090	1	0.96	0.000001	6.88E-06	1.1	10	0.11	70	0.85	1.03E-07	0.10	0.418813
310	0.00057	0.00	1090	1	0.96	0.000001	4.17E-06	1.1	10	0.11	70	0.85	6.25E-08	0.06	0.253722
311	0.00057	0.00	1090	1	0.96	0.000001	4.46E-06	1.1	10	0.11	70	0.85	6.69E-08	0.07	0.271305
312	0.00057	0.00	1090	1	0.96	0.000001	4.73E-06	1.1	10	0.11	70	0.85	7.10E-08	0.07	0.288116
313	0.00057	0.00	1090	1	0.96	0.000001	5.06E-06	1.1	10	0.11	70	0.85	7.59E-08	0.08	0.307791
314	0.00057	0.01	1090	1	0.96	0.000001	5.42E-06	1.1	10	0.11	70	0.85	8.13E-08	0.08	0.329955
315	0.00057	0.01	1090	1	0.96	0.000001	5.78E-06	1.1	10	0.11	70	0.85	8.67E-08	0.09	0.351978
316	0.00057	0.00	1090	1	0.96	0.000001	3.69E-06	1.1	10	0.11	70	0.85	5.54E-08	0.06	0.2247
317	0.00057	0.00	1090	1	0.96	0.000001	3.91E-06	1.1	10	0.11	70	0.85	5.86E-08	0.06	0.237894
318	0.00057	0.00	1090	1	0.96	0.000001	4.11E-06	1.1	10	0.11	70	0.85	6.16E-08	0.06	0.250057
319	0.00057	0.00	1090	1	0.96	0.000001	4.35E-06	1.1	10	0.11	70	0.85	6.52E-08	0.07	0.264547
320	0.00057	0.00	1090	1	0.96	0.000001	4.62E-06	1.1	10	0.11	70	0.85	6.94E-08	0.07	0.281435

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
321	0.00057	0.00	1090	1	0.96	0.000001	4.88E-06	1.1	10	0.11	70	0.85	7.32E-08	0.297192
322	0.00057	0.00	1090	1	0.96	0.000001	5.16E-06	1.1	10	0.11	70	0.85	7.75E-08	0.314354
323	0.00057	0.00	1090	1	0.96	0.000001	3.28E-06	1.1	10	0.11	70	0.85	4.92E-08	0.199577
324	0.00057	0.00	1090	1	0.96	0.000001	3.46E-06	1.1	10	0.11	70	0.85	5.19E-08	0.210445
325	0.00057	0.00	1090	1	0.96	0.000001	3.62E-06	1.1	10	0.11	70	0.85	5.42E-08	0.220125
326	0.00057	0.00	1090	1	0.96	0.000001	3.80E-06	1.1	10	0.11	70	0.85	5.70E-08	0.231363
327	0.00057	0.00	1090	1	0.96	0.000001	4.02E-06	1.1	10	0.11	70	0.85	6.03E-08	0.244792
328	0.00057	0.00	1090	1	0.96	0.000001	4.23E-06	1.1	10	0.11	70	0.85	6.34E-08	0.257429
329	0.00057	0.00	1090	1	0.96	0.000001	4.44E-06	1.1	10	0.11	70	0.85	6.66E-08	0.270441
330	0.00057	0.00	1090	1	0.96	0.000001	2.93E-06	1.1	10	0.11	70	0.85	4.39E-08	0.178185
331	0.00057	0.00	1090	1	0.96	0.000001	3.07E-06	1.1	10	0.11	70	0.85	4.60E-08	0.186631
332	0.00057	0.00	1090	1	0.96	0.000001	3.21E-06	1.1	10	0.11	70	0.85	4.81E-08	0.195373
333	0.00057	0.00	1090	1	0.96	0.000001	3.36E-06	1.1	10	0.11	70	0.85	5.04E-08	0.204622
334	0.00057	0.00	1090	1	0.96	0.000001	3.52E-06	1.1	10	0.11	70	0.85	5.28E-08	0.214347
335	0.00057	0.00	1090	1	0.96	0.000001	3.69E-06	1.1	10	0.11	70	0.85	5.54E-08	0.224619
336	0.00057	0.00	1090	1	0.96	0.000001	3.88E-06	1.1	10	0.11	70	0.85	5.82E-08	0.236006
337	0.00057	0.00	1090	1	0.96	0.000001	2.65E-06	1.1	10	0.11	70	0.85	3.98E-08	0.161597
338	0.00057	0.00	1090	1	0.96	0.000001	2.77E-06	1.1	10	0.11	70	0.85	4.15E-08	0.168567
339	0.00057	0.00	1090	1	0.96	0.000001	2.88E-06	1.1	10	0.11	70	0.85	4.33E-08	0.175574
340	0.00057	0.00	1090	1	0.96	0.000001	3.00E-06	1.1	10	0.11	70	0.85	4.51E-08	0.18287
341	0.00057	0.00	1090	1	0.96	0.000001	3.15E-06	1.1	10	0.11	70	0.85	4.72E-08	0.191586
342	0.00057	0.00	1090	1	0.96	0.000001	3.29E-06	1.1	10	0.11	70	0.85	4.93E-08	0.200057
343	0.00057	0.00	1090	1	0.96	0.000001	3.43E-06	1.1	10	0.11	70	0.85	5.14E-08	0.20862
344	0.00057	0.00	1090	1	0.96	0.000001	2.41E-06	1.1	10	0.11	70	0.85	3.62E-08	0.146723
345	0.00057	0.00	1090	1	0.96	0.000001	2.51E-06	1.1	10	0.11	70	0.85	3.76E-08	0.152567
346	0.00057	0.00	1090	1	0.96	0.000001	2.60E-06	1.1	10	0.11	70	0.85	3.90E-08	0.158392
347	0.00057	0.00	1090	1	0.96	0.000001	2.71E-06	1.1	10	0.11	70	0.85	4.06E-08	0.164827
348	0.00057	0.00	1090	1	0.96	0.000001	2.81E-06	1.1	10	0.11	70	0.85	4.22E-08	0.171353
349	0.00057	0.00	1090	1	0.96	0.000001	2.92E-06	1.1	10	0.11	70	0.85	4.39E-08	0.178065
350	0.00057	0.00	1090	1	0.96	0.000001	3.05E-06	1.1	10	0.11	70	0.85	4.57E-08	0.185614
351	0.00057	0.00	1090	1	0.96	0.000001	2.20E-06	1.1	10	0.11	70	0.85	3.30E-08	0.133743
352	0.00057	0.00	1090	1	0.96	0.000001	2.28E-06	1.1	10	0.11	70	0.85	3.42E-08	0.13878

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
353	0.00057	0.00	1090	1	0.96	0.000001	2.36E-06	1.1	10	0.11	70	0.85	3.54E-08	0.143544
354	0.00057	0.00	1090	1	0.96	0.000001	2.44E-06	1.1	10	0.11	70	0.85	3.66E-08	0.148654
355	0.00057	0.00	1090	1	0.96	0.000001	2.54E-06	1.1	10	0.11	70	0.85	3.81E-08	0.154787
356	0.00057	0.00	1090	1	0.96	0.000001	2.64E-06	1.1	10	0.11	70	0.85	3.95E-08	0.160474
357	0.00057	0.00	1090	1	0.96	0.000001	2.73E-06	1.1	10	0.11	70	0.85	4.10E-08	0.16645
358	0.00057	0.00	1090	1	0.96	0.000001	2.01E-06	1.1	10	0.11	70	0.85	3.01E-08	0.122312
359	0.00057	0.00	1090	1	0.96	0.000001	2.08E-06	1.1	10	0.11	70	0.85	3.12E-08	0.126495
360	0.00057	0.00	1090	1	0.96	0.000001	2.15E-06	1.1	10	0.11	70	0.85	3.23E-08	0.130967
361	0.00057	0.00	1090	1	0.96	0.000001	2.23E-06	1.1	10	0.11	70	0.85	3.34E-08	0.135507
362	0.00057	0.00	1090	1	0.96	0.000001	2.31E-06	1.1	10	0.11	70	0.85	3.46E-08	0.140432
363	0.00057	0.00	1090	1	0.96	0.000001	2.38E-06	1.1	10	0.11	70	0.85	3.58E-08	0.145176
364	0.00057	0.00	1090	1	0.96	0.000001	2.47E-06	1.1	10	0.11	70	0.85	3.70E-08	0.15026
365	0.00057	0.00	1090	1	0.96	0.000001	1.85E-06	1.1	10	0.11	70	0.85	2.78E-08	0.112857
366	0.00057	0.00	1090	1	0.96	0.000001	1.91E-06	1.1	10	0.11	70	0.85	2.87E-08	0.116401
367	0.00057	0.00	1090	1	0.96	0.000001	1.97E-06	1.1	10	0.11	70	0.85	2.96E-08	0.120167
368	0.00057	0.00	1090	1	0.96	0.000001	2.04E-06	1.1	10	0.11	70	0.85	3.06E-08	0.12416
369	0.00057	0.00	1090	1	0.96	0.000001	2.10E-06	1.1	10	0.11	70	0.85	3.16E-08	0.128145
370	0.00057	0.00	1090	1	0.96	0.000001	2.18E-06	1.1	10	0.11	70	0.85	3.27E-08	0.132524
371	0.00057	0.00	1090	1	0.96	0.000001	2.24E-06	1.1	10	0.11	70	0.85	3.37E-08	0.136577
372	0.00057	0.00	1090	1	0.96	0.000001	1.71E-06	1.1	10	0.11	70	0.85	2.57E-08	0.104174
373	0.00057	0.00	1090	1	0.96	0.000001	1.76E-06	1.1	10	0.11	70	0.85	2.64E-08	0.107314
374	0.00057	0.00	1090	1	0.96	0.000001	1.82E-06	1.1	10	0.11	70	0.85	2.72E-08	0.110517
375	0.00057	0.00	1090	1	0.96	0.000001	1.87E-06	1.1	10	0.11	70	0.85	2.81E-08	0.113955
376	0.00057	0.00	1090	1	0.96	0.000001	1.93E-06	1.1	10	0.11	70	0.85	2.89E-08	0.117406
377	0.00057	0.00	1090	1	0.96	0.000001	1.99E-06	1.1	10	0.11	70	0.85	2.99E-08	0.121235
378	0.00057	0.00	1090	1	0.96	0.000001	2.05E-06	1.1	10	0.11	70	0.85	3.08E-08	0.124815
379	0.00057	0.04	1090	1	0.96	0.000001	3.75E-05	1.1	10	0.11	70	0.85	5.63E-07	2.283087
380	0.00057	0.05	1090	1	0.96	0.000001	5.02E-05	1.1	10	0.11	70	0.85	7.52E-07	3.053435
381	0.00057	0.03	1090	1	0.96	0.000001	2.76E-05	1.1	10	0.11	70	0.85	4.14E-07	1.679611
382	0.00057	0.03	1090	1	0.96	0.000001	2.95E-05	1.1	10	0.11	70	0.85	4.42E-07	1.794943
383	0.00057	0.02	1090	1	0.96	0.000001	2.04E-05	1.1	10	0.11	70	0.85	3.07E-07	1.244959
384	0.00057	0.01	1090	1	0.96	0.000001	1.50E-05	1.1	10	0.11	70	0.85	2.25E-07	0.913804

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Risk from Mitigated Onsite Construction Activity

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
385	0.00057	0.01	1090	1	0.96	0.000001	1.22E-05	1.1	10	0.11	70	0.85	1.83E-07	0.18	0.743403
386	0.00057	0.01	1090	1	0.96	0.000001	9.84E-06	1.1	10	0.11	70	0.85	1.48E-07	0.15	0.599266
387	0.00057	0.01	1090	1	0.96	0.000001	8.21E-06	1.1	10	0.11	70	0.85	1.23E-07	0.12	0.499868
388	0.00057	0.01	1090	1	0.96	0.000001	7.02E-06	1.1	10	0.11	70	0.85	1.05E-07	0.11	0.427482
389	0.00057	0.01	1090	1	0.96	0.000001	6.08E-06	1.1	10	0.11	70	0.85	9.12E-08	0.09	0.370259
390	0.00057	0.01	1090	1	0.96	0.000001	5.44E-06	1.1	10	0.11	70	0.85	8.16E-08	0.08	0.330948

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI	
1	2.71E-03	5	5.42E-04	Max
2	2.92E-03	5	5.84E-04	4.94E-02
3	2.63E-03	5	5.27E-04	
4	2.85E-03	5	5.70E-04	
5	3.09E-03	5	6.17E-04	
6	3.34E-03	5	6.69E-04	
7	2.76E-03	5	5.52E-04	
8	2.99E-03	5	5.98E-04	
9	3.25E-03	5	6.50E-04	
10	3.55E-03	5	7.09E-04	
11	3.88E-03	5	7.77E-04	
12	3.12E-03	5	6.25E-04	
13	3.41E-03	5	6.83E-04	
14	3.75E-03	5	7.49E-04	
15	4.13E-03	5	8.25E-04	
16	4.56E-03	5	9.11E-04	
17	3.58E-03	5	7.16E-04	
18	3.95E-03	5	7.90E-04	
19	4.38E-03	5	8.76E-04	
20	4.87E-03	5	9.75E-04	
21	5.46E-03	5	1.09E-03	
22	4.15E-03	5	8.30E-04	
23	4.63E-03	5	9.26E-04	
24	5.19E-03	5	1.04E-03	
25	5.86E-03	5	1.17E-03	
26	6.67E-03	5	1.33E-03	
27	4.87E-03	5	9.73E-04	
28	5.49E-03	5	1.10E-03	
29	6.26E-03	5	1.25E-03	
30	7.21E-03	5	1.44E-03	
31	8.40E-03	5	1.68E-03	
32	5.78E-03	5	1.16E-03	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
33	6.63E-03	5	1.33E-03
34	7.72E-03	5	1.54E-03
35	9.08E-03	5	1.82E-03
36	1.09E-02	5	2.18E-03
37	6.97E-03	5	1.39E-03
38	8.17E-03	5	1.63E-03
39	9.72E-03	5	1.94E-03
40	1.19E-02	5	2.37E-03
41	8.58E-03	5	1.72E-03
42	1.03E-02	5	2.06E-03
43	1.27E-02	5	2.53E-03
44	1.60E-02	5	3.21E-03
45	1.07E-02	5	2.14E-03
46	1.32E-02	5	2.64E-03
47	1.68E-02	5	3.37E-03
48	2.23E-02	5	4.46E-03
49	1.72E-02	5	3.44E-03
50	2.26E-02	5	4.51E-03
51	1.71E-02	5	3.41E-03
52	2.21E-02	5	4.42E-03
53	2.96E-02	5	5.92E-03
54	1.65E-02	5	3.30E-03
55	2.10E-02	5	4.21E-03
56	2.78E-02	5	5.56E-03
57	3.82E-02	5	7.64E-03
58	1.56E-02	5	3.12E-03
59	1.96E-02	5	3.91E-03
60	2.53E-02	5	5.06E-03
61	3.40E-02	5	6.81E-03
62	1.45E-02	5	2.90E-03
63	1.78E-02	5	3.56E-03
64	2.23E-02	5	4.46E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
65	2.87E-02	5	5.74E-03
66	3.82E-02	5	7.64E-03
67	1.32E-02	5	2.63E-03
68	1.58E-02	5	3.16E-03
69	1.91E-02	5	3.83E-03
70	2.35E-02	5	4.69E-03
71	2.91E-02	5	5.83E-03
72	1.18E-02	5	2.36E-03
73	1.38E-02	5	2.75E-03
74	1.62E-02	5	3.24E-03
75	1.90E-02	5	3.80E-03
76	2.24E-02	5	4.47E-03
77	1.05E-02	5	2.09E-03
78	1.19E-02	5	2.38E-03
79	1.36E-02	5	2.72E-03
80	1.55E-02	5	3.09E-03
81	1.75E-02	5	3.50E-03
82	9.22E-03	5	1.84E-03
83	1.03E-02	5	2.06E-03
84	1.15E-02	5	2.29E-03
85	1.27E-02	5	2.54E-03
86	1.40E-02	5	2.80E-03
87	8.12E-03	5	1.62E-03
88	8.91E-03	5	1.78E-03
89	9.75E-03	5	1.95E-03
90	1.07E-02	5	2.13E-03
91	1.16E-02	5	2.32E-03
92	7.17E-03	5	1.43E-03
93	7.77E-03	5	1.55E-03
94	8.40E-03	5	1.68E-03
95	9.05E-03	5	1.81E-03
96	9.71E-03	5	1.94E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
97	6.36E-03	5	1.27E-03
98	6.83E-03	5	1.37E-03
99	7.30E-03	5	1.46E-03
100	7.78E-03	5	1.56E-03
101	8.28E-03	5	1.66E-03
102	2.65E-03	5	5.29E-04
103	2.65E-03	5	5.31E-04
104	2.74E-03	5	5.48E-04
105	2.65E-03	5	5.30E-04
106	2.74E-03	5	5.49E-04
107	2.83E-03	5	5.67E-04
108	2.92E-03	5	5.85E-04
109	2.74E-03	5	5.47E-04
110	2.83E-03	5	5.66E-04
111	2.93E-03	5	5.85E-04
112	3.03E-03	5	6.06E-04
113	3.13E-03	5	6.25E-04
114	2.72E-03	5	5.44E-04
115	2.82E-03	5	5.63E-04
116	2.92E-03	5	5.84E-04
117	3.02E-03	5	6.05E-04
118	3.13E-03	5	6.26E-04
119	3.25E-03	5	6.49E-04
120	3.36E-03	5	6.71E-04
121	2.70E-03	5	5.40E-04
122	2.80E-03	5	5.60E-04
123	2.90E-03	5	5.81E-04
124	3.01E-03	5	6.02E-04
125	3.12E-03	5	6.25E-04
126	3.24E-03	5	6.48E-04
127	3.36E-03	5	6.72E-04
128	3.48E-03	5	6.96E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
129	2.99E-03	5	5.98E-04
130	3.10E-03	5	6.21E-04
131	3.22E-03	5	6.45E-04
132	3.35E-03	5	6.70E-04
133	3.48E-03	5	6.95E-04
134	3.61E-03	5	7.23E-04
135	3.76E-03	5	7.52E-04
136	3.20E-03	5	6.40E-04
137	3.33E-03	5	6.65E-04
138	3.46E-03	5	6.92E-04
139	3.60E-03	5	7.19E-04
140	3.75E-03	5	7.50E-04
141	3.91E-03	5	7.82E-04
142	4.07E-03	5	8.14E-04
143	3.43E-03	5	6.86E-04
144	3.58E-03	5	7.15E-04
145	3.72E-03	5	7.45E-04
146	3.89E-03	5	7.78E-04
147	4.06E-03	5	8.12E-04
148	4.24E-03	5	8.48E-04
149	3.69E-03	5	7.38E-04
150	3.85E-03	5	7.71E-04
151	4.03E-03	5	8.07E-04
152	4.22E-03	5	8.43E-04
153	4.41E-03	5	8.82E-04
154	4.62E-03	5	9.24E-04
155	3.99E-03	5	7.97E-04
156	4.18E-03	5	8.35E-04
157	4.38E-03	5	8.75E-04
158	4.59E-03	5	9.18E-04
159	4.82E-03	5	9.64E-04
160	5.06E-03	5	1.01E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
161	4.33E-03	5	8.65E-04
162	4.54E-03	5	9.08E-04
163	4.77E-03	5	9.54E-04
164	5.02E-03	5	1.00E-03
165	5.28E-03	5	1.06E-03
166	5.57E-03	5	1.11E-03
167	4.70E-03	5	9.41E-04
168	4.96E-03	5	9.93E-04
169	5.24E-03	5	1.05E-03
170	5.53E-03	5	1.11E-03
171	5.84E-03	5	1.17E-03
172	6.17E-03	5	1.23E-03
173	5.15E-03	5	1.03E-03
174	5.45E-03	5	1.09E-03
175	5.77E-03	5	1.15E-03
176	6.11E-03	5	1.22E-03
177	6.48E-03	5	1.30E-03
178	5.66E-03	5	1.13E-03
179	6.01E-03	5	1.20E-03
180	6.40E-03	5	1.28E-03
181	6.80E-03	5	1.36E-03
182	7.26E-03	5	1.45E-03
183	6.27E-03	5	1.25E-03
184	6.67E-03	5	1.33E-03
185	7.13E-03	5	1.43E-03
186	7.64E-03	5	1.53E-03
187	8.19E-03	5	1.64E-03
188	6.97E-03	5	1.39E-03
189	7.48E-03	5	1.50E-03
190	8.02E-03	5	1.60E-03
191	8.65E-03	5	1.73E-03
192	9.34E-03	5	1.87E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
193	7.82E-03	5	1.56E-03
194	8.44E-03	5	1.69E-03
195	9.11E-03	5	1.82E-03
196	9.90E-03	5	1.98E-03
197	1.08E-02	5	2.16E-03
198	8.84E-03	5	1.77E-03
199	9.60E-03	5	1.92E-03
200	1.05E-02	5	2.09E-03
201	1.15E-02	5	2.30E-03
202	1.01E-02	5	2.02E-03
203	1.10E-02	5	2.20E-03
204	1.22E-02	5	2.44E-03
205	1.35E-02	5	2.70E-03
206	1.16E-02	5	2.32E-03
207	1.29E-02	5	2.57E-03
208	1.43E-02	5	2.87E-03
209	1.61E-02	5	3.23E-03
210	1.21E-02	5	2.42E-03
211	1.35E-02	5	2.71E-03
212	1.52E-02	5	3.04E-03
213	1.72E-02	5	3.45E-03
214	1.97E-02	5	3.94E-03
215	1.26E-02	5	2.53E-03
216	1.42E-02	5	2.83E-03
217	1.60E-02	5	3.19E-03
218	1.82E-02	5	3.64E-03
219	2.10E-02	5	4.21E-03
220	1.48E-02	5	2.95E-03
221	1.67E-02	5	3.35E-03
222	1.92E-02	5	3.84E-03
223	2.23E-02	5	4.46E-03
224	2.64E-02	5	5.27E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
225	1.74E-02	5	3.47E-03
226	2.00E-02	5	4.00E-03
227	2.33E-02	5	4.65E-03
228	2.76E-02	5	5.52E-03
229	3.35E-02	5	6.69E-03
230	2.06E-02	5	4.12E-03
231	2.41E-02	5	4.81E-03
232	2.84E-02	5	5.69E-03
233	3.45E-02	5	6.89E-03
234	4.28E-02	5	8.55E-03
235	2.45E-02	5	4.91E-03
236	2.89E-02	5	5.77E-03
237	3.47E-02	5	6.94E-03
238	4.27E-02	5	8.54E-03
239	5.35E-02	5	1.07E-02
240	2.90E-02	5	5.80E-03
241	3.48E-02	5	6.96E-03
242	4.19E-02	5	8.38E-03
243	5.20E-02	5	1.04E-02
244	2.88E-02	5	5.76E-03
245	3.44E-02	5	6.87E-03
246	4.13E-02	5	8.25E-03
247	5.01E-02	5	1.00E-02
248	6.28E-02	5	1.26E-02
249	3.37E-02	5	6.73E-03
250	4.02E-02	5	8.05E-03
251	4.85E-02	5	9.70E-03
252	6.01E-02	5	1.20E-02
253	7.66E-02	5	1.53E-02
254	3.28E-02	5	6.55E-03
255	3.88E-02	5	7.76E-03
256	4.71E-02	5	9.42E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
257	5.76E-02	5	1.15E-02
258	7.34E-02	5	1.47E-02
259	9.61E-02	5	1.92E-02
260	3.74E-02	5	7.48E-03
261	4.52E-02	5	9.03E-03
262	5.56E-02	5	1.11E-02
263	6.96E-02	5	1.39E-02
264	9.32E-02	5	1.86E-02
265	4.30E-02	5	8.60E-03
266	5.25E-02	5	1.05E-02
267	6.55E-02	5	1.31E-02
268	8.70E-02	5	1.74E-02
269	1.23E-01	5	2.47E-02
270	4.93E-02	5	9.86E-03
271	6.10E-02	5	1.22E-02
272	7.89E-02	5	1.58E-02
273	1.10E-01	5	2.21E-02
274	4.52E-02	5	9.05E-03
275	5.52E-02	5	1.10E-02
276	6.98E-02	5	1.40E-02
277	9.14E-02	5	1.83E-02
278	1.30E-01	5	2.60E-02
279	4.90E-02	5	9.79E-03
280	5.97E-02	5	1.19E-02
281	7.36E-02	5	1.47E-02
282	9.60E-02	5	1.92E-02
283	4.20E-02	5	8.41E-03
284	4.95E-02	5	9.91E-03
285	5.87E-02	5	1.17E-02
286	7.02E-02	5	1.40E-02
287	8.47E-02	5	1.69E-02
288	3.65E-02	5	7.29E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
289	4.17E-02	5	8.33E-03
290	4.76E-02	5	9.52E-03
291	5.44E-02	5	1.09E-02
292	6.22E-02	5	1.24E-02
293	3.11E-02	5	6.22E-03
294	3.47E-02	5	6.93E-03
295	3.84E-02	5	7.69E-03
296	4.26E-02	5	8.52E-03
297	4.75E-02	5	9.50E-03
298	2.70E-02	5	5.40E-03
299	2.95E-02	5	5.90E-03
300	3.20E-02	5	6.39E-03
301	3.48E-02	5	6.95E-03
302	3.82E-02	5	7.64E-03
303	4.17E-02	5	8.34E-03
304	2.34E-02	5	4.68E-03
305	2.53E-02	5	5.06E-03
306	2.71E-02	5	5.42E-03
307	2.91E-02	5	5.82E-03
308	3.15E-02	5	6.30E-03
309	3.39E-02	5	6.78E-03
310	2.05E-02	5	4.11E-03
311	2.19E-02	5	4.39E-03
312	2.33E-02	5	4.66E-03
313	2.49E-02	5	4.98E-03
314	2.67E-02	5	5.34E-03
315	2.85E-02	5	5.70E-03
316	1.82E-02	5	3.64E-03
317	1.92E-02	5	3.85E-03
318	2.02E-02	5	4.05E-03
319	2.14E-02	5	4.28E-03
320	2.28E-02	5	4.55E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
321	2.40E-02	5	4.81E-03
322	2.54E-02	5	5.09E-03
323	1.61E-02	5	3.23E-03
324	1.70E-02	5	3.41E-03
325	1.78E-02	5	3.56E-03
326	1.87E-02	5	3.74E-03
327	1.98E-02	5	3.96E-03
328	2.08E-02	5	4.17E-03
329	2.19E-02	5	4.38E-03
330	1.44E-02	5	2.88E-03
331	1.51E-02	5	3.02E-03
332	1.58E-02	5	3.16E-03
333	1.66E-02	5	3.31E-03
334	1.73E-02	5	3.47E-03
335	1.82E-02	5	3.63E-03
336	1.91E-02	5	3.82E-03
337	1.31E-02	5	2.61E-03
338	1.36E-02	5	2.73E-03
339	1.42E-02	5	2.84E-03
340	1.48E-02	5	2.96E-03
341	1.55E-02	5	3.10E-03
342	1.62E-02	5	3.24E-03
343	1.69E-02	5	3.38E-03
344	1.19E-02	5	2.37E-03
345	1.23E-02	5	2.47E-03
346	1.28E-02	5	2.56E-03
347	1.33E-02	5	2.67E-03
348	1.39E-02	5	2.77E-03
349	1.44E-02	5	2.88E-03
350	1.50E-02	5	3.00E-03
351	1.08E-02	5	2.16E-03
352	1.12E-02	5	2.25E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
353	1.16E-02	5	2.32E-03
354	1.20E-02	5	2.41E-03
355	1.25E-02	5	2.50E-03
356	1.30E-02	5	2.60E-03
357	1.35E-02	5	2.69E-03
358	9.90E-03	5	1.98E-03
359	1.02E-02	5	2.05E-03
360	1.06E-02	5	2.12E-03
361	1.10E-02	5	2.19E-03
362	1.14E-02	5	2.27E-03
363	1.17E-02	5	2.35E-03
364	1.22E-02	5	2.43E-03
365	9.13E-03	5	1.83E-03
366	9.42E-03	5	1.88E-03
367	9.72E-03	5	1.94E-03
368	1.00E-02	5	2.01E-03
369	1.04E-02	5	2.07E-03
370	1.07E-02	5	2.14E-03
371	1.10E-02	5	2.21E-03
372	8.43E-03	5	1.69E-03
373	8.68E-03	5	1.74E-03
374	8.94E-03	5	1.79E-03
375	9.22E-03	5	1.84E-03
376	9.50E-03	5	1.90E-03
377	9.81E-03	5	1.96E-03
378	1.01E-02	5	2.02E-03
379	1.85E-01	5	3.69E-02
380	2.47E-01	5	4.94E-02
381	1.36E-01	5	2.72E-02
382	1.45E-01	5	2.90E-02
383	1.01E-01	5	2.01E-02
384	7.39E-02	5	1.48E-02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index for Mitigated Onsite Consturction Activities

Receptor #	Conc	REL	HI
385	6.01E-02	5	1.20E-02
386	4.85E-02	5	9.70E-03
387	4.04E-02	5	8.09E-03
388	3.46E-02	5	6.92E-03
389	3.00E-02	5	5.99E-03
390	2.68E-02	5	5.36E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
1	7.12642	4.65E-04	3.31E-03	361	1	0.96	0.000001	1.15E-06	1.1	10	0.25	70	0.85	3.83E-08	0.04		
2	9.44431	4.65E-04	4.39E-03	361	1	0.96	0.000001	1.52E-06	1.1	10	0.25	70	0.85	5.08E-08	0.05		
3	5.02248	4.65E-04	2.34E-03	361	1	0.96	0.000001	8.08E-07	1.1	10	0.25	70	0.85	2.70E-08	0.03		
4	6.24262	4.65E-04	2.90E-03	361	1	0.96	0.000001	1.00E-06	1.1	10	0.25	70	0.85	3.35E-08	0.03		
5	7.94815	4.65E-04	3.70E-03	361	1	0.96	0.000001	1.28E-06	1.1	10	0.25	70	0.85	4.27E-08	0.04		
6	10.533	4.65E-04	4.90E-03	361	1	0.96	0.000001	1.70E-06	1.1	10	0.25	70	0.85	5.66E-08	0.06		
7	4.55703	4.65E-04	2.12E-03	361	1	0.96	0.000001	7.33E-07	1.1	10	0.25	70	0.85	2.45E-08	0.02		
8	5.52767	4.65E-04	2.57E-03	361	1	0.96	0.000001	8.90E-07	1.1	10	0.25	70	0.85	2.97E-08	0.03		
9	6.84787	4.65E-04	3.18E-03	361	1	0.96	0.000001	1.10E-06	1.1	10	0.25	70	0.85	3.68E-08	0.04		
10	8.72425	4.65E-04	4.06E-03	361	1	0.96	0.000001	1.40E-06	1.1	10	0.25	70	0.85	4.69E-08	0.05		
11	11.55618	4.65E-04	5.37E-03	361	1	0.96	0.000001	1.86E-06	1.1	10	0.25	70	0.85	6.21E-08	0.06		
12	4.93686	4.65E-04	2.30E-03	361	1	0.96	0.000001	7.95E-07	1.1	10	0.25	70	0.85	2.65E-08	0.03		
13	5.97904	4.65E-04	2.78E-03	361	1	0.96	0.000001	9.62E-07	1.1	10	0.25	70	0.85	3.21E-08	0.03		
14	7.4047	4.65E-04	3.44E-03	361	1	0.96	0.000001	1.19E-06	1.1	10	0.25	70	0.85	3.98E-08	0.04		
15	9.4476	4.65E-04	4.39E-03	361	1	0.96	0.000001	1.52E-06	1.1	10	0.25	70	0.85	5.08E-08	0.05		
16	12.5272	4.65E-04	5.82E-03	361	1	0.96	0.000001	2.02E-06	1.1	10	0.25	70	0.85	6.73E-08	0.07		
17	5.28354	4.65E-04	2.46E-03	361	1	0.96	0.000001	8.50E-07	1.1	10	0.25	70	0.85	2.84E-08	0.03		
18	6.39912	4.65E-04	2.98E-03	361	1	0.96	0.000001	1.03E-06	1.1	10	0.25	70	0.85	3.44E-08	0.03		
19	7.92554	4.65E-04	3.68E-03	361	1	0.96	0.000001	1.28E-06	1.1	10	0.25	70	0.85	4.26E-08	0.04		
20	10.11134	4.65E-04	4.70E-03	361	1	0.96	0.000001	1.63E-06	1.1	10	0.25	70	0.85	5.43E-08	0.05		
21	13.55128	4.65E-04	6.30E-03	361	1	0.96	0.000001	2.18E-06	1.1	10	0.25	70	0.85	7.28E-08	0.07		
22	5.5923	4.65E-04	2.60E-03	361	1	0.96	0.000001	9.00E-07	1.1	10	0.25	70	0.85	3.01E-08	0.03		
23	6.76949	4.65E-04	3.15E-03	361	1	0.96	0.000001	1.09E-06	1.1	10	0.25	70	0.85	3.64E-08	0.04		
24	8.38163	4.65E-04	3.90E-03	361	1	0.96	0.000001	1.35E-06	1.1	10	0.25	70	0.85	4.50E-08	0.05		
25	10.74398	4.65E-04	5.00E-03	361	1	0.96	0.000001	1.73E-06	1.1	10	0.25	70	0.85	5.77E-08	0.06		
26	14.45776	4.65E-04	6.72E-03	361	1	0.96	0.000001	2.33E-06	1.1	10	0.25	70	0.85	7.77E-08	0.08		
27	5.85653	4.65E-04	2.72E-03	361	1	0.96	0.000001	9.43E-07	1.1	10	0.25	70	0.85	3.15E-08	0.03		
28	7.08318	4.65E-04	3.29E-03	361	1	0.96	0.000001	1.14E-06	1.1	10	0.25	70	0.85	3.81E-08	0.04		
29	8.80543	4.65E-04	4.09E-03	361	1	0.96	0.000001	1.42E-06	1.1	10	0.25	70	0.85	4.73E-08	0.05		
30	11.34514	4.65E-04	5.27E-03	361	1	0.96	0.000001	1.83E-06	1.1	10	0.25	70	0.85	6.10E-08	0.06		
31	15.49511	4.65E-04	7.20E-03	361	1	0.96	0.000001	2.49E-06	1.1	10	0.25	70	0.85	8.33E-08	0.08		
32	6.06715	4.65E-04	2.82E-03	361	1	0.96	0.000001	9.76E-07	1.1	10	0.25	70	0.85	3.26E-08	0.03		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
33	7.34424	4.65E-04	3.41E-03	361	1	0.96	0.000001	1.18E-06	1.1	10	0.25	70	0.85	3.95E-08	0.04		
34	9.14749	4.65E-04	4.25E-03	361	1	0.96	0.000001	1.47E-06	1.1	10	0.25	70	0.85	4.92E-08	0.05		
35	11.81501	4.65E-04	5.49E-03	361	1	0.96	0.000001	1.90E-06	1.1	10	0.25	70	0.85	6.35E-08	0.06		
36	16.47993	4.65E-04	7.66E-03	361	1	0.96	0.000001	2.65E-06	1.1	10	0.25	70	0.85	8.86E-08	0.09		
37	6.20127	4.65E-04	2.88E-03	361	1	0.96	0.000001	9.98E-07	1.1	10	0.25	70	0.85	3.33E-08	0.03		
38	7.50894	4.65E-04	3.49E-03	361	1	0.96	0.000001	1.21E-06	1.1	10	0.25	70	0.85	4.04E-08	0.04		
39	9.35646	4.65E-04	4.35E-03	361	1	0.96	0.000001	1.51E-06	1.1	10	0.25	70	0.85	5.03E-08	0.05		
40	12.24816	4.65E-04	5.69E-03	361	1	0.96	0.000001	1.97E-06	1.1	10	0.25	70	0.85	6.58E-08	0.07		
41	6.26757	4.65E-04	2.91E-03	361	1	0.96	0.000001	1.01E-06	1.1	10	0.25	70	0.85	3.37E-08	0.03		
42	7.57376	4.65E-04	3.52E-03	361	1	0.96	0.000001	1.22E-06	1.1	10	0.25	70	0.85	4.07E-08	0.04		
43	9.43774	4.65E-04	4.39E-03	361	1	0.96	0.000001	1.52E-06	1.1	10	0.25	70	0.85	5.07E-08	0.05		
44	12.35708	4.65E-04	5.75E-03	361	1	0.96	0.000001	1.99E-06	1.1	10	0.25	70	0.85	6.64E-08	0.07		
45	6.17138	4.65E-04	2.87E-03	361	1	0.96	0.000001	9.93E-07	1.1	10	0.25	70	0.85	3.32E-08	0.03		
46	7.39828	4.65E-04	3.44E-03	361	1	0.96	0.000001	1.19E-06	1.1	10	0.25	70	0.85	3.98E-08	0.04		
47	9.13335	4.65E-04	4.25E-03	361	1	0.96	0.000001	1.47E-06	1.1	10	0.25	70	0.85	4.91E-08	0.05		
48	11.76265	4.65E-04	5.47E-03	361	1	0.96	0.000001	1.89E-06	1.1	10	0.25	70	0.85	6.32E-08	0.06		
49	6.90549	4.65E-04	3.21E-03	361	1	0.96	0.000001	1.11E-06	1.1	10	0.25	70	0.85	3.71E-08	0.04		
50	8.19562	4.65E-04	3.81E-03	361	1	0.96	0.000001	1.32E-06	1.1	10	0.25	70	0.85	4.40E-08	0.04		
51	5.35001	4.65E-04	2.49E-03	361	1	0.96	0.000001	8.61E-07	1.1	10	0.25	70	0.85	2.88E-08	0.03		
52	6.02005	4.65E-04	2.80E-03	361	1	0.96	0.000001	9.69E-07	1.1	10	0.25	70	0.85	3.24E-08	0.03		
53	6.7182	4.65E-04	3.12E-03	361	1	0.96	0.000001	1.08E-06	1.1	10	0.25	70	0.85	3.61E-08	0.04		
54	4.26234	4.65E-04	1.98E-03	361	1	0.96	0.000001	6.86E-07	1.1	10	0.25	70	0.85	2.29E-08	0.02		
55	4.65127	4.65E-04	2.16E-03	361	1	0.96	0.000001	7.49E-07	1.1	10	0.25	70	0.85	2.50E-08	0.02		
56	5.03032	4.65E-04	2.34E-03	361	1	0.96	0.000001	8.10E-07	1.1	10	0.25	70	0.85	2.70E-08	0.03		
57	5.36437	4.65E-04	2.49E-03	361	1	0.96	0.000001	8.63E-07	1.1	10	0.25	70	0.85	2.88E-08	0.03		
58	3.48723	4.65E-04	1.62E-03	361	1	0.96	0.000001	5.61E-07	1.1	10	0.25	70	0.85	1.87E-08	0.02		
59	3.73795	4.65E-04	1.74E-03	361	1	0.96	0.000001	6.02E-07	1.1	10	0.25	70	0.85	2.01E-08	0.02		
60	3.97677	4.65E-04	1.85E-03	361	1	0.96	0.000001	6.40E-07	1.1	10	0.25	70	0.85	2.14E-08	0.02		
61	4.18597	4.65E-04	1.95E-03	361	1	0.96	0.000001	6.74E-07	1.1	10	0.25	70	0.85	2.25E-08	0.02		
62	2.91981	4.65E-04	1.36E-03	361	1	0.96	0.000001	4.70E-07	1.1	10	0.25	70	0.85	1.57E-08	0.02		
63	3.09325	4.65E-04	1.44E-03	361	1	0.96	0.000001	4.98E-07	1.1	10	0.25	70	0.85	1.66E-08	0.02		
64	3.25908	4.65E-04	1.52E-03	361	1	0.96	0.000001	5.25E-07	1.1	10	0.25	70	0.85	1.75E-08	0.02		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
65	3.40495	4.65E-04	1.58E-03	361	1	0.96	0.000001	5.48E-07	1.1	10	0.25	70	0.85	1.83E-08	0.02		
66	3.5008	4.65E-04	1.63E-03	361	1	0.96	0.000001	5.63E-07	1.1	10	0.25	70	0.85	1.88E-08	0.02		
67	2.48949	4.65E-04	1.16E-03	361	1	0.96	0.000001	4.01E-07	1.1	10	0.25	70	0.85	1.34E-08	0.01		
68	2.61728	4.65E-04	1.22E-03	361	1	0.96	0.000001	4.21E-07	1.1	10	0.25	70	0.85	1.41E-08	0.01		
69	2.73937	4.65E-04	1.27E-03	361	1	0.96	0.000001	4.41E-07	1.1	10	0.25	70	0.85	1.47E-08	0.01		
70	2.8478	4.65E-04	1.32E-03	361	1	0.96	0.000001	4.58E-07	1.1	10	0.25	70	0.85	1.53E-08	0.02		
71	2.92577	4.65E-04	1.36E-03	361	1	0.96	0.000001	4.71E-07	1.1	10	0.25	70	0.85	1.57E-08	0.02		
72	2.15491	4.65E-04	1.00E-03	361	1	0.96	0.000001	3.47E-07	1.1	10	0.25	70	0.85	1.16E-08	0.01		
73	2.25296	4.65E-04	1.05E-03	361	1	0.96	0.000001	3.63E-07	1.1	10	0.25	70	0.85	1.21E-08	0.01		
74	2.34683	4.65E-04	1.09E-03	361	1	0.96	0.000001	3.78E-07	1.1	10	0.25	70	0.85	1.26E-08	0.01		
75	2.43169	4.65E-04	1.13E-03	361	1	0.96	0.000001	3.91E-07	1.1	10	0.25	70	0.85	1.31E-08	0.01		
76	2.49622	4.65E-04	1.16E-03	361	1	0.96	0.000001	4.02E-07	1.1	10	0.25	70	0.85	1.34E-08	0.01		
77	1.88877	4.65E-04	8.78E-04	361	1	0.96	0.000001	3.04E-07	1.1	10	0.25	70	0.85	1.02E-08	0.01		
78	1.96628	4.65E-04	9.14E-04	361	1	0.96	0.000001	3.16E-07	1.1	10	0.25	70	0.85	1.06E-08	0.01		
79	2.04091	4.65E-04	9.49E-04	361	1	0.96	0.000001	3.28E-07	1.1	10	0.25	70	0.85	1.10E-08	0.01		
80	2.10939	4.65E-04	9.81E-04	361	1	0.96	0.000001	3.39E-07	1.1	10	0.25	70	0.85	1.13E-08	0.01		
81	2.16393	4.65E-04	1.01E-03	361	1	0.96	0.000001	3.48E-07	1.1	10	0.25	70	0.85	1.16E-08	0.01		
82	1.67298	4.65E-04	7.78E-04	361	1	0.96	0.000001	2.69E-07	1.1	10	0.25	70	0.85	8.99E-09	0.01		
83	1.73582	4.65E-04	8.07E-04	361	1	0.96	0.000001	2.79E-07	1.1	10	0.25	70	0.85	9.33E-09	0.01		
84	1.79654	4.65E-04	8.35E-04	361	1	0.96	0.000001	2.89E-07	1.1	10	0.25	70	0.85	9.66E-09	0.01		
85	1.85252	4.65E-04	8.61E-04	361	1	0.96	0.000001	2.98E-07	1.1	10	0.25	70	0.85	9.96E-09	0.01		
86	1.89901	4.65E-04	8.83E-04	361	1	0.96	0.000001	3.06E-07	1.1	10	0.25	70	0.85	1.02E-08	0.01		
87	1.49478	4.65E-04	6.95E-04	361	1	0.96	0.000001	2.41E-07	1.1	10	0.25	70	0.85	8.03E-09	0.01		
88	1.54673	4.65E-04	7.19E-04	361	1	0.96	0.000001	2.49E-07	1.1	10	0.25	70	0.85	8.31E-09	0.01		
89	1.59702	4.65E-04	7.43E-04	361	1	0.96	0.000001	2.57E-07	1.1	10	0.25	70	0.85	8.58E-09	0.01		
90	1.64473	4.65E-04	7.65E-04	361	1	0.96	0.000001	2.65E-07	1.1	10	0.25	70	0.85	8.84E-09	0.01		
91	1.68519	4.65E-04	7.83E-04	361	1	0.96	0.000001	2.71E-07	1.1	10	0.25	70	0.85	9.06E-09	0.01		
92	1.34582	4.65E-04	6.26E-04	361	1	0.96	0.000001	2.17E-07	1.1	10	0.25	70	0.85	7.23E-09	0.01		
93	1.38942	4.65E-04	6.46E-04	361	1	0.96	0.000001	2.24E-07	1.1	10	0.25	70	0.85	7.47E-09	0.01		
94	1.43211	4.65E-04	6.66E-04	361	1	0.96	0.000001	2.30E-07	1.1	10	0.25	70	0.85	7.70E-09	0.01		
95	1.47264	4.65E-04	6.85E-04	361	1	0.96	0.000001	2.37E-07	1.1	10	0.25	70	0.85	7.91E-09	0.01		
96	1.50798	4.65E-04	7.01E-04	361	1	0.96	0.000001	2.43E-07	1.1	10	0.25	70	0.85	8.10E-09	0.01		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
97	1.21956	4.65E-04	5.67E-04	361	1	0.96	0.000001	1.96E-07	1.1	10	0.25	70	0.85	6.55E-09	0.01
98	1.25683	4.65E-04	5.84E-04	361	1	0.96	0.000001	2.02E-07	1.1	10	0.25	70	0.85	6.75E-09	0.01
99	1.29345	4.65E-04	6.01E-04	361	1	0.96	0.000001	2.08E-07	1.1	10	0.25	70	0.85	6.95E-09	0.01
100	1.3282	4.65E-04	6.18E-04	361	1	0.96	0.000001	2.14E-07	1.1	10	0.25	70	0.85	7.14E-09	0.01
101	1.3594	4.65E-04	6.32E-04	361	1	0.96	0.000001	2.19E-07	1.1	10	0.25	70	0.85	7.31E-09	0.01
102	33.55026	4.65E-04	1.56E-02	361	1	0.96	0.000001	5.40E-06	1.1	10	0.25	70	0.85	1.80E-07	0.18
103	30.07179	4.65E-04	1.40E-02	361	1	0.96	0.000001	4.84E-06	1.1	10	0.25	70	0.85	1.62E-07	0.16
104	49.54652	4.65E-04	2.30E-02	361	1	0.96	0.000001	7.97E-06	1.1	10	0.25	70	0.85	2.66E-07	0.27
105	17.39502	4.65E-04	8.09E-03	361	1	0.96	0.000001	2.80E-06	1.1	10	0.25	70	0.85	9.35E-08	0.09
106	23.33807	4.65E-04	1.09E-02	361	1	0.96	0.000001	3.76E-06	1.1	10	0.25	70	0.85	1.25E-07	0.13
107	33.73649	4.65E-04	1.57E-02	361	1	0.96	0.000001	5.43E-06	1.1	10	0.25	70	0.85	1.81E-07	0.18
108	42.32493	4.65E-04	1.97E-02	361	1	0.96	0.000001	6.81E-06	1.1	10	0.25	70	0.85	2.27E-07	0.23
109	14.92114	4.65E-04	6.94E-03	361	1	0.96	0.000001	2.40E-06	1.1	10	0.25	70	0.85	8.02E-08	0.08
110	19.09	4.65E-04	8.88E-03	361	1	0.96	0.000001	3.07E-06	1.1	10	0.25	70	0.85	1.03E-07	0.10
111	25.63326	4.65E-04	1.19E-02	361	1	0.96	0.000001	4.13E-06	1.1	10	0.25	70	0.85	1.38E-07	0.14
112	37.48441	4.65E-04	1.74E-02	361	1	0.96	0.000001	6.03E-06	1.1	10	0.25	70	0.85	2.01E-07	0.20
113	33.95865	4.65E-04	1.58E-02	361	1	0.96	0.000001	5.47E-06	1.1	10	0.25	70	0.85	1.83E-07	0.18
114	10.79306	4.65E-04	5.02E-03	361	1	0.96	0.000001	1.74E-06	1.1	10	0.25	70	0.85	5.80E-08	0.06
115	13.04407	4.65E-04	6.06E-03	361	1	0.96	0.000001	2.10E-06	1.1	10	0.25	70	0.85	7.01E-08	0.07
116	16.10358	4.65E-04	7.49E-03	361	1	0.96	0.000001	2.59E-06	1.1	10	0.25	70	0.85	8.65E-08	0.09
117	20.63244	4.65E-04	9.59E-03	361	1	0.96	0.000001	3.32E-06	1.1	10	0.25	70	0.85	1.11E-07	0.11
118	27.94148	4.65E-04	1.30E-02	361	1	0.96	0.000001	4.50E-06	1.1	10	0.25	70	0.85	1.50E-07	0.15
119	41.76594	4.65E-04	1.94E-02	361	1	0.96	0.000001	6.72E-06	1.1	10	0.25	70	0.85	2.24E-07	0.22
120	38.89079	4.65E-04	1.81E-02	361	1	0.96	0.000001	6.26E-06	1.1	10	0.25	70	0.85	2.09E-07	0.21
121	8.36861	4.65E-04	3.89E-03	361	1	0.96	0.000001	1.35E-06	1.1	10	0.25	70	0.85	4.50E-08	0.04
122	9.77078	4.65E-04	4.54E-03	361	1	0.96	0.000001	1.57E-06	1.1	10	0.25	70	0.85	5.25E-08	0.05
123	11.55942	4.65E-04	5.37E-03	361	1	0.96	0.000001	1.86E-06	1.1	10	0.25	70	0.85	6.21E-08	0.06
124	13.93303	4.65E-04	6.48E-03	361	1	0.96	0.000001	2.24E-06	1.1	10	0.25	70	0.85	7.49E-08	0.07
125	17.27952	4.65E-04	8.03E-03	361	1	0.96	0.000001	2.78E-06	1.1	10	0.25	70	0.85	9.29E-08	0.09
126	22.26041	4.65E-04	1.03E-02	361	1	0.96	0.000001	3.58E-06	1.1	10	0.25	70	0.85	1.20E-07	0.12
127	30.31811	4.65E-04	1.41E-02	361	1	0.96	0.000001	4.88E-06	1.1	10	0.25	70	0.85	1.63E-07	0.16
128	46.64352	4.65E-04	2.17E-02	361	1	0.96	0.000001	7.51E-06	1.1	10	0.25	70	0.85	2.51E-07	0.25

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
129	10.39186	4.65E-04	4.83E-03	361	1	0.96	0.000001	1.67E-06	1.1	10	0.25	70	0.85	5.58E-08	0.06		
130	12.29247	4.65E-04	5.72E-03	361	1	0.96	0.000001	1.98E-06	1.1	10	0.25	70	0.85	6.61E-08	0.07		
131	14.86919	4.65E-04	6.91E-03	361	1	0.96	0.000001	2.39E-06	1.1	10	0.25	70	0.85	7.99E-08	0.08		
132	18.47484	4.65E-04	8.59E-03	361	1	0.96	0.000001	2.97E-06	1.1	10	0.25	70	0.85	9.93E-08	0.10		
133	23.90288	4.65E-04	1.11E-02	361	1	0.96	0.000001	3.85E-06	1.1	10	0.25	70	0.85	1.28E-07	0.13		
134	33.16374	4.65E-04	1.54E-02	361	1	0.96	0.000001	5.34E-06	1.1	10	0.25	70	0.85	1.78E-07	0.18		
135	43.01654	4.65E-04	2.00E-02	361	1	0.96	0.000001	6.92E-06	1.1	10	0.25	70	0.85	2.31E-07	0.23		
136	10.98455	4.65E-04	5.11E-03	361	1	0.96	0.000001	1.77E-06	1.1	10	0.25	70	0.85	5.90E-08	0.06		
137	13.04049	4.65E-04	6.06E-03	361	1	0.96	0.000001	2.10E-06	1.1	10	0.25	70	0.85	7.01E-08	0.07		
138	15.78015	4.65E-04	7.34E-03	361	1	0.96	0.000001	2.54E-06	1.1	10	0.25	70	0.85	8.48E-08	0.08		
139	19.55494	4.65E-04	9.09E-03	361	1	0.96	0.000001	3.15E-06	1.1	10	0.25	70	0.85	1.05E-07	0.11		
140	25.64532	4.65E-04	1.19E-02	361	1	0.96	0.000001	4.13E-06	1.1	10	0.25	70	0.85	1.38E-07	0.14		
141	36.20477	4.65E-04	1.68E-02	361	1	0.96	0.000001	5.83E-06	1.1	10	0.25	70	0.85	1.95E-07	0.19		
142	44.53036	4.65E-04	2.07E-02	361	1	0.96	0.000001	7.17E-06	1.1	10	0.25	70	0.85	2.39E-07	0.24		
143	11.59696	4.65E-04	5.39E-03	361	1	0.96	0.000001	1.87E-06	1.1	10	0.25	70	0.85	6.23E-08	0.06		
144	13.76023	4.65E-04	6.40E-03	361	1	0.96	0.000001	2.21E-06	1.1	10	0.25	70	0.85	7.40E-08	0.07		
145	16.5957	4.65E-04	7.72E-03	361	1	0.96	0.000001	2.67E-06	1.1	10	0.25	70	0.85	8.92E-08	0.09		
146	20.89485	4.65E-04	9.71E-03	361	1	0.96	0.000001	3.36E-06	1.1	10	0.25	70	0.85	1.12E-07	0.11		
147	27.51452	4.65E-04	1.28E-02	361	1	0.96	0.000001	4.43E-06	1.1	10	0.25	70	0.85	1.48E-07	0.15		
148	39.75497	4.65E-04	1.85E-02	361	1	0.96	0.000001	6.40E-06	1.1	10	0.25	70	0.85	2.14E-07	0.21		
149	12.18242	4.65E-04	5.66E-03	361	1	0.96	0.000001	1.96E-06	1.1	10	0.25	70	0.85	6.55E-08	0.07		
150	14.41244	4.65E-04	6.70E-03	361	1	0.96	0.000001	2.32E-06	1.1	10	0.25	70	0.85	7.75E-08	0.08		
151	17.60595	4.65E-04	8.19E-03	361	1	0.96	0.000001	2.83E-06	1.1	10	0.25	70	0.85	9.46E-08	0.09		
152	22.16708	4.65E-04	1.03E-02	361	1	0.96	0.000001	3.57E-06	1.1	10	0.25	70	0.85	1.19E-07	0.12		
153	29.33297	4.65E-04	1.36E-02	361	1	0.96	0.000001	4.72E-06	1.1	10	0.25	70	0.85	1.58E-07	0.16		
154	43.91249	4.65E-04	2.04E-02	361	1	0.96	0.000001	7.07E-06	1.1	10	0.25	70	0.85	2.36E-07	0.24		
155	12.73808	4.65E-04	5.92E-03	361	1	0.96	0.000001	2.05E-06	1.1	10	0.25	70	0.85	6.85E-08	0.07		
156	15.17303	4.65E-04	7.05E-03	361	1	0.96	0.000001	2.44E-06	1.1	10	0.25	70	0.85	8.15E-08	0.08		
157	18.49884	4.65E-04	8.60E-03	361	1	0.96	0.000001	2.98E-06	1.1	10	0.25	70	0.85	9.94E-08	0.10		
158	23.39351	4.65E-04	1.09E-02	361	1	0.96	0.000001	3.77E-06	1.1	10	0.25	70	0.85	1.26E-07	0.13		
159	31.81978	4.65E-04	1.48E-02	361	1	0.96	0.000001	5.12E-06	1.1	10	0.25	70	0.85	1.71E-07	0.17		
160	48.77912	4.65E-04	2.27E-02	361	1	0.96	0.000001	7.85E-06	1.1	10	0.25	70	0.85	2.62E-07	0.26		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
161	13.31781	4.65E-04	6.19E-03	361	1	0.96	0.000001	2.14E-06	1.1	10	0.25	70	0.85	7.16E-08	0.07		
162	15.84008	4.65E-04	7.36E-03	361	1	0.96	0.000001	2.55E-06	1.1	10	0.25	70	0.85	8.51E-08	0.09		
163	19.44156	4.65E-04	9.04E-03	361	1	0.96	0.000001	3.13E-06	1.1	10	0.25	70	0.85	1.04E-07	0.10		
164	24.86043	4.65E-04	1.16E-02	361	1	0.96	0.000001	4.00E-06	1.1	10	0.25	70	0.85	1.34E-07	0.13		
165	34.15334	4.65E-04	1.59E-02	361	1	0.96	0.000001	5.50E-06	1.1	10	0.25	70	0.85	1.84E-07	0.18		
166	43.50496	4.65E-04	2.02E-02	361	1	0.96	0.000001	7.00E-06	1.1	10	0.25	70	0.85	2.34E-07	0.23		
167	13.81609	4.65E-04	6.42E-03	361	1	0.96	0.000001	2.22E-06	1.1	10	0.25	70	0.85	7.43E-08	0.07		
168	16.63593	4.65E-04	7.73E-03	361	1	0.96	0.000001	2.68E-06	1.1	10	0.25	70	0.85	8.94E-08	0.09		
169	20.53613	4.65E-04	9.55E-03	361	1	0.96	0.000001	3.31E-06	1.1	10	0.25	70	0.85	1.10E-07	0.11		
170	26.56742	4.65E-04	1.24E-02	361	1	0.96	0.000001	4.28E-06	1.1	10	0.25	70	0.85	1.43E-07	0.14		
171	37.35384	4.65E-04	1.74E-02	361	1	0.96	0.000001	6.01E-06	1.1	10	0.25	70	0.85	2.01E-07	0.20		
172	36.0152	4.65E-04	1.67E-02	361	1	0.96	0.000001	5.80E-06	1.1	10	0.25	70	0.85	1.94E-07	0.19		
173	14.45701	4.65E-04	6.72E-03	361	1	0.96	0.000001	2.33E-06	1.1	10	0.25	70	0.85	7.77E-08	0.08		
174	17.37301	4.65E-04	8.08E-03	361	1	0.96	0.000001	2.80E-06	1.1	10	0.25	70	0.85	9.34E-08	0.09		
175	21.5797	4.65E-04	1.00E-02	361	1	0.96	0.000001	3.47E-06	1.1	10	0.25	70	0.85	1.16E-07	0.12		
176	28.27979	4.65E-04	1.31E-02	361	1	0.96	0.000001	4.55E-06	1.1	10	0.25	70	0.85	1.52E-07	0.15		
177	40.42447	4.65E-04	1.88E-02	361	1	0.96	0.000001	6.51E-06	1.1	10	0.25	70	0.85	2.17E-07	0.22		
178	15.00358	4.65E-04	6.98E-03	361	1	0.96	0.000001	2.41E-06	1.1	10	0.25	70	0.85	8.06E-08	0.08		
179	18.06113	4.65E-04	8.40E-03	361	1	0.96	0.000001	2.91E-06	1.1	10	0.25	70	0.85	9.71E-08	0.10		
180	22.71956	4.65E-04	1.06E-02	361	1	0.96	0.000001	3.66E-06	1.1	10	0.25	70	0.85	1.22E-07	0.12		
181	29.87302	4.65E-04	1.39E-02	361	1	0.96	0.000001	4.81E-06	1.1	10	0.25	70	0.85	1.61E-07	0.16		
182	44.81	4.65E-04	2.08E-02	361	1	0.96	0.000001	7.21E-06	1.1	10	0.25	70	0.85	2.41E-07	0.24		
183	15.60073	4.65E-04	7.25E-03	361	1	0.96	0.000001	2.51E-06	1.1	10	0.25	70	0.85	8.38E-08	0.08		
184	18.80739	4.65E-04	8.74E-03	361	1	0.96	0.000001	3.03E-06	1.1	10	0.25	70	0.85	1.01E-07	0.10		
185	23.75632	4.65E-04	1.10E-02	361	1	0.96	0.000001	3.82E-06	1.1	10	0.25	70	0.85	1.28E-07	0.13		
186	32.21529	4.65E-04	1.50E-02	361	1	0.96	0.000001	5.18E-06	1.1	10	0.25	70	0.85	1.73E-07	0.17		
187	49.94775	4.65E-04	2.32E-02	361	1	0.96	0.000001	8.04E-06	1.1	10	0.25	70	0.85	2.68E-07	0.27		
188	16.15173	4.65E-04	7.51E-03	361	1	0.96	0.000001	2.60E-06	1.1	10	0.25	70	0.85	8.68E-08	0.09		
189	19.79861	4.65E-04	9.21E-03	361	1	0.96	0.000001	3.19E-06	1.1	10	0.25	70	0.85	1.06E-07	0.11		
190	25.08632	4.65E-04	1.17E-02	361	1	0.96	0.000001	4.04E-06	1.1	10	0.25	70	0.85	1.35E-07	0.13		
191	34.73573	4.65E-04	1.61E-02	361	1	0.96	0.000001	5.59E-06	1.1	10	0.25	70	0.85	1.87E-07	0.19		
192	43.3961	4.65E-04	2.02E-02	361	1	0.96	0.000001	6.98E-06	1.1	10	0.25	70	0.85	2.33E-07	0.23		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
193	16.79449	4.65E-04	7.81E-03	361	1	0.96	0.000001	2.70E-06	1.1	10	0.25	70	0.85	9.03E-08	0.09		
194	20.69337	4.65E-04	9.62E-03	361	1	0.96	0.000001	3.33E-06	1.1	10	0.25	70	0.85	1.11E-07	0.11		
195	26.4885	4.65E-04	1.23E-02	361	1	0.96	0.000001	4.26E-06	1.1	10	0.25	70	0.85	1.42E-07	0.14		
196	37.64884	4.65E-04	1.75E-02	361	1	0.96	0.000001	6.06E-06	1.1	10	0.25	70	0.85	2.02E-07	0.20		
197	35.3791	4.65E-04	1.64E-02	361	1	0.96	0.000001	5.69E-06	1.1	10	0.25	70	0.85	1.90E-07	0.19		
198	17.41292	4.65E-04	8.10E-03	361	1	0.96	0.000001	2.80E-06	1.1	10	0.25	70	0.85	9.36E-08	0.09		
199	21.59767	4.65E-04	1.00E-02	361	1	0.96	0.000001	3.48E-06	1.1	10	0.25	70	0.85	1.16E-07	0.12		
200	28.12072	4.65E-04	1.31E-02	361	1	0.96	0.000001	4.53E-06	1.1	10	0.25	70	0.85	1.51E-07	0.15		
201	41.12258	4.65E-04	1.91E-02	361	1	0.96	0.000001	6.62E-06	1.1	10	0.25	70	0.85	2.21E-07	0.22		
202	18.02574	4.65E-04	8.38E-03	361	1	0.96	0.000001	2.90E-06	1.1	10	0.25	70	0.85	9.69E-08	0.10		
203	22.41384	4.65E-04	1.04E-02	361	1	0.96	0.000001	3.61E-06	1.1	10	0.25	70	0.85	1.20E-07	0.12		
204	30.11382	4.65E-04	1.40E-02	361	1	0.96	0.000001	4.85E-06	1.1	10	0.25	70	0.85	1.62E-07	0.16		
205	45.13292	4.65E-04	2.10E-02	361	1	0.96	0.000001	7.26E-06	1.1	10	0.25	70	0.85	2.43E-07	0.24		
206	18.54066	4.65E-04	8.62E-03	361	1	0.96	0.000001	2.98E-06	1.1	10	0.25	70	0.85	9.96E-08	0.10		
207	23.55101	4.65E-04	1.09E-02	361	1	0.96	0.000001	3.79E-06	1.1	10	0.25	70	0.85	1.27E-07	0.13		
208	31.87562	4.65E-04	1.48E-02	361	1	0.96	0.000001	5.13E-06	1.1	10	0.25	70	0.85	1.71E-07	0.17		
209	49.98284	4.65E-04	2.32E-02	361	1	0.96	0.000001	8.04E-06	1.1	10	0.25	70	0.85	2.69E-07	0.27		
210	15.64889	4.65E-04	7.28E-03	361	1	0.96	0.000001	2.52E-06	1.1	10	0.25	70	0.85	8.41E-08	0.08		
211	19.2355	4.65E-04	8.94E-03	361	1	0.96	0.000001	3.10E-06	1.1	10	0.25	70	0.85	1.03E-07	0.10		
212	24.65128	4.65E-04	1.15E-02	361	1	0.96	0.000001	3.97E-06	1.1	10	0.25	70	0.85	1.32E-07	0.13		
213	34.23593	4.65E-04	1.59E-02	361	1	0.96	0.000001	5.51E-06	1.1	10	0.25	70	0.85	1.84E-07	0.18		
214	42.21348	4.65E-04	1.96E-02	361	1	0.96	0.000001	6.79E-06	1.1	10	0.25	70	0.85	2.27E-07	0.23		
215	13.43579	4.65E-04	6.25E-03	361	1	0.96	0.000001	2.16E-06	1.1	10	0.25	70	0.85	7.22E-08	0.07		
216	16.00489	4.65E-04	7.44E-03	361	1	0.96	0.000001	2.58E-06	1.1	10	0.25	70	0.85	8.60E-08	0.09		
217	19.70792	4.65E-04	9.16E-03	361	1	0.96	0.000001	3.17E-06	1.1	10	0.25	70	0.85	1.06E-07	0.11		
218	25.57126	4.65E-04	1.19E-02	361	1	0.96	0.000001	4.12E-06	1.1	10	0.25	70	0.85	1.37E-07	0.14		
219	36.42147	4.65E-04	1.69E-02	361	1	0.96	0.000001	5.86E-06	1.1	10	0.25	70	0.85	1.96E-07	0.20		
220	13.61074	4.65E-04	6.33E-03	361	1	0.96	0.000001	2.19E-06	1.1	10	0.25	70	0.85	7.31E-08	0.07		
221	16.2822	4.65E-04	7.57E-03	361	1	0.96	0.000001	2.62E-06	1.1	10	0.25	70	0.85	8.75E-08	0.09		
222	20.21449	4.65E-04	9.40E-03	361	1	0.96	0.000001	3.25E-06	1.1	10	0.25	70	0.85	1.09E-07	0.11		
223	26.63429	4.65E-04	1.24E-02	361	1	0.96	0.000001	4.29E-06	1.1	10	0.25	70	0.85	1.43E-07	0.14		
224	39.18658	4.65E-04	1.82E-02	361	1	0.96	0.000001	6.31E-06	1.1	10	0.25	70	0.85	2.11E-07	0.21		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
225	13.61514	4.65E-04	6.33E-03	361	1	0.96	0.000001	2.19E-06	1.1	10	0.25	70	0.85	7.32E-08	0.07		
226	16.33158	4.65E-04	7.59E-03	361	1	0.96	0.000001	2.63E-06	1.1	10	0.25	70	0.85	8.78E-08	0.09		
227	20.38504	4.65E-04	9.48E-03	361	1	0.96	0.000001	3.28E-06	1.1	10	0.25	70	0.85	1.10E-07	0.11		
228	27.16745	4.65E-04	1.26E-02	361	1	0.96	0.000001	4.37E-06	1.1	10	0.25	70	0.85	1.46E-07	0.15		
229	41.30182	4.65E-04	1.92E-02	361	1	0.96	0.000001	6.65E-06	1.1	10	0.25	70	0.85	2.22E-07	0.22		
230	13.41637	4.65E-04	6.24E-03	361	1	0.96	0.000001	2.16E-06	1.1	10	0.25	70	0.85	7.21E-08	0.07		
231	16.06074	4.65E-04	7.47E-03	361	1	0.96	0.000001	2.58E-06	1.1	10	0.25	70	0.85	8.63E-08	0.09		
232	19.96178	4.65E-04	9.28E-03	361	1	0.96	0.000001	3.21E-06	1.1	10	0.25	70	0.85	1.07E-07	0.11		
233	26.78309	4.65E-04	1.25E-02	361	1	0.96	0.000001	4.31E-06	1.1	10	0.25	70	0.85	1.44E-07	0.14		
234	41.43989	4.65E-04	1.93E-02	361	1	0.96	0.000001	6.67E-06	1.1	10	0.25	70	0.85	2.23E-07	0.22		
235	12.86229	4.65E-04	5.98E-03	361	1	0.96	0.000001	2.07E-06	1.1	10	0.25	70	0.85	6.91E-08	0.07		
236	15.08917	4.65E-04	7.02E-03	361	1	0.96	0.000001	2.43E-06	1.1	10	0.25	70	0.85	8.11E-08	0.08		
237	18.33392	4.65E-04	8.52E-03	361	1	0.96	0.000001	2.95E-06	1.1	10	0.25	70	0.85	9.85E-08	0.10		
238	23.14588	4.65E-04	1.08E-02	361	1	0.96	0.000001	3.73E-06	1.1	10	0.25	70	0.85	1.24E-07	0.12		
239	28.20951	4.65E-04	1.31E-02	361	1	0.96	0.000001	4.54E-06	1.1	10	0.25	70	0.85	1.52E-07	0.15		
240	11.7602	4.65E-04	5.47E-03	361	1	0.96	0.000001	1.89E-06	1.1	10	0.25	70	0.85	6.32E-08	0.06		
241	13.38931	4.65E-04	6.23E-03	361	1	0.96	0.000001	2.15E-06	1.1	10	0.25	70	0.85	7.20E-08	0.07		
242	15.06634	4.65E-04	7.00E-03	361	1	0.96	0.000001	2.42E-06	1.1	10	0.25	70	0.85	8.10E-08	0.08		
243	16.58835	4.65E-04	7.71E-03	361	1	0.96	0.000001	2.67E-06	1.1	10	0.25	70	0.85	8.92E-08	0.09		
244	9.42824	4.65E-04	4.38E-03	361	1	0.96	0.000001	1.52E-06	1.1	10	0.25	70	0.85	5.07E-08	0.05		
245	10.30359	4.65E-04	4.79E-03	361	1	0.96	0.000001	1.66E-06	1.1	10	0.25	70	0.85	5.54E-08	0.06		
246	11.14416	4.65E-04	5.18E-03	361	1	0.96	0.000001	1.79E-06	1.1	10	0.25	70	0.85	5.99E-08	0.06		
247	11.77298	4.65E-04	5.47E-03	361	1	0.96	0.000001	1.89E-06	1.1	10	0.25	70	0.85	6.33E-08	0.06		
248	11.81269	4.65E-04	5.49E-03	361	1	0.96	0.000001	1.90E-06	1.1	10	0.25	70	0.85	6.35E-08	0.06		
249	8.30251	4.65E-04	3.86E-03	361	1	0.96	0.000001	1.34E-06	1.1	10	0.25	70	0.85	4.46E-08	0.04		
250	8.78697	4.65E-04	4.09E-03	361	1	0.96	0.000001	1.41E-06	1.1	10	0.25	70	0.85	4.72E-08	0.05		
251	9.15386	4.65E-04	4.26E-03	361	1	0.96	0.000001	1.47E-06	1.1	10	0.25	70	0.85	4.92E-08	0.05		
252	9.25084	4.65E-04	4.30E-03	361	1	0.96	0.000001	1.49E-06	1.1	10	0.25	70	0.85	4.97E-08	0.05		
253	8.89292	4.65E-04	4.13E-03	361	1	0.96	0.000001	1.43E-06	1.1	10	0.25	70	0.85	4.78E-08	0.05		
254	6.91794	4.65E-04	3.22E-03	361	1	0.96	0.000001	1.11E-06	1.1	10	0.25	70	0.85	3.72E-08	0.04		
255	7.23262	4.65E-04	3.36E-03	361	1	0.96	0.000001	1.16E-06	1.1	10	0.25	70	0.85	3.89E-08	0.04		
256	7.47988	4.65E-04	3.48E-03	361	1	0.96	0.000001	1.20E-06	1.1	10	0.25	70	0.85	4.02E-08	0.04		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
257	7.56891	4.65E-04	3.52E-03	361	1	0.96	0.000001	1.22E-06	1.1	10	0.25	70	0.85	4.07E-08	0.04		
258	7.42703	4.65E-04	3.45E-03	361	1	0.96	0.000001	1.20E-06	1.1	10	0.25	70	0.85	3.99E-08	0.04		
259	7.03979	4.65E-04	3.27E-03	361	1	0.96	0.000001	1.13E-06	1.1	10	0.25	70	0.85	3.78E-08	0.04		
260	6.12934	4.65E-04	2.85E-03	361	1	0.96	0.000001	9.86E-07	1.1	10	0.25	70	0.85	3.29E-08	0.03		
261	6.30523	4.65E-04	2.93E-03	361	1	0.96	0.000001	1.01E-06	1.1	10	0.25	70	0.85	3.39E-08	0.03		
262	6.39015	4.65E-04	2.97E-03	361	1	0.96	0.000001	1.03E-06	1.1	10	0.25	70	0.85	3.43E-08	0.03		
263	6.33067	4.65E-04	2.94E-03	361	1	0.96	0.000001	1.02E-06	1.1	10	0.25	70	0.85	3.40E-08	0.03		
264	6.12279	4.65E-04	2.85E-03	361	1	0.96	0.000001	9.85E-07	1.1	10	0.25	70	0.85	3.29E-08	0.03		
265	5.4363	4.65E-04	2.53E-03	361	1	0.96	0.000001	8.75E-07	1.1	10	0.25	70	0.85	2.92E-08	0.03		
266	5.51205	4.65E-04	2.56E-03	361	1	0.96	0.000001	8.87E-07	1.1	10	0.25	70	0.85	2.96E-08	0.03		
267	5.49212	4.65E-04	2.55E-03	361	1	0.96	0.000001	8.84E-07	1.1	10	0.25	70	0.85	2.95E-08	0.03		
268	5.3805	4.65E-04	2.50E-03	361	1	0.96	0.000001	8.66E-07	1.1	10	0.25	70	0.85	2.89E-08	0.03		
269	5.16454	4.65E-04	2.40E-03	361	1	0.96	0.000001	8.31E-07	1.1	10	0.25	70	0.85	2.78E-08	0.03		
270	4.83176	4.65E-04	2.25E-03	361	1	0.96	0.000001	7.78E-07	1.1	10	0.25	70	0.85	2.60E-08	0.03		
271	4.84073	4.65E-04	2.25E-03	361	1	0.96	0.000001	7.79E-07	1.1	10	0.25	70	0.85	2.60E-08	0.03		
272	4.77349	4.65E-04	2.22E-03	361	1	0.96	0.000001	7.68E-07	1.1	10	0.25	70	0.85	2.57E-08	0.03		
273	4.63877	4.65E-04	2.16E-03	361	1	0.96	0.000001	7.47E-07	1.1	10	0.25	70	0.85	2.49E-08	0.02		
274	4.29146	4.65E-04	2.00E-03	361	1	0.96	0.000001	6.91E-07	1.1	10	0.25	70	0.85	2.31E-08	0.02		
275	4.31025	4.65E-04	2.00E-03	361	1	0.96	0.000001	6.94E-07	1.1	10	0.25	70	0.85	2.32E-08	0.02		
276	4.27681	4.65E-04	1.99E-03	361	1	0.96	0.000001	6.88E-07	1.1	10	0.25	70	0.85	2.30E-08	0.02		
277	4.18832	4.65E-04	1.95E-03	361	1	0.96	0.000001	6.74E-07	1.1	10	0.25	70	0.85	2.25E-08	0.02		
278	4.05217	4.65E-04	1.88E-03	361	1	0.96	0.000001	6.52E-07	1.1	10	0.25	70	0.85	2.18E-08	0.02		
279	3.87349	4.65E-04	1.80E-03	361	1	0.96	0.000001	6.23E-07	1.1	10	0.25	70	0.85	2.08E-08	0.02		
280	3.85945	4.65E-04	1.79E-03	361	1	0.96	0.000001	6.21E-07	1.1	10	0.25	70	0.85	2.07E-08	0.02		
281	3.8031	4.65E-04	1.77E-03	361	1	0.96	0.000001	6.12E-07	1.1	10	0.25	70	0.85	2.04E-08	0.02		
282	3.70874	4.65E-04	1.72E-03	361	1	0.96	0.000001	5.97E-07	1.1	10	0.25	70	0.85	1.99E-08	0.02		
283	3.51043	4.65E-04	1.63E-03	361	1	0.96	0.000001	5.65E-07	1.1	10	0.25	70	0.85	1.89E-08	0.02		
284	3.50731	4.65E-04	1.63E-03	361	1	0.96	0.000001	5.64E-07	1.1	10	0.25	70	0.85	1.88E-08	0.02		
285	3.47221	4.65E-04	1.61E-03	361	1	0.96	0.000001	5.59E-07	1.1	10	0.25	70	0.85	1.87E-08	0.02		
286	3.40646	4.65E-04	1.58E-03	361	1	0.96	0.000001	5.48E-07	1.1	10	0.25	70	0.85	1.83E-08	0.02		
287	3.31229	4.65E-04	1.54E-03	361	1	0.96	0.000001	5.33E-07	1.1	10	0.25	70	0.85	1.78E-08	0.02		
288	3.20153	4.65E-04	1.49E-03	361	1	0.96	0.000001	5.15E-07	1.1	10	0.25	70	0.85	1.72E-08	0.02		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
289	3.20589	4.65E-04	1.49E-03	361	1	0.96	0.000001	5.16E-07	1.1	10	0.25	70	0.85	1.72E-08	0.02
290	3.18588	4.65E-04	1.48E-03	361	1	0.96	0.000001	5.13E-07	1.1	10	0.25	70	0.85	1.71E-08	0.02
291	3.14029	4.65E-04	1.46E-03	361	1	0.96	0.000001	5.05E-07	1.1	10	0.25	70	0.85	1.69E-08	0.02
292	3.07064	4.65E-04	1.43E-03	361	1	0.96	0.000001	4.94E-07	1.1	10	0.25	70	0.85	1.65E-08	0.02
293	2.93743	4.65E-04	1.37E-03	361	1	0.96	0.000001	4.73E-07	1.1	10	0.25	70	0.85	1.58E-08	0.02
294	2.94601	4.65E-04	1.37E-03	361	1	0.96	0.000001	4.74E-07	1.1	10	0.25	70	0.85	1.58E-08	0.02
295	2.93445	4.65E-04	1.36E-03	361	1	0.96	0.000001	4.72E-07	1.1	10	0.25	70	0.85	1.58E-08	0.02
296	2.90327	4.65E-04	1.35E-03	361	1	0.96	0.000001	4.67E-07	1.1	10	0.25	70	0.85	1.56E-08	0.02
297	2.85381	4.65E-04	1.33E-03	361	1	0.96	0.000001	4.59E-07	1.1	10	0.25	70	0.85	1.53E-08	0.02
298	2.70836	4.65E-04	1.26E-03	361	1	0.96	0.000001	4.36E-07	1.1	10	0.25	70	0.85	1.46E-08	0.01
299	2.71996	4.65E-04	1.26E-03	361	1	0.96	0.000001	4.38E-07	1.1	10	0.25	70	0.85	1.46E-08	0.01
300	2.71483	4.65E-04	1.26E-03	361	1	0.96	0.000001	4.37E-07	1.1	10	0.25	70	0.85	1.46E-08	0.01
301	2.69409	4.65E-04	1.25E-03	361	1	0.96	0.000001	4.34E-07	1.1	10	0.25	70	0.85	1.45E-08	0.01
302	2.65874	4.65E-04	1.24E-03	361	1	0.96	0.000001	4.28E-07	1.1	10	0.25	70	0.85	1.43E-08	0.01
303	2.60586	4.65E-04	1.21E-03	361	1	0.96	0.000001	4.19E-07	1.1	10	0.25	70	0.85	1.40E-08	0.01
304	2.50821	4.65E-04	1.17E-03	361	1	0.96	0.000001	4.04E-07	1.1	10	0.25	70	0.85	1.35E-08	0.01
305	2.52139	4.65E-04	1.17E-03	361	1	0.96	0.000001	4.06E-07	1.1	10	0.25	70	0.85	1.36E-08	0.01
306	2.52124	4.65E-04	1.17E-03	361	1	0.96	0.000001	4.06E-07	1.1	10	0.25	70	0.85	1.36E-08	0.01
307	2.50855	4.65E-04	1.17E-03	361	1	0.96	0.000001	4.04E-07	1.1	10	0.25	70	0.85	1.35E-08	0.01
308	2.48297	4.65E-04	1.15E-03	361	1	0.96	0.000001	4.00E-07	1.1	10	0.25	70	0.85	1.33E-08	0.01
309	2.44271	4.65E-04	1.14E-03	361	1	0.96	0.000001	3.93E-07	1.1	10	0.25	70	0.85	1.31E-08	0.01
310	2.33178	4.65E-04	1.08E-03	361	1	0.96	0.000001	3.75E-07	1.1	10	0.25	70	0.85	1.25E-08	0.01
311	2.3459	4.65E-04	1.09E-03	361	1	0.96	0.000001	3.78E-07	1.1	10	0.25	70	0.85	1.26E-08	0.01
312	2.34964	4.65E-04	1.09E-03	361	1	0.96	0.000001	3.78E-07	1.1	10	0.25	70	0.85	1.26E-08	0.01
313	2.34307	4.65E-04	1.09E-03	361	1	0.96	0.000001	3.77E-07	1.1	10	0.25	70	0.85	1.26E-08	0.01
314	2.32401	4.65E-04	1.08E-03	361	1	0.96	0.000001	3.74E-07	1.1	10	0.25	70	0.85	1.25E-08	0.01
315	2.29345	4.65E-04	1.07E-03	361	1	0.96	0.000001	3.69E-07	1.1	10	0.25	70	0.85	1.23E-08	0.01
316	2.17514	4.65E-04	1.01E-03	361	1	0.96	0.000001	3.50E-07	1.1	10	0.25	70	0.85	1.17E-08	0.01
317	2.18984	4.65E-04	1.02E-03	361	1	0.96	0.000001	3.52E-07	1.1	10	0.25	70	0.85	1.18E-08	0.01
318	2.19505	4.65E-04	1.02E-03	361	1	0.96	0.000001	3.53E-07	1.1	10	0.25	70	0.85	1.18E-08	0.01
319	2.19225	4.65E-04	1.02E-03	361	1	0.96	0.000001	3.53E-07	1.1	10	0.25	70	0.85	1.18E-08	0.01
320	2.18064	4.65E-04	1.01E-03	361	1	0.96	0.000001	3.51E-07	1.1	10	0.25	70	0.85	1.17E-08	0.01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
321	2.15758	4.65E-04	1.00E-03	361	1	0.96	0.000001	3.47E-07	1.1	10	0.25	70	0.85	1.16E-08	0.01
322	2.1254	4.65E-04	9.88E-04	361	1	0.96	0.000001	3.42E-07	1.1	10	0.25	70	0.85	1.14E-08	0.01
323	2.03561	4.65E-04	9.46E-04	361	1	0.96	0.000001	3.28E-07	1.1	10	0.25	70	0.85	1.09E-08	0.01
324	2.05029	4.65E-04	9.53E-04	361	1	0.96	0.000001	3.30E-07	1.1	10	0.25	70	0.85	1.10E-08	0.01
325	2.0573	4.65E-04	9.57E-04	361	1	0.96	0.000001	3.31E-07	1.1	10	0.25	70	0.85	1.11E-08	0.01
326	2.05727	4.65E-04	9.56E-04	361	1	0.96	0.000001	3.31E-07	1.1	10	0.25	70	0.85	1.11E-08	0.01
327	2.05028	4.65E-04	9.53E-04	361	1	0.96	0.000001	3.30E-07	1.1	10	0.25	70	0.85	1.10E-08	0.01
328	2.03345	4.65E-04	9.45E-04	361	1	0.96	0.000001	3.27E-07	1.1	10	0.25	70	0.85	1.09E-08	0.01
329	2.00821	4.65E-04	9.34E-04	361	1	0.96	0.000001	3.23E-07	1.1	10	0.25	70	0.85	1.08E-08	0.01
330	1.90937	4.65E-04	8.88E-04	361	1	0.96	0.000001	3.07E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01
331	1.92388	4.65E-04	8.94E-04	361	1	0.96	0.000001	3.10E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01
332	1.93278	4.65E-04	8.99E-04	361	1	0.96	0.000001	3.11E-07	1.1	10	0.25	70	0.85	1.04E-08	0.01
333	1.93535	4.65E-04	9.00E-04	361	1	0.96	0.000001	3.11E-07	1.1	10	0.25	70	0.85	1.04E-08	0.01
334	1.93074	4.65E-04	8.98E-04	361	1	0.96	0.000001	3.11E-07	1.1	10	0.25	70	0.85	1.04E-08	0.01
335	1.91881	4.65E-04	8.92E-04	361	1	0.96	0.000001	3.09E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01
336	1.90007	4.65E-04	8.83E-04	361	1	0.96	0.000001	3.06E-07	1.1	10	0.25	70	0.85	1.02E-08	0.01
337	1.7972	4.65E-04	8.36E-04	361	1	0.96	0.000001	2.89E-07	1.1	10	0.25	70	0.85	9.66E-09	0.01
338	1.81158	4.65E-04	8.42E-04	361	1	0.96	0.000001	2.92E-07	1.1	10	0.25	70	0.85	9.74E-09	0.01
339	1.82118	4.65E-04	8.47E-04	361	1	0.96	0.000001	2.93E-07	1.1	10	0.25	70	0.85	9.79E-09	0.01
340	1.82504	4.65E-04	8.49E-04	361	1	0.96	0.000001	2.94E-07	1.1	10	0.25	70	0.85	9.81E-09	0.01
341	1.82335	4.65E-04	8.48E-04	361	1	0.96	0.000001	2.93E-07	1.1	10	0.25	70	0.85	9.80E-09	0.01
342	1.81496	4.65E-04	8.44E-04	361	1	0.96	0.000001	2.92E-07	1.1	10	0.25	70	0.85	9.75E-09	0.01
343	1.80006	4.65E-04	8.37E-04	361	1	0.96	0.000001	2.90E-07	1.1	10	0.25	70	0.85	9.67E-09	0.01
344	1.69476	4.65E-04	7.88E-04	361	1	0.96	0.000001	2.73E-07	1.1	10	0.25	70	0.85	9.11E-09	0.01
345	1.7088	4.65E-04	7.94E-04	361	1	0.96	0.000001	2.75E-07	1.1	10	0.25	70	0.85	9.18E-09	0.01
346	1.71886	4.65E-04	7.99E-04	361	1	0.96	0.000001	2.77E-07	1.1	10	0.25	70	0.85	9.24E-09	0.01
347	1.72417	4.65E-04	8.02E-04	361	1	0.96	0.000001	2.77E-07	1.1	10	0.25	70	0.85	9.27E-09	0.01
348	1.72434	4.65E-04	8.02E-04	361	1	0.96	0.000001	2.78E-07	1.1	10	0.25	70	0.85	9.27E-09	0.01
349	1.71894	4.65E-04	7.99E-04	361	1	0.96	0.000001	2.77E-07	1.1	10	0.25	70	0.85	9.24E-09	0.01
350	1.70774	4.65E-04	7.94E-04	361	1	0.96	0.000001	2.75E-07	1.1	10	0.25	70	0.85	9.18E-09	0.01
351	1.6017	4.65E-04	7.45E-04	361	1	0.96	0.000001	2.58E-07	1.1	10	0.25	70	0.85	8.61E-09	0.01
352	1.61524	4.65E-04	7.51E-04	361	1	0.96	0.000001	2.60E-07	1.1	10	0.25	70	0.85	8.68E-09	0.01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
353	1.62551	4.65E-04	7.56E-04	361	1	0.96	0.000001	2.62E-07	1.1	10	0.25	70	0.85	8.74E-09	0.01		
354	1.63153	4.65E-04	7.59E-04	361	1	0.96	0.000001	2.63E-07	1.1	10	0.25	70	0.85	8.77E-09	0.01		
355	1.63337	4.65E-04	7.59E-04	361	1	0.96	0.000001	2.63E-07	1.1	10	0.25	70	0.85	8.78E-09	0.01		
356	1.63038	4.65E-04	7.58E-04	361	1	0.96	0.000001	2.62E-07	1.1	10	0.25	70	0.85	8.76E-09	0.01		
357	1.62229	4.65E-04	7.54E-04	361	1	0.96	0.000001	2.61E-07	1.1	10	0.25	70	0.85	8.72E-09	0.01		
358	1.51662	4.65E-04	7.05E-04	361	1	0.96	0.000001	2.44E-07	1.1	10	0.25	70	0.85	8.15E-09	0.01		
359	1.52979	4.65E-04	7.11E-04	361	1	0.96	0.000001	2.46E-07	1.1	10	0.25	70	0.85	8.22E-09	0.01		
360	1.54012	4.65E-04	7.16E-04	361	1	0.96	0.000001	2.48E-07	1.1	10	0.25	70	0.85	8.28E-09	0.01		
361	1.54694	4.65E-04	7.19E-04	361	1	0.96	0.000001	2.49E-07	1.1	10	0.25	70	0.85	8.31E-09	0.01		
362	1.54984	4.65E-04	7.21E-04	361	1	0.96	0.000001	2.49E-07	1.1	10	0.25	70	0.85	8.33E-09	0.01		
363	1.54871	4.65E-04	7.20E-04	361	1	0.96	0.000001	2.49E-07	1.1	10	0.25	70	0.85	8.32E-09	0.01		
364	1.54309	4.65E-04	7.17E-04	361	1	0.96	0.000001	2.48E-07	1.1	10	0.25	70	0.85	8.29E-09	0.01		
365	1.4388	4.65E-04	6.69E-04	361	1	0.96	0.000001	2.32E-07	1.1	10	0.25	70	0.85	7.73E-09	0.01		
366	1.45154	4.65E-04	6.75E-04	361	1	0.96	0.000001	2.34E-07	1.1	10	0.25	70	0.85	7.80E-09	0.01		
367	1.4617	4.65E-04	6.80E-04	361	1	0.96	0.000001	2.35E-07	1.1	10	0.25	70	0.85	7.86E-09	0.01		
368	1.46881	4.65E-04	6.83E-04	361	1	0.96	0.000001	2.36E-07	1.1	10	0.25	70	0.85	7.89E-09	0.01		
369	1.47281	4.65E-04	6.85E-04	361	1	0.96	0.000001	2.37E-07	1.1	10	0.25	70	0.85	7.92E-09	0.01		
370	1.47286	4.65E-04	6.85E-04	361	1	0.96	0.000001	2.37E-07	1.1	10	0.25	70	0.85	7.92E-09	0.01		
371	1.46952	4.65E-04	6.83E-04	361	1	0.96	0.000001	2.37E-07	1.1	10	0.25	70	0.85	7.90E-09	0.01		
372	1.36733	4.65E-04	6.36E-04	361	1	0.96	0.000001	2.20E-07	1.1	10	0.25	70	0.85	7.35E-09	0.01		
373	1.37955	4.65E-04	6.41E-04	361	1	0.96	0.000001	2.22E-07	1.1	10	0.25	70	0.85	7.41E-09	0.01		
374	1.3896	4.65E-04	6.46E-04	361	1	0.96	0.000001	2.24E-07	1.1	10	0.25	70	0.85	7.47E-09	0.01		
375	1.39707	4.65E-04	6.50E-04	361	1	0.96	0.000001	2.25E-07	1.1	10	0.25	70	0.85	7.51E-09	0.01		
376	1.40171	4.65E-04	6.52E-04	361	1	0.96	0.000001	2.26E-07	1.1	10	0.25	70	0.85	7.53E-09	0.01		
377	1.40293	4.65E-04	6.52E-04	361	1	0.96	0.000001	2.26E-07	1.1	10	0.25	70	0.85	7.54E-09	0.01		
378	1.40112	4.65E-04	6.51E-04	361	1	0.96	0.000001	2.26E-07	1.1	10	0.25	70	0.85	7.53E-09	0.01		
379	3.46781	4.65E-04	1.61E-03	361	1	0.96	0.000001	5.58E-07	1.1	10	0.25	70	0.85	1.86E-08	0.02		
380	3.38575	4.65E-04	1.57E-03	361	1	0.96	0.000001	5.45E-07	1.1	10	0.25	70	0.85	1.82E-08	0.02		
381	3.31439	4.65E-04	1.54E-03	361	1	0.96	0.000001	5.33E-07	1.1	10	0.25	70	0.85	1.78E-08	0.02		
382	3.20886	4.65E-04	1.49E-03	361	1	0.96	0.000001	5.16E-07	1.1	10	0.25	70	0.85	1.72E-08	0.02		
383	3.04032	4.65E-04	1.41E-03	361	1	0.96	0.000001	4.89E-07	1.1	10	0.25	70	0.85	1.63E-08	0.02		
384	2.88186	4.65E-04	1.34E-03	361	1	0.96	0.000001	4.64E-07	1.1	10	0.25	70	0.85	1.55E-08	0.02		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
385	2.72952	4.65E-04	1.27E-03	361	1	0.96	0.000001	4.39E-07	1.1	10	0.25	70	0.85	1.47E-08	0.01
386	2.55559	4.65E-04	1.19E-03	361	1	0.96	0.000001	4.11E-07	1.1	10	0.25	70	0.85	1.37E-08	0.01
387	2.4077	4.65E-04	1.12E-03	361	1	0.96	0.000001	3.88E-07	1.1	10	0.25	70	0.85	1.29E-08	0.01
388	2.28203	4.65E-04	1.06E-03	361	1	0.96	0.000001	3.67E-07	1.1	10	0.25	70	0.85	1.23E-08	0.01
389	2.175	4.65E-04	1.01E-03	361	1	0.96	0.000001	3.50E-07	1.1	10	0.25	70	0.85	1.17E-08	0.01
390	2.08263	4.65E-04	9.68E-04	361	1	0.96	0.000001	3.35E-07	1.1	10	0.25	70	0.85	1.12E-08	0.01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total	
1	6.65E-05	4.74E-04	1090	1	0.96	0.000001	4.95E-07	1.1	10	0.112	70	0.85	7.43E-09	0.01	0.045726	Max 0.321
2	6.65E-05	6.28E-04	1090	1	0.96	0.000001	6.56E-07	1.1	10	0.112	70	0.85	9.84E-09	0.01	0.060599	
3	6.65E-05	3.34E-04	1090	1	0.96	0.000001	3.49E-07	1.1	10	0.112	70	0.85	5.23E-09	0.01	0.032226	
4	6.65E-05	4.15E-04	1090	1	0.96	0.000001	4.34E-07	1.1	10	0.112	70	0.85	6.51E-09	0.01	0.040055	
5	6.65E-05	5.28E-04	1090	1	0.96	0.000001	5.52E-07	1.1	10	0.112	70	0.85	8.28E-09	0.01	0.050999	
6	6.65E-05	7.00E-04	1090	1	0.96	0.000001	7.32E-07	1.1	10	0.112	70	0.85	1.10E-08	0.01	0.067584	
7	6.65E-05	3.03E-04	1090	1	0.96	0.000001	3.17E-07	1.1	10	0.112	70	0.85	4.75E-09	0.00	0.02924	
8	6.65E-05	3.67E-04	1090	1	0.96	0.000001	3.84E-07	1.1	10	0.112	70	0.85	5.76E-09	0.01	0.035468	
9	6.65E-05	4.55E-04	1090	1	0.96	0.000001	4.76E-07	1.1	10	0.112	70	0.85	7.14E-09	0.01	0.043939	
10	6.65E-05	5.80E-04	1090	1	0.96	0.000001	6.06E-07	1.1	10	0.112	70	0.85	9.09E-09	0.01	0.055979	
11	6.65E-05	7.68E-04	1090	1	0.96	0.000001	8.03E-07	1.1	10	0.112	70	0.85	1.20E-08	0.01	0.074149	
12	6.65E-05	3.28E-04	1090	1	0.96	0.000001	3.43E-07	1.1	10	0.112	70	0.85	5.14E-09	0.01	0.031677	
13	6.65E-05	3.97E-04	1090	1	0.96	0.000001	4.15E-07	1.1	10	0.112	70	0.85	6.23E-09	0.01	0.038364	
14	6.65E-05	4.92E-04	1090	1	0.96	0.000001	5.14E-07	1.1	10	0.112	70	0.85	7.72E-09	0.01	0.047512	
15	6.65E-05	6.28E-04	1090	1	0.96	0.000001	6.56E-07	1.1	10	0.112	70	0.85	9.85E-09	0.01	0.06062	
16	6.65E-05	8.32E-04	1090	1	0.96	0.000001	8.70E-07	1.1	10	0.112	70	0.85	1.31E-08	0.01	0.08038	
17	6.65E-05	3.51E-04	1090	1	0.96	0.000001	3.67E-07	1.1	10	0.112	70	0.85	5.51E-09	0.01	0.033901	
18	6.65E-05	4.25E-04	1090	1	0.96	0.000001	4.44E-07	1.1	10	0.112	70	0.85	6.67E-09	0.01	0.041059	
19	6.65E-05	5.27E-04	1090	1	0.96	0.000001	5.50E-07	1.1	10	0.112	70	0.85	8.26E-09	0.01	0.050854	
20	6.65E-05	6.72E-04	1090	1	0.96	0.000001	7.02E-07	1.1	10	0.112	70	0.85	1.05E-08	0.01	0.064879	
21	6.65E-05	9.00E-04	1090	1	0.96	0.000001	9.41E-07	1.1	10	0.112	70	0.85	1.41E-08	0.01	0.086951	
22	6.65E-05	3.72E-04	1090	1	0.96	0.000001	3.88E-07	1.1	10	0.112	70	0.85	5.83E-09	0.01	0.035883	
23	6.65E-05	4.50E-04	1090	1	0.96	0.000001	4.70E-07	1.1	10	0.112	70	0.85	7.05E-09	0.01	0.043436	
24	6.65E-05	5.57E-04	1090	1	0.96	0.000001	5.82E-07	1.1	10	0.112	70	0.85	8.73E-09	0.01	0.05378	
25	6.65E-05	7.14E-04	1090	1	0.96	0.000001	7.46E-07	1.1	10	0.112	70	0.85	1.12E-08	0.01	0.068938	
26	6.65E-05	9.61E-04	1090	1	0.96	0.000001	1.00E-06	1.1	10	0.112	70	0.85	1.51E-08	0.02	0.092767	
27	6.65E-05	3.89E-04	1090	1	0.96	0.000001	4.07E-07	1.1	10	0.112	70	0.85	6.10E-09	0.01	0.037578	
28	6.65E-05	4.71E-04	1090	1	0.96	0.000001	4.92E-07	1.1	10	0.112	70	0.85	7.38E-09	0.01	0.045449	
29	6.65E-05	5.85E-04	1090	1	0.96	0.000001	6.12E-07	1.1	10	0.112	70	0.85	9.18E-09	0.01	0.056499	
30	6.65E-05	7.54E-04	1090	1	0.96	0.000001	7.88E-07	1.1	10	0.112	70	0.85	1.18E-08	0.01	0.072795	
31	6.65E-05	1.03E-03	1090	1	0.96	0.000001	1.08E-06	1.1	10	0.112	70	0.85	1.61E-08	0.02	0.099423	
32	6.65E-05	4.03E-04	1090	1	0.96	0.000001	4.21E-07	1.1	10	0.112	70	0.85	6.32E-09	0.01	0.038929	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
33	6.65E-05	4.88E-04	1090	1	0.96	0.000001	5.10E-07	1.1	10	0.112	70	0.85	7.65E-09	0.047124
34	6.65E-05	6.08E-04	1090	1	0.96	0.000001	6.35E-07	1.1	10	0.112	70	0.85	9.53E-09	0.058694
35	6.65E-05	7.85E-04	1090	1	0.96	0.000001	8.21E-07	1.1	10	0.112	70	0.85	1.23E-08	0.07581
36	6.65E-05	1.10E-03	1090	1	0.96	0.000001	1.14E-06	1.1	10	0.112	70	0.85	1.72E-08	0.105742
37	6.65E-05	4.12E-04	1090	1	0.96	0.000001	4.31E-07	1.1	10	0.112	70	0.85	6.46E-09	0.03979
38	6.65E-05	4.99E-04	1090	1	0.96	0.000001	5.22E-07	1.1	10	0.112	70	0.85	7.82E-09	0.048181
39	6.65E-05	6.22E-04	1090	1	0.96	0.000001	6.50E-07	1.1	10	0.112	70	0.85	9.75E-09	0.060035
40	6.65E-05	8.14E-04	1090	1	0.96	0.000001	8.51E-07	1.1	10	0.112	70	0.85	1.28E-08	0.078589
41	6.65E-05	4.16E-04	1090	1	0.96	0.000001	4.35E-07	1.1	10	0.112	70	0.85	6.53E-09	0.040215
42	6.65E-05	5.03E-04	1090	1	0.96	0.000001	5.26E-07	1.1	10	0.112	70	0.85	7.89E-09	0.048596
43	6.65E-05	6.27E-04	1090	1	0.96	0.000001	6.55E-07	1.1	10	0.112	70	0.85	9.83E-09	0.060557
44	6.65E-05	8.21E-04	1090	1	0.96	0.000001	8.58E-07	1.1	10	0.112	70	0.85	1.29E-08	0.079288
45	6.65E-05	4.10E-04	1090	1	0.96	0.000001	4.29E-07	1.1	10	0.112	70	0.85	6.43E-09	0.039598
46	6.65E-05	4.92E-04	1090	1	0.96	0.000001	5.14E-07	1.1	10	0.112	70	0.85	7.71E-09	0.047471
47	6.65E-05	6.07E-04	1090	1	0.96	0.000001	6.34E-07	1.1	10	0.112	70	0.85	9.52E-09	0.058603
48	6.65E-05	7.82E-04	1090	1	0.96	0.000001	8.17E-07	1.1	10	0.112	70	0.85	1.23E-08	0.075474
49	6.65E-05	4.59E-04	1090	1	0.96	0.000001	4.80E-07	1.1	10	0.112	70	0.85	7.20E-09	0.044309
50	6.65E-05	5.45E-04	1090	1	0.96	0.000001	5.69E-07	1.1	10	0.112	70	0.85	8.54E-09	0.052587
51	6.65E-05	3.56E-04	1090	1	0.96	0.000001	3.72E-07	1.1	10	0.112	70	0.85	5.58E-09	0.034328
52	6.65E-05	4.00E-04	1090	1	0.96	0.000001	4.18E-07	1.1	10	0.112	70	0.85	6.27E-09	0.038627
53	6.65E-05	4.46E-04	1090	1	0.96	0.000001	4.67E-07	1.1	10	0.112	70	0.85	7.00E-09	0.043107
54	6.65E-05	2.83E-04	1090	1	0.96	0.000001	2.96E-07	1.1	10	0.112	70	0.85	4.44E-09	0.027349
55	6.65E-05	3.09E-04	1090	1	0.96	0.000001	3.23E-07	1.1	10	0.112	70	0.85	4.85E-09	0.029845
56	6.65E-05	3.34E-04	1090	1	0.96	0.000001	3.49E-07	1.1	10	0.112	70	0.85	5.24E-09	0.032277
57	6.65E-05	3.56E-04	1090	1	0.96	0.000001	3.73E-07	1.1	10	0.112	70	0.85	5.59E-09	0.03442
58	6.65E-05	2.32E-04	1090	1	0.96	0.000001	2.42E-07	1.1	10	0.112	70	0.85	3.63E-09	0.022376
59	6.65E-05	2.48E-04	1090	1	0.96	0.000001	2.60E-07	1.1	10	0.112	70	0.85	3.90E-09	0.023984
60	6.65E-05	2.64E-04	1090	1	0.96	0.000001	2.76E-07	1.1	10	0.112	70	0.85	4.14E-09	0.025517
61	6.65E-05	2.78E-04	1090	1	0.96	0.000001	2.91E-07	1.1	10	0.112	70	0.85	4.36E-09	0.026859
62	6.65E-05	1.94E-04	1090	1	0.96	0.000001	2.03E-07	1.1	10	0.112	70	0.85	3.04E-09	0.018735
63	6.65E-05	2.06E-04	1090	1	0.96	0.000001	2.15E-07	1.1	10	0.112	70	0.85	3.22E-09	0.019848
64	6.65E-05	2.17E-04	1090	1	0.96	0.000001	2.26E-07	1.1	10	0.112	70	0.85	3.40E-09	0.020912

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
65	6.65E-05	2.26E-04	1090	1	0.96	0.000001	2.36E-07	1.1	10	0.112	70	0.85	3.55E-09	0.00	0.021848
66	6.65E-05	2.33E-04	1090	1	0.96	0.000001	2.43E-07	1.1	10	0.112	70	0.85	3.65E-09	0.00	0.022463
67	6.65E-05	1.65E-04	1090	1	0.96	0.000001	1.73E-07	1.1	10	0.112	70	0.85	2.59E-09	0.00	0.015974
68	6.65E-05	1.74E-04	1090	1	0.96	0.000001	1.82E-07	1.1	10	0.112	70	0.85	2.73E-09	0.00	0.016794
69	6.65E-05	1.82E-04	1090	1	0.96	0.000001	1.90E-07	1.1	10	0.112	70	0.85	2.85E-09	0.00	0.017577
70	6.65E-05	1.89E-04	1090	1	0.96	0.000001	1.98E-07	1.1	10	0.112	70	0.85	2.97E-09	0.00	0.018273
71	6.65E-05	1.94E-04	1090	1	0.96	0.000001	2.03E-07	1.1	10	0.112	70	0.85	3.05E-09	0.00	0.018773
72	6.65E-05	1.43E-04	1090	1	0.96	0.000001	1.50E-07	1.1	10	0.112	70	0.85	2.25E-09	0.00	0.013827
73	6.65E-05	1.50E-04	1090	1	0.96	0.000001	1.56E-07	1.1	10	0.112	70	0.85	2.35E-09	0.00	0.014456
74	6.65E-05	1.56E-04	1090	1	0.96	0.000001	1.63E-07	1.1	10	0.112	70	0.85	2.45E-09	0.00	0.015058
75	6.65E-05	1.62E-04	1090	1	0.96	0.000001	1.69E-07	1.1	10	0.112	70	0.85	2.53E-09	0.00	0.015603
76	6.65E-05	1.66E-04	1090	1	0.96	0.000001	1.73E-07	1.1	10	0.112	70	0.85	2.60E-09	0.00	0.016017
77	6.65E-05	1.26E-04	1090	1	0.96	0.000001	1.31E-07	1.1	10	0.112	70	0.85	1.97E-09	0.00	0.012119
78	6.65E-05	1.31E-04	1090	1	0.96	0.000001	1.37E-07	1.1	10	0.112	70	0.85	2.05E-09	0.00	0.012616
79	6.65E-05	1.36E-04	1090	1	0.96	0.000001	1.42E-07	1.1	10	0.112	70	0.85	2.13E-09	0.00	0.013095
80	6.65E-05	1.40E-04	1090	1	0.96	0.000001	1.47E-07	1.1	10	0.112	70	0.85	2.20E-09	0.00	0.013535
81	6.65E-05	1.44E-04	1090	1	0.96	0.000001	1.50E-07	1.1	10	0.112	70	0.85	2.25E-09	0.00	0.013885
82	6.65E-05	1.11E-04	1090	1	0.96	0.000001	1.16E-07	1.1	10	0.112	70	0.85	1.74E-09	0.00	0.010735
83	6.65E-05	1.15E-04	1090	1	0.96	0.000001	1.21E-07	1.1	10	0.112	70	0.85	1.81E-09	0.00	0.011138
84	6.65E-05	1.19E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.87E-09	0.00	0.011527
85	6.65E-05	1.23E-04	1090	1	0.96	0.000001	1.29E-07	1.1	10	0.112	70	0.85	1.93E-09	0.00	0.011887
86	6.65E-05	1.26E-04	1090	1	0.96	0.000001	1.32E-07	1.1	10	0.112	70	0.85	1.98E-09	0.00	0.012185
87	6.65E-05	9.93E-05	1090	1	0.96	0.000001	1.04E-07	1.1	10	0.112	70	0.85	1.56E-09	0.00	0.009591
88	6.65E-05	1.03E-04	1090	1	0.96	0.000001	1.07E-07	1.1	10	0.112	70	0.85	1.61E-09	0.00	0.009924
89	6.65E-05	1.06E-04	1090	1	0.96	0.000001	1.11E-07	1.1	10	0.112	70	0.85	1.66E-09	0.00	0.010247
90	6.65E-05	1.09E-04	1090	1	0.96	0.000001	1.14E-07	1.1	10	0.112	70	0.85	1.71E-09	0.00	0.010553
91	6.65E-05	1.12E-04	1090	1	0.96	0.000001	1.17E-07	1.1	10	0.112	70	0.85	1.76E-09	0.00	0.010813
92	6.65E-05	8.94E-05	1090	1	0.96	0.000001	9.35E-08	1.1	10	0.112	70	0.85	1.40E-09	0.00	0.008635
93	6.65E-05	9.23E-05	1090	1	0.96	0.000001	9.65E-08	1.1	10	0.112	70	0.85	1.45E-09	0.00	0.008915
94	6.65E-05	9.52E-05	1090	1	0.96	0.000001	9.95E-08	1.1	10	0.112	70	0.85	1.49E-09	0.00	0.009189
95	6.65E-05	9.79E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.00	0.009449
96	6.65E-05	1.00E-04	1090	1	0.96	0.000001	1.05E-07	1.1	10	0.112	70	0.85	1.57E-09	0.00	0.009676

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
97	6.65E-05	8.10E-05	1090	1	0.96	0.000001	8.47E-08	1.1	10	0.112	70	0.85	1.27E-09	0.007825
98	6.65E-05	8.35E-05	1090	1	0.96	0.000001	8.73E-08	1.1	10	0.112	70	0.85	1.31E-09	0.008064
99	6.65E-05	8.59E-05	1090	1	0.96	0.000001	8.98E-08	1.1	10	0.112	70	0.85	1.35E-09	0.008299
100	6.65E-05	8.83E-05	1090	1	0.96	0.000001	9.22E-08	1.1	10	0.112	70	0.85	1.38E-09	0.008522
101	6.65E-05	9.03E-05	1090	1	0.96	0.000001	9.44E-08	1.1	10	0.112	70	0.85	1.42E-09	0.008722
102	6.65E-05	2.23E-03	1090	1	0.96	0.000001	2.33E-06	1.1	10	0.112	70	0.85	3.50E-08	0.215273
103	6.65E-05	2.00E-03	1090	1	0.96	0.000001	2.09E-06	1.1	10	0.112	70	0.85	3.13E-08	0.192953
104	6.65E-05	3.29E-03	1090	1	0.96	0.000001	3.44E-06	1.1	10	0.112	70	0.85	5.16E-08	0.317912
105	6.65E-05	1.16E-03	1090	1	0.96	0.000001	1.21E-06	1.1	10	0.112	70	0.85	1.81E-08	0.111614
106	6.65E-05	1.55E-03	1090	1	0.96	0.000001	1.62E-06	1.1	10	0.112	70	0.85	2.43E-08	0.149747
107	6.65E-05	2.24E-03	1090	1	0.96	0.000001	2.34E-06	1.1	10	0.112	70	0.85	3.52E-08	0.216468
108	6.65E-05	2.81E-03	1090	1	0.96	0.000001	2.94E-06	1.1	10	0.112	70	0.85	4.41E-08	0.271575
109	6.65E-05	9.92E-04	1090	1	0.96	0.000001	1.04E-06	1.1	10	0.112	70	0.85	1.55E-08	0.09574
110	6.65E-05	1.27E-03	1090	1	0.96	0.000001	1.33E-06	1.1	10	0.112	70	0.85	1.99E-08	0.12249
111	6.65E-05	1.70E-03	1090	1	0.96	0.000001	1.78E-06	1.1	10	0.112	70	0.85	2.67E-08	0.164474
112	6.65E-05	2.49E-03	1090	1	0.96	0.000001	2.60E-06	1.1	10	0.112	70	0.85	3.91E-08	0.240516
113	6.65E-05	2.26E-03	1090	1	0.96	0.000001	2.36E-06	1.1	10	0.112	70	0.85	3.54E-08	0.217893
114	6.65E-05	7.17E-04	1090	1	0.96	0.000001	7.50E-07	1.1	10	0.112	70	0.85	1.12E-08	0.069253
115	6.65E-05	8.67E-04	1090	1	0.96	0.000001	9.06E-07	1.1	10	0.112	70	0.85	1.36E-08	0.083696
116	6.65E-05	1.07E-03	1090	1	0.96	0.000001	1.12E-06	1.1	10	0.112	70	0.85	1.68E-08	0.103327
117	6.65E-05	1.37E-03	1090	1	0.96	0.000001	1.43E-06	1.1	10	0.112	70	0.85	2.15E-08	0.132387
118	6.65E-05	1.86E-03	1090	1	0.96	0.000001	1.94E-06	1.1	10	0.112	70	0.85	2.91E-08	0.179284
119	6.65E-05	2.78E-03	1090	1	0.96	0.000001	2.90E-06	1.1	10	0.112	70	0.85	4.35E-08	0.267988
120	6.65E-05	2.58E-03	1090	1	0.96	0.000001	2.70E-06	1.1	10	0.112	70	0.85	4.05E-08	0.24954
121	6.65E-05	5.56E-04	1090	1	0.96	0.000001	5.81E-07	1.1	10	0.112	70	0.85	8.72E-09	0.053697
122	6.65E-05	6.49E-04	1090	1	0.96	0.000001	6.79E-07	1.1	10	0.112	70	0.85	1.02E-08	0.062693
123	6.65E-05	7.68E-04	1090	1	0.96	0.000001	8.03E-07	1.1	10	0.112	70	0.85	1.20E-08	0.07417
124	6.65E-05	9.26E-04	1090	1	0.96	0.000001	9.68E-07	1.1	10	0.112	70	0.85	1.45E-08	0.0894
125	6.65E-05	1.15E-03	1090	1	0.96	0.000001	1.20E-06	1.1	10	0.112	70	0.85	1.80E-08	0.110873
126	6.65E-05	1.48E-03	1090	1	0.96	0.000001	1.55E-06	1.1	10	0.112	70	0.85	2.32E-08	0.142832
127	6.65E-05	2.01E-03	1090	1	0.96	0.000001	2.11E-06	1.1	10	0.112	70	0.85	3.16E-08	0.194534
128	6.65E-05	3.10E-03	1090	1	0.96	0.000001	3.24E-06	1.1	10	0.112	70	0.85	4.86E-08	0.299285

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2)	(Risk/Mill)	Total
129	6.65E-05	6.91E-04	1090	1	0.96	0.000001	7.22E-07	1.1	10	0.112	70	0.85	1.08E-08	0.01	0.066679
130	6.65E-05	8.17E-04	1090	1	0.96	0.000001	8.54E-07	1.1	10	0.112	70	0.85	1.28E-08	0.01	0.078874
131	6.65E-05	9.88E-04	1090	1	0.96	0.000001	1.03E-06	1.1	10	0.112	70	0.85	1.55E-08	0.02	0.095407
132	6.65E-05	1.23E-03	1090	1	0.96	0.000001	1.28E-06	1.1	10	0.112	70	0.85	1.93E-08	0.02	0.118542
133	6.65E-05	1.59E-03	1090	1	0.96	0.000001	1.66E-06	1.1	10	0.112	70	0.85	2.49E-08	0.02	0.153371
134	6.65E-05	2.20E-03	1090	1	0.96	0.000001	2.30E-06	1.1	10	0.112	70	0.85	3.46E-08	0.03	0.212793
135	6.65E-05	2.86E-03	1090	1	0.96	0.000001	2.99E-06	1.1	10	0.112	70	0.85	4.48E-08	0.04	0.276012
136	6.65E-05	7.30E-04	1090	1	0.96	0.000001	7.63E-07	1.1	10	0.112	70	0.85	1.14E-08	0.01	0.070482
137	6.65E-05	8.67E-04	1090	1	0.96	0.000001	9.06E-07	1.1	10	0.112	70	0.85	1.36E-08	0.01	0.083673
138	6.65E-05	1.05E-03	1090	1	0.96	0.000001	1.10E-06	1.1	10	0.112	70	0.85	1.64E-08	0.02	0.101252
139	6.65E-05	1.30E-03	1090	1	0.96	0.000001	1.36E-06	1.1	10	0.112	70	0.85	2.04E-08	0.02	0.125473
140	6.65E-05	1.70E-03	1090	1	0.96	0.000001	1.78E-06	1.1	10	0.112	70	0.85	2.67E-08	0.03	0.164551
141	6.65E-05	2.41E-03	1090	1	0.96	0.000001	2.51E-06	1.1	10	0.112	70	0.85	3.77E-08	0.04	0.232305
142	6.65E-05	2.96E-03	1090	1	0.96	0.000001	3.09E-06	1.1	10	0.112	70	0.85	4.64E-08	0.05	0.285726
143	6.65E-05	7.71E-04	1090	1	0.96	0.000001	8.05E-07	1.1	10	0.112	70	0.85	1.21E-08	0.01	0.074411
144	6.65E-05	9.14E-04	1090	1	0.96	0.000001	9.56E-07	1.1	10	0.112	70	0.85	1.43E-08	0.01	0.088291
145	6.65E-05	1.10E-03	1090	1	0.96	0.000001	1.15E-06	1.1	10	0.112	70	0.85	1.73E-08	0.02	0.106485
146	6.65E-05	1.39E-03	1090	1	0.96	0.000001	1.45E-06	1.1	10	0.112	70	0.85	2.18E-08	0.02	0.13407
147	6.65E-05	1.83E-03	1090	1	0.96	0.000001	1.91E-06	1.1	10	0.112	70	0.85	2.87E-08	0.03	0.176545
148	6.65E-05	2.64E-03	1090	1	0.96	0.000001	2.76E-06	1.1	10	0.112	70	0.85	4.14E-08	0.04	0.255085
149	6.65E-05	8.10E-04	1090	1	0.96	0.000001	8.46E-07	1.1	10	0.112	70	0.85	1.27E-08	0.01	0.078168
150	6.65E-05	9.58E-04	1090	1	0.96	0.000001	1.00E-06	1.1	10	0.112	70	0.85	1.50E-08	0.02	0.092476
151	6.65E-05	1.17E-03	1090	1	0.96	0.000001	1.22E-06	1.1	10	0.112	70	0.85	1.83E-08	0.02	0.112967
152	6.65E-05	1.47E-03	1090	1	0.96	0.000001	1.54E-06	1.1	10	0.112	70	0.85	2.31E-08	0.02	0.142233
153	6.65E-05	1.95E-03	1090	1	0.96	0.000001	2.04E-06	1.1	10	0.112	70	0.85	3.06E-08	0.03	0.188213
154	6.65E-05	2.92E-03	1090	1	0.96	0.000001	3.05E-06	1.1	10	0.112	70	0.85	4.58E-08	0.05	0.281761
155	6.65E-05	8.46E-04	1090	1	0.96	0.000001	8.85E-07	1.1	10	0.112	70	0.85	1.33E-08	0.01	0.081733
156	6.65E-05	1.01E-03	1090	1	0.96	0.000001	1.05E-06	1.1	10	0.112	70	0.85	1.58E-08	0.02	0.097357
157	6.65E-05	1.23E-03	1090	1	0.96	0.000001	1.28E-06	1.1	10	0.112	70	0.85	1.93E-08	0.02	0.118696
158	6.65E-05	1.55E-03	1090	1	0.96	0.000001	1.62E-06	1.1	10	0.112	70	0.85	2.44E-08	0.02	0.150103
159	6.65E-05	2.11E-03	1090	1	0.96	0.000001	2.21E-06	1.1	10	0.112	70	0.85	3.32E-08	0.03	0.204169
160	6.65E-05	3.24E-03	1090	1	0.96	0.000001	3.39E-06	1.1	10	0.112	70	0.85	5.08E-08	0.05	0.312988

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
161	6.65E-05	8.85E-04	1090	1	0.96	0.000001	9.25E-07	1.1	10	0.112	70	0.85	1.39E-08	0.01	0.085453
162	6.65E-05	1.05E-03	1090	1	0.96	0.000001	1.10E-06	1.1	10	0.112	70	0.85	1.65E-08	0.02	0.101637
163	6.65E-05	1.29E-03	1090	1	0.96	0.000001	1.35E-06	1.1	10	0.112	70	0.85	2.03E-08	0.02	0.124745
164	6.65E-05	1.65E-03	1090	1	0.96	0.000001	1.73E-06	1.1	10	0.112	70	0.85	2.59E-08	0.03	0.159515
165	6.65E-05	2.27E-03	1090	1	0.96	0.000001	2.37E-06	1.1	10	0.112	70	0.85	3.56E-08	0.04	0.219142
166	6.65E-05	2.89E-03	1090	1	0.96	0.000001	3.02E-06	1.1	10	0.112	70	0.85	4.53E-08	0.05	0.279146
167	6.65E-05	9.18E-04	1090	1	0.96	0.000001	9.60E-07	1.1	10	0.112	70	0.85	1.44E-08	0.01	0.08865
168	6.65E-05	1.11E-03	1090	1	0.96	0.000001	1.16E-06	1.1	10	0.112	70	0.85	1.73E-08	0.02	0.106743
169	6.65E-05	1.36E-03	1090	1	0.96	0.000001	1.43E-06	1.1	10	0.112	70	0.85	2.14E-08	0.02	0.131769
170	6.65E-05	1.77E-03	1090	1	0.96	0.000001	1.85E-06	1.1	10	0.112	70	0.85	2.77E-08	0.03	0.170468
171	6.65E-05	2.48E-03	1090	1	0.96	0.000001	2.59E-06	1.1	10	0.112	70	0.85	3.89E-08	0.04	0.239678
172	6.65E-05	2.39E-03	1090	1	0.96	0.000001	2.50E-06	1.1	10	0.112	70	0.85	3.75E-08	0.04	0.231089
173	6.65E-05	9.61E-04	1090	1	0.96	0.000001	1.00E-06	1.1	10	0.112	70	0.85	1.51E-08	0.02	0.092762
174	6.65E-05	1.15E-03	1090	1	0.96	0.000001	1.21E-06	1.1	10	0.112	70	0.85	1.81E-08	0.02	0.111473
175	6.65E-05	1.43E-03	1090	1	0.96	0.000001	1.50E-06	1.1	10	0.112	70	0.85	2.25E-08	0.02	0.138465
176	6.65E-05	1.88E-03	1090	1	0.96	0.000001	1.96E-06	1.1	10	0.112	70	0.85	2.95E-08	0.03	0.181455
177	6.65E-05	2.69E-03	1090	1	0.96	0.000001	2.81E-06	1.1	10	0.112	70	0.85	4.21E-08	0.04	0.259381
178	6.65E-05	9.97E-04	1090	1	0.96	0.000001	1.04E-06	1.1	10	0.112	70	0.85	1.56E-08	0.02	0.096269
179	6.65E-05	1.20E-03	1090	1	0.96	0.000001	1.25E-06	1.1	10	0.112	70	0.85	1.88E-08	0.02	0.115888
180	6.65E-05	1.51E-03	1090	1	0.96	0.000001	1.58E-06	1.1	10	0.112	70	0.85	2.37E-08	0.02	0.145778
181	6.65E-05	1.99E-03	1090	1	0.96	0.000001	2.07E-06	1.1	10	0.112	70	0.85	3.11E-08	0.03	0.191678
182	6.65E-05	2.98E-03	1090	1	0.96	0.000001	3.11E-06	1.1	10	0.112	70	0.85	4.67E-08	0.05	0.28752
183	6.65E-05	1.04E-03	1090	1	0.96	0.000001	1.08E-06	1.1	10	0.112	70	0.85	1.63E-08	0.02	0.100101
184	6.65E-05	1.25E-03	1090	1	0.96	0.000001	1.31E-06	1.1	10	0.112	70	0.85	1.96E-08	0.02	0.120676
185	6.65E-05	1.58E-03	1090	1	0.96	0.000001	1.65E-06	1.1	10	0.112	70	0.85	2.48E-08	0.02	0.152431
186	6.65E-05	2.14E-03	1090	1	0.96	0.000001	2.24E-06	1.1	10	0.112	70	0.85	3.36E-08	0.03	0.206707
187	6.65E-05	3.32E-03	1090	1	0.96	0.000001	3.47E-06	1.1	10	0.112	70	0.85	5.20E-08	0.05	0.320486
188	6.65E-05	1.07E-03	1090	1	0.96	0.000001	1.12E-06	1.1	10	0.112	70	0.85	1.68E-08	0.02	0.103636
189	6.65E-05	1.32E-03	1090	1	0.96	0.000001	1.38E-06	1.1	10	0.112	70	0.85	2.06E-08	0.02	0.127036
190	6.65E-05	1.67E-03	1090	1	0.96	0.000001	1.74E-06	1.1	10	0.112	70	0.85	2.61E-08	0.03	0.160965
191	6.65E-05	2.31E-03	1090	1	0.96	0.000001	2.41E-06	1.1	10	0.112	70	0.85	3.62E-08	0.04	0.222879
192	6.65E-05	2.88E-03	1090	1	0.96	0.000001	3.01E-06	1.1	10	0.112	70	0.85	4.52E-08	0.05	0.278448

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
193	6.65E-05	1.12E-03	1090	1	0.96	0.000001	1.17E-06	1.1	10	0.112	70	0.85	1.75E-08	0.107761
194	6.65E-05	1.38E-03	1090	1	0.96	0.000001	1.44E-06	1.1	10	0.112	70	0.85	2.16E-08	0.132777
195	6.65E-05	1.76E-03	1090	1	0.96	0.000001	1.84E-06	1.1	10	0.112	70	0.85	2.76E-08	0.169961
196	6.65E-05	2.50E-03	1090	1	0.96	0.000001	2.61E-06	1.1	10	0.112	70	0.85	3.92E-08	0.241571
197	6.65E-05	2.35E-03	1090	1	0.96	0.000001	2.46E-06	1.1	10	0.112	70	0.85	3.69E-08	0.227007
198	6.65E-05	1.16E-03	1090	1	0.96	0.000001	1.21E-06	1.1	10	0.112	70	0.85	1.81E-08	0.111729
199	6.65E-05	1.44E-03	1090	1	0.96	0.000001	1.50E-06	1.1	10	0.112	70	0.85	2.25E-08	0.13858
200	6.65E-05	1.87E-03	1090	1	0.96	0.000001	1.95E-06	1.1	10	0.112	70	0.85	2.93E-08	0.180435
201	6.65E-05	2.73E-03	1090	1	0.96	0.000001	2.86E-06	1.1	10	0.112	70	0.85	4.29E-08	0.26386
202	6.65E-05	1.20E-03	1090	1	0.96	0.000001	1.25E-06	1.1	10	0.112	70	0.85	1.88E-08	0.115661
203	6.65E-05	1.49E-03	1090	1	0.96	0.000001	1.56E-06	1.1	10	0.112	70	0.85	2.34E-08	0.143817
204	6.65E-05	2.00E-03	1090	1	0.96	0.000001	2.09E-06	1.1	10	0.112	70	0.85	3.14E-08	0.193223
205	6.65E-05	3.00E-03	1090	1	0.96	0.000001	3.13E-06	1.1	10	0.112	70	0.85	4.70E-08	0.289592
206	6.65E-05	1.23E-03	1090	1	0.96	0.000001	1.29E-06	1.1	10	0.112	70	0.85	1.93E-08	0.118965
207	6.65E-05	1.56E-03	1090	1	0.96	0.000001	1.64E-06	1.1	10	0.112	70	0.85	2.45E-08	0.151113
208	6.65E-05	2.12E-03	1090	1	0.96	0.000001	2.21E-06	1.1	10	0.112	70	0.85	3.32E-08	0.204528
209	6.65E-05	3.32E-03	1090	1	0.96	0.000001	3.47E-06	1.1	10	0.112	70	0.85	5.21E-08	0.320711
210	6.65E-05	1.04E-03	1090	1	0.96	0.000001	1.09E-06	1.1	10	0.112	70	0.85	1.63E-08	0.10041
211	6.65E-05	1.28E-03	1090	1	0.96	0.000001	1.34E-06	1.1	10	0.112	70	0.85	2.00E-08	0.123423
212	6.65E-05	1.64E-03	1090	1	0.96	0.000001	1.71E-06	1.1	10	0.112	70	0.85	2.57E-08	0.158173
213	6.65E-05	2.27E-03	1090	1	0.96	0.000001	2.38E-06	1.1	10	0.112	70	0.85	3.57E-08	0.219672
214	6.65E-05	2.81E-03	1090	1	0.96	0.000001	2.93E-06	1.1	10	0.112	70	0.85	4.40E-08	0.27086
215	6.65E-05	8.93E-04	1090	1	0.96	0.000001	9.33E-07	1.1	10	0.112	70	0.85	1.40E-08	0.08621
216	6.65E-05	1.06E-03	1090	1	0.96	0.000001	1.11E-06	1.1	10	0.112	70	0.85	1.67E-08	0.102694
217	6.65E-05	1.31E-03	1090	1	0.96	0.000001	1.37E-06	1.1	10	0.112	70	0.85	2.05E-08	0.126454
218	6.65E-05	1.70E-03	1090	1	0.96	0.000001	1.78E-06	1.1	10	0.112	70	0.85	2.66E-08	0.164076
219	6.65E-05	2.42E-03	1090	1	0.96	0.000001	2.53E-06	1.1	10	0.112	70	0.85	3.80E-08	0.233696
220	6.65E-05	9.04E-04	1090	1	0.96	0.000001	9.45E-07	1.1	10	0.112	70	0.85	1.42E-08	0.087332
221	6.65E-05	1.08E-03	1090	1	0.96	0.000001	1.13E-06	1.1	10	0.112	70	0.85	1.70E-08	0.104474
222	6.65E-05	1.34E-03	1090	1	0.96	0.000001	1.40E-06	1.1	10	0.112	70	0.85	2.11E-08	0.129705
223	6.65E-05	1.77E-03	1090	1	0.96	0.000001	1.85E-06	1.1	10	0.112	70	0.85	2.78E-08	0.170897
224	6.65E-05	2.60E-03	1090	1	0.96	0.000001	2.72E-06	1.1	10	0.112	70	0.85	4.08E-08	0.251438

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
225	6.65E-05	9.05E-04	1090	1	0.96	0.000001	9.46E-07	1.1	10	0.112	70	0.85	1.42E-08	0.087361
226	6.65E-05	1.09E-03	1090	1	0.96	0.000001	1.13E-06	1.1	10	0.112	70	0.85	1.70E-08	0.10479
227	6.65E-05	1.35E-03	1090	1	0.96	0.000001	1.42E-06	1.1	10	0.112	70	0.85	2.12E-08	0.130799
228	6.65E-05	1.81E-03	1090	1	0.96	0.000001	1.89E-06	1.1	10	0.112	70	0.85	2.83E-08	0.174318
229	6.65E-05	2.74E-03	1090	1	0.96	0.000001	2.87E-06	1.1	10	0.112	70	0.85	4.30E-08	0.26501
230	6.65E-05	8.92E-04	1090	1	0.96	0.000001	9.32E-07	1.1	10	0.112	70	0.85	1.40E-08	0.086085
231	6.65E-05	1.07E-03	1090	1	0.96	0.000001	1.12E-06	1.1	10	0.112	70	0.85	1.67E-08	0.103053
232	6.65E-05	1.33E-03	1090	1	0.96	0.000001	1.39E-06	1.1	10	0.112	70	0.85	2.08E-08	0.128083
233	6.65E-05	1.78E-03	1090	1	0.96	0.000001	1.86E-06	1.1	10	0.112	70	0.85	2.79E-08	0.171852
234	6.65E-05	2.75E-03	1090	1	0.96	0.000001	2.88E-06	1.1	10	0.112	70	0.85	4.32E-08	0.265896
235	6.65E-05	8.55E-04	1090	1	0.96	0.000001	8.93E-07	1.1	10	0.112	70	0.85	1.34E-08	0.08253
236	6.65E-05	1.00E-03	1090	1	0.96	0.000001	1.05E-06	1.1	10	0.112	70	0.85	1.57E-08	0.096819
237	6.65E-05	1.22E-03	1090	1	0.96	0.000001	1.27E-06	1.1	10	0.112	70	0.85	1.91E-08	0.117638
238	6.65E-05	1.54E-03	1090	1	0.96	0.000001	1.61E-06	1.1	10	0.112	70	0.85	2.41E-08	0.148514
239	6.65E-05	1.87E-03	1090	1	0.96	0.000001	1.96E-06	1.1	10	0.112	70	0.85	2.94E-08	0.181004
240	6.65E-05	7.81E-04	1090	1	0.96	0.000001	8.17E-07	1.1	10	0.112	70	0.85	1.23E-08	0.075458
241	6.65E-05	8.90E-04	1090	1	0.96	0.000001	9.30E-07	1.1	10	0.112	70	0.85	1.40E-08	0.085912
242	6.65E-05	1.00E-03	1090	1	0.96	0.000001	1.05E-06	1.1	10	0.112	70	0.85	1.57E-08	0.096672
243	6.65E-05	1.10E-03	1090	1	0.96	0.000001	1.15E-06	1.1	10	0.112	70	0.85	1.73E-08	0.106438
244	6.65E-05	6.27E-04	1090	1	0.96	0.000001	6.55E-07	1.1	10	0.112	70	0.85	9.82E-09	0.060496
245	6.65E-05	6.85E-04	1090	1	0.96	0.000001	7.16E-07	1.1	10	0.112	70	0.85	1.07E-08	0.066112
246	6.65E-05	7.41E-04	1090	1	0.96	0.000001	7.74E-07	1.1	10	0.112	70	0.85	1.16E-08	0.071506
247	6.65E-05	7.82E-04	1090	1	0.96	0.000001	8.18E-07	1.1	10	0.112	70	0.85	1.23E-08	0.07554
248	6.65E-05	7.85E-04	1090	1	0.96	0.000001	8.20E-07	1.1	10	0.112	70	0.85	1.23E-08	0.075795
249	6.65E-05	5.52E-04	1090	1	0.96	0.000001	5.77E-07	1.1	10	0.112	70	0.85	8.65E-09	0.053272
250	6.65E-05	5.84E-04	1090	1	0.96	0.000001	6.10E-07	1.1	10	0.112	70	0.85	9.16E-09	0.056381
251	6.65E-05	6.08E-04	1090	1	0.96	0.000001	6.36E-07	1.1	10	0.112	70	0.85	9.54E-09	0.058735
252	6.65E-05	6.15E-04	1090	1	0.96	0.000001	6.43E-07	1.1	10	0.112	70	0.85	9.64E-09	0.059357
253	6.65E-05	5.91E-04	1090	1	0.96	0.000001	6.18E-07	1.1	10	0.112	70	0.85	9.27E-09	0.057061
254	6.65E-05	4.60E-04	1090	1	0.96	0.000001	4.80E-07	1.1	10	0.112	70	0.85	7.21E-09	0.044388
255	6.65E-05	4.81E-04	1090	1	0.96	0.000001	5.02E-07	1.1	10	0.112	70	0.85	7.54E-09	0.046408
256	6.65E-05	4.97E-04	1090	1	0.96	0.000001	5.20E-07	1.1	10	0.112	70	0.85	7.79E-09	0.047994

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
257	6.65E-05	5.03E-04	1090	1	0.96	0.000001	5.26E-07	1.1	10	0.112	70	0.85	7.89E-09	0.01	0.048565
258	6.65E-05	4.94E-04	1090	1	0.96	0.000001	5.16E-07	1.1	10	0.112	70	0.85	7.74E-09	0.01	0.047655
259	6.65E-05	4.68E-04	1090	1	0.96	0.000001	4.89E-07	1.1	10	0.112	70	0.85	7.34E-09	0.01	0.04517
260	6.65E-05	4.07E-04	1090	1	0.96	0.000001	4.26E-07	1.1	10	0.112	70	0.85	6.39E-09	0.01	0.039328
261	6.65E-05	4.19E-04	1090	1	0.96	0.000001	4.38E-07	1.1	10	0.112	70	0.85	6.57E-09	0.01	0.040457
262	6.65E-05	4.25E-04	1090	1	0.96	0.000001	4.44E-07	1.1	10	0.112	70	0.85	6.66E-09	0.01	0.041002
263	6.65E-05	4.21E-04	1090	1	0.96	0.000001	4.40E-07	1.1	10	0.112	70	0.85	6.60E-09	0.01	0.04062
264	6.65E-05	4.07E-04	1090	1	0.96	0.000001	4.25E-07	1.1	10	0.112	70	0.85	6.38E-09	0.01	0.039286
265	6.65E-05	3.61E-04	1090	1	0.96	0.000001	3.78E-07	1.1	10	0.112	70	0.85	5.67E-09	0.01	0.034882
266	6.65E-05	3.66E-04	1090	1	0.96	0.000001	3.83E-07	1.1	10	0.112	70	0.85	5.74E-09	0.01	0.035368
267	6.65E-05	3.65E-04	1090	1	0.96	0.000001	3.81E-07	1.1	10	0.112	70	0.85	5.72E-09	0.01	0.03524
268	6.65E-05	3.58E-04	1090	1	0.96	0.000001	3.74E-07	1.1	10	0.112	70	0.85	5.61E-09	0.01	0.034524
269	6.65E-05	3.43E-04	1090	1	0.96	0.000001	3.59E-07	1.1	10	0.112	70	0.85	5.38E-09	0.01	0.033138
270	6.65E-05	3.21E-04	1090	1	0.96	0.000001	3.36E-07	1.1	10	0.112	70	0.85	5.04E-09	0.01	0.031003
271	6.65E-05	3.22E-04	1090	1	0.96	0.000001	3.36E-07	1.1	10	0.112	70	0.85	5.04E-09	0.01	0.03106
272	6.65E-05	3.17E-04	1090	1	0.96	0.000001	3.32E-07	1.1	10	0.112	70	0.85	4.97E-09	0.00	0.030629
273	6.65E-05	3.08E-04	1090	1	0.96	0.000001	3.22E-07	1.1	10	0.112	70	0.85	4.83E-09	0.00	0.029764
274	6.65E-05	2.85E-04	1090	1	0.96	0.000001	2.98E-07	1.1	10	0.112	70	0.85	4.47E-09	0.00	0.027536
275	6.65E-05	2.86E-04	1090	1	0.96	0.000001	2.99E-07	1.1	10	0.112	70	0.85	4.49E-09	0.00	0.027656
276	6.65E-05	2.84E-04	1090	1	0.96	0.000001	2.97E-07	1.1	10	0.112	70	0.85	4.46E-09	0.00	0.027442
277	6.65E-05	2.78E-04	1090	1	0.96	0.000001	2.91E-07	1.1	10	0.112	70	0.85	4.36E-09	0.00	0.026874
278	6.65E-05	2.69E-04	1090	1	0.96	0.000001	2.81E-07	1.1	10	0.112	70	0.85	4.22E-09	0.00	0.026
279	6.65E-05	2.57E-04	1090	1	0.96	0.000001	2.69E-07	1.1	10	0.112	70	0.85	4.04E-09	0.00	0.024854
280	6.65E-05	2.56E-04	1090	1	0.96	0.000001	2.68E-07	1.1	10	0.112	70	0.85	4.02E-09	0.00	0.024764
281	6.65E-05	2.53E-04	1090	1	0.96	0.000001	2.64E-07	1.1	10	0.112	70	0.85	3.96E-09	0.00	0.024402
282	6.65E-05	2.46E-04	1090	1	0.96	0.000001	2.58E-07	1.1	10	0.112	70	0.85	3.86E-09	0.00	0.023797
283	6.65E-05	2.33E-04	1090	1	0.96	0.000001	2.44E-07	1.1	10	0.112	70	0.85	3.66E-09	0.00	0.022524
284	6.65E-05	2.33E-04	1090	1	0.96	0.000001	2.44E-07	1.1	10	0.112	70	0.85	3.65E-09	0.00	0.022504
285	6.65E-05	2.31E-04	1090	1	0.96	0.000001	2.41E-07	1.1	10	0.112	70	0.85	3.62E-09	0.00	0.022279
286	6.65E-05	2.26E-04	1090	1	0.96	0.000001	2.37E-07	1.1	10	0.112	70	0.85	3.55E-09	0.00	0.021857
287	6.65E-05	2.20E-04	1090	1	0.96	0.000001	2.30E-07	1.1	10	0.112	70	0.85	3.45E-09	0.00	0.021253
288	6.65E-05	2.13E-04	1090	1	0.96	0.000001	2.22E-07	1.1	10	0.112	70	0.85	3.34E-09	0.00	0.020542

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
289	6.65E-05	2.13E-04	1090	1	0.96	0.000001	2.23E-07	1.1	10	0.112	70	0.85	3.34E-09	0.00	0.02057
290	6.65E-05	2.12E-04	1090	1	0.96	0.000001	2.21E-07	1.1	10	0.112	70	0.85	3.32E-09	0.00	0.020442
291	6.65E-05	2.09E-04	1090	1	0.96	0.000001	2.18E-07	1.1	10	0.112	70	0.85	3.27E-09	0.00	0.020149
292	6.65E-05	2.04E-04	1090	1	0.96	0.000001	2.13E-07	1.1	10	0.112	70	0.85	3.20E-09	0.00	0.019703
293	6.65E-05	1.95E-04	1090	1	0.96	0.000001	2.04E-07	1.1	10	0.112	70	0.85	3.06E-09	0.00	0.018848
294	6.65E-05	1.96E-04	1090	1	0.96	0.000001	2.05E-07	1.1	10	0.112	70	0.85	3.07E-09	0.00	0.018903
295	6.65E-05	1.95E-04	1090	1	0.96	0.000001	2.04E-07	1.1	10	0.112	70	0.85	3.06E-09	0.00	0.018829
296	6.65E-05	1.93E-04	1090	1	0.96	0.000001	2.02E-07	1.1	10	0.112	70	0.85	3.03E-09	0.00	0.018629
297	6.65E-05	1.90E-04	1090	1	0.96	0.000001	1.98E-07	1.1	10	0.112	70	0.85	2.97E-09	0.00	0.018311
298	6.65E-05	1.80E-04	1090	1	0.96	0.000001	1.88E-07	1.1	10	0.112	70	0.85	2.82E-09	0.00	0.017378
299	6.65E-05	1.81E-04	1090	1	0.96	0.000001	1.89E-07	1.1	10	0.112	70	0.85	2.83E-09	0.00	0.017452
300	6.65E-05	1.80E-04	1090	1	0.96	0.000001	1.89E-07	1.1	10	0.112	70	0.85	2.83E-09	0.00	0.01742
301	6.65E-05	1.79E-04	1090	1	0.96	0.000001	1.87E-07	1.1	10	0.112	70	0.85	2.81E-09	0.00	0.017286
302	6.65E-05	1.77E-04	1090	1	0.96	0.000001	1.85E-07	1.1	10	0.112	70	0.85	2.77E-09	0.00	0.01706
303	6.65E-05	1.73E-04	1090	1	0.96	0.000001	1.81E-07	1.1	10	0.112	70	0.85	2.72E-09	0.00	0.01672
304	6.65E-05	1.67E-04	1090	1	0.96	0.000001	1.74E-07	1.1	10	0.112	70	0.85	2.61E-09	0.00	0.016094
305	6.65E-05	1.68E-04	1090	1	0.96	0.000001	1.75E-07	1.1	10	0.112	70	0.85	2.63E-09	0.00	0.016178
306	6.65E-05	1.68E-04	1090	1	0.96	0.000001	1.75E-07	1.1	10	0.112	70	0.85	2.63E-09	0.00	0.016177
307	6.65E-05	1.67E-04	1090	1	0.96	0.000001	1.74E-07	1.1	10	0.112	70	0.85	2.61E-09	0.00	0.016096
308	6.65E-05	1.65E-04	1090	1	0.96	0.000001	1.72E-07	1.1	10	0.112	70	0.85	2.59E-09	0.00	0.015932
309	6.65E-05	1.62E-04	1090	1	0.96	0.000001	1.70E-07	1.1	10	0.112	70	0.85	2.55E-09	0.00	0.015673
310	6.65E-05	1.55E-04	1090	1	0.96	0.000001	1.62E-07	1.1	10	0.112	70	0.85	2.43E-09	0.00	0.014962
311	6.65E-05	1.56E-04	1090	1	0.96	0.000001	1.63E-07	1.1	10	0.112	70	0.85	2.44E-09	0.00	0.015052
312	6.65E-05	1.56E-04	1090	1	0.96	0.000001	1.63E-07	1.1	10	0.112	70	0.85	2.45E-09	0.00	0.015076
313	6.65E-05	1.56E-04	1090	1	0.96	0.000001	1.63E-07	1.1	10	0.112	70	0.85	2.44E-09	0.00	0.015034
314	6.65E-05	1.54E-04	1090	1	0.96	0.000001	1.61E-07	1.1	10	0.112	70	0.85	2.42E-09	0.00	0.014912
315	6.65E-05	1.52E-04	1090	1	0.96	0.000001	1.59E-07	1.1	10	0.112	70	0.85	2.39E-09	0.00	0.014716
316	6.65E-05	1.45E-04	1090	1	0.96	0.000001	1.51E-07	1.1	10	0.112	70	0.85	2.27E-09	0.00	0.013957
317	6.65E-05	1.46E-04	1090	1	0.96	0.000001	1.52E-07	1.1	10	0.112	70	0.85	2.28E-09	0.00	0.014051
318	6.65E-05	1.46E-04	1090	1	0.96	0.000001	1.52E-07	1.1	10	0.112	70	0.85	2.29E-09	0.00	0.014084
319	6.65E-05	1.46E-04	1090	1	0.96	0.000001	1.52E-07	1.1	10	0.112	70	0.85	2.28E-09	0.00	0.014066
320	6.65E-05	1.45E-04	1090	1	0.96	0.000001	1.51E-07	1.1	10	0.112	70	0.85	2.27E-09	0.00	0.013992

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
321	6.65E-05	1.43E-04	1090	1	0.96	0.000001	1.50E-07	1.1	10	0.112	70	0.85	2.25E-09	0.00	0.013844
322	6.65E-05	1.41E-04	1090	1	0.96	0.000001	1.48E-07	1.1	10	0.112	70	0.85	2.21E-09	0.00	0.013637
323	6.65E-05	1.35E-04	1090	1	0.96	0.000001	1.41E-07	1.1	10	0.112	70	0.85	2.12E-09	0.00	0.013061
324	6.65E-05	1.36E-04	1090	1	0.96	0.000001	1.42E-07	1.1	10	0.112	70	0.85	2.14E-09	0.00	0.013156
325	6.65E-05	1.37E-04	1090	1	0.96	0.000001	1.43E-07	1.1	10	0.112	70	0.85	2.14E-09	0.00	0.013201
326	6.65E-05	1.37E-04	1090	1	0.96	0.000001	1.43E-07	1.1	10	0.112	70	0.85	2.14E-09	0.00	0.0132
327	6.65E-05	1.36E-04	1090	1	0.96	0.000001	1.42E-07	1.1	10	0.112	70	0.85	2.14E-09	0.00	0.013155
328	6.65E-05	1.35E-04	1090	1	0.96	0.000001	1.41E-07	1.1	10	0.112	70	0.85	2.12E-09	0.00	0.013047
329	6.65E-05	1.33E-04	1090	1	0.96	0.000001	1.39E-07	1.1	10	0.112	70	0.85	2.09E-09	0.00	0.012886
330	6.65E-05	1.27E-04	1090	1	0.96	0.000001	1.33E-07	1.1	10	0.112	70	0.85	1.99E-09	0.00	0.012251
331	6.65E-05	1.28E-04	1090	1	0.96	0.000001	1.34E-07	1.1	10	0.112	70	0.85	2.00E-09	0.00	0.012344
332	6.65E-05	1.28E-04	1090	1	0.96	0.000001	1.34E-07	1.1	10	0.112	70	0.85	2.01E-09	0.00	0.012402
333	6.65E-05	1.29E-04	1090	1	0.96	0.000001	1.34E-07	1.1	10	0.112	70	0.85	2.02E-09	0.00	0.012418
334	6.65E-05	1.28E-04	1090	1	0.96	0.000001	1.34E-07	1.1	10	0.112	70	0.85	2.01E-09	0.00	0.012388
335	6.65E-05	1.28E-04	1090	1	0.96	0.000001	1.33E-07	1.1	10	0.112	70	0.85	2.00E-09	0.00	0.012312
336	6.65E-05	1.26E-04	1090	1	0.96	0.000001	1.32E-07	1.1	10	0.112	70	0.85	1.98E-09	0.00	0.012192
337	6.65E-05	1.19E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.87E-09	0.00	0.011532
338	6.65E-05	1.20E-04	1090	1	0.96	0.000001	1.26E-07	1.1	10	0.112	70	0.85	1.89E-09	0.00	0.011624
339	6.65E-05	1.21E-04	1090	1	0.96	0.000001	1.26E-07	1.1	10	0.112	70	0.85	1.90E-09	0.00	0.011685
340	6.65E-05	1.21E-04	1090	1	0.96	0.000001	1.27E-07	1.1	10	0.112	70	0.85	1.90E-09	0.00	0.01171
341	6.65E-05	1.21E-04	1090	1	0.96	0.000001	1.27E-07	1.1	10	0.112	70	0.85	1.90E-09	0.00	0.011699
342	6.65E-05	1.21E-04	1090	1	0.96	0.000001	1.26E-07	1.1	10	0.112	70	0.85	1.89E-09	0.00	0.011646
343	6.65E-05	1.20E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.88E-09	0.00	0.01155
344	6.65E-05	1.13E-04	1090	1	0.96	0.000001	1.18E-07	1.1	10	0.112	70	0.85	1.77E-09	0.00	0.010874
345	6.65E-05	1.14E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.78E-09	0.00	0.010964
346	6.65E-05	1.14E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.79E-09	0.00	0.011029
347	6.65E-05	1.15E-04	1090	1	0.96	0.000001	1.20E-07	1.1	10	0.112	70	0.85	1.80E-09	0.00	0.011063
348	6.65E-05	1.15E-04	1090	1	0.96	0.000001	1.20E-07	1.1	10	0.112	70	0.85	1.80E-09	0.00	0.011064
349	6.65E-05	1.14E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.79E-09	0.00	0.011029
350	6.65E-05	1.13E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.78E-09	0.00	0.010958
351	6.65E-05	1.06E-04	1090	1	0.96	0.000001	1.11E-07	1.1	10	0.112	70	0.85	1.67E-09	0.00	0.010277
352	6.65E-05	1.07E-04	1090	1	0.96	0.000001	1.12E-07	1.1	10	0.112	70	0.85	1.68E-09	0.00	0.010364

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
353	6.65E-05	1.08E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.69E-09	0.01043
354	6.65E-05	1.08E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.70E-09	0.010469
355	6.65E-05	1.09E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.70E-09	0.01048
356	6.65E-05	1.08E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.70E-09	0.010461
357	6.65E-05	1.08E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.69E-09	0.010409
358	6.65E-05	1.01E-04	1090	1	0.96	0.000001	1.05E-07	1.1	10	0.112	70	0.85	1.58E-09	0.009731
359	6.65E-05	1.02E-04	1090	1	0.96	0.000001	1.06E-07	1.1	10	0.112	70	0.85	1.59E-09	0.009816
360	6.65E-05	1.02E-04	1090	1	0.96	0.000001	1.07E-07	1.1	10	0.112	70	0.85	1.60E-09	0.009882
361	6.65E-05	1.03E-04	1090	1	0.96	0.000001	1.07E-07	1.1	10	0.112	70	0.85	1.61E-09	0.009926
362	6.65E-05	1.03E-04	1090	1	0.96	0.000001	1.08E-07	1.1	10	0.112	70	0.85	1.62E-09	0.009944
363	6.65E-05	1.03E-04	1090	1	0.96	0.000001	1.08E-07	1.1	10	0.112	70	0.85	1.61E-09	0.009937
364	6.65E-05	1.03E-04	1090	1	0.96	0.000001	1.07E-07	1.1	10	0.112	70	0.85	1.61E-09	0.009901
365	6.65E-05	9.56E-05	1090	1	0.96	0.000001	9.99E-08	1.1	10	0.112	70	0.85	1.50E-09	0.009232
366	6.65E-05	9.65E-05	1090	1	0.96	0.000001	1.01E-07	1.1	10	0.112	70	0.85	1.51E-09	0.009314
367	6.65E-05	9.71E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.52E-09	0.009379
368	6.65E-05	9.76E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.009425
369	6.65E-05	9.79E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.00945
370	6.65E-05	9.79E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.00945
371	6.65E-05	9.76E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.009429
372	6.65E-05	9.09E-05	1090	1	0.96	0.000001	9.50E-08	1.1	10	0.112	70	0.85	1.42E-09	0.008773
373	6.65E-05	9.17E-05	1090	1	0.96	0.000001	9.58E-08	1.1	10	0.112	70	0.85	1.44E-09	0.008852
374	6.65E-05	9.23E-05	1090	1	0.96	0.000001	9.65E-08	1.1	10	0.112	70	0.85	1.45E-09	0.008916
375	6.65E-05	9.28E-05	1090	1	0.96	0.000001	9.70E-08	1.1	10	0.112	70	0.85	1.46E-09	0.008964
376	6.65E-05	9.31E-05	1090	1	0.96	0.000001	9.74E-08	1.1	10	0.112	70	0.85	1.46E-09	0.008994
377	6.65E-05	9.32E-05	1090	1	0.96	0.000001	9.74E-08	1.1	10	0.112	70	0.85	1.46E-09	0.009002
378	6.65E-05	9.31E-05	1090	1	0.96	0.000001	9.73E-08	1.1	10	0.112	70	0.85	1.46E-09	0.00899
379	6.65E-05	2.30E-04	1090	1	0.96	0.000001	2.41E-07	1.1	10	0.112	70	0.85	3.61E-09	0.022251
380	6.65E-05	2.25E-04	1090	1	0.96	0.000001	2.35E-07	1.1	10	0.112	70	0.85	3.53E-09	0.021724
381	6.65E-05	2.20E-04	1090	1	0.96	0.000001	2.30E-07	1.1	10	0.112	70	0.85	3.45E-09	0.021267
382	6.65E-05	2.13E-04	1090	1	0.96	0.000001	2.23E-07	1.1	10	0.112	70	0.85	3.34E-09	0.020589
383	6.65E-05	2.02E-04	1090	1	0.96	0.000001	2.11E-07	1.1	10	0.112	70	0.85	3.17E-09	0.019508
384	6.65E-05	1.91E-04	1090	1	0.96	0.000001	2.00E-07	1.1	10	0.112	70	0.85	3.00E-09	0.018491

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Offsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
385	6.65E-05	1.81E-04	1090	1	0.96	0.000001	1.90E-07	1.1	10	0.112	70	0.85	2.84E-09	0.00	0.017514
386	6.65E-05	1.70E-04	1090	1	0.96	0.000001	1.77E-07	1.1	10	0.112	70	0.85	2.66E-09	0.00	0.016398
387	6.65E-05	1.60E-04	1090	1	0.96	0.000001	1.67E-07	1.1	10	0.112	70	0.85	2.51E-09	0.00	0.015449
388	6.65E-05	1.52E-04	1090	1	0.96	0.000001	1.58E-07	1.1	10	0.112	70	0.85	2.38E-09	0.00	0.014642
389	6.65E-05	1.45E-04	1090	1	0.96	0.000001	1.51E-07	1.1	10	0.112	70	0.85	2.27E-09	0.00	0.013956
390	6.65E-05	1.38E-04	1090	1	0.96	0.000001	1.45E-07	1.1	10	0.112	70	0.85	2.17E-09	0.00	0.013363

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI	Max
1	3.79E-03	5	7.57E-04	5.31E-03
2	5.02E-03	5	1.00E-03	
3	2.67E-03	5	5.34E-04	
4	3.32E-03	5	6.63E-04	
5	4.22E-03	5	8.45E-04	
6	5.60E-03	5	1.12E-03	
7	2.42E-03	5	4.84E-04	
8	2.94E-03	5	5.87E-04	
9	3.64E-03	5	7.28E-04	
10	4.64E-03	5	9.27E-04	
11	6.14E-03	5	1.23E-03	
12	2.62E-03	5	5.25E-04	
13	3.18E-03	5	6.35E-04	
14	3.93E-03	5	7.87E-04	
15	5.02E-03	5	1.00E-03	
16	6.66E-03	5	1.33E-03	
17	2.81E-03	5	5.62E-04	
18	3.40E-03	5	6.80E-04	
19	4.21E-03	5	8.42E-04	
20	5.37E-03	5	1.07E-03	
21	7.20E-03	5	1.44E-03	
22	2.97E-03	5	5.94E-04	
23	3.60E-03	5	7.19E-04	
24	4.45E-03	5	8.91E-04	
25	5.71E-03	5	1.14E-03	
26	7.68E-03	5	1.54E-03	
27	3.11E-03	5	6.22E-04	
28	3.76E-03	5	7.53E-04	
29	4.68E-03	5	9.36E-04	
30	6.03E-03	5	1.21E-03	
31	8.23E-03	5	1.65E-03	
32	3.22E-03	5	6.45E-04	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
33	3.90E-03	5	7.81E-04
34	4.86E-03	5	9.72E-04
35	6.28E-03	5	1.26E-03
36	8.76E-03	5	1.75E-03
37	3.30E-03	5	6.59E-04
38	3.99E-03	5	7.98E-04
39	4.97E-03	5	9.94E-04
40	6.51E-03	5	1.30E-03
41	3.33E-03	5	6.66E-04
42	4.02E-03	5	8.05E-04
43	5.02E-03	5	1.00E-03
44	6.57E-03	5	1.31E-03
45	3.28E-03	5	6.56E-04
46	3.93E-03	5	7.86E-04
47	4.85E-03	5	9.71E-04
48	6.25E-03	5	1.25E-03
49	3.67E-03	5	7.34E-04
50	4.36E-03	5	8.71E-04
51	2.84E-03	5	5.69E-04
52	3.20E-03	5	6.40E-04
53	3.57E-03	5	7.14E-04
54	2.26E-03	5	4.53E-04
55	2.47E-03	5	4.94E-04
56	2.67E-03	5	5.35E-04
57	2.85E-03	5	5.70E-04
58	1.85E-03	5	3.71E-04
59	1.99E-03	5	3.97E-04
60	2.11E-03	5	4.23E-04
61	2.22E-03	5	4.45E-04
62	1.55E-03	5	3.10E-04
63	1.64E-03	5	3.29E-04
64	1.73E-03	5	3.46E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
65	1.81E-03	5	3.62E-04
66	1.86E-03	5	3.72E-04
67	1.32E-03	5	2.65E-04
68	1.39E-03	5	2.78E-04
69	1.46E-03	5	2.91E-04
70	1.51E-03	5	3.03E-04
71	1.55E-03	5	3.11E-04
72	1.15E-03	5	2.29E-04
73	1.20E-03	5	2.39E-04
74	1.25E-03	5	2.49E-04
75	1.29E-03	5	2.58E-04
76	1.33E-03	5	2.65E-04
77	1.00E-03	5	2.01E-04
78	1.04E-03	5	2.09E-04
79	1.08E-03	5	2.17E-04
80	1.12E-03	5	2.24E-04
81	1.15E-03	5	2.30E-04
82	8.89E-04	5	1.78E-04
83	9.22E-04	5	1.84E-04
84	9.55E-04	5	1.91E-04
85	9.84E-04	5	1.97E-04
86	1.01E-03	5	2.02E-04
87	7.94E-04	5	1.59E-04
88	8.22E-04	5	1.64E-04
89	8.49E-04	5	1.70E-04
90	8.74E-04	5	1.75E-04
91	8.95E-04	5	1.79E-04
92	7.15E-04	5	1.43E-04
93	7.38E-04	5	1.48E-04
94	7.61E-04	5	1.52E-04
95	7.83E-04	5	1.57E-04
96	8.01E-04	5	1.60E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
97	6.48E-04	5	1.30E-04
98	6.68E-04	5	1.34E-04
99	6.87E-04	5	1.37E-04
100	7.06E-04	5	1.41E-04
101	7.22E-04	5	1.44E-04
102	1.78E-02	5	3.57E-03
103	1.60E-02	5	3.20E-03
104	2.63E-02	5	5.27E-03
105	9.24E-03	5	1.85E-03
106	1.24E-02	5	2.48E-03
107	1.79E-02	5	3.59E-03
108	2.25E-02	5	4.50E-03
109	7.93E-03	5	1.59E-03
110	1.01E-02	5	2.03E-03
111	1.36E-02	5	2.72E-03
112	1.99E-02	5	3.98E-03
113	1.80E-02	5	3.61E-03
114	5.74E-03	5	1.15E-03
115	6.93E-03	5	1.39E-03
116	8.56E-03	5	1.71E-03
117	1.10E-02	5	2.19E-03
118	1.48E-02	5	2.97E-03
119	2.22E-02	5	4.44E-03
120	2.07E-02	5	4.13E-03
121	4.45E-03	5	8.89E-04
122	5.19E-03	5	1.04E-03
123	6.14E-03	5	1.23E-03
124	7.40E-03	5	1.48E-03
125	9.18E-03	5	1.84E-03
126	1.18E-02	5	2.37E-03
127	1.61E-02	5	3.22E-03
128	2.48E-02	5	4.96E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
129	5.52E-03	5	1.10E-03
130	6.53E-03	5	1.31E-03
131	7.90E-03	5	1.58E-03
132	9.82E-03	5	1.96E-03
133	1.27E-02	5	2.54E-03
134	1.76E-02	5	3.52E-03
135	2.29E-02	5	4.57E-03
136	5.84E-03	5	1.17E-03
137	6.93E-03	5	1.39E-03
138	8.39E-03	5	1.68E-03
139	1.04E-02	5	2.08E-03
140	1.36E-02	5	2.73E-03
141	1.92E-02	5	3.85E-03
142	2.37E-02	5	4.73E-03
143	6.16E-03	5	1.23E-03
144	7.31E-03	5	1.46E-03
145	8.82E-03	5	1.76E-03
146	1.11E-02	5	2.22E-03
147	1.46E-02	5	2.92E-03
148	2.11E-02	5	4.23E-03
149	6.47E-03	5	1.29E-03
150	7.66E-03	5	1.53E-03
151	9.36E-03	5	1.87E-03
152	1.18E-02	5	2.36E-03
153	1.56E-02	5	3.12E-03
154	2.33E-02	5	4.67E-03
155	6.77E-03	5	1.35E-03
156	8.06E-03	5	1.61E-03
157	9.83E-03	5	1.97E-03
158	1.24E-02	5	2.49E-03
159	1.69E-02	5	3.38E-03
160	2.59E-02	5	5.18E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
161	7.08E-03	5	1.42E-03
162	8.42E-03	5	1.68E-03
163	1.03E-02	5	2.07E-03
164	1.32E-02	5	2.64E-03
165	1.81E-02	5	3.63E-03
166	2.31E-02	5	4.62E-03
167	7.34E-03	5	1.47E-03
168	8.84E-03	5	1.77E-03
169	1.09E-02	5	2.18E-03
170	1.41E-02	5	2.82E-03
171	1.98E-02	5	3.97E-03
172	1.91E-02	5	3.83E-03
173	7.68E-03	5	1.54E-03
174	9.23E-03	5	1.85E-03
175	1.15E-02	5	2.29E-03
176	1.50E-02	5	3.01E-03
177	2.15E-02	5	4.30E-03
178	7.97E-03	5	1.59E-03
179	9.60E-03	5	1.92E-03
180	1.21E-02	5	2.41E-03
181	1.59E-02	5	3.17E-03
182	2.38E-02	5	4.76E-03
183	8.29E-03	5	1.66E-03
184	9.99E-03	5	2.00E-03
185	1.26E-02	5	2.52E-03
186	1.71E-02	5	3.42E-03
187	2.65E-02	5	5.31E-03
188	8.58E-03	5	1.72E-03
189	1.05E-02	5	2.10E-03
190	1.33E-02	5	2.67E-03
191	1.85E-02	5	3.69E-03
192	2.31E-02	5	4.61E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
193	8.92E-03	5	1.78E-03
194	1.10E-02	5	2.20E-03
195	1.41E-02	5	2.82E-03
196	2.00E-02	5	4.00E-03
197	1.88E-02	5	3.76E-03
198	9.25E-03	5	1.85E-03
199	1.15E-02	5	2.30E-03
200	1.49E-02	5	2.99E-03
201	2.19E-02	5	4.37E-03
202	9.58E-03	5	1.92E-03
203	1.19E-02	5	2.38E-03
204	1.60E-02	5	3.20E-03
205	2.40E-02	5	4.80E-03
206	9.85E-03	5	1.97E-03
207	1.25E-02	5	2.50E-03
208	1.69E-02	5	3.39E-03
209	2.66E-02	5	5.31E-03
210	8.32E-03	5	1.66E-03
211	1.02E-02	5	2.04E-03
212	1.31E-02	5	2.62E-03
213	1.82E-02	5	3.64E-03
214	2.24E-02	5	4.49E-03
215	7.14E-03	5	1.43E-03
216	8.50E-03	5	1.70E-03
217	1.05E-02	5	2.09E-03
218	1.36E-02	5	2.72E-03
219	1.94E-02	5	3.87E-03
220	7.23E-03	5	1.45E-03
221	8.65E-03	5	1.73E-03
222	1.07E-02	5	2.15E-03
223	1.42E-02	5	2.83E-03
224	2.08E-02	5	4.16E-03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
225	7.23E-03	5	1.45E-03
226	8.68E-03	5	1.74E-03
227	1.08E-02	5	2.17E-03
228	1.44E-02	5	2.89E-03
229	2.19E-02	5	4.39E-03
230	7.13E-03	5	1.43E-03
231	8.53E-03	5	1.71E-03
232	1.06E-02	5	2.12E-03
233	1.42E-02	5	2.85E-03
234	2.20E-02	5	4.40E-03
235	6.83E-03	5	1.37E-03
236	8.02E-03	5	1.60E-03
237	9.74E-03	5	1.95E-03
238	1.23E-02	5	2.46E-03
239	1.50E-02	5	3.00E-03
240	6.25E-03	5	1.25E-03
241	7.11E-03	5	1.42E-03
242	8.01E-03	5	1.60E-03
243	8.81E-03	5	1.76E-03
244	5.01E-03	5	1.00E-03
245	5.48E-03	5	1.10E-03
246	5.92E-03	5	1.18E-03
247	6.26E-03	5	1.25E-03
248	6.28E-03	5	1.26E-03
249	4.41E-03	5	8.82E-04
250	4.67E-03	5	9.34E-04
251	4.86E-03	5	9.73E-04
252	4.92E-03	5	9.83E-04
253	4.73E-03	5	9.45E-04
254	3.68E-03	5	7.35E-04
255	3.84E-03	5	7.69E-04
256	3.97E-03	5	7.95E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
257	4.02E-03	5	8.04E-04
258	3.95E-03	5	7.89E-04
259	3.74E-03	5	7.48E-04
260	3.26E-03	5	6.51E-04
261	3.35E-03	5	6.70E-04
262	3.40E-03	5	6.79E-04
263	3.36E-03	5	6.73E-04
264	3.25E-03	5	6.51E-04
265	2.89E-03	5	5.78E-04
266	2.93E-03	5	5.86E-04
267	2.92E-03	5	5.84E-04
268	2.86E-03	5	5.72E-04
269	2.74E-03	5	5.49E-04
270	2.57E-03	5	5.14E-04
271	2.57E-03	5	5.14E-04
272	2.54E-03	5	5.07E-04
273	2.46E-03	5	4.93E-04
274	2.28E-03	5	4.56E-04
275	2.29E-03	5	4.58E-04
276	2.27E-03	5	4.55E-04
277	2.23E-03	5	4.45E-04
278	2.15E-03	5	4.31E-04
279	2.06E-03	5	4.12E-04
280	2.05E-03	5	4.10E-04
281	2.02E-03	5	4.04E-04
282	1.97E-03	5	3.94E-04
283	1.87E-03	5	3.73E-04
284	1.86E-03	5	3.73E-04
285	1.85E-03	5	3.69E-04
286	1.81E-03	5	3.62E-04
287	1.76E-03	5	3.52E-04
288	1.70E-03	5	3.40E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
289	1.70E-03	5	3.41E-04
290	1.69E-03	5	3.39E-04
291	1.67E-03	5	3.34E-04
292	1.63E-03	5	3.26E-04
293	1.56E-03	5	3.12E-04
294	1.57E-03	5	3.13E-04
295	1.56E-03	5	3.12E-04
296	1.54E-03	5	3.09E-04
297	1.52E-03	5	3.03E-04
298	1.44E-03	5	2.88E-04
299	1.45E-03	5	2.89E-04
300	1.44E-03	5	2.89E-04
301	1.43E-03	5	2.86E-04
302	1.41E-03	5	2.83E-04
303	1.38E-03	5	2.77E-04
304	1.33E-03	5	2.67E-04
305	1.34E-03	5	2.68E-04
306	1.34E-03	5	2.68E-04
307	1.33E-03	5	2.67E-04
308	1.32E-03	5	2.64E-04
309	1.30E-03	5	2.60E-04
310	1.24E-03	5	2.48E-04
311	1.25E-03	5	2.49E-04
312	1.25E-03	5	2.50E-04
313	1.25E-03	5	2.49E-04
314	1.23E-03	5	2.47E-04
315	1.22E-03	5	2.44E-04
316	1.16E-03	5	2.31E-04
317	1.16E-03	5	2.33E-04
318	1.17E-03	5	2.33E-04
319	1.16E-03	5	2.33E-04
320	1.16E-03	5	2.32E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
321	1.15E-03	5	2.29E-04
322	1.13E-03	5	2.26E-04
323	1.08E-03	5	2.16E-04
324	1.09E-03	5	2.18E-04
325	1.09E-03	5	2.19E-04
326	1.09E-03	5	2.19E-04
327	1.09E-03	5	2.18E-04
328	1.08E-03	5	2.16E-04
329	1.07E-03	5	2.13E-04
330	1.01E-03	5	2.03E-04
331	1.02E-03	5	2.04E-04
332	1.03E-03	5	2.05E-04
333	1.03E-03	5	2.06E-04
334	1.03E-03	5	2.05E-04
335	1.02E-03	5	2.04E-04
336	1.01E-03	5	2.02E-04
337	9.55E-04	5	1.91E-04
338	9.63E-04	5	1.93E-04
339	9.68E-04	5	1.94E-04
340	9.70E-04	5	1.94E-04
341	9.69E-04	5	1.94E-04
342	9.64E-04	5	1.93E-04
343	9.57E-04	5	1.91E-04
344	9.01E-04	5	1.80E-04
345	9.08E-04	5	1.82E-04
346	9.13E-04	5	1.83E-04
347	9.16E-04	5	1.83E-04
348	9.16E-04	5	1.83E-04
349	9.13E-04	5	1.83E-04
350	9.07E-04	5	1.81E-04
351	8.51E-04	5	1.70E-04
352	8.58E-04	5	1.72E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
353	8.64E-04	5	1.73E-04
354	8.67E-04	5	1.73E-04
355	8.68E-04	5	1.74E-04
356	8.66E-04	5	1.73E-04
357	8.62E-04	5	1.72E-04
358	8.06E-04	5	1.61E-04
359	8.13E-04	5	1.63E-04
360	8.18E-04	5	1.64E-04
361	8.22E-04	5	1.64E-04
362	8.24E-04	5	1.65E-04
363	8.23E-04	5	1.65E-04
364	8.20E-04	5	1.64E-04
365	7.65E-04	5	1.53E-04
366	7.71E-04	5	1.54E-04
367	7.77E-04	5	1.55E-04
368	7.80E-04	5	1.56E-04
369	7.83E-04	5	1.57E-04
370	7.83E-04	5	1.57E-04
371	7.81E-04	5	1.56E-04
372	7.27E-04	5	1.45E-04
373	7.33E-04	5	1.47E-04
374	7.38E-04	5	1.48E-04
375	7.42E-04	5	1.48E-04
376	7.45E-04	5	1.49E-04
377	7.45E-04	5	1.49E-04
378	7.45E-04	5	1.49E-04
379	1.84E-03	5	3.69E-04
380	1.80E-03	5	3.60E-04
381	1.76E-03	5	3.52E-04
382	1.71E-03	5	3.41E-04
383	1.62E-03	5	3.23E-04
384	1.53E-03	5	3.06E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Offsite Truck Travel

Receptor #	Conc	REL	HI
385	1.45E-03	5	2.90E-04
386	1.36E-03	5	2.72E-04
387	1.28E-03	5	2.56E-04
388	1.21E-03	5	2.43E-04
389	1.16E-03	5	2.31E-04
390	1.11E-03	5	2.21E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
1	1.0696	1.25E-04	1.33E-04	361	1	0.96	0.000001	4.61E-08	1.1	10	0.25	70	0.85	1.54E-09	0.00		
2	1.15678	1.25E-04	1.44E-04	361	1	0.96	0.000001	4.99E-08	1.1	10	0.25	70	0.85	1.67E-09	0.00		
3	1.04187	1.25E-04	1.30E-04	361	1	0.96	0.000001	4.49E-08	1.1	10	0.25	70	0.85	1.50E-09	0.00		
4	1.13277	1.25E-04	1.41E-04	361	1	0.96	0.000001	4.89E-08	1.1	10	0.25	70	0.85	1.63E-09	0.00		
5	1.23378	1.25E-04	1.54E-04	361	1	0.96	0.000001	5.32E-08	1.1	10	0.25	70	0.85	1.78E-09	0.00		
6	1.34505	1.25E-04	1.68E-04	361	1	0.96	0.000001	5.80E-08	1.1	10	0.25	70	0.85	1.94E-09	0.00		
7	1.09709	1.25E-04	1.37E-04	361	1	0.96	0.000001	4.73E-08	1.1	10	0.25	70	0.85	1.58E-09	0.00		
8	1.19799	1.25E-04	1.49E-04	361	1	0.96	0.000001	5.17E-08	1.1	10	0.25	70	0.85	1.73E-09	0.00		
9	1.31213	1.25E-04	1.63E-04	361	1	0.96	0.000001	5.66E-08	1.1	10	0.25	70	0.85	1.89E-09	0.00		
10	1.44164	1.25E-04	1.80E-04	361	1	0.96	0.000001	6.22E-08	1.1	10	0.25	70	0.85	2.08E-09	0.00		
11	1.58861	1.25E-04	1.98E-04	361	1	0.96	0.000001	6.85E-08	1.1	10	0.25	70	0.85	2.29E-09	0.00		
12	1.26099	1.25E-04	1.57E-04	361	1	0.96	0.000001	5.44E-08	1.1	10	0.25	70	0.85	1.82E-09	0.00		
13	1.39001	1.25E-04	1.73E-04	361	1	0.96	0.000001	6.00E-08	1.1	10	0.25	70	0.85	2.00E-09	0.00		
14	1.5389	1.25E-04	1.92E-04	361	1	0.96	0.000001	6.64E-08	1.1	10	0.25	70	0.85	2.22E-09	0.00		
15	1.71109	1.25E-04	2.13E-04	361	1	0.96	0.000001	7.38E-08	1.1	10	0.25	70	0.85	2.46E-09	0.00		
16	1.90647	1.25E-04	2.38E-04	361	1	0.96	0.000001	8.22E-08	1.1	10	0.25	70	0.85	2.75E-09	0.00		
17	1.4692	1.25E-04	1.83E-04	361	1	0.96	0.000001	6.34E-08	1.1	10	0.25	70	0.85	2.12E-09	0.00		
18	1.63959	1.25E-04	2.04E-04	361	1	0.96	0.000001	7.07E-08	1.1	10	0.25	70	0.85	2.36E-09	0.00		
19	1.83847	1.25E-04	2.29E-04	361	1	0.96	0.000001	7.93E-08	1.1	10	0.25	70	0.85	2.65E-09	0.00		
20	2.07122	1.25E-04	2.58E-04	361	1	0.96	0.000001	8.93E-08	1.1	10	0.25	70	0.85	2.98E-09	0.00		
21	2.34948	1.25E-04	2.93E-04	361	1	0.96	0.000001	1.01E-07	1.1	10	0.25	70	0.85	3.38E-09	0.00		
22	1.73717	1.25E-04	2.16E-04	361	1	0.96	0.000001	7.49E-08	1.1	10	0.25	70	0.85	2.50E-09	0.00		
23	1.96535	1.25E-04	2.45E-04	361	1	0.96	0.000001	8.48E-08	1.1	10	0.25	70	0.85	2.83E-09	0.00		
24	2.23666	1.25E-04	2.79E-04	361	1	0.96	0.000001	9.65E-08	1.1	10	0.25	70	0.85	3.22E-09	0.00		
25	2.57059	1.25E-04	3.20E-04	361	1	0.96	0.000001	1.11E-07	1.1	10	0.25	70	0.85	3.70E-09	0.00		
26	2.97498	1.25E-04	3.71E-04	361	1	0.96	0.000001	1.28E-07	1.1	10	0.25	70	0.85	4.28E-09	0.00		
27	2.08655	1.25E-04	2.60E-04	361	1	0.96	0.000001	9.00E-08	1.1	10	0.25	70	0.85	3.01E-09	0.00		
28	2.39869	1.25E-04	2.99E-04	361	1	0.96	0.000001	1.03E-07	1.1	10	0.25	70	0.85	3.45E-09	0.00		
29	2.79443	1.25E-04	3.48E-04	361	1	0.96	0.000001	1.21E-07	1.1	10	0.25	70	0.85	4.02E-09	0.00		
30	3.2938	1.25E-04	4.10E-04	361	1	0.96	0.000001	1.42E-07	1.1	10	0.25	70	0.85	4.74E-09	0.00		
31	3.93243	1.25E-04	4.90E-04	361	1	0.96	0.000001	1.70E-07	1.1	10	0.25	70	0.85	5.66E-09	0.01		
32	2.55199	1.25E-04	3.18E-04	361	1	0.96	0.000001	1.10E-07	1.1	10	0.25	70	0.85	3.68E-09	0.00		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
33	3.00441	1.25E-04	3.74E-04	361	1	0.96	0.000001	1.30E-07	1.1	10	0.25	70	0.85	4.33E-09	0.00
34	3.59885	1.25E-04	4.48E-04	361	1	0.96	0.000001	1.55E-07	1.1	10	0.25	70	0.85	5.18E-09	0.01
35	4.38408	1.25E-04	5.46E-04	361	1	0.96	0.000001	1.89E-07	1.1	10	0.25	70	0.85	6.31E-09	0.01
36	5.49118	1.25E-04	6.84E-04	361	1	0.96	0.000001	2.37E-07	1.1	10	0.25	70	0.85	7.91E-09	0.01
37	3.19114	1.25E-04	3.98E-04	361	1	0.96	0.000001	1.38E-07	1.1	10	0.25	70	0.85	4.60E-09	0.00
38	3.8707	1.25E-04	4.82E-04	361	1	0.96	0.000001	1.67E-07	1.1	10	0.25	70	0.85	5.57E-09	0.01
39	4.81086	1.25E-04	5.99E-04	361	1	0.96	0.000001	2.07E-07	1.1	10	0.25	70	0.85	6.93E-09	0.01
40	6.19303	1.25E-04	7.72E-04	361	1	0.96	0.000001	2.67E-07	1.1	10	0.25	70	0.85	8.92E-09	0.01
41	4.11183	1.25E-04	5.12E-04	361	1	0.96	0.000001	1.77E-07	1.1	10	0.25	70	0.85	5.92E-09	0.01
42	5.18306	1.25E-04	6.46E-04	361	1	0.96	0.000001	2.24E-07	1.1	10	0.25	70	0.85	7.46E-09	0.01
43	6.79025	1.25E-04	8.46E-04	361	1	0.96	0.000001	2.93E-07	1.1	10	0.25	70	0.85	9.78E-09	0.01
44	9.40712	1.25E-04	1.17E-03	361	1	0.96	0.000001	4.06E-07	1.1	10	0.25	70	0.85	1.35E-08	0.01
45	5.42243	1.25E-04	6.76E-04	361	1	0.96	0.000001	2.34E-07	1.1	10	0.25	70	0.85	7.81E-09	0.01
46	7.16904	1.25E-04	8.93E-04	361	1	0.96	0.000001	3.09E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01
47	10.06069	1.25E-04	1.25E-03	361	1	0.96	0.000001	4.34E-07	1.1	10	0.25	70	0.85	1.45E-08	0.01
48	15.43612	1.25E-04	1.92E-03	361	1	0.96	0.000001	6.66E-07	1.1	10	0.25	70	0.85	2.22E-08	0.02
49	10.05692	1.25E-04	1.25E-03	361	1	0.96	0.000001	4.34E-07	1.1	10	0.25	70	0.85	1.45E-08	0.01
50	14.81502	1.25E-04	1.85E-03	361	1	0.96	0.000001	6.39E-07	1.1	10	0.25	70	0.85	2.13E-08	0.02
51	9.43355	1.25E-04	1.18E-03	361	1	0.96	0.000001	4.07E-07	1.1	10	0.25	70	0.85	1.36E-08	0.01
52	13.14507	1.25E-04	1.64E-03	361	1	0.96	0.000001	5.67E-07	1.1	10	0.25	70	0.85	1.89E-08	0.02
53	19.14621	1.25E-04	2.39E-03	361	1	0.96	0.000001	8.26E-07	1.1	10	0.25	70	0.85	2.76E-08	0.03
54	8.45779	1.25E-04	1.05E-03	361	1	0.96	0.000001	3.65E-07	1.1	10	0.25	70	0.85	1.22E-08	0.01
55	11.1538	1.25E-04	1.39E-03	361	1	0.96	0.000001	4.81E-07	1.1	10	0.25	70	0.85	1.61E-08	0.02
56	15.16885	1.25E-04	1.89E-03	361	1	0.96	0.000001	6.54E-07	1.1	10	0.25	70	0.85	2.18E-08	0.02
57	21.18886	1.25E-04	2.64E-03	361	1	0.96	0.000001	9.14E-07	1.1	10	0.25	70	0.85	3.05E-08	0.03
58	7.3322	1.25E-04	9.14E-04	361	1	0.96	0.000001	3.16E-07	1.1	10	0.25	70	0.85	1.06E-08	0.01
59	9.24195	1.25E-04	1.15E-03	361	1	0.96	0.000001	3.99E-07	1.1	10	0.25	70	0.85	1.33E-08	0.01
60	11.80759	1.25E-04	1.47E-03	361	1	0.96	0.000001	5.09E-07	1.1	10	0.25	70	0.85	1.70E-08	0.02
61	15.26345	1.25E-04	1.90E-03	361	1	0.96	0.000001	6.58E-07	1.1	10	0.25	70	0.85	2.20E-08	0.02
62	6.28319	1.25E-04	7.83E-04	361	1	0.96	0.000001	2.71E-07	1.1	10	0.25	70	0.85	9.05E-09	0.01
63	7.57582	1.25E-04	9.44E-04	361	1	0.96	0.000001	3.27E-07	1.1	10	0.25	70	0.85	1.09E-08	0.01
64	9.15543	1.25E-04	1.14E-03	361	1	0.96	0.000001	3.95E-07	1.1	10	0.25	70	0.85	1.32E-08	0.01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
65	11.06465	1.25E-04	1.38E-03	361	1	0.96	0.000001	4.77E-07	1.1	10	0.25	70	0.85	1.59E-08	0.02		
66	13.31328	1.25E-04	1.66E-03	361	1	0.96	0.000001	5.74E-07	1.1	10	0.25	70	0.85	1.92E-08	0.02		
67	5.3135	1.25E-04	6.62E-04	361	1	0.96	0.000001	2.29E-07	1.1	10	0.25	70	0.85	7.65E-09	0.01		
68	6.18619	1.25E-04	7.71E-04	361	1	0.96	0.000001	2.67E-07	1.1	10	0.25	70	0.85	8.91E-09	0.01		
69	7.18562	1.25E-04	8.95E-04	361	1	0.96	0.000001	3.10E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01		
70	8.29172	1.25E-04	1.03E-03	361	1	0.96	0.000001	3.58E-07	1.1	10	0.25	70	0.85	1.19E-08	0.01		
71	9.52622	1.25E-04	1.19E-03	361	1	0.96	0.000001	4.11E-07	1.1	10	0.25	70	0.85	1.37E-08	0.01		
72	4.49867	1.25E-04	5.61E-04	361	1	0.96	0.000001	1.94E-07	1.1	10	0.25	70	0.85	6.48E-09	0.01		
73	5.09356	1.25E-04	6.35E-04	361	1	0.96	0.000001	2.20E-07	1.1	10	0.25	70	0.85	7.34E-09	0.01		
74	5.75191	1.25E-04	7.17E-04	361	1	0.96	0.000001	2.48E-07	1.1	10	0.25	70	0.85	8.28E-09	0.01		
75	6.43732	1.25E-04	8.02E-04	361	1	0.96	0.000001	2.78E-07	1.1	10	0.25	70	0.85	9.27E-09	0.01		
76	7.18721	1.25E-04	8.95E-04	361	1	0.96	0.000001	3.10E-07	1.1	10	0.25	70	0.85	1.04E-08	0.01		
77	3.8277	1.25E-04	4.77E-04	361	1	0.96	0.000001	1.65E-07	1.1	10	0.25	70	0.85	5.51E-09	0.01		
78	4.24219	1.25E-04	5.29E-04	361	1	0.96	0.000001	1.83E-07	1.1	10	0.25	70	0.85	6.11E-09	0.01		
79	4.69038	1.25E-04	5.84E-04	361	1	0.96	0.000001	2.02E-07	1.1	10	0.25	70	0.85	6.76E-09	0.01		
80	5.14038	1.25E-04	6.40E-04	361	1	0.96	0.000001	2.22E-07	1.1	10	0.25	70	0.85	7.40E-09	0.01		
81	5.62856	1.25E-04	7.01E-04	361	1	0.96	0.000001	2.43E-07	1.1	10	0.25	70	0.85	8.11E-09	0.01		
82	3.2843	1.25E-04	4.09E-04	361	1	0.96	0.000001	1.42E-07	1.1	10	0.25	70	0.85	4.73E-09	0.00		
83	3.58155	1.25E-04	4.46E-04	361	1	0.96	0.000001	1.54E-07	1.1	10	0.25	70	0.85	5.16E-09	0.01		
84	3.88641	1.25E-04	4.84E-04	361	1	0.96	0.000001	1.68E-07	1.1	10	0.25	70	0.85	5.60E-09	0.01		
85	4.20185	1.25E-04	5.24E-04	361	1	0.96	0.000001	1.81E-07	1.1	10	0.25	70	0.85	6.05E-09	0.01		
86	4.53442	1.25E-04	5.65E-04	361	1	0.96	0.000001	1.96E-07	1.1	10	0.25	70	0.85	6.53E-09	0.01		
87	2.83963	1.25E-04	3.54E-04	361	1	0.96	0.000001	1.22E-07	1.1	10	0.25	70	0.85	4.09E-09	0.00		
88	3.05904	1.25E-04	3.81E-04	361	1	0.96	0.000001	1.32E-07	1.1	10	0.25	70	0.85	4.41E-09	0.00		
89	3.28039	1.25E-04	4.09E-04	361	1	0.96	0.000001	1.41E-07	1.1	10	0.25	70	0.85	4.72E-09	0.00		
90	3.51883	1.25E-04	4.38E-04	361	1	0.96	0.000001	1.52E-07	1.1	10	0.25	70	0.85	5.07E-09	0.01		
91	3.76161	1.25E-04	4.69E-04	361	1	0.96	0.000001	1.62E-07	1.1	10	0.25	70	0.85	5.42E-09	0.01		
92	2.47861	1.25E-04	3.09E-04	361	1	0.96	0.000001	1.07E-07	1.1	10	0.25	70	0.85	3.57E-09	0.00		
93	2.64404	1.25E-04	3.29E-04	361	1	0.96	0.000001	1.14E-07	1.1	10	0.25	70	0.85	3.81E-09	0.00		
94	2.81165	1.25E-04	3.50E-04	361	1	0.96	0.000001	1.21E-07	1.1	10	0.25	70	0.85	4.05E-09	0.00		
95	2.98629	1.25E-04	3.72E-04	361	1	0.96	0.000001	1.29E-07	1.1	10	0.25	70	0.85	4.30E-09	0.00		
96	3.16933	1.25E-04	3.95E-04	361	1	0.96	0.000001	1.37E-07	1.1	10	0.25	70	0.85	4.56E-09	0.00		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
97	2.18036	1.25E-04	2.72E-04	361	1	0.96	0.000001	9.40E-08	1.1	10	0.25	70	0.85	3.14E-09	0.00		
98	2.30952	1.25E-04	2.88E-04	361	1	0.96	0.000001	9.96E-08	1.1	10	0.25	70	0.85	3.33E-09	0.00		
99	2.43954	1.25E-04	3.04E-04	361	1	0.96	0.000001	1.05E-07	1.1	10	0.25	70	0.85	3.51E-09	0.00		
100	2.57161	1.25E-04	3.20E-04	361	1	0.96	0.000001	1.11E-07	1.1	10	0.25	70	0.85	3.70E-09	0.00		
101	2.71373	1.25E-04	3.38E-04	361	1	0.96	0.000001	1.17E-07	1.1	10	0.25	70	0.85	3.91E-09	0.00		
102	1.02416	1.25E-04	1.28E-04	361	1	0.96	0.000001	4.42E-08	1.1	10	0.25	70	0.85	1.48E-09	0.00		
103	1.03139	1.25E-04	1.29E-04	361	1	0.96	0.000001	4.45E-08	1.1	10	0.25	70	0.85	1.49E-09	0.00		
104	1.06531	1.25E-04	1.33E-04	361	1	0.96	0.000001	4.59E-08	1.1	10	0.25	70	0.85	1.53E-09	0.00		
105	1.03323	1.25E-04	1.29E-04	361	1	0.96	0.000001	4.46E-08	1.1	10	0.25	70	0.85	1.49E-09	0.00		
106	1.06991	1.25E-04	1.33E-04	361	1	0.96	0.000001	4.61E-08	1.1	10	0.25	70	0.85	1.54E-09	0.00		
107	1.10577	1.25E-04	1.38E-04	361	1	0.96	0.000001	4.77E-08	1.1	10	0.25	70	0.85	1.59E-09	0.00		
108	1.14215	1.25E-04	1.42E-04	361	1	0.96	0.000001	4.93E-08	1.1	10	0.25	70	0.85	1.64E-09	0.00		
109	1.07108	1.25E-04	1.33E-04	361	1	0.96	0.000001	4.62E-08	1.1	10	0.25	70	0.85	1.54E-09	0.00		
110	1.10856	1.25E-04	1.38E-04	361	1	0.96	0.000001	4.78E-08	1.1	10	0.25	70	0.85	1.60E-09	0.00		
111	1.14756	1.25E-04	1.43E-04	361	1	0.96	0.000001	4.95E-08	1.1	10	0.25	70	0.85	1.65E-09	0.00		
112	1.18841	1.25E-04	1.48E-04	361	1	0.96	0.000001	5.13E-08	1.1	10	0.25	70	0.85	1.71E-09	0.00		
113	1.2283	1.25E-04	1.53E-04	361	1	0.96	0.000001	5.30E-08	1.1	10	0.25	70	0.85	1.77E-09	0.00		
114	1.06874	1.25E-04	1.33E-04	361	1	0.96	0.000001	4.61E-08	1.1	10	0.25	70	0.85	1.54E-09	0.00		
115	1.10795	1.25E-04	1.38E-04	361	1	0.96	0.000001	4.78E-08	1.1	10	0.25	70	0.85	1.60E-09	0.00		
116	1.14942	1.25E-04	1.43E-04	361	1	0.96	0.000001	4.96E-08	1.1	10	0.25	70	0.85	1.66E-09	0.00		
117	1.19184	1.25E-04	1.48E-04	361	1	0.96	0.000001	5.14E-08	1.1	10	0.25	70	0.85	1.72E-09	0.00		
118	1.23557	1.25E-04	1.54E-04	361	1	0.96	0.000001	5.33E-08	1.1	10	0.25	70	0.85	1.78E-09	0.00		
119	1.28128	1.25E-04	1.60E-04	361	1	0.96	0.000001	5.53E-08	1.1	10	0.25	70	0.85	1.85E-09	0.00		
120	1.32619	1.25E-04	1.65E-04	361	1	0.96	0.000001	5.72E-08	1.1	10	0.25	70	0.85	1.91E-09	0.00		
121	1.063	1.25E-04	1.32E-04	361	1	0.96	0.000001	4.58E-08	1.1	10	0.25	70	0.85	1.53E-09	0.00		
122	1.10365	1.25E-04	1.38E-04	361	1	0.96	0.000001	4.76E-08	1.1	10	0.25	70	0.85	1.59E-09	0.00		
123	1.14663	1.25E-04	1.43E-04	361	1	0.96	0.000001	4.95E-08	1.1	10	0.25	70	0.85	1.65E-09	0.00		
124	1.1913	1.25E-04	1.48E-04	361	1	0.96	0.000001	5.14E-08	1.1	10	0.25	70	0.85	1.72E-09	0.00		
125	1.23734	1.25E-04	1.54E-04	361	1	0.96	0.000001	5.34E-08	1.1	10	0.25	70	0.85	1.78E-09	0.00		
126	1.28479	1.25E-04	1.60E-04	361	1	0.96	0.000001	5.54E-08	1.1	10	0.25	70	0.85	1.85E-09	0.00		
127	1.33519	1.25E-04	1.66E-04	361	1	0.96	0.000001	5.76E-08	1.1	10	0.25	70	0.85	1.92E-09	0.00		
128	1.38423	1.25E-04	1.72E-04	361	1	0.96	0.000001	5.97E-08	1.1	10	0.25	70	0.85	1.99E-09	0.00		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
129	1.18585	1.25E-04	1.48E-04	361	1	0.96	0.000001	5.11E-08	1.1	10	0.25	70	0.85	1.71E-09	0.00		
130	1.23426	1.25E-04	1.54E-04	361	1	0.96	0.000001	5.32E-08	1.1	10	0.25	70	0.85	1.78E-09	0.00		
131	1.28421	1.25E-04	1.60E-04	361	1	0.96	0.000001	5.54E-08	1.1	10	0.25	70	0.85	1.85E-09	0.00		
132	1.33632	1.25E-04	1.66E-04	361	1	0.96	0.000001	5.76E-08	1.1	10	0.25	70	0.85	1.92E-09	0.00		
133	1.38992	1.25E-04	1.73E-04	361	1	0.96	0.000001	5.99E-08	1.1	10	0.25	70	0.85	2.00E-09	0.00		
134	1.44634	1.25E-04	1.80E-04	361	1	0.96	0.000001	6.24E-08	1.1	10	0.25	70	0.85	2.08E-09	0.00		
135	1.50466	1.25E-04	1.87E-04	361	1	0.96	0.000001	6.49E-08	1.1	10	0.25	70	0.85	2.17E-09	0.00		
136	1.27848	1.25E-04	1.59E-04	361	1	0.96	0.000001	5.51E-08	1.1	10	0.25	70	0.85	1.84E-09	0.00		
137	1.33248	1.25E-04	1.66E-04	361	1	0.96	0.000001	5.75E-08	1.1	10	0.25	70	0.85	1.92E-09	0.00		
138	1.38958	1.25E-04	1.73E-04	361	1	0.96	0.000001	5.99E-08	1.1	10	0.25	70	0.85	2.00E-09	0.00		
139	1.44702	1.25E-04	1.80E-04	361	1	0.96	0.000001	6.24E-08	1.1	10	0.25	70	0.85	2.08E-09	0.00		
140	1.5107	1.25E-04	1.88E-04	361	1	0.96	0.000001	6.52E-08	1.1	10	0.25	70	0.85	2.18E-09	0.00		
141	1.57629	1.25E-04	1.96E-04	361	1	0.96	0.000001	6.80E-08	1.1	10	0.25	70	0.85	2.27E-09	0.00		
142	1.64179	1.25E-04	2.05E-04	361	1	0.96	0.000001	7.08E-08	1.1	10	0.25	70	0.85	2.36E-09	0.00		
143	1.38232	1.25E-04	1.72E-04	361	1	0.96	0.000001	5.96E-08	1.1	10	0.25	70	0.85	1.99E-09	0.00		
144	1.44442	1.25E-04	1.80E-04	361	1	0.96	0.000001	6.23E-08	1.1	10	0.25	70	0.85	2.08E-09	0.00		
145	1.50731	1.25E-04	1.88E-04	361	1	0.96	0.000001	6.50E-08	1.1	10	0.25	70	0.85	2.17E-09	0.00		
146	1.57773	1.25E-04	1.97E-04	361	1	0.96	0.000001	6.80E-08	1.1	10	0.25	70	0.85	2.27E-09	0.00		
147	1.64977	1.25E-04	2.06E-04	361	1	0.96	0.000001	7.12E-08	1.1	10	0.25	70	0.85	2.38E-09	0.00		
148	1.72383	1.25E-04	2.15E-04	361	1	0.96	0.000001	7.43E-08	1.1	10	0.25	70	0.85	2.48E-09	0.00		
149	1.50018	1.25E-04	1.87E-04	361	1	0.96	0.000001	6.47E-08	1.1	10	0.25	70	0.85	2.16E-09	0.00		
150	1.57005	1.25E-04	1.96E-04	361	1	0.96	0.000001	6.77E-08	1.1	10	0.25	70	0.85	2.26E-09	0.00		
151	1.64735	1.25E-04	2.05E-04	361	1	0.96	0.000001	7.11E-08	1.1	10	0.25	70	0.85	2.37E-09	0.00		
152	1.7263	1.25E-04	2.15E-04	361	1	0.96	0.000001	7.45E-08	1.1	10	0.25	70	0.85	2.49E-09	0.00		
153	1.80795	1.25E-04	2.25E-04	361	1	0.96	0.000001	7.80E-08	1.1	10	0.25	70	0.85	2.60E-09	0.00		
154	1.89675	1.25E-04	2.36E-04	361	1	0.96	0.000001	8.18E-08	1.1	10	0.25	70	0.85	2.73E-09	0.00		
155	1.63541	1.25E-04	2.04E-04	361	1	0.96	0.000001	7.05E-08	1.1	10	0.25	70	0.85	2.36E-09	0.00		
156	1.71866	1.25E-04	2.14E-04	361	1	0.96	0.000001	7.41E-08	1.1	10	0.25	70	0.85	2.48E-09	0.00		
157	1.80591	1.25E-04	2.25E-04	361	1	0.96	0.000001	7.79E-08	1.1	10	0.25	70	0.85	2.60E-09	0.00		
158	1.89775	1.25E-04	2.36E-04	361	1	0.96	0.000001	8.19E-08	1.1	10	0.25	70	0.85	2.73E-09	0.00		
159	1.99696	1.25E-04	2.49E-04	361	1	0.96	0.000001	8.61E-08	1.1	10	0.25	70	0.85	2.88E-09	0.00		
160	2.09828	1.25E-04	2.61E-04	361	1	0.96	0.000001	9.05E-08	1.1	10	0.25	70	0.85	3.02E-09	0.00		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
161	1.793	1.25E-04	2.23E-04	361	1	0.96	0.000001	7.73E-08	1.1	10	0.25	70	0.85	2.58E-09	0.00		
162	1.88839	1.25E-04	2.35E-04	361	1	0.96	0.000001	8.14E-08	1.1	10	0.25	70	0.85	2.72E-09	0.00		
163	1.99175	1.25E-04	2.48E-04	361	1	0.96	0.000001	8.59E-08	1.1	10	0.25	70	0.85	2.87E-09	0.00		
164	2.10087	1.25E-04	2.62E-04	361	1	0.96	0.000001	9.06E-08	1.1	10	0.25	70	0.85	3.03E-09	0.00		
165	2.21603	1.25E-04	2.76E-04	361	1	0.96	0.000001	9.56E-08	1.1	10	0.25	70	0.85	3.19E-09	0.00		
166	2.33783	1.25E-04	2.91E-04	361	1	0.96	0.000001	1.01E-07	1.1	10	0.25	70	0.85	3.37E-09	0.00		
167	1.97324	1.25E-04	2.46E-04	361	1	0.96	0.000001	8.51E-08	1.1	10	0.25	70	0.85	2.84E-09	0.00		
168	2.09085	1.25E-04	2.61E-04	361	1	0.96	0.000001	9.02E-08	1.1	10	0.25	70	0.85	3.01E-09	0.00		
169	2.21338	1.25E-04	2.76E-04	361	1	0.96	0.000001	9.55E-08	1.1	10	0.25	70	0.85	3.19E-09	0.00		
170	2.3435	1.25E-04	2.92E-04	361	1	0.96	0.000001	1.01E-07	1.1	10	0.25	70	0.85	3.38E-09	0.00		
171	2.48158	1.25E-04	3.09E-04	361	1	0.96	0.000001	1.07E-07	1.1	10	0.25	70	0.85	3.57E-09	0.00		
172	2.62461	1.25E-04	3.27E-04	361	1	0.96	0.000001	1.13E-07	1.1	10	0.25	70	0.85	3.78E-09	0.00		
173	2.19117	1.25E-04	2.73E-04	361	1	0.96	0.000001	9.45E-08	1.1	10	0.25	70	0.85	3.16E-09	0.00		
174	2.32727	1.25E-04	2.90E-04	361	1	0.96	0.000001	1.00E-07	1.1	10	0.25	70	0.85	3.35E-09	0.00		
175	2.47383	1.25E-04	3.08E-04	361	1	0.96	0.000001	1.07E-07	1.1	10	0.25	70	0.85	3.56E-09	0.00		
176	2.63134	1.25E-04	3.28E-04	361	1	0.96	0.000001	1.13E-07	1.1	10	0.25	70	0.85	3.79E-09	0.00		
177	2.79618	1.25E-04	3.48E-04	361	1	0.96	0.000001	1.21E-07	1.1	10	0.25	70	0.85	4.03E-09	0.00		
178	2.44487	1.25E-04	3.05E-04	361	1	0.96	0.000001	1.05E-07	1.1	10	0.25	70	0.85	3.52E-09	0.00		
179	2.60774	1.25E-04	3.25E-04	361	1	0.96	0.000001	1.12E-07	1.1	10	0.25	70	0.85	3.76E-09	0.00		
180	2.78931	1.25E-04	3.48E-04	361	1	0.96	0.000001	1.20E-07	1.1	10	0.25	70	0.85	4.02E-09	0.00		
181	2.97736	1.25E-04	3.71E-04	361	1	0.96	0.000001	1.28E-07	1.1	10	0.25	70	0.85	4.29E-09	0.00		
182	3.18799	1.25E-04	3.97E-04	361	1	0.96	0.000001	1.37E-07	1.1	10	0.25	70	0.85	4.59E-09	0.00		
183	2.75228	1.25E-04	3.43E-04	361	1	0.96	0.000001	1.19E-07	1.1	10	0.25	70	0.85	3.96E-09	0.00		
184	2.949	1.25E-04	3.67E-04	361	1	0.96	0.000001	1.27E-07	1.1	10	0.25	70	0.85	4.25E-09	0.00		
185	3.1704	1.25E-04	3.95E-04	361	1	0.96	0.000001	1.37E-07	1.1	10	0.25	70	0.85	4.57E-09	0.00		
186	3.41389	1.25E-04	4.25E-04	361	1	0.96	0.000001	1.47E-07	1.1	10	0.25	70	0.85	4.92E-09	0.00		
187	3.67541	1.25E-04	4.58E-04	361	1	0.96	0.000001	1.59E-07	1.1	10	0.25	70	0.85	5.29E-09	0.01		
188	3.12322	1.25E-04	3.89E-04	361	1	0.96	0.000001	1.35E-07	1.1	10	0.25	70	0.85	4.50E-09	0.00		
189	3.37892	1.25E-04	4.21E-04	361	1	0.96	0.000001	1.46E-07	1.1	10	0.25	70	0.85	4.87E-09	0.00		
190	3.65119	1.25E-04	4.55E-04	361	1	0.96	0.000001	1.57E-07	1.1	10	0.25	70	0.85	5.26E-09	0.01		
191	3.96181	1.25E-04	4.94E-04	361	1	0.96	0.000001	1.71E-07	1.1	10	0.25	70	0.85	5.71E-09	0.01		
192	4.29471	1.25E-04	5.35E-04	361	1	0.96	0.000001	1.85E-07	1.1	10	0.25	70	0.85	6.19E-09	0.01		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
193	3.58827	1.25E-04	4.47E-04	361	1	0.96	0.000001	1.55E-07	1.1	10	0.25	70	0.85	5.17E-09	0.01
194	3.91143	1.25E-04	4.87E-04	361	1	0.96	0.000001	1.69E-07	1.1	10	0.25	70	0.85	5.63E-09	0.01
195	4.26106	1.25E-04	5.31E-04	361	1	0.96	0.000001	1.84E-07	1.1	10	0.25	70	0.85	6.14E-09	0.01
196	4.66917	1.25E-04	5.82E-04	361	1	0.96	0.000001	2.01E-07	1.1	10	0.25	70	0.85	6.72E-09	0.01
197	5.10732	1.25E-04	6.36E-04	361	1	0.96	0.000001	2.20E-07	1.1	10	0.25	70	0.85	7.36E-09	0.01
198	4.17254	1.25E-04	5.20E-04	361	1	0.96	0.000001	1.80E-07	1.1	10	0.25	70	0.85	6.01E-09	0.01
199	4.5911	1.25E-04	5.72E-04	361	1	0.96	0.000001	1.98E-07	1.1	10	0.25	70	0.85	6.61E-09	0.01
200	5.0605	1.25E-04	6.31E-04	361	1	0.96	0.000001	2.18E-07	1.1	10	0.25	70	0.85	7.29E-09	0.01
201	5.61236	1.25E-04	6.99E-04	361	1	0.96	0.000001	2.42E-07	1.1	10	0.25	70	0.85	8.08E-09	0.01
202	4.92407	1.25E-04	6.14E-04	361	1	0.96	0.000001	2.12E-07	1.1	10	0.25	70	0.85	7.09E-09	0.01
203	5.47531	1.25E-04	6.82E-04	361	1	0.96	0.000001	2.36E-07	1.1	10	0.25	70	0.85	7.89E-09	0.01
204	6.15108	1.25E-04	7.66E-04	361	1	0.96	0.000001	2.65E-07	1.1	10	0.25	70	0.85	8.86E-09	0.01
205	6.91024	1.25E-04	8.61E-04	361	1	0.96	0.000001	2.98E-07	1.1	10	0.25	70	0.85	9.95E-09	0.01
206	5.90473	1.25E-04	7.36E-04	361	1	0.96	0.000001	2.55E-07	1.1	10	0.25	70	0.85	8.50E-09	0.01
207	6.70371	1.25E-04	8.35E-04	361	1	0.96	0.000001	2.89E-07	1.1	10	0.25	70	0.85	9.65E-09	0.01
208	7.64594	1.25E-04	9.53E-04	361	1	0.96	0.000001	3.30E-07	1.1	10	0.25	70	0.85	1.10E-08	0.01
209	8.78906	1.25E-04	1.10E-03	361	1	0.96	0.000001	3.79E-07	1.1	10	0.25	70	0.85	1.27E-08	0.01
210	6.3265	1.25E-04	7.88E-04	361	1	0.96	0.000001	2.73E-07	1.1	10	0.25	70	0.85	9.11E-09	0.01
211	7.28184	1.25E-04	9.07E-04	361	1	0.96	0.000001	3.14E-07	1.1	10	0.25	70	0.85	1.05E-08	0.01
212	8.44374	1.25E-04	1.05E-03	361	1	0.96	0.000001	3.64E-07	1.1	10	0.25	70	0.85	1.22E-08	0.01
213	9.89456	1.25E-04	1.23E-03	361	1	0.96	0.000001	4.27E-07	1.1	10	0.25	70	0.85	1.43E-08	0.01
214	11.70465	1.25E-04	1.46E-03	361	1	0.96	0.000001	5.05E-07	1.1	10	0.25	70	0.85	1.69E-08	0.02
215	6.73876	1.25E-04	8.40E-04	361	1	0.96	0.000001	2.91E-07	1.1	10	0.25	70	0.85	9.71E-09	0.01
216	7.81701	1.25E-04	9.74E-04	361	1	0.96	0.000001	3.37E-07	1.1	10	0.25	70	0.85	1.13E-08	0.01
217	9.19324	1.25E-04	1.15E-03	361	1	0.96	0.000001	3.97E-07	1.1	10	0.25	70	0.85	1.32E-08	0.01
218	10.99378	1.25E-04	1.37E-03	361	1	0.96	0.000001	4.74E-07	1.1	10	0.25	70	0.85	1.58E-08	0.02
219	13.41235	1.25E-04	1.67E-03	361	1	0.96	0.000001	5.78E-07	1.1	10	0.25	70	0.85	1.93E-08	0.02
220	8.34677	1.25E-04	1.04E-03	361	1	0.96	0.000001	3.60E-07	1.1	10	0.25	70	0.85	1.20E-08	0.01
221	9.94119	1.25E-04	1.24E-03	361	1	0.96	0.000001	4.29E-07	1.1	10	0.25	70	0.85	1.43E-08	0.01
222	12.09844	1.25E-04	1.51E-03	361	1	0.96	0.000001	5.22E-07	1.1	10	0.25	70	0.85	1.74E-08	0.02
223	15.1481	1.25E-04	1.89E-03	361	1	0.96	0.000001	6.53E-07	1.1	10	0.25	70	0.85	2.18E-08	0.02
224	19.73468	1.25E-04	2.46E-03	361	1	0.96	0.000001	8.51E-07	1.1	10	0.25	70	0.85	2.84E-08	0.03

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
225	10.56997	1.25E-04	1.32E-03	361	1	0.96	0.000001	4.56E-07	1.1	10	0.25	70	0.85	1.52E-08	0.02		
226	13.03536	1.25E-04	1.62E-03	361	1	0.96	0.000001	5.62E-07	1.1	10	0.25	70	0.85	1.88E-08	0.02		
227	16.63569	1.25E-04	2.07E-03	361	1	0.96	0.000001	7.18E-07	1.1	10	0.25	70	0.85	2.40E-08	0.02		
228	22.33373	1.25E-04	2.78E-03	361	1	0.96	0.000001	9.63E-07	1.1	10	0.25	70	0.85	3.22E-08	0.03		
229	32.62137	1.25E-04	4.06E-03	361	1	0.96	0.000001	1.41E-06	1.1	10	0.25	70	0.85	4.70E-08	0.05		
230	13.74083	1.25E-04	1.71E-03	361	1	0.96	0.000001	5.93E-07	1.1	10	0.25	70	0.85	1.98E-08	0.02		
231	17.71321	1.25E-04	2.21E-03	361	1	0.96	0.000001	7.64E-07	1.1	10	0.25	70	0.85	2.55E-08	0.03		
232	23.98181	1.25E-04	2.99E-03	361	1	0.96	0.000001	1.03E-06	1.1	10	0.25	70	0.85	3.45E-08	0.03		
233	35.75652	1.25E-04	4.46E-03	361	1	0.96	0.000001	1.54E-06	1.1	10	0.25	70	0.85	5.15E-08	0.05		
234	63.36339	1.25E-04	7.89E-03	361	1	0.96	0.000001	2.73E-06	1.1	10	0.25	70	0.85	9.13E-08	0.09		
235	18.07381	1.25E-04	2.25E-03	361	1	0.96	0.000001	7.80E-07	1.1	10	0.25	70	0.85	2.60E-08	0.03		
236	24.07809	1.25E-04	3.00E-03	361	1	0.96	0.000001	1.04E-06	1.1	10	0.25	70	0.85	3.47E-08	0.03		
237	34.42402	1.25E-04	4.29E-03	361	1	0.96	0.000001	1.48E-06	1.1	10	0.25	70	0.85	4.96E-08	0.05		
238	53.48805	1.25E-04	6.66E-03	361	1	0.96	0.000001	2.31E-06	1.1	10	0.25	70	0.85	7.70E-08	0.08		
239	87.94839	1.25E-04	1.10E-02	361	1	0.96	0.000001	3.79E-06	1.1	10	0.25	70	0.85	1.27E-07	0.13		
240	23.04175	1.25E-04	2.87E-03	361	1	0.96	0.000001	9.94E-07	1.1	10	0.25	70	0.85	3.32E-08	0.03		
241	31.43293	1.25E-04	3.92E-03	361	1	0.96	0.000001	1.36E-06	1.1	10	0.25	70	0.85	4.53E-08	0.05		
242	43.66183	1.25E-04	5.44E-03	361	1	0.96	0.000001	1.88E-06	1.1	10	0.25	70	0.85	6.29E-08	0.06		
243	64.93814	1.25E-04	8.09E-03	361	1	0.96	0.000001	2.80E-06	1.1	10	0.25	70	0.85	9.35E-08	0.09		
244	21.37231	1.25E-04	2.66E-03	361	1	0.96	0.000001	9.22E-07	1.1	10	0.25	70	0.85	3.08E-08	0.03		
245	27.97058	1.25E-04	3.48E-03	361	1	0.96	0.000001	1.21E-06	1.1	10	0.25	70	0.85	4.03E-08	0.04		
246	37.22215	1.25E-04	4.64E-03	361	1	0.96	0.000001	1.61E-06	1.1	10	0.25	70	0.85	5.36E-08	0.05		
247	50.92165	1.25E-04	6.34E-03	361	1	0.96	0.000001	2.20E-06	1.1	10	0.25	70	0.85	7.33E-08	0.07		
248	75.17356	1.25E-04	9.37E-03	361	1	0.96	0.000001	3.24E-06	1.1	10	0.25	70	0.85	1.08E-07	0.11		
249	24.71828	1.25E-04	3.08E-03	361	1	0.96	0.000001	1.07E-06	1.1	10	0.25	70	0.85	3.56E-08	0.04		
250	31.79559	1.25E-04	3.96E-03	361	1	0.96	0.000001	1.37E-06	1.1	10	0.25	70	0.85	4.58E-08	0.05		
251	41.65027	1.25E-04	5.19E-03	361	1	0.96	0.000001	1.80E-06	1.1	10	0.25	70	0.85	6.00E-08	0.06		
252	57.51758	1.25E-04	7.17E-03	361	1	0.96	0.000001	2.48E-06	1.1	10	0.25	70	0.85	8.28E-08	0.08		
253	84.75563	1.25E-04	1.06E-02	361	1	0.96	0.000001	3.66E-06	1.1	10	0.25	70	0.85	1.22E-07	0.12		
254	21.77299	1.25E-04	2.71E-03	361	1	0.96	0.000001	9.39E-07	1.1	10	0.25	70	0.85	3.14E-08	0.03		
255	27.04687	1.25E-04	3.37E-03	361	1	0.96	0.000001	1.17E-06	1.1	10	0.25	70	0.85	3.90E-08	0.04		
256	34.71722	1.25E-04	4.33E-03	361	1	0.96	0.000001	1.50E-06	1.1	10	0.25	70	0.85	5.00E-08	0.05		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
257	45.23761	1.25E-04	5.64E-03	361	1	0.96	0.000001	1.95E-06	1.1	10	0.25	70	0.85	6.52E-08	0.07		
258	62.66449	1.25E-04	7.81E-03	361	1	0.96	0.000001	2.70E-06	1.1	10	0.25	70	0.85	9.03E-08	0.09		
259	91.47486	1.25E-04	1.14E-02	361	1	0.96	0.000001	3.95E-06	1.1	10	0.25	70	0.85	1.32E-07	0.13		
260	23.1793	1.25E-04	2.89E-03	361	1	0.96	0.000001	1.00E-06	1.1	10	0.25	70	0.85	3.34E-08	0.03		
261	28.76706	1.25E-04	3.58E-03	361	1	0.96	0.000001	1.24E-06	1.1	10	0.25	70	0.85	4.14E-08	0.04		
262	36.40289	1.25E-04	4.54E-03	361	1	0.96	0.000001	1.57E-06	1.1	10	0.25	70	0.85	5.24E-08	0.05		
263	46.75602	1.25E-04	5.83E-03	361	1	0.96	0.000001	2.02E-06	1.1	10	0.25	70	0.85	6.73E-08	0.07		
264	64.54317	1.25E-04	8.04E-03	361	1	0.96	0.000001	2.78E-06	1.1	10	0.25	70	0.85	9.30E-08	0.09		
265	23.87475	1.25E-04	2.97E-03	361	1	0.96	0.000001	1.03E-06	1.1	10	0.25	70	0.85	3.44E-08	0.03		
266	29.02426	1.25E-04	3.62E-03	361	1	0.96	0.000001	1.25E-06	1.1	10	0.25	70	0.85	4.18E-08	0.04		
267	35.48536	1.25E-04	4.42E-03	361	1	0.96	0.000001	1.53E-06	1.1	10	0.25	70	0.85	5.11E-08	0.05		
268	45.15515	1.25E-04	5.63E-03	361	1	0.96	0.000001	1.95E-06	1.1	10	0.25	70	0.85	6.50E-08	0.07		
269	58.03312	1.25E-04	7.23E-03	361	1	0.96	0.000001	2.50E-06	1.1	10	0.25	70	0.85	8.36E-08	0.08		
270	23.40747	1.25E-04	2.92E-03	361	1	0.96	0.000001	1.01E-06	1.1	10	0.25	70	0.85	3.37E-08	0.03		
271	27.55015	1.25E-04	3.43E-03	361	1	0.96	0.000001	1.19E-06	1.1	10	0.25	70	0.85	3.97E-08	0.04		
272	32.608	1.25E-04	4.06E-03	361	1	0.96	0.000001	1.41E-06	1.1	10	0.25	70	0.85	4.70E-08	0.05		
273	39.08403	1.25E-04	4.87E-03	361	1	0.96	0.000001	1.69E-06	1.1	10	0.25	70	0.85	5.63E-08	0.06		
274	18.94474	1.25E-04	2.36E-03	361	1	0.96	0.000001	8.17E-07	1.1	10	0.25	70	0.85	2.73E-08	0.03		
275	21.61125	1.25E-04	2.69E-03	361	1	0.96	0.000001	9.32E-07	1.1	10	0.25	70	0.85	3.11E-08	0.03		
276	24.64634	1.25E-04	3.07E-03	361	1	0.96	0.000001	1.06E-06	1.1	10	0.25	70	0.85	3.55E-08	0.04		
277	27.7939	1.25E-04	3.46E-03	361	1	0.96	0.000001	1.20E-06	1.1	10	0.25	70	0.85	4.00E-08	0.04		
278	31.32645	1.25E-04	3.90E-03	361	1	0.96	0.000001	1.35E-06	1.1	10	0.25	70	0.85	4.51E-08	0.05		
279	17.32953	1.25E-04	2.16E-03	361	1	0.96	0.000001	7.47E-07	1.1	10	0.25	70	0.85	2.50E-08	0.02		
280	19.23473	1.25E-04	2.40E-03	361	1	0.96	0.000001	8.30E-07	1.1	10	0.25	70	0.85	2.77E-08	0.03		
281	21.06063	1.25E-04	2.62E-03	361	1	0.96	0.000001	9.08E-07	1.1	10	0.25	70	0.85	3.03E-08	0.03		
282	23.22386	1.25E-04	2.89E-03	361	1	0.96	0.000001	1.00E-06	1.1	10	0.25	70	0.85	3.34E-08	0.03		
283	14.05531	1.25E-04	1.75E-03	361	1	0.96	0.000001	6.06E-07	1.1	10	0.25	70	0.85	2.02E-08	0.02		
284	15.33521	1.25E-04	1.91E-03	361	1	0.96	0.000001	6.61E-07	1.1	10	0.25	70	0.85	2.21E-08	0.02		
285	16.63518	1.25E-04	2.07E-03	361	1	0.96	0.000001	7.17E-07	1.1	10	0.25	70	0.85	2.40E-08	0.02		
286	17.94378	1.25E-04	2.24E-03	361	1	0.96	0.000001	7.74E-07	1.1	10	0.25	70	0.85	2.58E-08	0.03		
287	19.07174	1.25E-04	2.38E-03	361	1	0.96	0.000001	8.23E-07	1.1	10	0.25	70	0.85	2.75E-08	0.03		
288	11.7563	1.25E-04	1.46E-03	361	1	0.96	0.000001	5.07E-07	1.1	10	0.25	70	0.85	1.69E-08	0.02		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
289	12.6677	1.25E-04	1.58E-03	361	1	0.96	0.000001	5.46E-07	1.1	10	0.25	70	0.85	1.82E-08	0.02		
290	13.59915	1.25E-04	1.69E-03	361	1	0.96	0.000001	5.87E-07	1.1	10	0.25	70	0.85	1.96E-08	0.02		
291	14.52068	1.25E-04	1.81E-03	361	1	0.96	0.000001	6.26E-07	1.1	10	0.25	70	0.85	2.09E-08	0.02		
292	15.3158	1.25E-04	1.91E-03	361	1	0.96	0.000001	6.61E-07	1.1	10	0.25	70	0.85	2.21E-08	0.02		
293	9.90958	1.25E-04	1.23E-03	361	1	0.96	0.000001	4.27E-07	1.1	10	0.25	70	0.85	1.43E-08	0.01		
294	10.57824	1.25E-04	1.32E-03	361	1	0.96	0.000001	4.56E-07	1.1	10	0.25	70	0.85	1.52E-08	0.02		
295	11.24453	1.25E-04	1.40E-03	361	1	0.96	0.000001	4.85E-07	1.1	10	0.25	70	0.85	1.62E-08	0.02		
296	11.91522	1.25E-04	1.48E-03	361	1	0.96	0.000001	5.14E-07	1.1	10	0.25	70	0.85	1.72E-08	0.02		
297	12.54783	1.25E-04	1.56E-03	361	1	0.96	0.000001	5.41E-07	1.1	10	0.25	70	0.85	1.81E-08	0.02		
298	8.53916	1.25E-04	1.06E-03	361	1	0.96	0.000001	3.68E-07	1.1	10	0.25	70	0.85	1.23E-08	0.01		
299	9.04519	1.25E-04	1.13E-03	361	1	0.96	0.000001	3.90E-07	1.1	10	0.25	70	0.85	1.30E-08	0.01		
300	9.52957	1.25E-04	1.19E-03	361	1	0.96	0.000001	4.11E-07	1.1	10	0.25	70	0.85	1.37E-08	0.01		
301	10.04035	1.25E-04	1.25E-03	361	1	0.96	0.000001	4.33E-07	1.1	10	0.25	70	0.85	1.45E-08	0.01		
302	10.5582	1.25E-04	1.32E-03	361	1	0.96	0.000001	4.55E-07	1.1	10	0.25	70	0.85	1.52E-08	0.02		
303	10.90737	1.25E-04	1.36E-03	361	1	0.96	0.000001	4.70E-07	1.1	10	0.25	70	0.85	1.57E-08	0.02		
304	7.41564	1.25E-04	9.24E-04	361	1	0.96	0.000001	3.20E-07	1.1	10	0.25	70	0.85	1.07E-08	0.01		
305	7.81983	1.25E-04	9.74E-04	361	1	0.96	0.000001	3.37E-07	1.1	10	0.25	70	0.85	1.13E-08	0.01		
306	8.20297	1.25E-04	1.02E-03	361	1	0.96	0.000001	3.54E-07	1.1	10	0.25	70	0.85	1.18E-08	0.01		
307	8.61002	1.25E-04	1.07E-03	361	1	0.96	0.000001	3.71E-07	1.1	10	0.25	70	0.85	1.24E-08	0.01		
308	9.01487	1.25E-04	1.12E-03	361	1	0.96	0.000001	3.89E-07	1.1	10	0.25	70	0.85	1.30E-08	0.01		
309	9.30659	1.25E-04	1.16E-03	361	1	0.96	0.000001	4.01E-07	1.1	10	0.25	70	0.85	1.34E-08	0.01		
310	6.51643	1.25E-04	8.12E-04	361	1	0.96	0.000001	2.81E-07	1.1	10	0.25	70	0.85	9.39E-09	0.01		
311	6.84096	1.25E-04	8.52E-04	361	1	0.96	0.000001	2.95E-07	1.1	10	0.25	70	0.85	9.85E-09	0.01		
312	7.15393	1.25E-04	8.91E-04	361	1	0.96	0.000001	3.09E-07	1.1	10	0.25	70	0.85	1.03E-08	0.01		
313	7.49257	1.25E-04	9.34E-04	361	1	0.96	0.000001	3.23E-07	1.1	10	0.25	70	0.85	1.08E-08	0.01		
314	7.82028	1.25E-04	9.74E-04	361	1	0.96	0.000001	3.37E-07	1.1	10	0.25	70	0.85	1.13E-08	0.01		
315	8.07564	1.25E-04	1.01E-03	361	1	0.96	0.000001	3.48E-07	1.1	10	0.25	70	0.85	1.16E-08	0.01		
316	5.78642	1.25E-04	7.21E-04	361	1	0.96	0.000001	2.50E-07	1.1	10	0.25	70	0.85	8.33E-09	0.01		
317	6.04435	1.25E-04	7.53E-04	361	1	0.96	0.000001	2.61E-07	1.1	10	0.25	70	0.85	8.71E-09	0.01		
318	6.2875	1.25E-04	7.83E-04	361	1	0.96	0.000001	2.71E-07	1.1	10	0.25	70	0.85	9.06E-09	0.01		
319	6.55535	1.25E-04	8.17E-04	361	1	0.96	0.000001	2.83E-07	1.1	10	0.25	70	0.85	9.44E-09	0.01		
320	6.82818	1.25E-04	8.51E-04	361	1	0.96	0.000001	2.95E-07	1.1	10	0.25	70	0.85	9.83E-09	0.01		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester									(3rd Tri)	(Risk/Mill)
							Constant1	DOSE	CPF	ASF	ED	AT	FAH				
321	7.03723	1.25E-04	8.77E-04	361	1	0.96	0.000001	3.04E-07	1.1	10	0.25	70	0.85	1.01E-08	0.01		
322	7.20086	1.25E-04	8.97E-04	361	1	0.96	0.000001	3.11E-07	1.1	10	0.25	70	0.85	1.04E-08	0.01		
323	5.16543	1.25E-04	6.44E-04	361	1	0.96	0.000001	2.23E-07	1.1	10	0.25	70	0.85	7.44E-09	0.01		
324	5.38462	1.25E-04	6.71E-04	361	1	0.96	0.000001	2.32E-07	1.1	10	0.25	70	0.85	7.76E-09	0.01		
325	5.58713	1.25E-04	6.96E-04	361	1	0.96	0.000001	2.41E-07	1.1	10	0.25	70	0.85	8.05E-09	0.01		
326	5.80608	1.25E-04	7.23E-04	361	1	0.96	0.000001	2.50E-07	1.1	10	0.25	70	0.85	8.36E-09	0.01		
327	6.03663	1.25E-04	7.52E-04	361	1	0.96	0.000001	2.60E-07	1.1	10	0.25	70	0.85	8.69E-09	0.01		
328	6.22157	1.25E-04	7.75E-04	361	1	0.96	0.000001	2.68E-07	1.1	10	0.25	70	0.85	8.96E-09	0.01		
329	6.36627	1.25E-04	7.93E-04	361	1	0.96	0.000001	2.75E-07	1.1	10	0.25	70	0.85	9.17E-09	0.01		
330	4.63743	1.25E-04	5.78E-04	361	1	0.96	0.000001	2.00E-07	1.1	10	0.25	70	0.85	6.68E-09	0.01		
331	4.81607	1.25E-04	6.00E-04	361	1	0.96	0.000001	2.08E-07	1.1	10	0.25	70	0.85	6.94E-09	0.01		
332	5.00023	1.25E-04	6.23E-04	361	1	0.96	0.000001	2.16E-07	1.1	10	0.25	70	0.85	7.20E-09	0.01		
333	5.18714	1.25E-04	6.46E-04	361	1	0.96	0.000001	2.24E-07	1.1	10	0.25	70	0.85	7.47E-09	0.01		
334	5.36699	1.25E-04	6.69E-04	361	1	0.96	0.000001	2.31E-07	1.1	10	0.25	70	0.85	7.73E-09	0.01		
335	5.5303	1.25E-04	6.89E-04	361	1	0.96	0.000001	2.39E-07	1.1	10	0.25	70	0.85	7.96E-09	0.01		
336	5.67501	1.25E-04	7.07E-04	361	1	0.96	0.000001	2.45E-07	1.1	10	0.25	70	0.85	8.17E-09	0.01		
337	4.21299	1.25E-04	5.25E-04	361	1	0.96	0.000001	1.82E-07	1.1	10	0.25	70	0.85	6.07E-09	0.01		
338	4.36452	1.25E-04	5.44E-04	361	1	0.96	0.000001	1.88E-07	1.1	10	0.25	70	0.85	6.29E-09	0.01		
339	4.51769	1.25E-04	5.63E-04	361	1	0.96	0.000001	1.95E-07	1.1	10	0.25	70	0.85	6.51E-09	0.01		
340	4.67175	1.25E-04	5.82E-04	361	1	0.96	0.000001	2.01E-07	1.1	10	0.25	70	0.85	6.73E-09	0.01		
341	4.83601	1.25E-04	6.03E-04	361	1	0.96	0.000001	2.09E-07	1.1	10	0.25	70	0.85	6.97E-09	0.01		
342	4.9788	1.25E-04	6.20E-04	361	1	0.96	0.000001	2.15E-07	1.1	10	0.25	70	0.85	7.17E-09	0.01		
343	5.09828	1.25E-04	6.35E-04	361	1	0.96	0.000001	2.20E-07	1.1	10	0.25	70	0.85	7.34E-09	0.01		
344	3.83756	1.25E-04	4.78E-04	361	1	0.96	0.000001	1.66E-07	1.1	10	0.25	70	0.85	5.53E-09	0.01		
345	3.9676	1.25E-04	4.94E-04	361	1	0.96	0.000001	1.71E-07	1.1	10	0.25	70	0.85	5.71E-09	0.01		
346	4.09849	1.25E-04	5.11E-04	361	1	0.96	0.000001	1.77E-07	1.1	10	0.25	70	0.85	5.90E-09	0.01		
347	4.23582	1.25E-04	5.28E-04	361	1	0.96	0.000001	1.83E-07	1.1	10	0.25	70	0.85	6.10E-09	0.01		
348	4.36726	1.25E-04	5.44E-04	361	1	0.96	0.000001	1.88E-07	1.1	10	0.25	70	0.85	6.29E-09	0.01		
349	4.4884	1.25E-04	5.59E-04	361	1	0.96	0.000001	1.94E-07	1.1	10	0.25	70	0.85	6.46E-09	0.01		
350	4.60214	1.25E-04	5.73E-04	361	1	0.96	0.000001	1.98E-07	1.1	10	0.25	70	0.85	6.63E-09	0.01		
351	3.51033	1.25E-04	4.37E-04	361	1	0.96	0.000001	1.51E-07	1.1	10	0.25	70	0.85	5.06E-09	0.01		
352	3.62399	1.25E-04	4.52E-04	361	1	0.96	0.000001	1.56E-07	1.1	10	0.25	70	0.85	5.22E-09	0.01		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	Risk from 3rd Trimester								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
353	3.73471	1.25E-04	4.65E-04	361	1	0.96	0.000001	1.61E-07	1.1	10	0.25	70	0.85	5.38E-09	0.01
354	3.8488	1.25E-04	4.80E-04	361	1	0.96	0.000001	1.66E-07	1.1	10	0.25	70	0.85	5.54E-09	0.01
355	3.97228	1.25E-04	4.95E-04	361	1	0.96	0.000001	1.71E-07	1.1	10	0.25	70	0.85	5.72E-09	0.01
356	4.07973	1.25E-04	5.08E-04	361	1	0.96	0.000001	1.76E-07	1.1	10	0.25	70	0.85	5.88E-09	0.01
357	4.17704	1.25E-04	5.20E-04	361	1	0.96	0.000001	1.80E-07	1.1	10	0.25	70	0.85	6.02E-09	0.01
358	3.22247	1.25E-04	4.02E-04	361	1	0.96	0.000001	1.39E-07	1.1	10	0.25	70	0.85	4.64E-09	0.00
359	3.31967	1.25E-04	4.14E-04	361	1	0.96	0.000001	1.43E-07	1.1	10	0.25	70	0.85	4.78E-09	0.00
360	3.42211	1.25E-04	4.26E-04	361	1	0.96	0.000001	1.48E-07	1.1	10	0.25	70	0.85	4.93E-09	0.00
361	3.5243	1.25E-04	4.39E-04	361	1	0.96	0.000001	1.52E-07	1.1	10	0.25	70	0.85	5.08E-09	0.01
362	3.62789	1.25E-04	4.52E-04	361	1	0.96	0.000001	1.56E-07	1.1	10	0.25	70	0.85	5.23E-09	0.01
363	3.72178	1.25E-04	4.64E-04	361	1	0.96	0.000001	1.61E-07	1.1	10	0.25	70	0.85	5.36E-09	0.01
364	3.80963	1.25E-04	4.75E-04	361	1	0.96	0.000001	1.64E-07	1.1	10	0.25	70	0.85	5.49E-09	0.01
365	2.97816	1.25E-04	3.71E-04	361	1	0.96	0.000001	1.28E-07	1.1	10	0.25	70	0.85	4.29E-09	0.00
366	3.06234	1.25E-04	3.82E-04	361	1	0.96	0.000001	1.32E-07	1.1	10	0.25	70	0.85	4.41E-09	0.00
367	3.15057	1.25E-04	3.93E-04	361	1	0.96	0.000001	1.36E-07	1.1	10	0.25	70	0.85	4.54E-09	0.00
368	3.24124	1.25E-04	4.04E-04	361	1	0.96	0.000001	1.40E-07	1.1	10	0.25	70	0.85	4.67E-09	0.00
369	3.32899	1.25E-04	4.15E-04	361	1	0.96	0.000001	1.44E-07	1.1	10	0.25	70	0.85	4.79E-09	0.00
370	3.41643	1.25E-04	4.26E-04	361	1	0.96	0.000001	1.47E-07	1.1	10	0.25	70	0.85	4.92E-09	0.00
371	3.49163	1.25E-04	4.35E-04	361	1	0.96	0.000001	1.51E-07	1.1	10	0.25	70	0.85	5.03E-09	0.01
372	2.75686	1.25E-04	3.43E-04	361	1	0.96	0.000001	1.19E-07	1.1	10	0.25	70	0.85	3.97E-09	0.00
373	2.83193	1.25E-04	3.53E-04	361	1	0.96	0.000001	1.22E-07	1.1	10	0.25	70	0.85	4.08E-09	0.00
374	2.90869	1.25E-04	3.62E-04	361	1	0.96	0.000001	1.25E-07	1.1	10	0.25	70	0.85	4.19E-09	0.00
375	2.98837	1.25E-04	3.72E-04	361	1	0.96	0.000001	1.29E-07	1.1	10	0.25	70	0.85	4.30E-09	0.00
376	3.06602	1.25E-04	3.82E-04	361	1	0.96	0.000001	1.32E-07	1.1	10	0.25	70	0.85	4.42E-09	0.00
377	3.14456	1.25E-04	3.92E-04	361	1	0.96	0.000001	1.36E-07	1.1	10	0.25	70	0.85	4.53E-09	0.00
378	3.21348	1.25E-04	4.00E-04	361	1	0.96	0.000001	1.39E-07	1.1	10	0.25	70	0.85	4.63E-09	0.00
379	26.13406	1.25E-04	3.26E-03	361	1	0.96	0.000001	1.13E-06	1.1	10	0.25	70	0.85	3.76E-08	0.04
380	26.51349	1.25E-04	3.30E-03	361	1	0.96	0.000001	1.14E-06	1.1	10	0.25	70	0.85	3.82E-08	0.04
381	22.46641	1.25E-04	2.80E-03	361	1	0.96	0.000001	9.69E-07	1.1	10	0.25	70	0.85	3.24E-08	0.03
382	21.69199	1.25E-04	2.70E-03	361	1	0.96	0.000001	9.36E-07	1.1	10	0.25	70	0.85	3.12E-08	0.03
383	18.21719	1.25E-04	2.27E-03	361	1	0.96	0.000001	7.86E-07	1.1	10	0.25	70	0.85	2.62E-08	0.03
384	15.38697	1.25E-04	1.92E-03	361	1	0.96	0.000001	6.64E-07	1.1	10	0.25	70	0.85	2.22E-08	0.02

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Receptor #	Conc	g/sec	Cair	DBR	A	EF	<i>Risk from 3rd Trimester</i>								
							Constant1	DOSE	CPF	ASF	ED	AT	FAH	(3rd Tri)	(Risk/Mill)
385	13.40161	1.25E-04	1.67E-03	361	1	0.96	0.000001	5.78E-07	1.1	10	0.25	70	0.85	1.93E-08	0.02
386	11.4762	1.25E-04	1.43E-03	361	1	0.96	0.000001	4.95E-07	1.1	10	0.25	70	0.85	1.65E-08	0.02
387	10.0255	1.25E-04	1.25E-03	361	1	0.96	0.000001	4.32E-07	1.1	10	0.25	70	0.85	1.44E-08	0.01
388	8.89918	1.25E-04	1.11E-03	361	1	0.96	0.000001	3.84E-07	1.1	10	0.25	70	0.85	1.28E-08	0.01
389	7.97844	1.25E-04	9.94E-04	361	1	0.96	0.000001	3.44E-07	1.1	10	0.25	70	0.85	1.15E-08	0.01
390	7.28899	1.25E-04	9.08E-04	361	1	0.96	0.000001	3.14E-07	1.1	10	0.25	70	0.85	1.05E-08	0.01

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total		
1	1.19E-05	1.27E-05	1090	1	0.96	0.000001	1.33E-08	1.1	10	0.112	70	0.85	2.00E-10	0.00	0.00174	Max 0.149
2	1.19E-05	1.38E-05	1090	1	0.96	0.000001	1.44E-08	1.1	10	0.112	70	0.85	2.16E-10	0.00	0.001882	
3	1.19E-05	1.24E-05	1090	1	0.96	0.000001	1.30E-08	1.1	10	0.112	70	0.85	1.95E-10	0.00	0.001695	
4	1.19E-05	1.35E-05	1090	1	0.96	0.000001	1.41E-08	1.1	10	0.112	70	0.85	2.11E-10	0.00	0.001843	
5	1.19E-05	1.47E-05	1090	1	0.96	0.000001	1.54E-08	1.1	10	0.112	70	0.85	2.30E-10	0.00	0.002007	
6	1.19E-05	1.60E-05	1090	1	0.96	0.000001	1.67E-08	1.1	10	0.112	70	0.85	2.51E-10	0.00	0.002188	
7	1.19E-05	1.31E-05	1090	1	0.96	0.000001	1.37E-08	1.1	10	0.112	70	0.85	2.05E-10	0.00	0.001785	
8	1.19E-05	1.43E-05	1090	1	0.96	0.000001	1.49E-08	1.1	10	0.112	70	0.85	2.24E-10	0.00	0.001949	
9	1.19E-05	1.56E-05	1090	1	0.96	0.000001	1.63E-08	1.1	10	0.112	70	0.85	2.45E-10	0.00	0.002135	
10	1.19E-05	1.72E-05	1090	1	0.96	0.000001	1.79E-08	1.1	10	0.112	70	0.85	2.69E-10	0.00	0.002345	
11	1.19E-05	1.89E-05	1090	1	0.96	0.000001	1.98E-08	1.1	10	0.112	70	0.85	2.97E-10	0.00	0.002585	
12	1.19E-05	1.50E-05	1090	1	0.96	0.000001	1.57E-08	1.1	10	0.112	70	0.85	2.35E-10	0.00	0.002052	
13	1.19E-05	1.65E-05	1090	1	0.96	0.000001	1.73E-08	1.1	10	0.112	70	0.85	2.60E-10	0.00	0.002261	
14	1.19E-05	1.83E-05	1090	1	0.96	0.000001	1.91E-08	1.1	10	0.112	70	0.85	2.87E-10	0.00	0.002504	
15	1.19E-05	2.04E-05	1090	1	0.96	0.000001	2.13E-08	1.1	10	0.112	70	0.85	3.19E-10	0.00	0.002784	
16	1.19E-05	2.27E-05	1090	1	0.96	0.000001	2.37E-08	1.1	10	0.112	70	0.85	3.56E-10	0.00	0.003102	
17	1.19E-05	1.75E-05	1090	1	0.96	0.000001	1.83E-08	1.1	10	0.112	70	0.85	2.74E-10	0.00	0.00239	
18	1.19E-05	1.95E-05	1090	1	0.96	0.000001	2.04E-08	1.1	10	0.112	70	0.85	3.06E-10	0.00	0.002668	
19	1.19E-05	2.19E-05	1090	1	0.96	0.000001	2.29E-08	1.1	10	0.112	70	0.85	3.43E-10	0.00	0.002991	
20	1.19E-05	2.47E-05	1090	1	0.96	0.000001	2.58E-08	1.1	10	0.112	70	0.85	3.87E-10	0.00	0.00337	
21	1.19E-05	2.80E-05	1090	1	0.96	0.000001	2.92E-08	1.1	10	0.112	70	0.85	4.39E-10	0.00	0.003822	
22	1.19E-05	2.07E-05	1090	1	0.96	0.000001	2.16E-08	1.1	10	0.112	70	0.85	3.24E-10	0.00	0.002826	
23	1.19E-05	2.34E-05	1090	1	0.96	0.000001	2.45E-08	1.1	10	0.112	70	0.85	3.67E-10	0.00	0.003198	
24	1.19E-05	2.66E-05	1090	1	0.96	0.000001	2.78E-08	1.1	10	0.112	70	0.85	4.18E-10	0.00	0.003639	
25	1.19E-05	3.06E-05	1090	1	0.96	0.000001	3.20E-08	1.1	10	0.112	70	0.85	4.80E-10	0.00	0.004182	
26	1.19E-05	3.54E-05	1090	1	0.96	0.000001	3.70E-08	1.1	10	0.112	70	0.85	5.55E-10	0.00	0.00484	
27	1.19E-05	2.48E-05	1090	1	0.96	0.000001	2.60E-08	1.1	10	0.112	70	0.85	3.90E-10	0.00	0.003395	
28	1.19E-05	2.86E-05	1090	1	0.96	0.000001	2.98E-08	1.1	10	0.112	70	0.85	4.48E-10	0.00	0.003903	
29	1.19E-05	3.33E-05	1090	1	0.96	0.000001	3.48E-08	1.1	10	0.112	70	0.85	5.22E-10	0.00	0.004546	
30	1.19E-05	3.92E-05	1090	1	0.96	0.000001	4.10E-08	1.1	10	0.112	70	0.85	6.15E-10	0.00	0.005359	
31	1.19E-05	4.68E-05	1090	1	0.96	0.000001	4.89E-08	1.1	10	0.112	70	0.85	7.34E-10	0.00	0.006398	
32	1.19E-05	3.04E-05	1090	1	0.96	0.000001	3.18E-08	1.1	10	0.112	70	0.85	4.76E-10	0.00	0.004152	

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
33	1.19E-05	3.58E-05	1090	1	0.96	0.000001	3.74E-08	1.1	10	0.112	70	0.85	5.61E-10	0.004888
34	1.19E-05	4.28E-05	1090	1	0.96	0.000001	4.48E-08	1.1	10	0.112	70	0.85	6.72E-10	0.005855
35	1.19E-05	5.22E-05	1090	1	0.96	0.000001	5.46E-08	1.1	10	0.112	70	0.85	8.18E-10	0.007133
36	1.19E-05	6.54E-05	1090	1	0.96	0.000001	6.83E-08	1.1	10	0.112	70	0.85	1.03E-09	0.008934
37	1.19E-05	3.80E-05	1090	1	0.96	0.000001	3.97E-08	1.1	10	0.112	70	0.85	5.96E-10	0.005192
38	1.19E-05	4.61E-05	1090	1	0.96	0.000001	4.82E-08	1.1	10	0.112	70	0.85	7.23E-10	0.006297
39	1.19E-05	5.73E-05	1090	1	0.96	0.000001	5.99E-08	1.1	10	0.112	70	0.85	8.98E-10	0.007827
40	1.19E-05	7.37E-05	1090	1	0.96	0.000001	7.71E-08	1.1	10	0.112	70	0.85	1.16E-09	0.010076
41	1.19E-05	4.90E-05	1090	1	0.96	0.000001	5.12E-08	1.1	10	0.112	70	0.85	7.68E-10	0.00669
42	1.19E-05	6.17E-05	1090	1	0.96	0.000001	6.45E-08	1.1	10	0.112	70	0.85	9.68E-10	0.008433
43	1.19E-05	8.08E-05	1090	1	0.96	0.000001	8.45E-08	1.1	10	0.112	70	0.85	1.27E-09	0.011047
44	1.19E-05	1.12E-04	1090	1	0.96	0.000001	1.17E-07	1.1	10	0.112	70	0.85	1.76E-09	0.015305
45	1.19E-05	6.46E-05	1090	1	0.96	0.000001	6.75E-08	1.1	10	0.112	70	0.85	1.01E-09	0.008822
46	1.19E-05	8.53E-05	1090	1	0.96	0.000001	8.92E-08	1.1	10	0.112	70	0.85	1.34E-09	0.011664
47	1.19E-05	1.20E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.88E-09	0.016368
48	1.19E-05	1.84E-04	1090	1	0.96	0.000001	1.92E-07	1.1	10	0.112	70	0.85	2.88E-09	0.025114
49	1.19E-05	1.20E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.88E-09	0.016362
50	1.19E-05	1.76E-04	1090	1	0.96	0.000001	1.84E-07	1.1	10	0.112	70	0.85	2.77E-09	0.024103
51	1.19E-05	1.12E-04	1090	1	0.96	0.000001	1.17E-07	1.1	10	0.112	70	0.85	1.76E-09	0.015348
52	1.19E-05	1.56E-04	1090	1	0.96	0.000001	1.64E-07	1.1	10	0.112	70	0.85	2.45E-09	0.021386
53	1.19E-05	2.28E-04	1090	1	0.96	0.000001	2.38E-07	1.1	10	0.112	70	0.85	3.57E-09	0.03115
54	1.19E-05	1.01E-04	1090	1	0.96	0.000001	1.05E-07	1.1	10	0.112	70	0.85	1.58E-09	0.01376
55	1.19E-05	1.33E-04	1090	1	0.96	0.000001	1.39E-07	1.1	10	0.112	70	0.85	2.08E-09	0.018147
56	1.19E-05	1.81E-04	1090	1	0.96	0.000001	1.89E-07	1.1	10	0.112	70	0.85	2.83E-09	0.024679
57	1.19E-05	2.52E-04	1090	1	0.96	0.000001	2.64E-07	1.1	10	0.112	70	0.85	3.96E-09	0.034473
58	1.19E-05	8.73E-05	1090	1	0.96	0.000001	9.12E-08	1.1	10	0.112	70	0.85	1.37E-09	0.011929
59	1.19E-05	1.10E-04	1090	1	0.96	0.000001	1.15E-07	1.1	10	0.112	70	0.85	1.73E-09	0.015036
60	1.19E-05	1.41E-04	1090	1	0.96	0.000001	1.47E-07	1.1	10	0.112	70	0.85	2.20E-09	0.01921
61	1.19E-05	1.82E-04	1090	1	0.96	0.000001	1.90E-07	1.1	10	0.112	70	0.85	2.85E-09	0.024833
62	1.19E-05	7.48E-05	1090	1	0.96	0.000001	7.82E-08	1.1	10	0.112	70	0.85	1.17E-09	0.010222
63	1.19E-05	9.02E-05	1090	1	0.96	0.000001	9.43E-08	1.1	10	0.112	70	0.85	1.41E-09	0.012325
64	1.19E-05	1.09E-04	1090	1	0.96	0.000001	1.14E-07	1.1	10	0.112	70	0.85	1.71E-09	0.014895

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
65	1.19E-05	1.32E-04	1090	1	0.96	0.000001	1.38E-07	1.1	10	0.112	70	0.85	2.07E-09	0.00	0.018002
66	1.19E-05	1.58E-04	1090	1	0.96	0.000001	1.66E-07	1.1	10	0.112	70	0.85	2.49E-09	0.00	0.02166
67	1.19E-05	6.33E-05	1090	1	0.96	0.000001	6.61E-08	1.1	10	0.112	70	0.85	9.92E-10	0.00	0.008645
68	1.19E-05	7.36E-05	1090	1	0.96	0.000001	7.70E-08	1.1	10	0.112	70	0.85	1.15E-09	0.00	0.010065
69	1.19E-05	8.55E-05	1090	1	0.96	0.000001	8.94E-08	1.1	10	0.112	70	0.85	1.34E-09	0.00	0.011691
70	1.19E-05	9.87E-05	1090	1	0.96	0.000001	1.03E-07	1.1	10	0.112	70	0.85	1.55E-09	0.00	0.01349
71	1.19E-05	1.13E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.78E-09	0.00	0.015499
72	1.19E-05	5.36E-05	1090	1	0.96	0.000001	5.60E-08	1.1	10	0.112	70	0.85	8.40E-10	0.00	0.007319
73	1.19E-05	6.06E-05	1090	1	0.96	0.000001	6.34E-08	1.1	10	0.112	70	0.85	9.51E-10	0.00	0.008287
74	1.19E-05	6.85E-05	1090	1	0.96	0.000001	7.16E-08	1.1	10	0.112	70	0.85	1.07E-09	0.00	0.009358
75	1.19E-05	7.66E-05	1090	1	0.96	0.000001	8.01E-08	1.1	10	0.112	70	0.85	1.20E-09	0.00	0.010473
76	1.19E-05	8.56E-05	1090	1	0.96	0.000001	8.94E-08	1.1	10	0.112	70	0.85	1.34E-09	0.00	0.011693
77	1.19E-05	4.56E-05	1090	1	0.96	0.000001	4.76E-08	1.1	10	0.112	70	0.85	7.15E-10	0.00	0.006227
78	1.19E-05	5.05E-05	1090	1	0.96	0.000001	5.28E-08	1.1	10	0.112	70	0.85	7.92E-10	0.00	0.006902
79	1.19E-05	5.58E-05	1090	1	0.96	0.000001	5.84E-08	1.1	10	0.112	70	0.85	8.76E-10	0.00	0.007631
80	1.19E-05	6.12E-05	1090	1	0.96	0.000001	6.40E-08	1.1	10	0.112	70	0.85	9.60E-10	0.00	0.008363
81	1.19E-05	6.70E-05	1090	1	0.96	0.000001	7.00E-08	1.1	10	0.112	70	0.85	1.05E-09	0.00	0.009157
82	1.19E-05	3.91E-05	1090	1	0.96	0.000001	4.09E-08	1.1	10	0.112	70	0.85	6.13E-10	0.00	0.005343
83	1.19E-05	4.26E-05	1090	1	0.96	0.000001	4.46E-08	1.1	10	0.112	70	0.85	6.69E-10	0.00	0.005827
84	1.19E-05	4.63E-05	1090	1	0.96	0.000001	4.84E-08	1.1	10	0.112	70	0.85	7.26E-10	0.00	0.006323
85	1.19E-05	5.00E-05	1090	1	0.96	0.000001	5.23E-08	1.1	10	0.112	70	0.85	7.84E-10	0.00	0.006836
86	1.19E-05	5.40E-05	1090	1	0.96	0.000001	5.64E-08	1.1	10	0.112	70	0.85	8.47E-10	0.00	0.007377
87	1.19E-05	3.38E-05	1090	1	0.96	0.000001	3.53E-08	1.1	10	0.112	70	0.85	5.30E-10	0.00	0.00462
88	1.19E-05	3.64E-05	1090	1	0.96	0.000001	3.81E-08	1.1	10	0.112	70	0.85	5.71E-10	0.00	0.004977
89	1.19E-05	3.91E-05	1090	1	0.96	0.000001	4.08E-08	1.1	10	0.112	70	0.85	6.12E-10	0.00	0.005337
90	1.19E-05	4.19E-05	1090	1	0.96	0.000001	4.38E-08	1.1	10	0.112	70	0.85	6.57E-10	0.00	0.005725
91	1.19E-05	4.48E-05	1090	1	0.96	0.000001	4.68E-08	1.1	10	0.112	70	0.85	7.02E-10	0.00	0.00612
92	1.19E-05	2.95E-05	1090	1	0.96	0.000001	3.08E-08	1.1	10	0.112	70	0.85	4.63E-10	0.00	0.004033
93	1.19E-05	3.15E-05	1090	1	0.96	0.000001	3.29E-08	1.1	10	0.112	70	0.85	4.94E-10	0.00	0.004302
94	1.19E-05	3.35E-05	1090	1	0.96	0.000001	3.50E-08	1.1	10	0.112	70	0.85	5.25E-10	0.00	0.004574
95	1.19E-05	3.56E-05	1090	1	0.96	0.000001	3.72E-08	1.1	10	0.112	70	0.85	5.58E-10	0.00	0.004859
96	1.19E-05	3.77E-05	1090	1	0.96	0.000001	3.94E-08	1.1	10	0.112	70	0.85	5.92E-10	0.00	0.005156

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
97	1.19E-05	2.60E-05	1090	1	0.96	0.000001	2.71E-08	1.1	10	0.112	70	0.85	4.07E-10	0.003547
98	1.19E-05	2.75E-05	1090	1	0.96	0.000001	2.87E-08	1.1	10	0.112	70	0.85	4.31E-10	0.003757
99	1.19E-05	2.90E-05	1090	1	0.96	0.000001	3.04E-08	1.1	10	0.112	70	0.85	4.55E-10	0.003969
100	1.19E-05	3.06E-05	1090	1	0.96	0.000001	3.20E-08	1.1	10	0.112	70	0.85	4.80E-10	0.004184
101	1.19E-05	3.23E-05	1090	1	0.96	0.000001	3.38E-08	1.1	10	0.112	70	0.85	5.07E-10	0.004415
102	1.19E-05	1.22E-05	1090	1	0.96	0.000001	1.27E-08	1.1	10	0.112	70	0.85	1.91E-10	0.001666
103	1.19E-05	1.23E-05	1090	1	0.96	0.000001	1.28E-08	1.1	10	0.112	70	0.85	1.93E-10	0.001678
104	1.19E-05	1.27E-05	1090	1	0.96	0.000001	1.33E-08	1.1	10	0.112	70	0.85	1.99E-10	0.001733
105	1.19E-05	1.23E-05	1090	1	0.96	0.000001	1.29E-08	1.1	10	0.112	70	0.85	1.93E-10	0.001681
106	1.19E-05	1.27E-05	1090	1	0.96	0.000001	1.33E-08	1.1	10	0.112	70	0.85	2.00E-10	0.001741
107	1.19E-05	1.32E-05	1090	1	0.96	0.000001	1.38E-08	1.1	10	0.112	70	0.85	2.06E-10	0.001799
108	1.19E-05	1.36E-05	1090	1	0.96	0.000001	1.42E-08	1.1	10	0.112	70	0.85	2.13E-10	0.001858
109	1.19E-05	1.28E-05	1090	1	0.96	0.000001	1.33E-08	1.1	10	0.112	70	0.85	2.00E-10	0.001743
110	1.19E-05	1.32E-05	1090	1	0.96	0.000001	1.38E-08	1.1	10	0.112	70	0.85	2.07E-10	0.001804
111	1.19E-05	1.37E-05	1090	1	0.96	0.000001	1.43E-08	1.1	10	0.112	70	0.85	2.14E-10	0.001867
112	1.19E-05	1.41E-05	1090	1	0.96	0.000001	1.48E-08	1.1	10	0.112	70	0.85	2.22E-10	0.001933
113	1.19E-05	1.46E-05	1090	1	0.96	0.000001	1.53E-08	1.1	10	0.112	70	0.85	2.29E-10	0.001998
114	1.19E-05	1.27E-05	1090	1	0.96	0.000001	1.33E-08	1.1	10	0.112	70	0.85	2.00E-10	0.001739
115	1.19E-05	1.32E-05	1090	1	0.96	0.000001	1.38E-08	1.1	10	0.112	70	0.85	2.07E-10	0.001803
116	1.19E-05	1.37E-05	1090	1	0.96	0.000001	1.43E-08	1.1	10	0.112	70	0.85	2.15E-10	0.00187
117	1.19E-05	1.42E-05	1090	1	0.96	0.000001	1.48E-08	1.1	10	0.112	70	0.85	2.23E-10	0.001939
118	1.19E-05	1.47E-05	1090	1	0.96	0.000001	1.54E-08	1.1	10	0.112	70	0.85	2.31E-10	0.00201
119	1.19E-05	1.53E-05	1090	1	0.96	0.000001	1.59E-08	1.1	10	0.112	70	0.85	2.39E-10	0.002085
120	1.19E-05	1.58E-05	1090	1	0.96	0.000001	1.65E-08	1.1	10	0.112	70	0.85	2.48E-10	0.002158
121	1.19E-05	1.27E-05	1090	1	0.96	0.000001	1.32E-08	1.1	10	0.112	70	0.85	1.98E-10	0.001729
122	1.19E-05	1.31E-05	1090	1	0.96	0.000001	1.37E-08	1.1	10	0.112	70	0.85	2.06E-10	0.001796
123	1.19E-05	1.37E-05	1090	1	0.96	0.000001	1.43E-08	1.1	10	0.112	70	0.85	2.14E-10	0.001865
124	1.19E-05	1.42E-05	1090	1	0.96	0.000001	1.48E-08	1.1	10	0.112	70	0.85	2.22E-10	0.001938
125	1.19E-05	1.47E-05	1090	1	0.96	0.000001	1.54E-08	1.1	10	0.112	70	0.85	2.31E-10	0.002013
126	1.19E-05	1.53E-05	1090	1	0.96	0.000001	1.60E-08	1.1	10	0.112	70	0.85	2.40E-10	0.00209
127	1.19E-05	1.59E-05	1090	1	0.96	0.000001	1.66E-08	1.1	10	0.112	70	0.85	2.49E-10	0.002172
128	1.19E-05	1.65E-05	1090	1	0.96	0.000001	1.72E-08	1.1	10	0.112	70	0.85	2.58E-10	0.002252

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
129	1.19E-05	1.41E-05	1090	1	0.96	0.000001	1.48E-08	1.1	10	0.112	70	0.85	2.21E-10	0.001929
130	1.19E-05	1.47E-05	1090	1	0.96	0.000001	1.54E-08	1.1	10	0.112	70	0.85	2.30E-10	0.002008
131	1.19E-05	1.53E-05	1090	1	0.96	0.000001	1.60E-08	1.1	10	0.112	70	0.85	2.40E-10	0.002089
132	1.19E-05	1.59E-05	1090	1	0.96	0.000001	1.66E-08	1.1	10	0.112	70	0.85	2.49E-10	0.002174
133	1.19E-05	1.65E-05	1090	1	0.96	0.000001	1.73E-08	1.1	10	0.112	70	0.85	2.59E-10	0.002261
134	1.19E-05	1.72E-05	1090	1	0.96	0.000001	1.80E-08	1.1	10	0.112	70	0.85	2.70E-10	0.002353
135	1.19E-05	1.79E-05	1090	1	0.96	0.000001	1.87E-08	1.1	10	0.112	70	0.85	2.81E-10	0.002448
136	1.19E-05	1.52E-05	1090	1	0.96	0.000001	1.59E-08	1.1	10	0.112	70	0.85	2.39E-10	0.00208
137	1.19E-05	1.59E-05	1090	1	0.96	0.000001	1.66E-08	1.1	10	0.112	70	0.85	2.49E-10	0.002168
138	1.19E-05	1.65E-05	1090	1	0.96	0.000001	1.73E-08	1.1	10	0.112	70	0.85	2.59E-10	0.002261
139	1.19E-05	1.72E-05	1090	1	0.96	0.000001	1.80E-08	1.1	10	0.112	70	0.85	2.70E-10	0.002354
140	1.19E-05	1.80E-05	1090	1	0.96	0.000001	1.88E-08	1.1	10	0.112	70	0.85	2.82E-10	0.002458
141	1.19E-05	1.88E-05	1090	1	0.96	0.000001	1.96E-08	1.1	10	0.112	70	0.85	2.94E-10	0.002565
142	1.19E-05	1.95E-05	1090	1	0.96	0.000001	2.04E-08	1.1	10	0.112	70	0.85	3.07E-10	0.002671
143	1.19E-05	1.65E-05	1090	1	0.96	0.000001	1.72E-08	1.1	10	0.112	70	0.85	2.58E-10	0.002249
144	1.19E-05	1.72E-05	1090	1	0.96	0.000001	1.80E-08	1.1	10	0.112	70	0.85	2.70E-10	0.00235
145	1.19E-05	1.79E-05	1090	1	0.96	0.000001	1.88E-08	1.1	10	0.112	70	0.85	2.81E-10	0.002452
146	1.19E-05	1.88E-05	1090	1	0.96	0.000001	1.96E-08	1.1	10	0.112	70	0.85	2.95E-10	0.002567
147	1.19E-05	1.96E-05	1090	1	0.96	0.000001	2.05E-08	1.1	10	0.112	70	0.85	3.08E-10	0.002684
148	1.19E-05	2.05E-05	1090	1	0.96	0.000001	2.14E-08	1.1	10	0.112	70	0.85	3.22E-10	0.002805
149	1.19E-05	1.79E-05	1090	1	0.96	0.000001	1.87E-08	1.1	10	0.112	70	0.85	2.80E-10	0.002441
150	1.19E-05	1.87E-05	1090	1	0.96	0.000001	1.95E-08	1.1	10	0.112	70	0.85	2.93E-10	0.002554
151	1.19E-05	1.96E-05	1090	1	0.96	0.000001	2.05E-08	1.1	10	0.112	70	0.85	3.08E-10	0.00268
152	1.19E-05	2.06E-05	1090	1	0.96	0.000001	2.15E-08	1.1	10	0.112	70	0.85	3.22E-10	0.002809
153	1.19E-05	2.15E-05	1090	1	0.96	0.000001	2.25E-08	1.1	10	0.112	70	0.85	3.38E-10	0.002941
154	1.19E-05	2.26E-05	1090	1	0.96	0.000001	2.36E-08	1.1	10	0.112	70	0.85	3.54E-10	0.003086
155	1.19E-05	1.95E-05	1090	1	0.96	0.000001	2.03E-08	1.1	10	0.112	70	0.85	3.05E-10	0.002661
156	1.19E-05	2.05E-05	1090	1	0.96	0.000001	2.14E-08	1.1	10	0.112	70	0.85	3.21E-10	0.002796
157	1.19E-05	2.15E-05	1090	1	0.96	0.000001	2.25E-08	1.1	10	0.112	70	0.85	3.37E-10	0.002938
158	1.19E-05	2.26E-05	1090	1	0.96	0.000001	2.36E-08	1.1	10	0.112	70	0.85	3.54E-10	0.003088
159	1.19E-05	2.38E-05	1090	1	0.96	0.000001	2.48E-08	1.1	10	0.112	70	0.85	3.73E-10	0.003249
160	1.19E-05	2.50E-05	1090	1	0.96	0.000001	2.61E-08	1.1	10	0.112	70	0.85	3.92E-10	0.003414

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
161	1.19E-05	2.13E-05	1090	1	0.96	0.000001	2.23E-08	1.1	10	0.112	70	0.85	3.35E-10	0.00	0.002917
162	1.19E-05	2.25E-05	1090	1	0.96	0.000001	2.35E-08	1.1	10	0.112	70	0.85	3.53E-10	0.00	0.003072
163	1.19E-05	2.37E-05	1090	1	0.96	0.000001	2.48E-08	1.1	10	0.112	70	0.85	3.72E-10	0.00	0.00324
164	1.19E-05	2.50E-05	1090	1	0.96	0.000001	2.61E-08	1.1	10	0.112	70	0.85	3.92E-10	0.00	0.003418
165	1.19E-05	2.64E-05	1090	1	0.96	0.000001	2.76E-08	1.1	10	0.112	70	0.85	4.14E-10	0.00	0.003605
166	1.19E-05	2.78E-05	1090	1	0.96	0.000001	2.91E-08	1.1	10	0.112	70	0.85	4.36E-10	0.00	0.003804
167	1.19E-05	2.35E-05	1090	1	0.96	0.000001	2.46E-08	1.1	10	0.112	70	0.85	3.68E-10	0.00	0.00321
168	1.19E-05	2.49E-05	1090	1	0.96	0.000001	2.60E-08	1.1	10	0.112	70	0.85	3.90E-10	0.00	0.003402
169	1.19E-05	2.64E-05	1090	1	0.96	0.000001	2.75E-08	1.1	10	0.112	70	0.85	4.13E-10	0.00	0.003601
170	1.19E-05	2.79E-05	1090	1	0.96	0.000001	2.92E-08	1.1	10	0.112	70	0.85	4.38E-10	0.00	0.003813
171	1.19E-05	2.95E-05	1090	1	0.96	0.000001	3.09E-08	1.1	10	0.112	70	0.85	4.63E-10	0.00	0.004037
172	1.19E-05	3.12E-05	1090	1	0.96	0.000001	3.27E-08	1.1	10	0.112	70	0.85	4.90E-10	0.00	0.00427
173	1.19E-05	2.61E-05	1090	1	0.96	0.000001	2.73E-08	1.1	10	0.112	70	0.85	4.09E-10	0.00	0.003565
174	1.19E-05	2.77E-05	1090	1	0.96	0.000001	2.90E-08	1.1	10	0.112	70	0.85	4.34E-10	0.00	0.003786
175	1.19E-05	2.95E-05	1090	1	0.96	0.000001	3.08E-08	1.1	10	0.112	70	0.85	4.62E-10	0.00	0.004025
176	1.19E-05	3.13E-05	1090	1	0.96	0.000001	3.27E-08	1.1	10	0.112	70	0.85	4.91E-10	0.00	0.004281
177	1.19E-05	3.33E-05	1090	1	0.96	0.000001	3.48E-08	1.1	10	0.112	70	0.85	5.22E-10	0.00	0.004549
178	1.19E-05	2.91E-05	1090	1	0.96	0.000001	3.04E-08	1.1	10	0.112	70	0.85	4.56E-10	0.00	0.003978
179	1.19E-05	3.10E-05	1090	1	0.96	0.000001	3.24E-08	1.1	10	0.112	70	0.85	4.87E-10	0.00	0.004243
180	1.19E-05	3.32E-05	1090	1	0.96	0.000001	3.47E-08	1.1	10	0.112	70	0.85	5.21E-10	0.00	0.004538
181	1.19E-05	3.54E-05	1090	1	0.96	0.000001	3.70E-08	1.1	10	0.112	70	0.85	5.56E-10	0.00	0.004844
182	1.19E-05	3.80E-05	1090	1	0.96	0.000001	3.97E-08	1.1	10	0.112	70	0.85	5.95E-10	0.00	0.005187
183	1.19E-05	3.28E-05	1090	1	0.96	0.000001	3.42E-08	1.1	10	0.112	70	0.85	5.14E-10	0.00	0.004478
184	1.19E-05	3.51E-05	1090	1	0.96	0.000001	3.67E-08	1.1	10	0.112	70	0.85	5.51E-10	0.00	0.004798
185	1.19E-05	3.77E-05	1090	1	0.96	0.000001	3.94E-08	1.1	10	0.112	70	0.85	5.92E-10	0.00	0.005158
186	1.19E-05	4.06E-05	1090	1	0.96	0.000001	4.25E-08	1.1	10	0.112	70	0.85	6.37E-10	0.00	0.005554
187	1.19E-05	4.38E-05	1090	1	0.96	0.000001	4.57E-08	1.1	10	0.112	70	0.85	6.86E-10	0.00	0.00598
188	1.19E-05	3.72E-05	1090	1	0.96	0.000001	3.89E-08	1.1	10	0.112	70	0.85	5.83E-10	0.00	0.005081
189	1.19E-05	4.02E-05	1090	1	0.96	0.000001	4.20E-08	1.1	10	0.112	70	0.85	6.31E-10	0.00	0.005497
190	1.19E-05	4.35E-05	1090	1	0.96	0.000001	4.54E-08	1.1	10	0.112	70	0.85	6.82E-10	0.00	0.00594
191	1.19E-05	4.72E-05	1090	1	0.96	0.000001	4.93E-08	1.1	10	0.112	70	0.85	7.40E-10	0.00	0.006446
192	1.19E-05	5.11E-05	1090	1	0.96	0.000001	5.34E-08	1.1	10	0.112	70	0.85	8.02E-10	0.00	0.006987

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total
193	1.19E-05	4.27E-05	1090	1	0.96	0.000001	4.46E-08	1.1	10	0.112	70	0.85	6.70E-10	0.005838
194	1.19E-05	4.66E-05	1090	1	0.96	0.000001	4.87E-08	1.1	10	0.112	70	0.85	7.30E-10	0.006364
195	1.19E-05	5.07E-05	1090	1	0.96	0.000001	5.30E-08	1.1	10	0.112	70	0.85	7.96E-10	0.006932
196	1.19E-05	5.56E-05	1090	1	0.96	0.000001	5.81E-08	1.1	10	0.112	70	0.85	8.72E-10	0.007596
197	1.19E-05	6.08E-05	1090	1	0.96	0.000001	6.36E-08	1.1	10	0.112	70	0.85	9.54E-10	0.008309
198	1.19E-05	4.97E-05	1090	1	0.96	0.000001	5.19E-08	1.1	10	0.112	70	0.85	7.79E-10	0.006788
199	1.19E-05	5.47E-05	1090	1	0.96	0.000001	5.71E-08	1.1	10	0.112	70	0.85	8.57E-10	0.007469
200	1.19E-05	6.02E-05	1090	1	0.96	0.000001	6.30E-08	1.1	10	0.112	70	0.85	9.45E-10	0.008233
201	1.19E-05	6.68E-05	1090	1	0.96	0.000001	6.98E-08	1.1	10	0.112	70	0.85	1.05E-09	0.009131
202	1.19E-05	5.86E-05	1090	1	0.96	0.000001	6.13E-08	1.1	10	0.112	70	0.85	9.19E-10	0.008011
203	1.19E-05	6.52E-05	1090	1	0.96	0.000001	6.81E-08	1.1	10	0.112	70	0.85	1.02E-09	0.008908
204	1.19E-05	7.32E-05	1090	1	0.96	0.000001	7.65E-08	1.1	10	0.112	70	0.85	1.15E-09	0.010007
205	1.19E-05	8.23E-05	1090	1	0.96	0.000001	8.60E-08	1.1	10	0.112	70	0.85	1.29E-09	0.011243
206	1.19E-05	7.03E-05	1090	1	0.96	0.000001	7.35E-08	1.1	10	0.112	70	0.85	1.10E-09	0.009607
207	1.19E-05	7.98E-05	1090	1	0.96	0.000001	8.34E-08	1.1	10	0.112	70	0.85	1.25E-09	0.010907
208	1.19E-05	9.10E-05	1090	1	0.96	0.000001	9.51E-08	1.1	10	0.112	70	0.85	1.43E-09	0.012439
209	1.19E-05	1.05E-04	1090	1	0.96	0.000001	1.09E-07	1.1	10	0.112	70	0.85	1.64E-09	0.014299
210	1.19E-05	7.53E-05	1090	1	0.96	0.000001	7.87E-08	1.1	10	0.112	70	0.85	1.18E-09	0.010293
211	1.19E-05	8.67E-05	1090	1	0.96	0.000001	9.06E-08	1.1	10	0.112	70	0.85	1.36E-09	0.011847
212	1.19E-05	1.01E-04	1090	1	0.96	0.000001	1.05E-07	1.1	10	0.112	70	0.85	1.58E-09	0.013737
213	1.19E-05	1.18E-04	1090	1	0.96	0.000001	1.23E-07	1.1	10	0.112	70	0.85	1.85E-09	0.016098
214	1.19E-05	1.39E-04	1090	1	0.96	0.000001	1.46E-07	1.1	10	0.112	70	0.85	2.19E-09	0.019043
215	1.19E-05	8.02E-05	1090	1	0.96	0.000001	8.39E-08	1.1	10	0.112	70	0.85	1.26E-09	0.010964
216	1.19E-05	9.31E-05	1090	1	0.96	0.000001	9.73E-08	1.1	10	0.112	70	0.85	1.46E-09	0.012718
217	1.19E-05	1.09E-04	1090	1	0.96	0.000001	1.14E-07	1.1	10	0.112	70	0.85	1.72E-09	0.014957
218	1.19E-05	1.31E-04	1090	1	0.96	0.000001	1.37E-07	1.1	10	0.112	70	0.85	2.05E-09	0.017886
219	1.19E-05	1.60E-04	1090	1	0.96	0.000001	1.67E-07	1.1	10	0.112	70	0.85	2.50E-09	0.021821
220	1.19E-05	9.94E-05	1090	1	0.96	0.000001	1.04E-07	1.1	10	0.112	70	0.85	1.56E-09	0.01358
221	1.19E-05	1.18E-04	1090	1	0.96	0.000001	1.24E-07	1.1	10	0.112	70	0.85	1.86E-09	0.016174
222	1.19E-05	1.44E-04	1090	1	0.96	0.000001	1.51E-07	1.1	10	0.112	70	0.85	2.26E-09	0.019683
223	1.19E-05	1.80E-04	1090	1	0.96	0.000001	1.88E-07	1.1	10	0.112	70	0.85	2.83E-09	0.024645
224	1.19E-05	2.35E-04	1090	1	0.96	0.000001	2.46E-07	1.1	10	0.112	70	0.85	3.68E-09	0.032107

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
225	1.19E-05	1.26E-04	1090	1	0.96	0.000001	1.32E-07	1.1	10	0.112	70	0.85	1.97E-09	0.00	0.017197
226	1.19E-05	1.55E-04	1090	1	0.96	0.000001	1.62E-07	1.1	10	0.112	70	0.85	2.43E-09	0.00	0.021208
227	1.19E-05	1.98E-04	1090	1	0.96	0.000001	2.07E-07	1.1	10	0.112	70	0.85	3.11E-09	0.00	0.027065
228	1.19E-05	2.66E-04	1090	1	0.96	0.000001	2.78E-07	1.1	10	0.112	70	0.85	4.17E-09	0.00	0.036336
229	1.19E-05	3.88E-04	1090	1	0.96	0.000001	4.06E-07	1.1	10	0.112	70	0.85	6.09E-09	0.01	0.053073
230	1.19E-05	1.64E-04	1090	1	0.96	0.000001	1.71E-07	1.1	10	0.112	70	0.85	2.57E-09	0.00	0.022356
231	1.19E-05	2.11E-04	1090	1	0.96	0.000001	2.20E-07	1.1	10	0.112	70	0.85	3.31E-09	0.00	0.028818
232	1.19E-05	2.86E-04	1090	1	0.96	0.000001	2.98E-07	1.1	10	0.112	70	0.85	4.48E-09	0.00	0.039017
233	1.19E-05	4.26E-04	1090	1	0.96	0.000001	4.45E-07	1.1	10	0.112	70	0.85	6.68E-09	0.01	0.058174
234	1.19E-05	7.54E-04	1090	1	0.96	0.000001	7.88E-07	1.1	10	0.112	70	0.85	1.18E-08	0.01	0.103089
235	1.19E-05	2.15E-04	1090	1	0.96	0.000001	2.25E-07	1.1	10	0.112	70	0.85	3.37E-09	0.00	0.029405
236	1.19E-05	2.87E-04	1090	1	0.96	0.000001	3.00E-07	1.1	10	0.112	70	0.85	4.50E-09	0.00	0.039174
237	1.19E-05	4.10E-04	1090	1	0.96	0.000001	4.28E-07	1.1	10	0.112	70	0.85	6.43E-09	0.01	0.056006
238	1.19E-05	6.37E-04	1090	1	0.96	0.000001	6.66E-07	1.1	10	0.112	70	0.85	9.99E-09	0.01	0.087022
239	1.19E-05	1.05E-03	1090	1	0.96	0.000001	1.09E-06	1.1	10	0.112	70	0.85	1.64E-08	0.02	0.143087
240	1.19E-05	2.74E-04	1090	1	0.96	0.000001	2.87E-07	1.1	10	0.112	70	0.85	4.30E-09	0.00	0.037488
241	1.19E-05	3.74E-04	1090	1	0.96	0.000001	3.91E-07	1.1	10	0.112	70	0.85	5.87E-09	0.01	0.05114
242	1.19E-05	5.20E-04	1090	1	0.96	0.000001	5.43E-07	1.1	10	0.112	70	0.85	8.15E-09	0.01	0.071035
243	1.19E-05	7.73E-04	1090	1	0.96	0.000001	8.08E-07	1.1	10	0.112	70	0.85	1.21E-08	0.01	0.105651
244	1.19E-05	2.54E-04	1090	1	0.96	0.000001	2.66E-07	1.1	10	0.112	70	0.85	3.99E-09	0.00	0.034771
245	1.19E-05	3.33E-04	1090	1	0.96	0.000001	3.48E-07	1.1	10	0.112	70	0.85	5.22E-09	0.01	0.045506
246	1.19E-05	4.43E-04	1090	1	0.96	0.000001	4.63E-07	1.1	10	0.112	70	0.85	6.95E-09	0.01	0.060558
247	1.19E-05	6.06E-04	1090	1	0.96	0.000001	6.34E-07	1.1	10	0.112	70	0.85	9.51E-09	0.01	0.082847
248	1.19E-05	8.95E-04	1090	1	0.96	0.000001	9.35E-07	1.1	10	0.112	70	0.85	1.40E-08	0.01	0.122303
249	1.19E-05	2.94E-04	1090	1	0.96	0.000001	3.08E-07	1.1	10	0.112	70	0.85	4.61E-09	0.00	0.040215
250	1.19E-05	3.79E-04	1090	1	0.96	0.000001	3.96E-07	1.1	10	0.112	70	0.85	5.94E-09	0.01	0.05173
251	1.19E-05	4.96E-04	1090	1	0.96	0.000001	5.18E-07	1.1	10	0.112	70	0.85	7.78E-09	0.01	0.067763
252	1.19E-05	6.85E-04	1090	1	0.96	0.000001	7.16E-07	1.1	10	0.112	70	0.85	1.07E-08	0.01	0.093578
253	1.19E-05	1.01E-03	1090	1	0.96	0.000001	1.05E-06	1.1	10	0.112	70	0.85	1.58E-08	0.02	0.137892
254	1.19E-05	2.59E-04	1090	1	0.96	0.000001	2.71E-07	1.1	10	0.112	70	0.85	4.06E-09	0.00	0.035423
255	1.19E-05	3.22E-04	1090	1	0.96	0.000001	3.37E-07	1.1	10	0.112	70	0.85	5.05E-09	0.01	0.044004
256	1.19E-05	4.13E-04	1090	1	0.96	0.000001	4.32E-07	1.1	10	0.112	70	0.85	6.48E-09	0.01	0.056483

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
257	1.19E-05	5.39E-04	1090	1	0.96	0.000001	5.63E-07	1.1	10	0.112	70	0.85	8.45E-09	0.01	0.073599
258	1.19E-05	7.46E-04	1090	1	0.96	0.000001	7.80E-07	1.1	10	0.112	70	0.85	1.17E-08	0.01	0.101951
259	1.19E-05	1.09E-03	1090	1	0.96	0.000001	1.14E-06	1.1	10	0.112	70	0.85	1.71E-08	0.02	0.148824
260	1.19E-05	2.76E-04	1090	1	0.96	0.000001	2.88E-07	1.1	10	0.112	70	0.85	4.33E-09	0.00	0.037711
261	1.19E-05	3.42E-04	1090	1	0.96	0.000001	3.58E-07	1.1	10	0.112	70	0.85	5.37E-09	0.01	0.046802
262	1.19E-05	4.33E-04	1090	1	0.96	0.000001	4.53E-07	1.1	10	0.112	70	0.85	6.80E-09	0.01	0.059225
263	1.19E-05	5.57E-04	1090	1	0.96	0.000001	5.82E-07	1.1	10	0.112	70	0.85	8.73E-09	0.01	0.076069
264	1.19E-05	7.68E-04	1090	1	0.96	0.000001	8.03E-07	1.1	10	0.112	70	0.85	1.20E-08	0.01	0.105008
265	1.19E-05	2.84E-04	1090	1	0.96	0.000001	2.97E-07	1.1	10	0.112	70	0.85	4.46E-09	0.00	0.038843
266	1.19E-05	3.46E-04	1090	1	0.96	0.000001	3.61E-07	1.1	10	0.112	70	0.85	5.42E-09	0.01	0.047221
267	1.19E-05	4.22E-04	1090	1	0.96	0.000001	4.42E-07	1.1	10	0.112	70	0.85	6.62E-09	0.01	0.057733
268	1.19E-05	5.38E-04	1090	1	0.96	0.000001	5.62E-07	1.1	10	0.112	70	0.85	8.43E-09	0.01	0.073465
269	1.19E-05	6.91E-04	1090	1	0.96	0.000001	7.22E-07	1.1	10	0.112	70	0.85	1.08E-08	0.01	0.094416
270	1.19E-05	2.79E-04	1090	1	0.96	0.000001	2.91E-07	1.1	10	0.112	70	0.85	4.37E-09	0.00	0.038083
271	1.19E-05	3.28E-04	1090	1	0.96	0.000001	3.43E-07	1.1	10	0.112	70	0.85	5.14E-09	0.01	0.044822
272	1.19E-05	3.88E-04	1090	1	0.96	0.000001	4.06E-07	1.1	10	0.112	70	0.85	6.09E-09	0.01	0.053051
273	1.19E-05	4.65E-04	1090	1	0.96	0.000001	4.86E-07	1.1	10	0.112	70	0.85	7.30E-09	0.01	0.063587
274	1.19E-05	2.26E-04	1090	1	0.96	0.000001	2.36E-07	1.1	10	0.112	70	0.85	3.54E-09	0.00	0.030822
275	1.19E-05	2.57E-04	1090	1	0.96	0.000001	2.69E-07	1.1	10	0.112	70	0.85	4.03E-09	0.00	0.03516
276	1.19E-05	2.93E-04	1090	1	0.96	0.000001	3.07E-07	1.1	10	0.112	70	0.85	4.60E-09	0.00	0.040098
277	1.19E-05	3.31E-04	1090	1	0.96	0.000001	3.46E-07	1.1	10	0.112	70	0.85	5.19E-09	0.01	0.045219
278	1.19E-05	3.73E-04	1090	1	0.96	0.000001	3.90E-07	1.1	10	0.112	70	0.85	5.85E-09	0.01	0.050966
279	1.19E-05	2.06E-04	1090	1	0.96	0.000001	2.16E-07	1.1	10	0.112	70	0.85	3.24E-09	0.00	0.028194
280	1.19E-05	2.29E-04	1090	1	0.96	0.000001	2.39E-07	1.1	10	0.112	70	0.85	3.59E-09	0.00	0.031294
281	1.19E-05	2.51E-04	1090	1	0.96	0.000001	2.62E-07	1.1	10	0.112	70	0.85	3.93E-09	0.00	0.034264
282	1.19E-05	2.76E-04	1090	1	0.96	0.000001	2.89E-07	1.1	10	0.112	70	0.85	4.34E-09	0.00	0.037784
283	1.19E-05	1.67E-04	1090	1	0.96	0.000001	1.75E-07	1.1	10	0.112	70	0.85	2.62E-09	0.00	0.022867
284	1.19E-05	1.83E-04	1090	1	0.96	0.000001	1.91E-07	1.1	10	0.112	70	0.85	2.86E-09	0.00	0.024949
285	1.19E-05	1.98E-04	1090	1	0.96	0.000001	2.07E-07	1.1	10	0.112	70	0.85	3.11E-09	0.00	0.027064
286	1.19E-05	2.14E-04	1090	1	0.96	0.000001	2.23E-07	1.1	10	0.112	70	0.85	3.35E-09	0.00	0.029193
287	1.19E-05	2.27E-04	1090	1	0.96	0.000001	2.37E-07	1.1	10	0.112	70	0.85	3.56E-09	0.00	0.031029
288	1.19E-05	1.40E-04	1090	1	0.96	0.000001	1.46E-07	1.1	10	0.112	70	0.85	2.19E-09	0.00	0.019127

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
289	1.19E-05	1.51E-04	1090	1	0.96	0.000001	1.58E-07	1.1	10	0.112	70	0.85	2.36E-09	0.00	0.02061
290	1.19E-05	1.62E-04	1090	1	0.96	0.000001	1.69E-07	1.1	10	0.112	70	0.85	2.54E-09	0.00	0.022125
291	1.19E-05	1.73E-04	1090	1	0.96	0.000001	1.81E-07	1.1	10	0.112	70	0.85	2.71E-09	0.00	0.023624
292	1.19E-05	1.82E-04	1090	1	0.96	0.000001	1.91E-07	1.1	10	0.112	70	0.85	2.86E-09	0.00	0.024918
293	1.19E-05	1.18E-04	1090	1	0.96	0.000001	1.23E-07	1.1	10	0.112	70	0.85	1.85E-09	0.00	0.016122
294	1.19E-05	1.26E-04	1090	1	0.96	0.000001	1.32E-07	1.1	10	0.112	70	0.85	1.97E-09	0.00	0.01721
295	1.19E-05	1.34E-04	1090	1	0.96	0.000001	1.40E-07	1.1	10	0.112	70	0.85	2.10E-09	0.00	0.018294
296	1.19E-05	1.42E-04	1090	1	0.96	0.000001	1.48E-07	1.1	10	0.112	70	0.85	2.22E-09	0.00	0.019385
297	1.19E-05	1.49E-04	1090	1	0.96	0.000001	1.56E-07	1.1	10	0.112	70	0.85	2.34E-09	0.00	0.020415
298	1.19E-05	1.02E-04	1090	1	0.96	0.000001	1.06E-07	1.1	10	0.112	70	0.85	1.59E-09	0.00	0.013893
299	1.19E-05	1.08E-04	1090	1	0.96	0.000001	1.13E-07	1.1	10	0.112	70	0.85	1.69E-09	0.00	0.014716
300	1.19E-05	1.13E-04	1090	1	0.96	0.000001	1.19E-07	1.1	10	0.112	70	0.85	1.78E-09	0.00	0.015504
301	1.19E-05	1.20E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.87E-09	0.00	0.016335
302	1.19E-05	1.26E-04	1090	1	0.96	0.000001	1.31E-07	1.1	10	0.112	70	0.85	1.97E-09	0.00	0.017178
303	1.19E-05	1.30E-04	1090	1	0.96	0.000001	1.36E-07	1.1	10	0.112	70	0.85	2.04E-09	0.00	0.017746
304	1.19E-05	8.83E-05	1090	1	0.96	0.000001	9.23E-08	1.1	10	0.112	70	0.85	1.38E-09	0.00	0.012065
305	1.19E-05	9.31E-05	1090	1	0.96	0.000001	9.73E-08	1.1	10	0.112	70	0.85	1.46E-09	0.00	0.012722
306	1.19E-05	9.77E-05	1090	1	0.96	0.000001	1.02E-07	1.1	10	0.112	70	0.85	1.53E-09	0.00	0.013346
307	1.19E-05	1.03E-04	1090	1	0.96	0.000001	1.07E-07	1.1	10	0.112	70	0.85	1.61E-09	0.00	0.014008
308	1.19E-05	1.07E-04	1090	1	0.96	0.000001	1.12E-07	1.1	10	0.112	70	0.85	1.68E-09	0.00	0.014667
309	1.19E-05	1.11E-04	1090	1	0.96	0.000001	1.16E-07	1.1	10	0.112	70	0.85	1.74E-09	0.00	0.015141
310	1.19E-05	7.76E-05	1090	1	0.96	0.000001	8.11E-08	1.1	10	0.112	70	0.85	1.22E-09	0.00	0.010602
311	1.19E-05	8.14E-05	1090	1	0.96	0.000001	8.51E-08	1.1	10	0.112	70	0.85	1.28E-09	0.00	0.01113
312	1.19E-05	8.52E-05	1090	1	0.96	0.000001	8.90E-08	1.1	10	0.112	70	0.85	1.34E-09	0.00	0.011639
313	1.19E-05	8.92E-05	1090	1	0.96	0.000001	9.32E-08	1.1	10	0.112	70	0.85	1.40E-09	0.00	0.01219
314	1.19E-05	9.31E-05	1090	1	0.96	0.000001	9.73E-08	1.1	10	0.112	70	0.85	1.46E-09	0.00	0.012723
315	1.19E-05	9.61E-05	1090	1	0.96	0.000001	1.00E-07	1.1	10	0.112	70	0.85	1.51E-09	0.00	0.013139
316	1.19E-05	6.89E-05	1090	1	0.96	0.000001	7.20E-08	1.1	10	0.112	70	0.85	1.08E-09	0.00	0.009414
317	1.19E-05	7.20E-05	1090	1	0.96	0.000001	7.52E-08	1.1	10	0.112	70	0.85	1.13E-09	0.00	0.009834
318	1.19E-05	7.49E-05	1090	1	0.96	0.000001	7.82E-08	1.1	10	0.112	70	0.85	1.17E-09	0.00	0.010229
319	1.19E-05	7.80E-05	1090	1	0.96	0.000001	8.16E-08	1.1	10	0.112	70	0.85	1.22E-09	0.00	0.010665
320	1.19E-05	8.13E-05	1090	1	0.96	0.000001	8.50E-08	1.1	10	0.112	70	0.85	1.27E-09	0.00	0.011109

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)		Total
321	1.19E-05	8.38E-05	1090	1	0.96	0.000001	8.76E-08	1.1	10	0.112	70	0.85	1.31E-09	0.00	0.011449
322	1.19E-05	8.57E-05	1090	1	0.96	0.000001	8.96E-08	1.1	10	0.112	70	0.85	1.34E-09	0.00	0.011715
323	1.19E-05	6.15E-05	1090	1	0.96	0.000001	6.43E-08	1.1	10	0.112	70	0.85	9.64E-10	0.00	0.008404
324	1.19E-05	6.41E-05	1090	1	0.96	0.000001	6.70E-08	1.1	10	0.112	70	0.85	1.01E-09	0.00	0.00876
325	1.19E-05	6.65E-05	1090	1	0.96	0.000001	6.95E-08	1.1	10	0.112	70	0.85	1.04E-09	0.00	0.00909
326	1.19E-05	6.91E-05	1090	1	0.96	0.000001	7.22E-08	1.1	10	0.112	70	0.85	1.08E-09	0.00	0.009446
327	1.19E-05	7.19E-05	1090	1	0.96	0.000001	7.51E-08	1.1	10	0.112	70	0.85	1.13E-09	0.00	0.009821
328	1.19E-05	7.41E-05	1090	1	0.96	0.000001	7.74E-08	1.1	10	0.112	70	0.85	1.16E-09	0.00	0.010122
329	1.19E-05	7.58E-05	1090	1	0.96	0.000001	7.92E-08	1.1	10	0.112	70	0.85	1.19E-09	0.00	0.010358
330	1.19E-05	5.52E-05	1090	1	0.96	0.000001	5.77E-08	1.1	10	0.112	70	0.85	8.66E-10	0.00	0.007545
331	1.19E-05	5.73E-05	1090	1	0.96	0.000001	5.99E-08	1.1	10	0.112	70	0.85	8.99E-10	0.00	0.007835
332	1.19E-05	5.95E-05	1090	1	0.96	0.000001	6.22E-08	1.1	10	0.112	70	0.85	9.34E-10	0.00	0.008135
333	1.19E-05	6.18E-05	1090	1	0.96	0.000001	6.45E-08	1.1	10	0.112	70	0.85	9.68E-10	0.00	0.008439
334	1.19E-05	6.39E-05	1090	1	0.96	0.000001	6.68E-08	1.1	10	0.112	70	0.85	1.00E-09	0.00	0.008732
335	1.19E-05	6.58E-05	1090	1	0.96	0.000001	6.88E-08	1.1	10	0.112	70	0.85	1.03E-09	0.00	0.008997
336	1.19E-05	6.76E-05	1090	1	0.96	0.000001	7.06E-08	1.1	10	0.112	70	0.85	1.06E-09	0.00	0.009233
337	1.19E-05	5.02E-05	1090	1	0.96	0.000001	5.24E-08	1.1	10	0.112	70	0.85	7.87E-10	0.00	0.006854
338	1.19E-05	5.20E-05	1090	1	0.96	0.000001	5.43E-08	1.1	10	0.112	70	0.85	8.15E-10	0.00	0.007101
339	1.19E-05	5.38E-05	1090	1	0.96	0.000001	5.62E-08	1.1	10	0.112	70	0.85	8.43E-10	0.00	0.00735
340	1.19E-05	5.56E-05	1090	1	0.96	0.000001	5.81E-08	1.1	10	0.112	70	0.85	8.72E-10	0.00	0.007601
341	1.19E-05	5.76E-05	1090	1	0.96	0.000001	6.02E-08	1.1	10	0.112	70	0.85	9.03E-10	0.00	0.007868
342	1.19E-05	5.93E-05	1090	1	0.96	0.000001	6.20E-08	1.1	10	0.112	70	0.85	9.30E-10	0.00	0.0081
343	1.19E-05	6.07E-05	1090	1	0.96	0.000001	6.34E-08	1.1	10	0.112	70	0.85	9.52E-10	0.00	0.008295
344	1.19E-05	4.57E-05	1090	1	0.96	0.000001	4.78E-08	1.1	10	0.112	70	0.85	7.16E-10	0.00	0.006243
345	1.19E-05	4.72E-05	1090	1	0.96	0.000001	4.94E-08	1.1	10	0.112	70	0.85	7.41E-10	0.00	0.006455
346	1.19E-05	4.88E-05	1090	1	0.96	0.000001	5.10E-08	1.1	10	0.112	70	0.85	7.65E-10	0.00	0.006668
347	1.19E-05	5.04E-05	1090	1	0.96	0.000001	5.27E-08	1.1	10	0.112	70	0.85	7.91E-10	0.00	0.006891
348	1.19E-05	5.20E-05	1090	1	0.96	0.000001	5.43E-08	1.1	10	0.112	70	0.85	8.15E-10	0.00	0.007105
349	1.19E-05	5.34E-05	1090	1	0.96	0.000001	5.58E-08	1.1	10	0.112	70	0.85	8.38E-10	0.00	0.007302
350	1.19E-05	5.48E-05	1090	1	0.96	0.000001	5.73E-08	1.1	10	0.112	70	0.85	8.59E-10	0.00	0.007487
351	1.19E-05	4.18E-05	1090	1	0.96	0.000001	4.37E-08	1.1	10	0.112	70	0.85	6.55E-10	0.00	0.005711
352	1.19E-05	4.31E-05	1090	1	0.96	0.000001	4.51E-08	1.1	10	0.112	70	0.85	6.77E-10	0.00	0.005896

OCSD - Plant No. 2 GWRs Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
353	1.19E-05	4.45E-05	1090	1	0.96	0.000001	4.65E-08	1.1	10	0.112	70	0.85	6.97E-10	0.00	0.006076
354	1.19E-05	4.58E-05	1090	1	0.96	0.000001	4.79E-08	1.1	10	0.112	70	0.85	7.19E-10	0.00	0.006262
355	1.19E-05	4.73E-05	1090	1	0.96	0.000001	4.94E-08	1.1	10	0.112	70	0.85	7.42E-10	0.00	0.006463
356	1.19E-05	4.86E-05	1090	1	0.96	0.000001	5.08E-08	1.1	10	0.112	70	0.85	7.62E-10	0.00	0.006637
357	1.19E-05	4.97E-05	1090	1	0.96	0.000001	5.20E-08	1.1	10	0.112	70	0.85	7.80E-10	0.00	0.006796
358	1.19E-05	3.84E-05	1090	1	0.96	0.000001	4.01E-08	1.1	10	0.112	70	0.85	6.02E-10	0.00	0.005243
359	1.19E-05	3.95E-05	1090	1	0.96	0.000001	4.13E-08	1.1	10	0.112	70	0.85	6.20E-10	0.00	0.005401
360	1.19E-05	4.07E-05	1090	1	0.96	0.000001	4.26E-08	1.1	10	0.112	70	0.85	6.39E-10	0.00	0.005568
361	1.19E-05	4.20E-05	1090	1	0.96	0.000001	4.39E-08	1.1	10	0.112	70	0.85	6.58E-10	0.00	0.005734
362	1.19E-05	4.32E-05	1090	1	0.96	0.000001	4.51E-08	1.1	10	0.112	70	0.85	6.77E-10	0.00	0.005902
363	1.19E-05	4.43E-05	1090	1	0.96	0.000001	4.63E-08	1.1	10	0.112	70	0.85	6.95E-10	0.00	0.006055
364	1.19E-05	4.54E-05	1090	1	0.96	0.000001	4.74E-08	1.1	10	0.112	70	0.85	7.11E-10	0.00	0.006198
365	1.19E-05	3.55E-05	1090	1	0.96	0.000001	3.71E-08	1.1	10	0.112	70	0.85	5.56E-10	0.00	0.004845
366	1.19E-05	3.65E-05	1090	1	0.96	0.000001	3.81E-08	1.1	10	0.112	70	0.85	5.72E-10	0.00	0.004982
367	1.19E-05	3.75E-05	1090	1	0.96	0.000001	3.92E-08	1.1	10	0.112	70	0.85	5.88E-10	0.00	0.005126
368	1.19E-05	3.86E-05	1090	1	0.96	0.000001	4.03E-08	1.1	10	0.112	70	0.85	6.05E-10	0.00	0.005273
369	1.19E-05	3.96E-05	1090	1	0.96	0.000001	4.14E-08	1.1	10	0.112	70	0.85	6.22E-10	0.00	0.005416
370	1.19E-05	4.07E-05	1090	1	0.96	0.000001	4.25E-08	1.1	10	0.112	70	0.85	6.38E-10	0.00	0.005558
371	1.19E-05	4.16E-05	1090	1	0.96	0.000001	4.34E-08	1.1	10	0.112	70	0.85	6.52E-10	0.00	0.005681
372	1.19E-05	3.28E-05	1090	1	0.96	0.000001	3.43E-08	1.1	10	0.112	70	0.85	5.15E-10	0.00	0.004485
373	1.19E-05	3.37E-05	1090	1	0.96	0.000001	3.52E-08	1.1	10	0.112	70	0.85	5.29E-10	0.00	0.004607
374	1.19E-05	3.46E-05	1090	1	0.96	0.000001	3.62E-08	1.1	10	0.112	70	0.85	5.43E-10	0.00	0.004732
375	1.19E-05	3.56E-05	1090	1	0.96	0.000001	3.72E-08	1.1	10	0.112	70	0.85	5.58E-10	0.00	0.004862
376	1.19E-05	3.65E-05	1090	1	0.96	0.000001	3.82E-08	1.1	10	0.112	70	0.85	5.72E-10	0.00	0.004988
377	1.19E-05	3.74E-05	1090	1	0.96	0.000001	3.91E-08	1.1	10	0.112	70	0.85	5.87E-10	0.00	0.005116
378	1.19E-05	3.83E-05	1090	1	0.96	0.000001	4.00E-08	1.1	10	0.112	70	0.85	6.00E-10	0.00	0.005228
379	1.19E-05	3.11E-04	1090	1	0.96	0.000001	3.25E-07	1.1	10	0.112	70	0.85	4.88E-09	0.00	0.042519
380	1.19E-05	3.16E-04	1090	1	0.96	0.000001	3.30E-07	1.1	10	0.112	70	0.85	4.95E-09	0.00	0.043136
381	1.19E-05	2.67E-04	1090	1	0.96	0.000001	2.80E-07	1.1	10	0.112	70	0.85	4.19E-09	0.00	0.036552
382	1.19E-05	2.58E-04	1090	1	0.96	0.000001	2.70E-07	1.1	10	0.112	70	0.85	4.05E-09	0.00	0.035292
383	1.19E-05	2.17E-04	1090	1	0.96	0.000001	2.27E-07	1.1	10	0.112	70	0.85	3.40E-09	0.00	0.029638
384	1.19E-05	1.83E-04	1090	1	0.96	0.000001	1.91E-07	1.1	10	0.112	70	0.85	2.87E-09	0.00	0.025034

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Mitigated Risk from Onsite Truck Travel

Risk from Birth to 2 Years

Receptor #	g/sec	Cair	DBR	A	EF	Constant1	DOSE	CPF	ASF	ED	AT	FAH	RISK (0-2) (Risk/Mill)	Total	
385	1.19E-05	1.60E-04	1090	1	0.96	0.000001	1.67E-07	1.1	10	0.112	70	0.85	2.50E-09	0.00	0.021804
386	1.19E-05	1.37E-04	1090	1	0.96	0.000001	1.43E-07	1.1	10	0.112	70	0.85	2.14E-09	0.00	0.018671
387	1.19E-05	1.19E-04	1090	1	0.96	0.000001	1.25E-07	1.1	10	0.112	70	0.85	1.87E-09	0.00	0.016311
388	1.19E-05	1.06E-04	1090	1	0.96	0.000001	1.11E-07	1.1	10	0.112	70	0.85	1.66E-09	0.00	0.014478
389	1.19E-05	9.50E-05	1090	1	0.96	0.000001	9.93E-08	1.1	10	0.112	70	0.85	1.49E-09	0.00	0.01298
390	1.19E-05	8.68E-05	1090	1	0.96	0.000001	9.07E-08	1.1	10	0.112	70	0.85	1.36E-09	0.00	0.011859

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI	
1	1.46E-04	5	2.92E-05	Max
2	1.58E-04	5	3.16E-05	2.50E-03
3	1.42E-04	5	2.84E-05	
4	1.55E-04	5	3.09E-05	
5	1.68E-04	5	3.37E-05	
6	1.84E-04	5	3.67E-05	
7	1.50E-04	5	3.00E-05	
8	1.64E-04	5	3.27E-05	
9	1.79E-04	5	3.58E-05	
10	1.97E-04	5	3.94E-05	
11	2.17E-04	5	4.34E-05	
12	1.72E-04	5	3.44E-05	
13	1.90E-04	5	3.79E-05	
14	2.10E-04	5	4.20E-05	
15	2.34E-04	5	4.67E-05	
16	2.60E-04	5	5.20E-05	
17	2.01E-04	5	4.01E-05	
18	2.24E-04	5	4.48E-05	
19	2.51E-04	5	5.02E-05	
20	2.83E-04	5	5.65E-05	
21	3.21E-04	5	6.41E-05	
22	2.37E-04	5	4.74E-05	
23	2.68E-04	5	5.37E-05	
24	3.05E-04	5	6.11E-05	
25	3.51E-04	5	7.02E-05	
26	4.06E-04	5	8.12E-05	
27	2.85E-04	5	5.70E-05	
28	3.27E-04	5	6.55E-05	
29	3.81E-04	5	7.63E-05	
30	4.50E-04	5	8.99E-05	
31	5.37E-04	5	1.07E-04	
32	3.48E-04	5	6.97E-05	

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
33	4.10E-04	5	8.20E-05
34	4.91E-04	5	9.82E-05
35	5.98E-04	5	1.20E-04
36	7.50E-04	5	1.50E-04
37	4.36E-04	5	8.71E-05
38	5.28E-04	5	1.06E-04
39	6.57E-04	5	1.31E-04
40	8.45E-04	5	1.69E-04
41	5.61E-04	5	1.12E-04
42	7.07E-04	5	1.41E-04
43	9.27E-04	5	1.85E-04
44	1.28E-03	5	2.57E-04
45	7.40E-04	5	1.48E-04
46	9.79E-04	5	1.96E-04
47	1.37E-03	5	2.75E-04
48	2.11E-03	5	4.21E-04
49	1.37E-03	5	2.75E-04
50	2.02E-03	5	4.04E-04
51	1.29E-03	5	2.58E-04
52	1.79E-03	5	3.59E-04
53	2.61E-03	5	5.23E-04
54	1.15E-03	5	2.31E-04
55	1.52E-03	5	3.04E-04
56	2.07E-03	5	4.14E-04
57	2.89E-03	5	5.78E-04
58	1.00E-03	5	2.00E-04
59	1.26E-03	5	2.52E-04
60	1.61E-03	5	3.22E-04
61	2.08E-03	5	4.17E-04
62	8.58E-04	5	1.72E-04
63	1.03E-03	5	2.07E-04
64	1.25E-03	5	2.50E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
65	1.51E-03	5	3.02E-04
66	1.82E-03	5	3.63E-04
67	7.25E-04	5	1.45E-04
68	8.44E-04	5	1.69E-04
69	9.81E-04	5	1.96E-04
70	1.13E-03	5	2.26E-04
71	1.30E-03	5	2.60E-04
72	6.14E-04	5	1.23E-04
73	6.95E-04	5	1.39E-04
74	7.85E-04	5	1.57E-04
75	8.79E-04	5	1.76E-04
76	9.81E-04	5	1.96E-04
77	5.22E-04	5	1.04E-04
78	5.79E-04	5	1.16E-04
79	6.40E-04	5	1.28E-04
80	7.02E-04	5	1.40E-04
81	7.68E-04	5	1.54E-04
82	4.48E-04	5	8.97E-05
83	4.89E-04	5	9.78E-05
84	5.30E-04	5	1.06E-04
85	5.74E-04	5	1.15E-04
86	6.19E-04	5	1.24E-04
87	3.88E-04	5	7.75E-05
88	4.18E-04	5	8.35E-05
89	4.48E-04	5	8.96E-05
90	4.80E-04	5	9.61E-05
91	5.13E-04	5	1.03E-04
92	3.38E-04	5	6.77E-05
93	3.61E-04	5	7.22E-05
94	3.84E-04	5	7.68E-05
95	4.08E-04	5	8.15E-05
96	4.33E-04	5	8.65E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
97	2.98E-04	5	5.95E-05
98	3.15E-04	5	6.30E-05
99	3.33E-04	5	6.66E-05
100	3.51E-04	5	7.02E-05
101	3.70E-04	5	7.41E-05
102	1.40E-04	5	2.80E-05
103	1.41E-04	5	2.82E-05
104	1.45E-04	5	2.91E-05
105	1.41E-04	5	2.82E-05
106	1.46E-04	5	2.92E-05
107	1.51E-04	5	3.02E-05
108	1.56E-04	5	3.12E-05
109	1.46E-04	5	2.92E-05
110	1.51E-04	5	3.03E-05
111	1.57E-04	5	3.13E-05
112	1.62E-04	5	3.24E-05
113	1.68E-04	5	3.35E-05
114	1.46E-04	5	2.92E-05
115	1.51E-04	5	3.02E-05
116	1.57E-04	5	3.14E-05
117	1.63E-04	5	3.25E-05
118	1.69E-04	5	3.37E-05
119	1.75E-04	5	3.50E-05
120	1.81E-04	5	3.62E-05
121	1.45E-04	5	2.90E-05
122	1.51E-04	5	3.01E-05
123	1.57E-04	5	3.13E-05
124	1.63E-04	5	3.25E-05
125	1.69E-04	5	3.38E-05
126	1.75E-04	5	3.51E-05
127	1.82E-04	5	3.65E-05
128	1.89E-04	5	3.78E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
129	1.62E-04	5	3.24E-05
130	1.68E-04	5	3.37E-05
131	1.75E-04	5	3.51E-05
132	1.82E-04	5	3.65E-05
133	1.90E-04	5	3.79E-05
134	1.97E-04	5	3.95E-05
135	2.05E-04	5	4.11E-05
136	1.75E-04	5	3.49E-05
137	1.82E-04	5	3.64E-05
138	1.90E-04	5	3.79E-05
139	1.98E-04	5	3.95E-05
140	2.06E-04	5	4.12E-05
141	2.15E-04	5	4.30E-05
142	2.24E-04	5	4.48E-05
143	1.89E-04	5	3.77E-05
144	1.97E-04	5	3.94E-05
145	2.06E-04	5	4.11E-05
146	2.15E-04	5	4.31E-05
147	2.25E-04	5	4.50E-05
148	2.35E-04	5	4.71E-05
149	2.05E-04	5	4.10E-05
150	2.14E-04	5	4.29E-05
151	2.25E-04	5	4.50E-05
152	2.36E-04	5	4.71E-05
153	2.47E-04	5	4.94E-05
154	2.59E-04	5	5.18E-05
155	2.23E-04	5	4.46E-05
156	2.35E-04	5	4.69E-05
157	2.47E-04	5	4.93E-05
158	2.59E-04	5	5.18E-05
159	2.73E-04	5	5.45E-05
160	2.86E-04	5	5.73E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
161	2.45E-04	5	4.89E-05
162	2.58E-04	5	5.16E-05
163	2.72E-04	5	5.44E-05
164	2.87E-04	5	5.74E-05
165	3.02E-04	5	6.05E-05
166	3.19E-04	5	6.38E-05
167	2.69E-04	5	5.39E-05
168	2.85E-04	5	5.71E-05
169	3.02E-04	5	6.04E-05
170	3.20E-04	5	6.40E-05
171	3.39E-04	5	6.77E-05
172	3.58E-04	5	7.17E-05
173	2.99E-04	5	5.98E-05
174	3.18E-04	5	6.35E-05
175	3.38E-04	5	6.75E-05
176	3.59E-04	5	7.18E-05
177	3.82E-04	5	7.63E-05
178	3.34E-04	5	6.67E-05
179	3.56E-04	5	7.12E-05
180	3.81E-04	5	7.61E-05
181	4.06E-04	5	8.13E-05
182	4.35E-04	5	8.70E-05
183	3.76E-04	5	7.51E-05
184	4.03E-04	5	8.05E-05
185	4.33E-04	5	8.66E-05
186	4.66E-04	5	9.32E-05
187	5.02E-04	5	1.00E-04
188	4.26E-04	5	8.53E-05
189	4.61E-04	5	9.22E-05
190	4.98E-04	5	9.97E-05
191	5.41E-04	5	1.08E-04
192	5.86E-04	5	1.17E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
193	4.90E-04	5	9.80E-05
194	5.34E-04	5	1.07E-04
195	5.82E-04	5	1.16E-04
196	6.37E-04	5	1.27E-04
197	6.97E-04	5	1.39E-04
198	5.70E-04	5	1.14E-04
199	6.27E-04	5	1.25E-04
200	6.91E-04	5	1.38E-04
201	7.66E-04	5	1.53E-04
202	6.72E-04	5	1.34E-04
203	7.47E-04	5	1.49E-04
204	8.40E-04	5	1.68E-04
205	9.43E-04	5	1.89E-04
206	8.06E-04	5	1.61E-04
207	9.15E-04	5	1.83E-04
208	1.04E-03	5	2.09E-04
209	1.20E-03	5	2.40E-04
210	8.64E-04	5	1.73E-04
211	9.94E-04	5	1.99E-04
212	1.15E-03	5	2.31E-04
213	1.35E-03	5	2.70E-04
214	1.60E-03	5	3.20E-04
215	9.20E-04	5	1.84E-04
216	1.07E-03	5	2.13E-04
217	1.25E-03	5	2.51E-04
218	1.50E-03	5	3.00E-04
219	1.83E-03	5	3.66E-04
220	1.14E-03	5	2.28E-04
221	1.36E-03	5	2.71E-04
222	1.65E-03	5	3.30E-04
223	2.07E-03	5	4.14E-04
224	2.69E-03	5	5.39E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
225	1.44E-03	5	2.89E-04
226	1.78E-03	5	3.56E-04
227	2.27E-03	5	4.54E-04
228	3.05E-03	5	6.10E-04
229	4.45E-03	5	8.91E-04
230	1.88E-03	5	3.75E-04
231	2.42E-03	5	4.84E-04
232	3.27E-03	5	6.55E-04
233	4.88E-03	5	9.76E-04
234	8.65E-03	5	1.73E-03
235	2.47E-03	5	4.93E-04
236	3.29E-03	5	6.57E-04
237	4.70E-03	5	9.40E-04
238	7.30E-03	5	1.46E-03
239	1.20E-02	5	2.40E-03
240	3.15E-03	5	6.29E-04
241	4.29E-03	5	8.58E-04
242	5.96E-03	5	1.19E-03
243	8.86E-03	5	1.77E-03
244	2.92E-03	5	5.83E-04
245	3.82E-03	5	7.64E-04
246	5.08E-03	5	1.02E-03
247	6.95E-03	5	1.39E-03
248	1.03E-02	5	2.05E-03
249	3.37E-03	5	6.75E-04
250	4.34E-03	5	8.68E-04
251	5.69E-03	5	1.14E-03
252	7.85E-03	5	1.57E-03
253	1.16E-02	5	2.31E-03
254	2.97E-03	5	5.94E-04
255	3.69E-03	5	7.38E-04
256	4.74E-03	5	9.48E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
257	6.17E-03	5	1.23E-03
258	8.55E-03	5	1.71E-03
259	1.25E-02	5	2.50E-03
260	3.16E-03	5	6.33E-04
261	3.93E-03	5	7.85E-04
262	4.97E-03	5	9.94E-04
263	6.38E-03	5	1.28E-03
264	8.81E-03	5	1.76E-03
265	3.26E-03	5	6.52E-04
266	3.96E-03	5	7.92E-04
267	4.84E-03	5	9.69E-04
268	6.16E-03	5	1.23E-03
269	7.92E-03	5	1.58E-03
270	3.20E-03	5	6.39E-04
271	3.76E-03	5	7.52E-04
272	4.45E-03	5	8.90E-04
273	5.33E-03	5	1.07E-03
274	2.59E-03	5	5.17E-04
275	2.95E-03	5	5.90E-04
276	3.36E-03	5	6.73E-04
277	3.79E-03	5	7.59E-04
278	4.28E-03	5	8.55E-04
279	2.37E-03	5	4.73E-04
280	2.63E-03	5	5.25E-04
281	2.87E-03	5	5.75E-04
282	3.17E-03	5	6.34E-04
283	1.92E-03	5	3.84E-04
284	2.09E-03	5	4.19E-04
285	2.27E-03	5	4.54E-04
286	2.45E-03	5	4.90E-04
287	2.60E-03	5	5.21E-04
288	1.60E-03	5	3.21E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
289	1.73E-03	5	3.46E-04
290	1.86E-03	5	3.71E-04
291	1.98E-03	5	3.96E-04
292	2.09E-03	5	4.18E-04
293	1.35E-03	5	2.71E-04
294	1.44E-03	5	2.89E-04
295	1.53E-03	5	3.07E-04
296	1.63E-03	5	3.25E-04
297	1.71E-03	5	3.43E-04
298	1.17E-03	5	2.33E-04
299	1.23E-03	5	2.47E-04
300	1.30E-03	5	2.60E-04
301	1.37E-03	5	2.74E-04
302	1.44E-03	5	2.88E-04
303	1.49E-03	5	2.98E-04
304	1.01E-03	5	2.02E-04
305	1.07E-03	5	2.13E-04
306	1.12E-03	5	2.24E-04
307	1.18E-03	5	2.35E-04
308	1.23E-03	5	2.46E-04
309	1.27E-03	5	2.54E-04
310	8.89E-04	5	1.78E-04
311	9.34E-04	5	1.87E-04
312	9.77E-04	5	1.95E-04
313	1.02E-03	5	2.05E-04
314	1.07E-03	5	2.13E-04
315	1.10E-03	5	2.20E-04
316	7.90E-04	5	1.58E-04
317	8.25E-04	5	1.65E-04
318	8.58E-04	5	1.72E-04
319	8.95E-04	5	1.79E-04
320	9.32E-04	5	1.86E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
321	9.61E-04	5	1.92E-04
322	9.83E-04	5	1.97E-04
323	7.05E-04	5	1.41E-04
324	7.35E-04	5	1.47E-04
325	7.63E-04	5	1.53E-04
326	7.93E-04	5	1.59E-04
327	8.24E-04	5	1.65E-04
328	8.49E-04	5	1.70E-04
329	8.69E-04	5	1.74E-04
330	6.33E-04	5	1.27E-04
331	6.57E-04	5	1.31E-04
332	6.83E-04	5	1.37E-04
333	7.08E-04	5	1.42E-04
334	7.33E-04	5	1.47E-04
335	7.55E-04	5	1.51E-04
336	7.75E-04	5	1.55E-04
337	5.75E-04	5	1.15E-04
338	5.96E-04	5	1.19E-04
339	6.17E-04	5	1.23E-04
340	6.38E-04	5	1.28E-04
341	6.60E-04	5	1.32E-04
342	6.80E-04	5	1.36E-04
343	6.96E-04	5	1.39E-04
344	5.24E-04	5	1.05E-04
345	5.42E-04	5	1.08E-04
346	5.59E-04	5	1.12E-04
347	5.78E-04	5	1.16E-04
348	5.96E-04	5	1.19E-04
349	6.13E-04	5	1.23E-04
350	6.28E-04	5	1.26E-04
351	4.79E-04	5	9.58E-05
352	4.95E-04	5	9.89E-05

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
353	5.10E-04	5	1.02E-04
354	5.25E-04	5	1.05E-04
355	5.42E-04	5	1.08E-04
356	5.57E-04	5	1.11E-04
357	5.70E-04	5	1.14E-04
358	4.40E-04	5	8.80E-05
359	4.53E-04	5	9.06E-05
360	4.67E-04	5	9.34E-05
361	4.81E-04	5	9.62E-05
362	4.95E-04	5	9.90E-05
363	5.08E-04	5	1.02E-04
364	5.20E-04	5	1.04E-04
365	4.07E-04	5	8.13E-05
366	4.18E-04	5	8.36E-05
367	4.30E-04	5	8.60E-05
368	4.42E-04	5	8.85E-05
369	4.54E-04	5	9.09E-05
370	4.66E-04	5	9.33E-05
371	4.77E-04	5	9.53E-05
372	3.76E-04	5	7.53E-05
373	3.87E-04	5	7.73E-05
374	3.97E-04	5	7.94E-05
375	4.08E-04	5	8.16E-05
376	4.19E-04	5	8.37E-05
377	4.29E-04	5	8.58E-05
378	4.39E-04	5	8.77E-05
379	3.57E-03	5	7.13E-04
380	3.62E-03	5	7.24E-04
381	3.07E-03	5	6.13E-04
382	2.96E-03	5	5.92E-04
383	2.49E-03	5	4.97E-04
384	2.10E-03	5	4.20E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Hazard Index from Onsite Truck Travel

Receptor #	Conc	REL	HI
385	1.83E-03	5	3.66E-04
386	1.57E-03	5	3.13E-04
387	1.37E-03	5	2.74E-04
388	1.21E-03	5	2.43E-04
389	1.09E-03	5	2.18E-04
390	9.95E-04	5	1.99E-04

AERMOD Output

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.5.0
** Lakes Environmental Software Inc.
** Date: 1/26/2018
** File: C:\Lakes\AERMOD View\AERMOD Projects\OCSD GWRS Plant No2\OCSD GWRS Plant No2.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc
  MODELOPT DEFAULT CONC
  AVERTIME 1 ANNUAL
  URBANOPT 9818605 LA_County_2010_-_SCAQMD
  POLLUTID PM_10
  RUNORNOT RUN
  ERRORFIL "OCSD GWRS Plant No2.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = P2TR1
** DESCRSRC Brookhurst Street to PCH
** PREFIX
** Length of Side = 27.00
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 7.32
** SZINIT = 3.40
** Nodes = 2
** 411317.530, 3723056.983, 2.24, 3.66, 12.56
** 410587.232, 3722135.717, 3.61, 3.66, 12.56
** -----
LOCATION L0001024 VOLUME 411309.144 3723046.404 2.19
LOCATION L0001025 VOLUME 411292.372 3723025.245 2.16
LOCATION L0001026 VOLUME 411275.599 3723004.087 2.17
LOCATION L0001027 VOLUME 411258.826 3722982.929 2.19
LOCATION L0001028 VOLUME 411242.054 3722961.770 2.27
LOCATION L0001029 VOLUME 411225.281 3722940.612 2.29
LOCATION L0001030 VOLUME 411208.509 3722919.453 2.26
LOCATION L0001031 VOLUME 411191.736 3722898.295 2.24
LOCATION L0001032 VOLUME 411174.964 3722877.136 2.29
LOCATION L0001033 VOLUME 411158.191 3722855.978 2.32
LOCATION L0001034 VOLUME 411141.418 3722834.819 2.18
LOCATION L0001035 VOLUME 411124.646 3722813.661 2.08
LOCATION L0001036 VOLUME 411107.873 3722792.502 2.12
LOCATION L0001037 VOLUME 411091.101 3722771.344 2.10
LOCATION L0001038 VOLUME 411074.328 3722750.185 2.10
LOCATION L0001039 VOLUME 411057.556 3722729.027 2.12
LOCATION L0001040 VOLUME 411040.783 3722707.868 2.08
LOCATION L0001041 VOLUME 411024.011 3722686.710 2.08
LOCATION L0001042 VOLUME 411007.238 3722665.551 2.07
LOCATION L0001043 VOLUME 410990.465 3722644.393 2.02
LOCATION L0001044 VOLUME 410973.693 3722623.234 2.01
LOCATION L0001045 VOLUME 410956.920 3722602.076 2.10
LOCATION L0001046 VOLUME 410940.148 3722580.918 2.11
LOCATION L0001047 VOLUME 410923.375 3722559.759 2.06
LOCATION L0001048 VOLUME 410906.603 3722538.601 1.88
LOCATION L0001049 VOLUME 410889.830 3722517.442 1.93
LOCATION L0001050 VOLUME 410873.057 3722496.284 1.93
LOCATION L0001051 VOLUME 410856.285 3722475.125 1.89
LOCATION L0001052 VOLUME 410839.512 3722453.967 1.88
LOCATION L0001053 VOLUME 410822.740 3722432.808 1.86
LOCATION L0001054 VOLUME 410805.967 3722411.650 1.89
LOCATION L0001055 VOLUME 410789.195 3722390.491 1.94
LOCATION L0001056 VOLUME 410772.422 3722369.333 2.01
LOCATION L0001057 VOLUME 410755.649 3722348.174 2.10
LOCATION L0001058 VOLUME 410738.877 3722327.016 2.38
LOCATION L0001059 VOLUME 410722.104 3722305.857 2.85
LOCATION L0001060 VOLUME 410705.332 3722284.699 -0.02
LOCATION L0001061 VOLUME 410688.559 3722263.540 0.35
LOCATION L0001062 VOLUME 410671.787 3722242.382 2.94
LOCATION L0001063 VOLUME 410655.014 3722221.223 2.54
LOCATION L0001064 VOLUME 410638.242 3722200.065 2.54
LOCATION L0001065 VOLUME 410621.469 3722178.907 2.69
LOCATION L0001066 VOLUME 410604.696 3722157.748 3.25
LOCATION L0001067 VOLUME 410587.924 3722136.590 3.61
** End of LINE VOLUME Source ID = P2TR1
** -----

```

```

** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = P2TR2
** DESCRSRC Onsite Truck Route
** PREFIX
** Length of Side = 9.00
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 7.32
** SZINIT = 3.40
** Nodes = 3
** 411308.883, 3723046.174, 2.21, 3.66, 4.19
** 411337.611, 3723025.762, 2.73, 3.66, 4.19
** 411481.251, 3723233.663, 4.71, 3.66, 4.19
** -----
LOCATION L0001068    VOLUME 411312.551 3723043.568 2.09
LOCATION L0001069    VOLUME 411319.888 3723038.355 2.08
LOCATION L0001070    VOLUME 411327.224 3723033.142 2.40
LOCATION L0001071    VOLUME 411334.561 3723027.929 2.64
LOCATION L0001072    VOLUME 411340.600 3723030.088 2.75
LOCATION L0001073    VOLUME 411345.716 3723037.493 3.04
LOCATION L0001074    VOLUME 411350.832 3723044.898 3.23
LOCATION L0001075    VOLUME 411355.948 3723052.302 3.22
LOCATION L0001076    VOLUME 411361.064 3723059.707 3.26
LOCATION L0001077    VOLUME 411366.179 3723067.111 3.36
LOCATION L0001078    VOLUME 411371.295 3723074.516 3.31
LOCATION L0001079    VOLUME 411376.411 3723081.920 3.33
LOCATION L0001080    VOLUME 411381.527 3723089.325 3.38
LOCATION L0001081    VOLUME 411386.643 3723096.730 3.43
LOCATION L0001082    VOLUME 411391.759 3723104.134 3.39
LOCATION L0001083    VOLUME 411396.875 3723111.539 3.30
LOCATION L0001084    VOLUME 411401.991 3723118.943 3.35
LOCATION L0001085    VOLUME 411407.107 3723126.348 3.47
LOCATION L0001086    VOLUME 411412.222 3723133.752 3.57
LOCATION L0001087    VOLUME 411417.338 3723141.157 3.66
LOCATION L0001088    VOLUME 411422.454 3723148.562 4.05
LOCATION L0001089    VOLUME 411427.570 3723155.966 3.93
LOCATION L0001090    VOLUME 411432.686 3723163.371 4.58
LOCATION L0001091    VOLUME 411437.802 3723170.775 4.49
LOCATION L0001092    VOLUME 411442.918 3723178.180 4.73
LOCATION L0001093    VOLUME 411448.034 3723185.584 4.55
LOCATION L0001094    VOLUME 411453.149 3723192.989 4.89
LOCATION L0001095    VOLUME 411458.265 3723200.394 4.88
LOCATION L0001096    VOLUME 411463.381 3723207.798 4.52
LOCATION L0001097    VOLUME 411468.497 3723215.203 4.57
LOCATION L0001098    VOLUME 411473.613 3723222.607 4.30
LOCATION L0001099    VOLUME 411478.729 3723230.012 3.89
** End of LINE VOLUME Source ID = P2TR2
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = OS
** DESCRSRC
** PREFIX
** Length of Side = 24.00
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 7.32
** SZINIT = 3.40
** Nodes = 9
** 411486.907, 3723226.848, 6.16, 3.66, 11.16
** 411523.586, 3723311.349, 4.68, 3.66, 11.16
** 411541.694, 3723303.456, 5.98, 3.66, 11.16
** 411506.407, 3723198.990, 6.46, 3.66, 11.16
** 411510.586, 3723180.418, 8.09, 3.66, 11.16
** 411488.764, 3723104.274, 3.33, 3.66, 11.16
** 411462.764, 3723016.987, 3.28, 3.66, 11.16
** 411405.191, 3722989.129, 3.79, 3.66, 11.16
** 411397.762, 3722968.700, 3.54, 3.66, 11.16
** -----
LOCATION L0001100    VOLUME 411491.685 3723237.856 5.93
LOCATION L0001101    VOLUME 411501.241 3723259.871 5.50
LOCATION L0001102    VOLUME 411510.797 3723281.887 5.65
LOCATION L0001103    VOLUME 411520.353 3723303.902 4.99
LOCATION L0001104    VOLUME 411538.144 3723305.004 6.20
LOCATION L0001105    VOLUME 411535.252 3723284.387 6.94
LOCATION L0001106    VOLUME 411527.572 3723261.649 5.79
LOCATION L0001107    VOLUME 411519.892 3723238.911 10.43
LOCATION L0001108    VOLUME 411512.211 3723216.173 7.80
LOCATION L0001109    VOLUME 411507.694 3723193.270 6.55
LOCATION L0001110    VOLUME 411507.603 3723170.010 5.80
LOCATION L0001111    VOLUME 411500.991 3723146.939 5.05
LOCATION L0001112    VOLUME 411494.379 3723123.868 4.92
LOCATION L0001113    VOLUME 411487.731 3723100.807 3.19
LOCATION L0001114    VOLUME 411480.880 3723077.806 2.94
LOCATION L0001115    VOLUME 411474.028 3723054.804 2.81
LOCATION L0001116    VOLUME 411467.177 3723031.803 2.95
LOCATION L0001117    VOLUME 411455.076 3723013.267 3.00
LOCATION L0001118    VOLUME 411433.472 3723002.814 3.79
LOCATION L0001119    VOLUME 411411.868 3722992.360 3.75
LOCATION L0001120    VOLUME 411399.524 3722973.545 3.46
** End of LINE VOLUME Source ID = OS
** Source Parameters **
** LINE VOLUME Source ID = P2TR1
SRCPARAM L0001024    0.0227272727    3.66    12.56    3.40
SRCPARAM L0001025    0.0227272727    3.66    12.56    3.40
SRCPARAM L0001026    0.0227272727    3.66    12.56    3.40

```

3

SRCPARAM	L0001118	0.0476190476	3.66	11.16	3.40
SRCPARAM	L0001119	0.0476190476	3.66	11.16	3.40
SRCPARAM	L0001120	0.0476190476	3.66	11.16	3.40

**-----
 URBANSRC L0001024
 URBANSRC L0001025
 URBANSRC L0001026
 URBANSRC L0001027
 URBANSRC L0001028
 URBANSRC L0001029
 URBANSRC L0001030
 URBANSRC L0001031
 URBANSRC L0001032
 URBANSRC L0001033
 URBANSRC L0001034
 URBANSRC L0001035
 URBANSRC L0001036
 URBANSRC L0001037
 URBANSRC L0001038
 URBANSRC L0001039
 URBANSRC L0001040
 URBANSRC L0001041
 URBANSRC L0001042
 URBANSRC L0001043
 URBANSRC L0001044
 URBANSRC L0001045
 URBANSRC L0001046
 URBANSRC L0001047
 URBANSRC L0001048
 URBANSRC L0001049
 URBANSRC L0001050
 URBANSRC L0001051
 URBANSRC L0001052
 URBANSRC L0001053
 URBANSRC L0001054
 URBANSRC L0001055
 URBANSRC L0001056
 URBANSRC L0001057
 URBANSRC L0001058
 URBANSRC L0001059
 URBANSRC L0001060
 URBANSRC L0001061
 URBANSRC L0001062
 URBANSRC L0001063
 URBANSRC L0001064
 URBANSRC L0001065
 URBANSRC L0001066
 URBANSRC L0001067
 URBANSRC L0001068
 URBANSRC L0001069
 URBANSRC L0001070
 URBANSRC L0001071
 URBANSRC L0001072
 URBANSRC L0001073
 URBANSRC L0001074
 URBANSRC L0001075
 URBANSRC L0001076
 URBANSRC L0001077
 URBANSRC L0001078
 URBANSRC L0001079
 URBANSRC L0001080
 URBANSRC L0001081
 URBANSRC L0001082
 URBANSRC L0001083
 URBANSRC L0001084
 URBANSRC L0001085
 URBANSRC L0001086
 URBANSRC L0001087
 URBANSRC L0001088
 URBANSRC L0001089
 URBANSRC L0001090
 URBANSRC L0001091
 URBANSRC L0001092
 URBANSRC L0001093
 URBANSRC L0001094
 URBANSRC L0001095
 URBANSRC L0001096
 URBANSRC L0001097
 URBANSRC L0001098
 URBANSRC L0001099
 URBANSRC L0001100
 URBANSRC L0001101
 URBANSRC L0001102
 URBANSRC L0001103
 URBANSRC L0001104
 URBANSRC L0001105
 URBANSRC L0001106
 URBANSRC L0001107
 URBANSRC L0001108
 URBANSRC L0001109
 URBANSRC L0001110
 URBANSRC L0001111
 URBANSRC L0001112
 URBANSRC L0001113
 URBANSRC L0001114

```

URBANSRC L0001115
URBANSRC L0001116
URBANSRC L0001117
URBANSRC L0001118
URBANSRC L0001119
URBANSRC L0001120
SRCGROUP OS L0001100 L0001101 L0001102 L0001103 L0001104 L0001105
SRCGROUP OS L0001106 L0001107 L0001108 L0001109 L0001110 L0001111
SRCGROUP OS L0001112 L0001113 L0001114 L0001115 L0001116 L0001117
SRCGROUP OS L0001118 L0001119 L0001120
SRCGROUP P2TR1 L0001024 L0001025 L0001026 L0001027 L0001028 L0001029
SRCGROUP P2TR1 L0001030 L0001031 L0001032 L0001033 L0001034 L0001035
SRCGROUP P2TR1 L0001036 L0001037 L0001038 L0001039 L0001040 L0001041
SRCGROUP P2TR1 L0001042 L0001043 L0001044 L0001045 L0001046 L0001047
SRCGROUP P2TR1 L0001048 L0001049 L0001050 L0001051 L0001052 L0001053
SRCGROUP P2TR1 L0001054 L0001055 L0001056 L0001057 L0001058 L0001059
SRCGROUP P2TR1 L0001060 L0001061 L0001062 L0001063 L0001064 L0001065
SRCGROUP P2TR1 L0001066 L0001067
SRCGROUP P2TR2 L0001068 L0001069 L0001070 L0001071 L0001072 L0001073
SRCGROUP P2TR2 L0001074 L0001075 L0001076 L0001077 L0001078 L0001079
SRCGROUP P2TR2 L0001080 L0001081 L0001082 L0001083 L0001084 L0001085
SRCGROUP P2TR2 L0001086 L0001087 L0001088 L0001089 L0001090 L0001091
SRCGROUP P2TR2 L0001092 L0001093 L0001094 L0001095 L0001096 L0001097
SRCGROUP P2TR2 L0001098 L0001099
SO FINISHED
**
*****
** AERMOD Receptor Pathway
*****
**
**
RE STARTING
  INCLUDED "OCSD GWRS Plant No2.rou"
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
  SURFFILE MET\KSNA_v9.SFC
  PROFFILE MET\KSNA_v9.PFL
  SURFDATA 93184 2012
  UAIRDATA 3190 2012
  PROFBASE 17.0 METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
  RECTABLE ALLAVE 1ST
  RECTABLE 1 1ST
** Auto-Generated Plotfiles
  PLOTFILE 1 OS 1ST "OCSD GWRS PLANT NO2.AD\01H1G001.PLT" 31
  PLOTFILE 1 P2TR1 1ST "OCSD GWRS PLANT NO2.AD\01H1G002.PLT" 32
  PLOTFILE 1 P2TR2 1ST "OCSD GWRS PLANT NO2.AD\01H1G003.PLT" 33
  PLOTFILE ANNUAL OS "OCSD GWRS PLANT NO2.AD\AN00G001.PLT" 34
  PLOTFILE ANNUAL P2TR1 "OCSD GWRS PLANT NO2.AD\AN00G002.PLT" 35
  PLOTFILE ANNUAL P2TR2 "OCSD GWRS PLANT NO2.AD\AN00G003.PLT" 36
  SUMMFILE "OCSD GWRS Plant No2.sum"
OU FINISHED

*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

A Total of          0 Fatal Error Message(s)
A Total of          2 Warning Message(s)
A Total of          0 Informational Message(s)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
ME W186      427      MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
ME W187      427      MEOPEN: ADJ_U* Option for Low Winds used in AERMET

*** SETUP Finishes Successfully ***
*****

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 1
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** MODEL SETUP OPTIONS SUMMARY ***
- - - - -

**Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for 97 Source(s),
for Total of 1 Urban Area(s):
Urban Population = 9818605.0 ; Urban Roughness Length = 1.000 m

**Model Uses Regulatory DEFAULT Options:
1. Stack-tip Downwash.
2. Model Accounts for ELEVated Terrain Effects.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.
6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
ADJ_U* - Use ADJ_U* BETA option for SBL in AERMET
CCVR_Sub - Meteorological data includes CCVR substitutions
TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM_10

**Model Calculates 1 Short Term Average(s) of: 1-HR
and Calculates ANNUAL Averages

**This Run Includes: 97 Source(s); 3 Source Group(s); and 390 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 97 VOLUME source(s)
and: 0 AREA type source(s)
and: 0 LINE source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 16216

**Output Options Selected:
Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 17.00 ; Decay Coef. = 0.000 ; Rot. Angle =
0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.6 MB of RAM.

**Detailed Error/Message File: OCSD GWRS Plant No2.err
**File for Summary of Results: OCSD GWRS Plant No2.sum

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 2

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001024	0	0.22727E-01	411309.1	3723046.4	2.2	3.66	12.56	3.40	YES	
L0001025	0	0.22727E-01	411292.4	3723025.2	2.2	3.66	12.56	3.40	YES	
L0001026	0	0.22727E-01	411275.6	3723004.1	2.2	3.66	12.56	3.40	YES	
L0001027	0	0.22727E-01	411258.8	3722982.9	2.2	3.66	12.56	3.40	YES	
L0001028	0	0.22727E-01	411242.1	3722961.8	2.3	3.66	12.56	3.40	YES	
L0001029	0	0.22727E-01	411225.3	3722940.6	2.3	3.66	12.56	3.40	YES	
L0001030	0	0.22727E-01	411208.5	3722919.5	2.3	3.66	12.56	3.40	YES	
L0001031	0	0.22727E-01	411191.7	3722898.3	2.2	3.66	12.56	3.40	YES	
L0001032	0	0.22727E-01	411175.0	3722877.1	2.3	3.66	12.56	3.40	YES	
L0001033	0	0.22727E-01	411158.2	3722856.0	2.3	3.66	12.56	3.40	YES	
L0001034	0	0.22727E-01	411141.4	3722834.8	2.2	3.66	12.56	3.40	YES	
L0001035	0	0.22727E-01	411124.6	3722813.7	2.1	3.66	12.56	3.40	YES	
L0001036	0	0.22727E-01	411107.9	3722792.5	2.1	3.66	12.56	3.40	YES	
L0001037	0	0.22727E-01	411091.1	3722771.3	2.1	3.66	12.56	3.40	YES	
L0001038	0	0.22727E-01	411074.3	3722750.2	2.1	3.66	12.56	3.40	YES	
L0001039	0	0.22727E-01	411057.6	3722729.0	2.1	3.66	12.56	3.40	YES	
L0001040	0	0.22727E-01	411040.8	3722707.9	2.1	3.66	12.56	3.40	YES	
L0001041	0	0.22727E-01	411024.0	3722686.7	2.1	3.66	12.56	3.40	YES	
L0001042	0	0.22727E-01	411007.2	3722665.6	2.1	3.66	12.56	3.40	YES	
L0001043	0	0.22727E-01	410990.5	3722644.4	2.0	3.66	12.56	3.40	YES	
L0001044	0	0.22727E-01	410973.7	3722623.2	2.0	3.66	12.56	3.40	YES	
L0001045	0	0.22727E-01	410956.9	3722602.1	2.1	3.66	12.56	3.40	YES	
L0001046	0	0.22727E-01	410940.1	3722580.9	2.1	3.66	12.56	3.40	YES	
L0001047	0	0.22727E-01	410923.4	3722559.8	2.1	3.66	12.56	3.40	YES	
L0001048	0	0.22727E-01	410906.6	3722538.6	1.9	3.66	12.56	3.40	YES	
L0001049	0	0.22727E-01	410889.8	3722517.4	1.9	3.66	12.56	3.40	YES	
L0001050	0	0.22727E-01	410873.1	3722496.3	1.9	3.66	12.56	3.40	YES	
L0001051	0	0.22727E-01	410856.3	3722475.1	1.9	3.66	12.56	3.40	YES	
L0001052	0	0.22727E-01	410839.5	3722454.0	1.9	3.66	12.56	3.40	YES	
L0001053	0	0.22727E-01	410822.7	3722432.8	1.9	3.66	12.56	3.40	YES	
L0001054	0	0.22727E-01	410806.0	3722411.6	1.9	3.66	12.56	3.40	YES	
L0001055	0	0.22727E-01	410789.2	3722390.5	1.9	3.66	12.56	3.40	YES	
L0001056	0	0.22727E-01	410772.4	3722369.3	2.0	3.66	12.56	3.40	YES	
L0001057	0	0.22727E-01	410755.6	3722348.2	2.1	3.66	12.56	3.40	YES	
L0001058	0	0.22727E-01	410738.9	3722327.0	2.4	3.66	12.56	3.40	YES	
L0001059	0	0.22727E-01	410722.1	3722305.9	2.8	3.66	12.56	3.40	YES	
L0001060	0	0.22727E-01	410705.3	3722284.7	-0.0	3.66	12.56	3.40	YES	
L0001061	0	0.22727E-01	410688.6	3722263.5	0.4	3.66	12.56	3.40	YES	
L0001062	0	0.22727E-01	410671.8	3722242.4	2.9	3.66	12.56	3.40	YES	
L0001063	0	0.22727E-01	410655.0	3722221.2	2.5	3.66	12.56	3.40	YES	

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 3
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001064	0	0.22727E-01	410638.2	3722200.1	2.5	3.66	12.56	3.40	YES	
L0001065	0	0.22727E-01	410621.5	3722178.9	2.7	3.66	12.56	3.40	YES	
L0001066	0	0.22727E-01	410604.7	3722157.7	3.2	3.66	12.56	3.40	YES	
L0001067	0	0.22727E-01	410587.9	3722136.6	3.6	3.66	12.56	3.40	YES	
L0001068	0	0.31250E-01	411312.6	3723043.6	2.1	3.66	4.19	3.40	YES	
L0001069	0	0.31250E-01	411319.9	3723038.4	2.1	3.66	4.19	3.40	YES	
L0001070	0	0.31250E-01	411327.2	3723033.1	2.4	3.66	4.19	3.40	YES	
L0001071	0	0.31250E-01	411334.6	3723027.9	2.6	3.66	4.19	3.40	YES	
L0001072	0	0.31250E-01	411340.6	3723030.1	2.8	3.66	4.19	3.40	YES	
L0001073	0	0.31250E-01	411345.7	3723037.5	3.0	3.66	4.19	3.40	YES	
L0001074	0	0.31250E-01	411350.8	3723044.9	3.2	3.66	4.19	3.40	YES	
L0001075	0	0.31250E-01	411355.9	3723052.3	3.2	3.66	4.19	3.40	YES	
L0001076	0	0.31250E-01	411361.1	3723059.7	3.3	3.66	4.19	3.40	YES	
L0001077	0	0.31250E-01	411366.2	3723067.1	3.4	3.66	4.19	3.40	YES	
L0001078	0	0.31250E-01	411371.3	3723074.5	3.3	3.66	4.19	3.40	YES	
L0001079	0	0.31250E-01	411376.4	3723081.9	3.3	3.66	4.19	3.40	YES	
L0001080	0	0.31250E-01	411381.5	3723089.3	3.4	3.66	4.19	3.40	YES	
L0001081	0	0.31250E-01	411386.6	3723096.7	3.4	3.66	4.19	3.40	YES	
L0001082	0	0.31250E-01	411391.8	3723104.1	3.4	3.66	4.19	3.40	YES	
L0001083	0	0.31250E-01	411396.9	3723111.5	3.3	3.66	4.19	3.40	YES	
L0001084	0	0.31250E-01	411402.0	3723118.9	3.3	3.66	4.19	3.40	YES	
L0001085	0	0.31250E-01	411407.1	3723126.3	3.5	3.66	4.19	3.40	YES	
L0001086	0	0.31250E-01	411412.2	3723133.8	3.6	3.66	4.19	3.40	YES	
L0001087	0	0.31250E-01	411417.3	3723141.2	3.7	3.66	4.19	3.40	YES	
L0001088	0	0.31250E-01	411422.5	3723148.6	4.0	3.66	4.19	3.40	YES	
L0001089	0	0.31250E-01	411427.6	3723156.0	3.9	3.66	4.19	3.40	YES	
L0001090	0	0.31250E-01	411432.7	3723163.4	4.6	3.66	4.19	3.40	YES	
L0001091	0	0.31250E-01	411437.8	3723170.8	4.5	3.66	4.19	3.40	YES	
L0001092	0	0.31250E-01	411442.9	3723178.2	4.7	3.66	4.19	3.40	YES	
L0001093	0	0.31250E-01	411448.0	3723185.6	4.5	3.66	4.19	3.40	YES	
L0001094	0	0.31250E-01	411453.1	3723193.0	4.9	3.66	4.19	3.40	YES	
L0001095	0	0.31250E-01	411458.3	3723200.4	4.9	3.66	4.19	3.40	YES	
L0001096	0	0.31250E-01	411463.4	3723207.8	4.5	3.66	4.19	3.40	YES	
L0001097	0	0.31250E-01	411468.5	3723215.2	4.6	3.66	4.19	3.40	YES	
L0001098	0	0.31250E-01	411473.6	3723222.6	4.3	3.66	4.19	3.40	YES	
L0001099	0	0.31250E-01	411478.7	3723230.0	3.9	3.66	4.19	3.40	YES	
L0001100	0	0.47619E-01	411491.7	3723237.9	5.9	3.66	11.16	3.40	YES	
L0001101	0	0.47619E-01	411501.2	3723259.9	5.5	3.66	11.16	3.40	YES	
L0001102	0	0.47619E-01	411510.8	3723281.9	5.6	3.66	11.16	3.40	YES	
L0001103	0	0.47619E-01	411520.4	3723303.9	5.0	3.66	11.16	3.40	YES	

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 4
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001104	0	0.47619E-01	411538.1	3723305.0	6.2	3.66	11.16	3.40	YES	
L0001105	0	0.47619E-01	411535.3	3723284.4	6.9	3.66	11.16	3.40	YES	
L0001106	0	0.47619E-01	411527.6	3723261.6	5.8	3.66	11.16	3.40	YES	
L0001107	0	0.47619E-01	411519.9	3723238.9	10.4	3.66	11.16	3.40	YES	
L0001108	0	0.47619E-01	411512.2	3723216.2	7.8	3.66	11.16	3.40	YES	
L0001109	0	0.47619E-01	411507.7	3723193.3	6.5	3.66	11.16	3.40	YES	
L0001110	0	0.47619E-01	411507.6	3723170.0	5.8	3.66	11.16	3.40	YES	
L0001111	0	0.47619E-01	411501.0	3723146.9	5.0	3.66	11.16	3.40	YES	
L0001112	0	0.47619E-01	411494.4	3723123.9	4.9	3.66	11.16	3.40	YES	
L0001113	0	0.47619E-01	411487.7	3723100.8	3.2	3.66	11.16	3.40	YES	
L0001114	0	0.47619E-01	411480.9	3723077.8	2.9	3.66	11.16	3.40	YES	
L0001115	0	0.47619E-01	411474.0	3723054.8	2.8	3.66	11.16	3.40	YES	
L0001116	0	0.47619E-01	411467.2	3723031.8	2.9	3.66	11.16	3.40	YES	
L0001117	0	0.47619E-01	411455.1	3723013.3	3.0	3.66	11.16	3.40	YES	
L0001118	0	0.47619E-01	411433.5	3723002.8	3.8	3.66	11.16	3.40	YES	
L0001119	0	0.47619E-01	411411.9	3722992.4	3.8	3.66	11.16	3.40	YES	
L0001120	0	0.47619E-01	411399.5	3722973.5	3.5	3.66	11.16	3.40	YES	

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 5
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs							
-----	-----							
OS	L0001100	, L0001101	, L0001102	, L0001103	, L0001104	, L0001105	, L0001106	,
L0001107	,							
	L0001108	, L0001109	, L0001110	, L0001111	, L0001112	, L0001113	, L0001114	,
L0001115	,							
	L0001116	, L0001117	, L0001118	, L0001119	, L0001120	,		
P2TR1	L0001024	, L0001025	, L0001026	, L0001027	, L0001028	, L0001029	, L0001030	,
L0001031	,							
	L0001032	, L0001033	, L0001034	, L0001035	, L0001036	, L0001037	, L0001038	,
L0001039	,							
	L0001040	, L0001041	, L0001042	, L0001043	, L0001044	, L0001045	, L0001046	,
L0001047	,							
	L0001048	, L0001049	, L0001050	, L0001051	, L0001052	, L0001053	, L0001054	,
L0001055	,							
	L0001056	, L0001057	, L0001058	, L0001059	, L0001060	, L0001061	, L0001062	,
L0001063	,							
	L0001064	, L0001065	, L0001066	, L0001067	,			
P2TR2	L0001068	, L0001069	, L0001070	, L0001071	, L0001072	, L0001073	, L0001074	,
L0001075	,							
	L0001076	, L0001077	, L0001078	, L0001079	, L0001080	, L0001081	, L0001082	,
L0001083	,							
	L0001084	, L0001085	, L0001086	, L0001087	, L0001088	, L0001089	, L0001090	,
L0001091	,							
	L0001092	, L0001093	, L0001094	, L0001095	, L0001096	, L0001097	, L0001098	,
L0001099	,							

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
 01/26/18
 *** AERMET - VERSION 16216 *** ***
 15:11:49 ***

PAGE 6
 *** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
-----	-----	-----
L0001030	9818605.	L0001024 , L0001025 , L0001026 , L0001027 , L0001028 , L0001029 ,
L0001031	,	
L0001039	L0001032 , L0001033 , L0001034 , L0001035 , L0001036 , L0001037 , L0001038 ,	
L0001047	L0001040 , L0001041 , L0001042 , L0001043 , L0001044 , L0001045 , L0001046 ,	
L0001055	L0001048 , L0001049 , L0001050 , L0001051 , L0001052 , L0001053 , L0001054 ,	
L0001063	L0001056 , L0001057 , L0001058 , L0001059 , L0001060 , L0001061 , L0001062 ,	
L0001071	L0001064 , L0001065 , L0001066 , L0001067 , L0001068 , L0001069 , L0001070 ,	
L0001079	L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 ,	
L0001087	L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 ,	
L0001095	L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,	
L0001103	L0001096 , L0001097 , L0001098 , L0001099 , L0001100 , L0001101 , L0001102 ,	
L0001111	L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 ,	
L0001119	L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 ,	
	L0001120 ,	

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 7
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

( 410571.0, 3722482.0, 3.2, 3.2, 0.0); ( 410631.0, 3722482.0, 2.9, 2.9,
0.0); ( 410511.0, 3722542.0, 1.5, 3.2, 0.0); ( 410571.0, 3722542.0, 2.4, 2.4,
0.0); ( 410631.0, 3722542.0, 3.3, 3.3, 0.0); ( 410691.0, 3722542.0, 2.7, 2.7,
0.0); ( 410511.0, 3722602.0, 3.1, 3.1, 0.0); ( 410571.0, 3722602.0, 2.9, 2.9,
0.0); ( 410631.0, 3722602.0, 2.7, 2.7, 0.0); ( 410691.0, 3722602.0, 2.7, 2.7,
0.0); ( 410751.0, 3722602.0, 3.0, 3.0, 0.0); ( 410571.0, 3722662.0, 1.7, 1.7,
0.0); ( 410631.0, 3722662.0, 1.7, 1.7, 0.0); ( 410691.0, 3722662.0, 1.8, 1.8,
0.0); ( 410751.0, 3722662.0, 2.1, 2.1, 0.0); ( 410811.0, 3722662.0, 1.4, 1.4,
0.0); ( 410631.0, 3722722.0, 1.9, 1.9, 0.0); ( 410691.0, 3722722.0, 2.4, 2.4,
0.0); ( 410751.0, 3722722.0, 2.3, 2.3, 0.0); ( 410811.0, 3722722.0, 1.7, 1.7,
0.0); ( 410871.0, 3722722.0, 1.9, 1.9, 0.0); ( 410691.0, 3722782.0, 2.5, 2.5,
0.0); ( 410751.0, 3722782.0, 2.6, 2.6, 0.0); ( 410811.0, 3722782.0, 1.7, 1.7,
0.0); ( 410871.0, 3722782.0, 1.7, 1.7, 0.0); ( 410931.0, 3722782.0, 1.3, 1.3,
0.0); ( 410751.0, 3722842.0, 2.5, 2.5, 0.0); ( 410811.0, 3722842.0, 1.7, 1.7,
0.0); ( 410871.0, 3722842.0, 2.0, 2.0, 0.0); ( 410931.0, 3722842.0, 1.9, 1.9,
0.0); ( 410991.0, 3722842.0, 1.8, 1.8, 0.0); ( 410811.0, 3722902.0, 1.9, 1.9,
0.0); ( 410871.0, 3722902.0, 1.8, 1.8, 0.0); ( 410931.0, 3722902.0, 1.9, 1.9,
0.0); ( 410991.0, 3722902.0, 1.4, 1.4, 0.0); ( 411051.0, 3722902.0, 2.1, 2.1,
0.0); ( 410871.0, 3722962.0, 1.4, 1.4, 0.0); ( 410931.0, 3722962.0, 1.5, 1.5,
0.0); ( 410991.0, 3722962.0, 1.4, 1.4, 0.0); ( 411051.0, 3722962.0, 2.0, 2.0,
0.0); ( 410931.0, 3723022.0, 2.0, 2.0, 0.0); ( 410991.0, 3723022.0, 2.1, 2.1,
0.0); ( 411051.0, 3723022.0, 2.1, 2.1, 0.0); ( 411111.0, 3723022.0, 2.2, 2.2,
0.0); ( 410991.0, 3723082.0, 1.6, 1.6, 0.0); ( 411051.0, 3723082.0, 1.8, 1.8,
0.0); ( 411111.0, 3723082.0, 2.2, 2.2, 0.0); ( 411171.0, 3723082.0, 2.4, 2.4,
0.0); ( 411111.0, 3723142.0, 2.5, 2.5, 0.0); ( 411171.0, 3723142.0, 2.4, 2.4,
0.0); ( 411111.0, 3723202.0, 2.7, 2.7, 0.0); ( 411171.0, 3723202.0, 2.7, 2.7,
0.0); ( 411231.0, 3723202.0, 2.3, 2.3, 0.0); ( 411111.0, 3723262.0, 2.8, 2.8,
0.0); ( 411171.0, 3723262.0, 2.5, 2.5, 0.0); ( 411231.0, 3723262.0, 2.8, 2.8,
0.0); ( 411291.0, 3723262.0, 2.1, 2.1, 0.0); ( 411111.0, 3723322.0, 2.0, 2.0,
0.0); ( 411171.0, 3723322.0, 2.4, 2.4, 0.0); ( 411231.0, 3723322.0, 2.8, 2.8,
0.0); ( 411291.0, 3723322.0, 2.8, 2.8, 0.0); ( 411111.0, 3723382.0, 2.6, 2.6,
0.0); ( 411171.0, 3723382.0, 2.6, 3.9, 0.0); ( 411231.0, 3723382.0, 2.5, 2.5,
0.0); ( 411291.0, 3723382.0, 2.3, 2.3, 0.0); ( 411351.0, 3723382.0, 2.2, 2.2,
0.0); ( 411111.0, 3723442.0, 2.1, 2.1, 0.0); ( 411171.0, 3723442.0, 2.2, 2.2,
0.0); ( 411231.0, 3723442.0, 2.4, 2.4, 0.0); ( 411291.0, 3723442.0, 2.2, 2.2,
0.0); ( 411351.0, 3723442.0, 2.3, 2.3, 0.0); ( 411111.0, 3723502.0, 2.1, 2.1,
0.0); ( 411171.0, 3723502.0, 2.2, 2.2, 0.0); ( 411231.0, 3723502.0, 2.7, 2.7,
0.0); ( 411291.0, 3723502.0, 2.3, 2.3, 0.0); ( 411351.0, 3723502.0, 2.5, 2.5,
0.0); ( 411111.0, 3723562.0, 2.1, 2.1, 0.0); ( 411171.0, 3723562.0, 2.1, 2.1,
0.0); ( 411231.0, 3723562.0, 2.8, 2.8, 0.0); ( 411291.0, 3723562.0, 2.3, 2.3,
0.0); ( 411351.0, 3723562.0, 2.4, 2.4, 0.0); ( 411111.0, 3723622.0, 2.3, 2.3,
0.0); ( 411171.0, 3723622.0, 2.3, 2.3, 0.0); ( 411231.0, 3723622.0, 2.0, 2.0,
0.0);

```

```
0.0); ( 411291.0, 3723622.0, 1.9, 1.9, 0.0); ( 411351.0, 3723622.0, 1.8, 1.8,
0.0); ( 411111.0, 3723682.0, 2.1, 2.1, 0.0); ( 411171.0, 3723682.0, 2.1, 2.1,
0.0); ( 411231.0, 3723682.0, 1.9, 1.9, 0.0); ( 411291.0, 3723682.0, 2.6, 2.6,
0.0);
```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc
 01/26/18
 *** AERMET - VERSION 16216 *** ***
 15:11:49

PAGE 8

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
 (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
 (METERS)

(411351.0, 3723682.0,	2.6,	2.6,	0.0);	(411111.0, 3723742.0,	2.2,	2.2,
0.0);						
(411171.0, 3723742.0,	2.1,	2.1,	0.0);	(411231.0, 3723742.0,	2.0,	2.0,
0.0);						
(411291.0, 3723742.0,	2.3,	2.3,	0.0);	(411351.0, 3723742.0,	2.5,	2.5,
0.0);						
(411111.0, 3723802.0,	2.0,	2.0,	0.0);	(411171.0, 3723802.0,	2.1,	2.1,
0.0);						
(411231.0, 3723802.0,	2.2,	2.2,	0.0);	(411291.0, 3723802.0,	2.1,	2.1,
0.0);						
(411351.0, 3723802.0,	2.5,	2.5,	0.0);	(410709.5, 3722302.2,	1.0,	2.9,
0.0);						
(410679.5, 3722332.2,	2.1,	3.3,	0.0);	(410709.5, 3722332.2,	3.0,	3.0,
0.0);						
(410649.5, 3722362.2,	1.5,	3.3,	0.0);	(410679.5, 3722362.2,	3.1,	3.1,
0.0);						
(410709.5, 3722362.2,	2.9,	2.9,	0.0);	(410739.5, 3722362.2,	2.3,	3.0,
0.0);						
(410649.5, 3722392.2,	3.3,	3.3,	0.0);	(410679.5, 3722392.2,	2.6,	2.6,
0.0);						
(410709.5, 3722392.2,	2.5,	2.5,	0.0);	(410739.5, 3722392.2,	3.0,	3.0,
0.0);						
(410769.5, 3722392.2,	1.8,	1.8,	0.0);	(410619.5, 3722422.2,	3.3,	3.3,
0.0);						
(410649.5, 3722422.2,	2.7,	2.7,	0.0);	(410679.5, 3722422.2,	3.2,	3.2,
0.0);						
(410709.5, 3722422.2,	2.9,	2.9,	0.0);	(410739.5, 3722422.2,	2.6,	2.6,
0.0);						
(410769.5, 3722422.2,	2.9,	2.9,	0.0);	(410799.5, 3722422.2,	1.8,	1.8,
0.0);						
(410589.5, 3722452.2,	3.2,	3.2,	0.0);	(410619.5, 3722452.2,	2.8,	2.8,
0.0);						
(410649.5, 3722452.2,	3.2,	3.2,	0.0);	(410679.5, 3722452.2,	3.4,	3.4,
0.0);						
(410709.5, 3722452.2,	3.0,	3.0,	0.0);	(410739.5, 3722452.2,	2.4,	2.4,
0.0);						
(410769.5, 3722452.2,	2.9,	2.9,	0.0);	(410799.5, 3722452.2,	1.6,	1.6,
0.0);						
(410649.5, 3722482.2,	3.0,	3.0,	0.0);	(410679.5, 3722482.2,	3.3,	3.3,
0.0);						
(410709.5, 3722482.2,	2.8,	2.8,	0.0);	(410739.5, 3722482.2,	2.5,	2.5,
0.0);						
(410769.5, 3722482.2,	2.0,	2.0,	0.0);	(410799.5, 3722482.2,	1.9,	1.9,
0.0);						
(410829.5, 3722482.2,	1.9,	1.9,	0.0);	(410679.5, 3722512.2,	3.4,	3.4,
0.0);						
(410709.5, 3722512.2,	2.7,	2.7,	0.0);	(410739.5, 3722512.2,	2.6,	2.6,
0.0);						
(410769.5, 3722512.2,	1.4,	2.9,	0.0);	(410799.5, 3722512.2,	2.0,	2.0,
0.0);						
(410829.5, 3722512.2,	2.4,	2.4,	0.0);	(410859.5, 3722512.2,	1.8,	1.8,
0.0);						
(410709.5, 3722542.2,	2.7,	2.7,	0.0);	(410739.5, 3722542.2,	2.5,	2.5,
0.0);						
(410769.5, 3722542.2,	1.3,	2.8,	0.0);	(410799.5, 3722542.2,	2.1,	2.1,
0.0);						
(410829.5, 3722542.2,	2.2,	2.2,	0.0);	(410859.5, 3722542.2,	2.0,	2.0,
0.0);						
(410739.5, 3722572.2,	2.1,	2.1,	0.0);	(410769.5, 3722572.2,	1.4,	1.4,
0.0);						
(410799.5, 3722572.2,	2.1,	2.1,	0.0);	(410829.5, 3722572.2,	1.9,	1.9,
0.0);						
(410859.5, 3722572.2,	1.5,	1.5,	0.0);	(410889.5, 3722572.2,	2.1,	2.1,
0.0);						
(410769.5, 3722602.2,	1.8,	2.9,	0.0);	(410799.5, 3722602.2,	1.9,	1.9,
0.0);						
(410829.5, 3722602.2,	1.7,	1.7,	0.0);	(410859.5, 3722602.2,	1.5,	1.5,
0.0);						
(410889.5, 3722602.2,	2.0,	2.0,	0.0);	(410919.5, 3722602.2,	1.9,	1.9,
0.0);						
(410799.5, 3722632.2,	1.9,	1.9,	0.0);	(410829.5, 3722632.2,	1.5,	1.5,
0.0);						
(410859.5, 3722632.2,	1.6,	1.6,	0.0);	(410889.5, 3722632.2,	1.7,	1.7,
0.0);						
(410919.5, 3722632.2,	1.7,	1.7,	0.0);	(410949.5, 3722632.2,	1.9,	1.9,
0.0);						
(410829.5, 3722662.2,	1.3,	1.3,	0.0);	(410859.5, 3722662.2,	2.1,	2.1,
0.0);						
(410889.5, 3722662.2,	2.1,	2.1,	0.0);	(410919.5, 3722662.2,	2.1,	2.1,
0.0);						
(410949.5, 3722662.2,	2.2,	2.2,	0.0);	(410979.5, 3722662.2,	1.8,	1.8,
0.0);						
(410859.5, 3722692.2,	2.0,	2.0,	0.0);	(410889.5, 3722692.2,	1.9,	1.9,

```
0.0); ( 410919.5, 3722692.2, 1.9, 1.9, 0.0); ( 410949.5, 3722692.2, 2.0, 2.0,
0.0); ( 410979.5, 3722692.2, 1.7, 1.7, 0.0); ( 410889.5, 3722722.2, 1.8, 1.8,
0.0); ( 410919.5, 3722722.2, 1.4, 1.4, 0.0); ( 410949.5, 3722722.2, 1.9, 1.9,
0.0);
```


*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSO All Sources\OCSO All Sources.isc
 01/26/18
 *** AERMET - VERSION 16216 *** ***
 15:11:49

PAGE 9

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
 (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
 (METERS)

(410979.5, 3722722.2,	1.4,	1.4,	0.0);	(411009.5, 3722722.2,	2.0,	2.0,
0.0);						
(410919.5, 3722752.2,	1.9,	1.9,	0.0);	(410949.5, 3722752.2,	1.2,	1.2,
0.0);						
(410979.5, 3722752.2,	1.4,	1.4,	0.0);	(411009.5, 3722752.2,	1.8,	1.8,
0.0);						
(411039.5, 3722752.2,	2.0,	2.0,	0.0);	(410949.5, 3722782.2,	1.7,	1.7,
0.0);						
(410979.5, 3722782.2,	2.0,	2.0,	0.0);	(411009.5, 3722782.2,	1.5,	1.5,
0.0);						
(411039.5, 3722782.2,	1.9,	1.9,	0.0);	(411069.5, 3722782.2,	1.9,	1.9,
0.0);						
(410979.5, 3722812.2,	2.0,	2.0,	0.0);	(411009.5, 3722812.2,	2.1,	2.1,
0.0);						
(411039.5, 3722812.2,	1.4,	1.4,	0.0);	(411069.5, 3722812.2,	2.0,	2.0,
0.0);						
(411099.5, 3722812.2,	1.9,	1.9,	0.0);	(411009.5, 3722842.2,	2.1,	2.1,
0.0);						
(411039.5, 3722842.2,	2.0,	2.0,	0.0);	(411069.5, 3722842.2,	1.6,	1.6,
0.0);						
(411099.5, 3722842.2,	2.2,	2.2,	0.0);	(411039.5, 3722872.2,	2.2,	2.2,
0.0);						
(411069.5, 3722872.2,	1.5,	1.5,	0.0);	(411099.5, 3722872.2,	2.3,	2.3,
0.0);						
(411129.5, 3722872.2,	2.2,	2.2,	0.0);	(411069.5, 3722902.2,	1.6,	1.6,
0.0);						
(411099.5, 3722902.2,	2.0,	2.0,	0.0);	(411129.5, 3722902.2,	1.9,	1.9,
0.0);						
(411159.5, 3722902.2,	2.2,	2.2,	0.0);	(411069.5, 3722932.2,	1.6,	1.6,
0.0);						
(411099.5, 3722932.2,	2.3,	2.3,	0.0);	(411129.5, 3722932.2,	2.4,	2.4,
0.0);						
(411159.5, 3722932.2,	2.4,	2.4,	0.0);	(411189.5, 3722932.2,	2.1,	2.1,
0.0);						
(411069.5, 3722962.2,	1.8,	1.8,	0.0);	(411099.5, 3722962.2,	1.9,	1.9,
0.0);						
(411129.5, 3722962.2,	1.9,	1.9,	0.0);	(411159.5, 3722962.2,	1.9,	1.9,
0.0);						
(411189.5, 3722962.2,	2.0,	2.0,	0.0);	(411099.5, 3722992.2,	2.2,	2.2,
0.0);						
(411129.5, 3722992.2,	2.3,	2.3,	0.0);	(411159.5, 3722992.2,	2.3,	2.3,
0.0);						
(411189.5, 3722992.2,	2.3,	2.3,	0.0);	(411219.5, 3722992.2,	2.4,	2.4,
0.0);						
(411129.5, 3723022.2,	2.2,	2.2,	0.0);	(411159.5, 3723022.2,	2.2,	2.2,
0.0);						
(411189.5, 3723022.2,	2.1,	2.1,	0.0);	(411219.5, 3723022.2,	2.0,	2.0,
0.0);						
(411249.5, 3723022.2,	2.0,	2.0,	0.0);	(411159.5, 3723052.2,	2.3,	2.3,
0.0);						
(411189.5, 3723052.2,	2.4,	2.4,	0.0);	(411219.5, 3723052.2,	1.9,	1.9,
0.0);						
(411249.5, 3723052.2,	2.1,	2.1,	0.0);	(411279.5, 3723052.2,	2.2,	2.2,
0.0);						
(411189.5, 3723082.2,	2.3,	2.3,	0.0);	(411219.5, 3723082.2,	1.7,	1.7,
0.0);						
(411249.5, 3723082.2,	1.8,	1.8,	0.0);	(411279.5, 3723082.2,	2.3,	2.3,
0.0);						
(411309.5, 3723082.2,	2.2,	2.2,	0.0);	(411219.5, 3723112.2,	1.8,	1.8,
0.0);						
(411249.5, 3723112.2,	2.4,	2.4,	0.0);	(411279.5, 3723112.2,	1.8,	1.8,
0.0);						
(411309.5, 3723112.2,	2.4,	2.4,	0.0);	(411219.5, 3723142.2,	1.8,	1.8,
0.0);						
(411249.5, 3723142.2,	2.6,	2.6,	0.0);	(411279.5, 3723142.2,	2.4,	2.4,
0.0);						
(411309.5, 3723142.2,	1.9,	1.9,	0.0);	(411339.5, 3723142.2,	2.5,	2.5,
0.0);						
(411249.5, 3723172.2,	2.5,	2.5,	0.0);	(411279.5, 3723172.2,	2.6,	2.6,
0.0);						
(411309.5, 3723172.2,	2.0,	2.0,	0.0);	(411339.5, 3723172.2,	2.2,	2.2,
0.0);						
(411369.5, 3723172.2,	2.5,	2.5,	0.0);	(411249.5, 3723202.2,	2.5,	2.5,
0.0);						
(411279.5, 3723202.2,	2.2,	2.2,	0.0);	(411309.5, 3723202.2,	2.6,	2.6,
0.0);						
(411339.5, 3723202.2,	2.0,	2.0,	0.0);	(411369.5, 3723202.2,	2.5,	2.5,
0.0);						
(411399.5, 3723202.2,	2.2,	2.2,	0.0);	(411279.5, 3723232.2,	2.3,	2.3,
0.0);						
(411309.5, 3723232.2,	2.6,	2.6,	0.0);	(411339.5, 3723232.2,	2.7,	2.7,
0.0);						
(411369.5, 3723232.2,	1.9,	1.9,	0.0);	(411399.5, 3723232.2,	2.6,	2.6,

0.0);	(411309.5, 3723262.2,	2.7,	2.7,	0.0);	(411339.5, 3723262.2,	2.5,	2.5,
0.0);	(411369.5, 3723262.2,	1.8,	1.8,	0.0);	(411399.5, 3723262.2,	2.1,	2.1,
0.0);	(411429.5, 3723262.2,	2.0,	11.1,	0.0);	(411339.5, 3723292.2,	2.9,	2.9,
0.0);							

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc
 01/26/18
 *** AERMET - VERSION 16216 *** ***
 15:11:49

PAGE 10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
 (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
 (METERS)

(411369.5, 3723292.2,	2.3,	2.3,	0.0);	(411399.5, 3723292.2,	1.9,	1.9,
0.0);						
(411429.5, 3723292.2,	2.5,	2.5,	0.0);	(411339.5, 3723322.2,	2.9,	2.9,
0.0);						
(411369.5, 3723322.2,	2.5,	2.5,	0.0);	(411399.5, 3723322.2,	2.4,	2.4,
0.0);						
(411429.5, 3723322.2,	2.1,	2.1,	0.0);	(411459.5, 3723322.2,	2.7,	2.7,
0.0);						
(411369.5, 3723352.2,	2.9,	2.9,	0.0);	(411399.5, 3723352.2,	2.8,	2.8,
0.0);						
(411429.5, 3723352.2,	2.0,	2.0,	0.0);	(411459.5, 3723352.2,	2.8,	2.8,
0.0);						
(411369.5, 3723382.2,	2.2,	2.2,	0.0);	(411399.5, 3723382.2,	2.2,	2.2,
0.0);						
(411429.5, 3723382.2,	2.0,	2.0,	0.0);	(411459.5, 3723382.2,	2.1,	2.1,
0.0);						
(411489.5, 3723382.2,	2.5,	2.5,	0.0);	(411369.5, 3723412.2,	2.8,	2.8,
0.0);						
(411399.5, 3723412.2,	2.8,	2.8,	0.0);	(411429.5, 3723412.2,	2.7,	2.7,
0.0);						
(411459.5, 3723412.2,	2.6,	2.6,	0.0);	(411489.5, 3723412.2,	2.8,	2.8,
0.0);						
(411369.5, 3723442.2,	2.2,	2.2,	0.0);	(411399.5, 3723442.2,	2.1,	2.1,
0.0);						
(411429.5, 3723442.2,	1.8,	1.8,	0.0);	(411459.5, 3723442.2,	1.8,	1.8,
0.0);						
(411489.5, 3723442.2,	2.2,	2.2,	0.0);	(411369.5, 3723472.2,	2.7,	2.7,
0.0);						
(411399.5, 3723472.2,	2.5,	2.5,	0.0);	(411429.5, 3723472.2,	1.8,	1.8,
0.0);						
(411459.5, 3723472.2,	1.7,	1.7,	0.0);	(411489.5, 3723472.2,	2.4,	2.4,
0.0);						
(411519.5, 3723472.2,	2.6,	2.6,	0.0);	(411369.5, 3723502.2,	2.4,	2.4,
0.0);						
(411399.5, 3723502.2,	2.5,	2.5,	0.0);	(411429.5, 3723502.2,	1.8,	1.8,
0.0);						
(411459.5, 3723502.2,	1.8,	1.8,	0.0);	(411489.5, 3723502.2,	2.4,	2.4,
0.0);						
(411519.5, 3723502.2,	2.4,	2.4,	0.0);	(411369.5, 3723532.2,	2.4,	2.4,
0.0);						
(411399.5, 3723532.2,	2.5,	2.5,	0.0);	(411429.5, 3723532.2,	2.0,	2.0,
0.0);						
(411459.5, 3723532.2,	2.3,	2.3,	0.0);	(411489.5, 3723532.2,	2.9,	3.5,
0.0);						
(411519.5, 3723532.2,	3.0,	3.6,	0.0);	(411369.5, 3723562.2,	2.7,	2.7,
0.0);						
(411399.5, 3723562.2,	2.5,	2.5,	0.0);	(411429.5, 3723562.2,	1.7,	1.7,
0.0);						
(411459.5, 3723562.2,	1.7,	1.7,	0.0);	(411489.5, 3723562.2,	2.3,	2.3,
0.0);						
(411519.5, 3723562.2,	2.1,	2.1,	0.0);	(411549.5, 3723562.2,	2.4,	2.4,
0.0);						
(411369.5, 3723592.2,	2.4,	2.4,	0.0);	(411399.5, 3723592.2,	2.5,	2.5,
0.0);						
(411429.5, 3723592.2,	1.7,	1.7,	0.0);	(411459.5, 3723592.2,	1.6,	1.6,
0.0);						
(411489.5, 3723592.2,	2.3,	2.3,	0.0);	(411519.5, 3723592.2,	2.2,	2.2,
0.0);						
(411549.5, 3723592.2,	2.3,	2.3,	0.0);	(411369.5, 3723622.2,	1.7,	1.7,
0.0);						
(411399.5, 3723622.2,	1.7,	1.7,	0.0);	(411429.5, 3723622.2,	1.6,	1.6,
0.0);						
(411459.5, 3723622.2,	1.7,	1.7,	0.0);	(411489.5, 3723622.2,	1.7,	1.7,
0.0);						
(411519.5, 3723622.2,	1.8,	1.8,	0.0);	(411549.5, 3723622.2,	2.4,	2.4,
0.0);						
(411369.5, 3723652.2,	2.6,	2.6,	0.0);	(411399.5, 3723652.2,	2.5,	2.5,
0.0);						
(411429.5, 3723652.2,	2.2,	2.2,	0.0);	(411459.5, 3723652.2,	2.0,	2.0,
0.0);						
(411489.5, 3723652.2,	2.6,	2.6,	0.0);	(411519.5, 3723652.2,	2.7,	2.7,
0.0);						
(411549.5, 3723652.2,	2.8,	2.8,	0.0);	(411369.5, 3723682.2,	2.7,	2.7,
0.0);						
(411399.5, 3723682.2,	2.7,	2.7,	0.0);	(411429.5, 3723682.2,	2.4,	2.4,
0.0);						
(411459.5, 3723682.2,	2.5,	2.5,	0.0);	(411489.5, 3723682.2,	2.4,	2.4,
0.0);						
(411519.5, 3723682.2,	2.3,	2.3,	0.0);	(411549.5, 3723682.2,	2.8,	2.8,
0.0);						
(411369.5, 3723712.2,	2.6,	2.6,	0.0);	(411399.5, 3723712.2,	2.7,	2.7,
0.0);						
(411429.5, 3723712.2,	2.2,	2.2,	0.0);	(411459.5, 3723712.2,	2.0,	2.0,

```
0.0); ( 411489.5, 3723712.2, 2.8, 2.8, 0.0); ( 411519.5, 3723712.2, 2.6, 2.6,  
0.0); ( 411549.5, 3723712.2, 2.8, 2.8, 0.0); ( 411369.5, 3723742.2, 2.1, 2.1,  
0.0); ( 411399.5, 3723742.2, 2.1, 2.1, 0.0); ( 411429.5, 3723742.2, 2.3, 2.3,  
0.0);
```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

```

PAGE 11

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(411459.5, 3723742.2,	2.4,	2.4,	0.0);	(411489.5, 3723742.2,	2.7,	2.7,
0.0);						
(411519.5, 3723742.2,	2.5,	2.5,	0.0);	(411549.5, 3723742.2,	2.6,	2.6,
0.0);						
(411369.5, 3723772.2,	2.7,	2.7,	0.0);	(411399.5, 3723772.2,	2.5,	2.5,
0.0);						
(411429.5, 3723772.2,	2.6,	2.6,	0.0);	(411459.5, 3723772.2,	2.9,	2.9,
0.0);						
(411489.5, 3723772.2,	2.8,	2.8,	0.0);	(411519.5, 3723772.2,	3.1,	3.1,
0.0);						
(411549.5, 3723772.2,	2.7,	2.7,	0.0);	(411369.5, 3723802.2,	2.4,	2.4,
0.0);						
(411399.5, 3723802.2,	2.5,	2.5,	0.0);	(411429.5, 3723802.2,	2.4,	2.4,
0.0);						
(411459.5, 3723802.2,	2.6,	2.6,	0.0);	(411489.5, 3723802.2,	2.6,	2.6,
0.0);						
(411519.5, 3723802.2,	3.0,	3.0,	0.0);	(411549.5, 3723802.2,	2.7,	2.7,
0.0);						
(411519.8, 3723347.2,	2.8,	8.2,	0.0);	(411543.3, 3723339.9,	3.1,	8.2,
0.0);						
(411523.5, 3723364.2,	2.5,	2.5,	0.0);	(411543.3, 3723364.9,	2.3,	6.9,
0.0);						
(411543.3, 3723389.9,	2.8,	2.8,	0.0);	(411543.3, 3723414.9,	2.3,	2.3,
0.0);						
(411550.0, 3723437.0,	2.2,	2.2,	0.0);	(411559.5, 3723464.2,	2.1,	7.1,
0.0);						
(411568.3, 3723489.9,	1.9,	6.9,	0.0);	(411575.0, 3723514.9,	1.9,	7.1,
0.0);						
(411577.1, 3723539.9,	2.2,	2.2,	0.0);	(411583.0, 3723561.2,	2.1,	7.1,
0.0);						

```

*** AERMOD - VERSION 16216r ***   *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 ***   ***
15:11:49

```

PAGE 12

*** MODEL_OPTS: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *
 LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS) YR (METERS)		DISTANCE (METERS)
L0001030	411189.5	3722932.2	-4.12
L0001035	411099.5	3722812.2	-1.85
L0001036	411099.5	3722812.2	-5.58
L0001037	411069.5	3722782.2	-2.84
L0001042	410979.5	3722662.2	0.90
L0001043	410979.5	3722662.2	-6.07
L0001044	410949.5	3722632.2	-1.22
L0001050	410859.5	3722512.2	-6.09
L0001051	410829.5	3722482.2	0.68
L0001053	410799.5	3722422.2	-1.50
L0001054	410799.5	3722422.2	-14.61
L0001055	410769.5	3722392.2	-7.26
L0001056	410769.5	3722392.2	-3.92
L0001057	410739.5	3722362.2	-5.61
L0001059	410709.5	3722302.2	-13.92
L0001060	410709.5	3722302.2	-8.97

1.54, 3.09, 5.14, 8.23, 10.80,

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 14
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: MET\KSNA_v9.SFC Met Version:
16216
Profile file: MET\KSNA_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 93184 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2012 Year: 2012

First 24 hours of scalar data
YR MO DY JDY HR H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO REF WS WD HT REF TA HT
- - - - -
12 01 01 1 01 -4.5 0.082 -9.000 -9.000 -999. 56. 11.0 0.12 2.65 1.00 0.87 62. 5.8 283.8 2.0
12 01 01 1 02 -3.5 0.073 -9.000 -9.000 -999. 47. 9.9 0.12 2.65 1.00 0.77 27. 5.8 283.1 2.0
12 01 01 1 03 -3.5 0.073 -9.000 -9.000 -999. 47. 9.9 0.12 2.65 1.00 0.77 336. 5.8 283.1 2.0
12 01 01 1 04 -3.3 0.070 -9.000 -9.000 -999. 45. 9.7 0.12 2.65 1.00 0.74 34. 5.8 283.1 2.0
12 01 01 1 05 -3.0 0.068 -9.000 -9.000 -999. 42. 9.4 0.12 2.65 1.00 0.70 154. 5.8 282.5 2.0
12 01 01 1 06 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.12 2.65 1.00 0.00 0. 5.8 282.0 2.0
12 01 01 1 07 -2.0 0.059 -9.000 -9.000 -999. 34. 9.0 0.12 2.65 1.00 0.55 343. 5.8 281.4 2.0
12 01 01 1 08 -2.6 0.066 -9.000 -9.000 -999. 40. 9.7 0.12 2.65 0.53 0.69 25. 5.8 281.4 2.0
12 01 01 1 09 21.6 0.133 0.252 0.010 27. 116. -9.9 0.12 2.65 0.31 1.03 344. 5.8 282.5 2.0
12 01 01 1 10 115.6 0.162 0.713 0.008 114. 156. -3.3 0.12 2.65 0.24 1.06 233. 5.8 286.4 2.0
12 01 01 1 11 160.9 0.126 1.129 0.005 325. 108. -1.1 0.12 2.65 0.21 0.67 261. 5.8 291.4 2.0
12 01 01 1 12 187.0 0.138 1.467 0.005 614. 123. -1.3 0.12 2.65 0.20 0.75 252. 5.8 294.9 2.0
12 01 01 1 13 186.9 0.189 1.755 0.005 1051. 197. -3.3 0.12 2.65 0.20 1.23 280. 5.8 297.5 2.0
12 01 01 1 14 168.3 0.247 1.857 0.005 1383. 295. -8.1 0.12 2.65 0.21 1.86 268. 5.8 299.2 2.0
12 01 01 1 15 115.3 0.275 1.688 0.005 1517. 346. -16.3 0.12 2.65 0.24 2.25 248. 5.8 298.1 2.0
12 01 01 1 16 41.5 0.262 1.211 0.005 1552. 322. -39.2 0.12 2.65 0.33 2.32 227. 5.8 295.9 2.0
12 01 01 1 17 -17.9 0.217 -9.000 -9.000 -999. 244. 52.0 0.12 2.65 0.60 2.18 227. 5.8 292.5 2.0
12 01 01 1 18 -24.7 0.250 -9.000 -9.000 -999. 300. 68.7 0.12 2.65 1.00 2.50 219. 5.8 288.8 2.0
12 01 01 1 19 -5.2 0.088 -9.000 -9.000 -999. 91. 12.0 0.12 2.65 1.00 0.94 201. 5.8 287.5 2.0
12 01 01 1 20 -3.5 0.073 -9.000 -9.000 -999. 47. 10.0 0.12 2.65 1.00 0.77 259. 5.8 287.0 2.0
12 01 01 1 21 -2.6 0.064 -9.000 -9.000 -999. 39. 9.1 0.12 2.65 1.00 0.65 264. 5.8 286.4 2.0
12 01 01 1 22 -4.4 0.081 -9.000 -9.000 -999. 55. 10.9 0.12 2.65 1.00 0.86 211. 5.8 285.9 2.0
12 01 01 1 23 -4.2 0.079 -9.000 -9.000 -999. 53. 10.7 0.12 2.65 1.00 0.84 247. 5.8 284.9 2.0
12 01 01 1 24 -7.1 0.103 -9.000 -9.000 -999. 80. 14.1 0.12 2.65 1.00 1.09 236. 5.8 283.8 2.0

First hour of profile data
YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
12 01 01 01 5.8 1 62. 0.87 283.8 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)

```



```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 15
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: OS ***
INCLUDING SOURCE(S): L0001100 , L0001101 , L0001102 , L0001103 ,
L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 , L0001111 ,
L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 , L0001119 ,
L0001120 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
410571.00 3722482.00 0.92351 410631.00 3722482.00 0.99428
410511.00 3722542.00 0.89737 410571.00 3722542.00 0.97029
410631.00 3722542.00 1.05113 410691.00 3722542.00 1.13943
410511.00 3722602.00 0.93952 410571.00 3722602.00 1.01872
410631.00 3722602.00 1.10771 410691.00 3722602.00 1.20834
410751.00 3722602.00 1.32261 410571.00 3722662.00 1.06424
410631.00 3722662.00 1.16297 410691.00 3722662.00 1.27601
410751.00 3722662.00 1.40596 410811.00 3722662.00 1.55227
410631.00 3722722.00 1.21949 410691.00 3722722.00 1.34636
410751.00 3722722.00 1.49218 410811.00 3722722.00 1.66061
410871.00 3722722.00 1.86136 410691.00 3722782.00 1.41376
410751.00 3722782.00 1.57719 410811.00 3722782.00 1.76693
410871.00 3722782.00 1.99771 410931.00 3722782.00 2.27309
410751.00 3722842.00 1.65767 410811.00 3722842.00 1.87006
410871.00 3722842.00 2.13371 410931.00 3722842.00 2.45713
410991.00 3722842.00 2.86056 410811.00 3722902.00 1.96815
410871.00 3722902.00 2.25988 410931.00 3722902.00 2.62873
410991.00 3722902.00 3.09314 411051.00 3722902.00 3.72112
410871.00 3722962.00 2.37325 410931.00 3722962.00 2.78155
410991.00 3722962.00 3.31275 411051.00 3722962.00 4.03894
410931.00 3723022.00 2.92357 410991.00 3723022.00 3.51130
411051.00 3723022.00 4.31357 411111.00 3723022.00 5.46047
410991.00 3723082.00 3.64748 411051.00 3723082.00 4.50502
411111.00 3723082.00 5.73991 411171.00 3723082.00 7.59936
411111.00 3723142.00 5.86184 411171.00 3723142.00 7.68528
411111.00 3723202.00 5.81462 411171.00 3723202.00 7.52767
411231.00 3723202.00 10.08388 411111.00 3723262.00 5.62847
411171.00 3723262.00 7.16584 411231.00 3723262.00 9.46980
411291.00 3723262.00 13.00667 411111.00 3723322.00 5.30775
411171.00 3723322.00 6.66551 411231.00 3723322.00 8.62303
411291.00 3723322.00 11.59538 411111.00 3723382.00 4.94243
411171.00 3723382.00 6.06368 411231.00 3723382.00 7.59505
411291.00 3723382.00 9.77520 411351.00 3723382.00 13.01445
411111.00 3723442.00 4.48777 411171.00 3723442.00 5.37411
411231.00 3723442.00 6.51987 411291.00 3723442.00 7.99231
411351.00 3723442.00 9.92554 411111.00 3723502.00 4.01872
411171.00 3723502.00 4.69003 411231.00 3723502.00 5.51814
411291.00 3723502.00 6.47604 411351.00 3723502.00 7.61855
411111.00 3723562.00 3.56034 411171.00 3723562.00 4.05604
411231.00 3723562.00 4.64053 411291.00 3723562.00 5.26361

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49
***

PAGE 16
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: OS ***
INCLUDING SOURCE(S): L0001100 , L0001101 , L0001102 , L0001103 ,
L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 , L0001111 ,
L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 , L0001119 ,
L0001120 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
411351.00 3723562.00 5.96303 411111.00 3723622.00 3.14110
411171.00 3723622.00 3.50605 411231.00 3723622.00 3.90230
411291.00 3723622.00 4.32759 411351.00 3723622.00 4.77455
411111.00 3723682.00 2.76513 411171.00 3723682.00 3.03666
411231.00 3723682.00 3.32132 411291.00 3723682.00 3.63605
411351.00 3723682.00 3.94789 411111.00 3723742.00 2.44315
411171.00 3723742.00 2.64763 411231.00 3723742.00 2.86031
411291.00 3723742.00 3.08269 411351.00 3723742.00 3.30883
411111.00 3723802.00 2.16628 411171.00 3723802.00 2.32551
411231.00 3723802.00 2.48807 411291.00 3723802.00 2.65069
411351.00 3723802.00 2.82108 410709.53 3722302.24 0.90143
410679.53 3722332.24 0.90436 410709.53 3722332.24 0.93405
410649.53 3722362.24 0.90256 410679.53 3722362.24 0.93434
410709.53 3722362.24 0.96496 410739.53 3722362.24 0.99611
410649.53 3722392.24 0.93214 410679.53 3722392.24 0.96347
410709.53 3722392.24 0.99643 410739.53 3722392.24 1.03148
410769.53 3722392.24 1.06523 410619.53 3722422.24 0.92739
410649.53 3722422.24 0.95974 410679.53 3722422.24 0.99451
410709.53 3722422.24 1.02992 410739.53 3722422.24 1.06658
410769.53 3722422.24 1.10549 410799.53 3722422.24 1.14334
410589.53 3722452.24 0.92020 410619.53 3722452.24 0.95343
410649.53 3722452.24 0.98892 410679.53 3722452.24 1.02587
410709.53 3722452.24 1.06375 410739.53 3722452.24 1.10291
410769.53 3722452.24 1.14533 410799.53 3722452.24 1.18599
410649.53 3722482.24 1.01795 410679.53 3722482.24 1.05754
410709.53 3722482.24 1.09814 410739.53 3722482.24 1.14072
410769.53 3722482.24 1.18463 410799.53 3722482.24 1.23143
410829.53 3722482.24 1.28025 410679.53 3722512.24 1.08996
410709.53 3722512.24 1.13315 410739.53 3722512.24 1.17930
410769.53 3722512.24 1.22541 410799.53 3722512.24 1.27772
410829.53 3722512.24 1.33197 410859.53 3722512.24 1.38613
410709.53 3722542.24 1.16906 410739.53 3722542.24 1.21852
410769.53 3722542.24 1.26826 410799.53 3722542.24 1.32524
410829.53 3722542.24 1.38365 410859.53 3722542.24 1.44400
410739.53 3722572.24 1.25769 410769.53 3722572.24 1.31241
410799.53 3722572.24 1.37390 410829.53 3722572.24 1.43660
410859.53 3722572.24 1.50175 410889.53 3722572.24 1.57395
410769.53 3722602.24 1.35805 410799.53 3722602.24 1.42283
410829.53 3722602.24 1.49084 410859.53 3722602.24 1.56282
410889.53 3722602.24 1.64168 410919.53 3722602.24 1.72273

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 17
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: OS ***
INCLUDING SOURCE(S): L0001100 , L0001101 , L0001102 , L0001103 ,
L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 , L0001111 ,
L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 , L0001119 ,
L0001120 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
410799.53 3722632.24 1.47343 410829.53 3722632.24 1.54619
410859.53 3722632.24 1.62572 410889.53 3722632.24 1.71018
410919.53 3722632.24 1.80017 410949.53 3722632.24 1.89674
410829.53 3722662.24 1.60225 410859.53 3722662.24 1.69132
410889.53 3722662.24 1.78401 410919.53 3722662.24 1.88308
410949.53 3722662.24 1.98942 410979.53 3722662.24 2.10088
410859.53 3722692.24 1.75607 410889.53 3722692.24 1.85639
410919.53 3722692.24 1.96498 410949.53 3722692.24 2.08272
410979.53 3722692.24 2.20711 410889.53 3722722.24 1.92977
410919.53 3722722.24 2.04686 410949.53 3722722.24 2.17880
410979.53 3722722.24 2.31568 411009.53 3722722.24 2.47233
410919.53 3722752.24 2.13501 410949.53 3722752.24 2.27223
410979.53 3722752.24 2.42837 411009.53 3722752.24 2.60208
411039.53 3722752.24 2.79163 410949.53 3722782.24 2.37408
410979.53 3722782.24 2.54821 411009.53 3722782.24 2.73315
411039.53 3722782.24 2.94781 411069.53 3722782.24 3.18176
410979.53 3722812.24 2.66375 411009.53 3722812.24 2.87500
411039.53 3722812.24 3.10293 411069.53 3722812.24 3.37413
411099.53 3722812.24 3.67077 411009.53 3722842.24 3.01108
411039.53 3722842.24 3.27121 411069.53 3722842.24 3.56278
411099.53 3722842.24 3.91156 411039.53 3722872.24 3.43359
411069.53 3722872.24 3.75467 411099.53 3722872.24 4.15137
411129.53 3722872.24 4.59785 411069.53 3722902.24 3.94684
411099.53 3722902.24 4.38038 411129.53 3722902.24 4.88393
411159.53 3722902.24 5.49774 411069.53 3722932.24 4.12983
411099.53 3722932.24 4.61539 411129.53 3722932.24 5.18281
411159.53 3722932.24 5.87009 411189.53 3722932.24 6.71395
411069.53 3722962.24 4.30813 411099.53 3722962.24 4.82115
411129.53 3722962.24 5.44025 411159.53 3722962.24 6.20271
411189.53 3722962.24 7.16527 411099.53 3722992.24 5.03099
411129.53 3722992.24 5.70233 411159.53 3722992.24 6.53367
411189.53 3722992.24 7.58936 411219.53 3722992.24 8.98430
411129.53 3723022.24 5.91832 411159.53 3723022.24 6.80491
411189.53 3723022.24 7.92864 411219.53 3723022.24 9.39693
411249.53 3723022.24 11.40174 411159.53 3723052.24 7.02540
411189.53 3723052.24 8.20122 411219.53 3723052.24 9.68952
411249.53 3723052.24 11.74266 411279.53 3723052.24 14.56883
411189.53 3723082.24 8.36042 411219.53 3723082.24 9.82906
411249.53 3723082.24 11.82504 411279.53 3723082.24 14.55211
411309.53 3723082.24 18.21231 411219.53 3723112.24 9.87348

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 18
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: OS ***
INCLUDING SOURCE(S): L0001100 , L0001101 , L0001102 , L0001103 ,
L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 , L0001111 ,
L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 , L0001119 ,
L0001120 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
411249.53 3723112.24 11.84772 411279.53 3723112.24 14.26521
411309.53 3723112.24 17.72742 411219.53 3723142.24 9.81145
411249.53 3723142.24 11.70505 411279.53 3723142.24 14.05355
411309.53 3723142.24 17.05549 411339.53 3723142.24 21.39562
411249.53 3723172.24 11.46461 411279.53 3723172.24 13.70621
411309.53 3723172.24 16.51477 411339.53 3723172.24 20.47044
411369.53 3723172.24 26.08833 411249.53 3723202.24 11.15902
411279.53 3723202.24 13.21699 411309.53 3723202.24 16.03973
411339.53 3723202.24 19.63125 411369.53 3723202.24 25.01500
411399.53 3723202.24 32.72408 411279.53 3723232.24 12.74653
411309.53 3723232.24 15.38643 411339.53 3723232.24 18.93009
411369.53 3723232.24 23.71591 411399.53 3723232.24 31.73581
411309.53 3723262.24 14.64992 411339.53 3723262.24 17.89094
411369.53 3723262.24 22.30373 411399.53 3723262.24 29.63923
411429.53 3723262.24 42.02096 411339.53 3723292.24 16.78899
411369.53 3723292.24 20.78876 411399.53 3723292.24 26.86772
411429.53 3723292.24 37.62679 411339.53 3723322.24 15.40937
411369.53 3723322.24 18.81102 411399.53 3723322.24 23.76149
411429.53 3723322.24 31.14801 411459.53 3723322.24 44.33099
411369.53 3723352.24 16.67695 411399.53 3723352.24 20.34740
411429.53 3723352.24 25.08922 411459.53 3723352.24 32.69829
411369.53 3723382.24 14.32227 411399.53 3723382.24 16.87758
411429.53 3723382.24 20.00997 411459.53 3723382.24 23.92894
411489.53 3723382.24 28.84843 411369.53 3723412.24 12.41733
411399.53 3723412.24 14.19225 411429.53 3723412.24 16.21762
411459.53 3723412.24 18.52453 411489.53 3723412.24 21.17436
411369.53 3723442.24 10.59617 411399.53 3723442.24 11.80874
411429.53 3723442.24 13.08990 411459.53 3723442.24 14.50639
411489.53 3723442.24 16.17745 411369.53 3723472.24 9.19837
411399.53 3723472.24 10.05283 411429.53 3723472.24 10.88803
411459.53 3723472.24 11.84230 411489.53 3723472.24 13.01904
411519.53 3723472.24 14.19792 411369.53 3723502.24 7.97911
411399.53 3723502.24 8.61834 411429.53 3723502.24 9.22400
411459.53 3723502.24 9.91786 411489.53 3723502.24 10.73741
411519.53 3723502.24 11.54285 411369.53 3723532.24 6.99278
411399.53 3723532.24 7.47738 411429.53 3723532.24 7.94073
411459.53 3723532.24 8.48299 411489.53 3723532.24 9.09383
411519.53 3723532.24 9.70080 411369.53 3723562.24 6.19291
411399.53 3723562.24 6.55656 411429.53 3723562.24 6.89178
411459.53 3723562.24 7.29115 411489.53 3723562.24 7.75659

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 19
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: OS ***
INCLUDING SOURCE(S): L0001100 , L0001101 , L0001102 , L0001103 ,
L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 , L0001111 ,
L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 , L0001119 ,
L0001120 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
411519.53 3723562.24 8.19085 411549.53 3723562.24 8.66385
411369.53 3723592.24 5.50050 411399.53 3723592.24 5.80003
411429.53 3723592.24 6.06684 411459.53 3723592.24 6.37655
411489.53 3723592.24 6.74668 411519.53 3723592.24 7.09497
411549.53 3723592.24 7.45358 411369.53 3723622.24 4.91092
411399.53 3723622.24 5.14370 411429.53 3723622.24 5.38464
411459.53 3723622.24 5.63956 411489.53 3723622.24 5.90758
411519.53 3723622.24 6.19070 411549.53 3723622.24 6.50453
411369.53 3723652.24 4.45376 411399.53 3723652.24 4.64585
411429.53 3723652.24 4.83896 411459.53 3723652.24 5.04006
411489.53 3723652.24 5.28027 411519.53 3723652.24 5.51375
411549.53 3723652.24 5.74975 411369.53 3723682.24 4.04382
411399.53 3723682.24 4.20487 411429.53 3723682.24 4.36542
411459.53 3723682.24 4.54276 411489.53 3723682.24 4.72262
411519.53 3723682.24 4.90761 411549.53 3723682.24 5.11568
411369.53 3723712.24 3.68606 411399.53 3723712.24 3.82488
411429.53 3723712.24 3.95619 411459.53 3723712.24 4.09702
411489.53 3723712.24 4.26607 411519.53 3723712.24 4.42281
411549.53 3723712.24 4.58750 411369.53 3723742.24 3.37102
411399.53 3723742.24 3.48632 411429.53 3723742.24 3.60955
411459.53 3723742.24 3.73470 411489.53 3723742.24 3.87043
411519.53 3723742.24 4.00117 411549.53 3723742.24 4.14130
411369.53 3723772.24 3.11044 411399.53 3723772.24 3.20812
411429.53 3723772.24 3.31189 411459.53 3723772.24 3.42196
411489.53 3723772.24 3.53178 411519.53 3723772.24 3.65247
411549.53 3723772.24 3.76418 411369.53 3723802.24 2.87113
411399.53 3723802.24 2.95765 411429.53 3723802.24 3.04595
411459.53 3723802.24 3.14069 411489.53 3723802.24 3.23581
411519.53 3723802.24 3.34134 411549.53 3723802.24 3.44001
411519.81 3723347.24 62.92378 411543.34 3723339.90 84.15523
411523.48 3723364.16 46.29148 411543.34 3723364.90 49.47014
411543.34 3723389.90 34.31211 411543.34 3723414.90 25.18519
411549.95 3723436.96 20.48881 411559.53 3723464.16 16.51626
411568.34 3723489.90 13.77677 411574.95 3723514.90 11.78176
411577.15 3723539.90 10.20464 411583.03 3723561.22 9.12121

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 20
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: P2TR1 ***
INCLUDING SOURCE(S): L0001024 , L0001025 , L0001026 , L0001027 ,

L0001028 , L0001029 , L0001030 , L0001031 , L0001032 , L0001033 , L0001034 , L0001035 ,
L0001036 , L0001037 , L0001038 , L0001039 , L0001040 , L0001041 , L0001042 , L0001043 ,
L0001044 , L0001045 , L0001046 , L0001047 , L0001048 , L0001049 , L0001050 ,
L0001051 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
- - - - -
410571.00 3722482.00 7.12642 410631.00 3722482.00 9.44431
410511.00 3722542.00 5.02248 410571.00 3722542.00 6.24262
410631.00 3722542.00 7.94815 410691.00 3722542.00 10.53300
410511.00 3722602.00 4.55703 410571.00 3722602.00 5.52767
410631.00 3722602.00 6.84787 410691.00 3722602.00 8.72425
410751.00 3722602.00 11.55618 410571.00 3722662.00 4.93686
410631.00 3722662.00 5.97904 410691.00 3722662.00 7.40470
410751.00 3722662.00 9.44760 410811.00 3722662.00 12.52720
410631.00 3722722.00 5.28354 410691.00 3722722.00 6.39912
410751.00 3722722.00 7.92554 410811.00 3722722.00 10.11134
410871.00 3722722.00 13.55128 410691.00 3722782.00 5.59230
410751.00 3722782.00 6.76949 410811.00 3722782.00 8.38163
410871.00 3722782.00 10.74398 410931.00 3722782.00 14.45776
410751.00 3722842.00 5.85653 410811.00 3722842.00 7.08318
410871.00 3722842.00 8.80543 410931.00 3722842.00 11.34514
410991.00 3722842.00 15.49511 410811.00 3722902.00 6.06715
410871.00 3722902.00 7.34424 410931.00 3722902.00 9.14749
410991.00 3722902.00 11.81501 411051.00 3722902.00 16.47993
410871.00 3722962.00 6.20127 410931.00 3722962.00 7.50894
410991.00 3722962.00 9.35646 411051.00 3722962.00 12.24816
410931.00 3723022.00 6.26757 410991.00 3723022.00 7.57376
411051.00 3723022.00 9.43774 411111.00 3723022.00 12.35708
410991.00 3723082.00 6.17138 411051.00 3723082.00 7.39828
411111.00 3723082.00 9.13335 411171.00 3723082.00 11.76265
411111.00 3723142.00 6.90549 411171.00 3723142.00 8.19562
411111.00 3723202.00 5.35001 411171.00 3723202.00 6.02005
411231.00 3723202.00 6.71820 411111.00 3723262.00 4.26234
411171.00 3723262.00 4.65127 411231.00 3723262.00 5.03032
411291.00 3723262.00 5.36437 411111.00 3723322.00 3.48723
411171.00 3723322.00 3.73795 411231.00 3723322.00 3.97677
411291.00 3723322.00 4.18597 411111.00 3723382.00 2.91981
411171.00 3723382.00 3.09325 411231.00 3723382.00 3.25908
411291.00 3723382.00 3.40495 411351.00 3723382.00 3.50080
411111.00 3723442.00 2.48949 411171.00 3723442.00 2.61728
411231.00 3723442.00 2.73937 411291.00 3723442.00 2.84780
411351.00 3723442.00 2.92577 411111.00 3723502.00 2.15491
411171.00 3723502.00 2.25296 411231.00 3723502.00 2.34683
411291.00 3723502.00 2.43169 411351.00 3723502.00 2.49622
411111.00 3723562.00 1.88877 411171.00 3723562.00 1.96628
411231.00 3723562.00 2.04091 411291.00 3723562.00 2.10939

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 21
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: P2TR1 ***
INCLUDING SOURCE(S): L0001024 , L0001025 , L0001026 , L0001027 ,
L0001028 ,
L0001029 , L0001030 , L0001031 , L0001032 , L0001033 , L0001034 , L0001035 ,
L0001036 ,
L0001037 , L0001038 , L0001039 , L0001040 , L0001041 , L0001042 , L0001043 ,
L0001044 ,
L0001045 , L0001046 , L0001047 , L0001048 , L0001049 , L0001050 ,
L0001051 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
411351.00 3723562.00 2.16393 411111.00 3723622.00 1.67298
411171.00 3723622.00 1.73582 411231.00 3723622.00 1.79654
411291.00 3723622.00 1.85252 411351.00 3723622.00 1.89901
411111.00 3723682.00 1.49478 411171.00 3723682.00 1.54673
411231.00 3723682.00 1.59702 411291.00 3723682.00 1.64473
411351.00 3723682.00 1.68519 411111.00 3723742.00 1.34582
411171.00 3723742.00 1.38942 411231.00 3723742.00 1.43211
411291.00 3723742.00 1.47264 411351.00 3723742.00 1.50798
411111.00 3723802.00 1.21956 411171.00 3723802.00 1.25683
411231.00 3723802.00 1.29345 411291.00 3723802.00 1.32820
411351.00 3723802.00 1.35940 410709.53 3722302.24 33.55026
410679.53 3722332.24 30.07179 410709.53 3722332.24 49.54652
410649.53 3722362.24 17.39502 410679.53 3722362.24 23.33807
410709.53 3722362.24 33.73649 410739.53 3722362.24 42.32493
410649.53 3722392.24 14.92114 410679.53 3722392.24 19.09000
410709.53 3722392.24 25.63326 410739.53 3722392.24 37.48441
410769.53 3722392.24 33.95865 410619.53 3722422.24 10.79306
410649.53 3722422.24 13.04407 410679.53 3722422.24 16.10358
410709.53 3722422.24 20.63244 410739.53 3722422.24 27.94148
410769.53 3722422.24 41.76594 410799.53 3722422.24 38.89079
410589.53 3722452.24 8.36861 410619.53 3722452.24 9.77078
410649.53 3722452.24 11.55942 410679.53 3722452.24 13.93303
410709.53 3722452.24 17.27952 410739.53 3722452.24 22.26041
410769.53 3722452.24 30.31811 410799.53 3722452.24 46.64352
410649.53 3722482.24 10.39186 410679.53 3722482.24 12.29247
410709.53 3722482.24 14.86919 410739.53 3722482.24 18.47484
410769.53 3722482.24 23.90288 410799.53 3722482.24 33.16374
410829.53 3722482.24 43.01654 410679.53 3722512.24 10.98455
410709.53 3722512.24 13.04049 410739.53 3722512.24 15.78015
410769.53 3722512.24 19.55494 410799.53 3722512.24 25.64532
410829.53 3722512.24 36.20477 410859.53 3722512.24 44.53036
410709.53 3722542.24 11.59696 410739.53 3722542.24 13.76023
410769.53 3722542.24 16.59570 410799.53 3722542.24 20.89485
410829.53 3722542.24 27.51452 410859.53 3722542.24 39.75497
410739.53 3722572.24 12.18242 410769.53 3722572.24 14.41244
410799.53 3722572.24 17.60595 410829.53 3722572.24 22.16708
410859.53 3722572.24 29.33297 410889.53 3722572.24 43.91249
410769.53 3722602.24 12.73808 410799.53 3722602.24 15.17303
410829.53 3722602.24 18.49884 410859.53 3722602.24 23.39351
410889.53 3722602.24 31.81978 410919.53 3722602.24 48.77912

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 22
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: P2TR1 ***
INCLUDING SOURCE(S): L0001024 , L0001025 , L0001026 , L0001027 ,
L0001028 ,
L0001036 , L0001029 , L0001030 , L0001031 , L0001032 , L0001033 , L0001034 , L0001035 ,
L0001044 , L0001037 , L0001038 , L0001039 , L0001040 , L0001041 , L0001042 , L0001043 ,
L0001051 , L0001045 , L0001046 , L0001047 , L0001048 , L0001049 , L0001050 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
410799.53 3722632.24 13.31781 410829.53 3722632.24 15.84008
410859.53 3722632.24 19.44156 410889.53 3722632.24 24.86043
410919.53 3722632.24 34.15334 410949.53 3722632.24 43.50496
410829.53 3722662.24 13.81609 410859.53 3722662.24 16.63593
410889.53 3722662.24 20.53613 410919.53 3722662.24 26.56742
410949.53 3722662.24 37.35384 410979.53 3722662.24 36.01520
410859.53 3722692.24 14.45701 410889.53 3722692.24 17.37301
410919.53 3722692.24 21.57970 410949.53 3722692.24 28.27979
410979.53 3722692.24 40.42447 410889.53 3722722.24 15.00358
410919.53 3722722.24 18.06113 410949.53 3722722.24 22.71956
410979.53 3722722.24 29.87302 411009.53 3722722.24 44.81000
410919.53 3722752.24 15.60073 410949.53 3722752.24 18.80739
410979.53 3722752.24 23.75632 411009.53 3722752.24 32.21529
411039.53 3722752.24 49.94775 410949.53 3722782.24 16.15173
410979.53 3722782.24 19.79861 411009.53 3722782.24 25.08632
411039.53 3722782.24 34.73573 411069.53 3722782.24 43.39610
410979.53 3722812.24 16.79449 411009.53 3722812.24 20.69337
411039.53 3722812.24 26.48850 411069.53 3722812.24 37.64884
411099.53 3722812.24 35.37910 411009.53 3722842.24 17.41292
411039.53 3722842.24 21.59767 411069.53 3722842.24 28.12072
411099.53 3722842.24 41.12258 411039.53 3722872.24 18.02574
411069.53 3722872.24 22.41384 411099.53 3722872.24 30.11382
411129.53 3722872.24 45.13292 411069.53 3722902.24 18.54066
411099.53 3722902.24 23.55101 411129.53 3722902.24 31.87562
411159.53 3722902.24 49.98284 411069.53 3722932.24 15.64889
411099.53 3722932.24 19.23550 411129.53 3722932.24 24.65128
411159.53 3722932.24 34.23593 411189.53 3722932.24 42.21348
411069.53 3722962.24 13.43579 411099.53 3722962.24 16.00489
411129.53 3722962.24 19.70792 411159.53 3722962.24 25.57126
411189.53 3722962.24 36.42147 411099.53 3722992.24 13.61074
411129.53 3722992.24 16.28220 411159.53 3722992.24 20.21449
411189.53 3722992.24 26.63429 411219.53 3722992.24 39.18658
411129.53 3723022.24 13.61514 411159.53 3723022.24 16.33158
411189.53 3723022.24 20.38504 411219.53 3723022.24 27.16745
411249.53 3723022.24 41.30182 411159.53 3723052.24 13.41637
411189.53 3723052.24 16.06074 411219.53 3723052.24 19.96178
411249.53 3723052.24 26.78309 411279.53 3723052.24 41.43989
411189.53 3723082.24 12.86229 411219.53 3723082.24 15.08917
411249.53 3723082.24 18.33392 411279.53 3723082.24 23.14588
411309.53 3723082.24 28.20951 411219.53 3723112.24 11.76020

```



```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 23
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: P2TR1 ***
INCLUDING SOURCE(S): L0001024 , L0001025 , L0001026 , L0001027 ,
L0001028 ,
L0001029 , L0001030 , L0001031 , L0001032 , L0001033 , L0001034 , L0001035 ,
L0001036 ,
L0001037 , L0001038 , L0001039 , L0001040 , L0001041 , L0001042 , L0001043 ,
L0001044 ,
L0001045 , L0001046 , L0001047 , L0001048 , L0001049 , L0001050 ,
L0001051 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
411249.53 3723112.24 13.38931 411279.53 3723112.24 15.06634
411309.53 3723112.24 16.58835 411219.53 3723142.24 9.42824
411249.53 3723142.24 10.30359 411279.53 3723142.24 11.14416
411309.53 3723142.24 11.77298 411339.53 3723142.24 11.81269
411249.53 3723172.24 8.30251 411279.53 3723172.24 8.78697
411309.53 3723172.24 9.15386 411339.53 3723172.24 9.25084
411369.53 3723172.24 8.89292 411249.53 3723202.24 6.91794
411279.53 3723202.24 7.23262 411309.53 3723202.24 7.47988
411339.53 3723202.24 7.56891 411369.53 3723202.24 7.42703
411399.53 3723202.24 7.03979 411279.53 3723232.24 6.12934
411309.53 3723232.24 6.30523 411339.53 3723232.24 6.39015
411369.53 3723232.24 6.33067 411399.53 3723232.24 6.12279
411309.53 3723262.24 5.43630 411339.53 3723262.24 5.51205
411369.53 3723262.24 5.49212 411399.53 3723262.24 5.38050
411429.53 3723262.24 5.16454 411339.53 3723292.24 4.83176
411369.53 3723292.24 4.84073 411399.53 3723292.24 4.77349
411429.53 3723292.24 4.63877 411339.53 3723322.24 4.29146
411369.53 3723322.24 4.31025 411399.53 3723322.24 4.27681
411429.53 3723322.24 4.18832 411459.53 3723322.24 4.05217
411369.53 3723352.24 3.87349 411399.53 3723352.24 3.85945
411429.53 3723352.24 3.80310 411459.53 3723352.24 3.70874
411369.53 3723382.24 3.51043 411399.53 3723382.24 3.50731
411429.53 3723382.24 3.47221 411459.53 3723382.24 3.40646
411489.53 3723382.24 3.31229 411369.53 3723412.24 3.20153
411399.53 3723412.24 3.20589 411429.53 3723412.24 3.18588
411459.53 3723412.24 3.14029 411489.53 3723412.24 3.07064
411369.53 3723442.24 2.93743 411399.53 3723442.24 2.94601
411429.53 3723442.24 2.93445 411459.53 3723442.24 2.90327
411489.53 3723442.24 2.85381 411369.53 3723472.24 2.70836
411399.53 3723472.24 2.71996 411429.53 3723472.24 2.71483
411459.53 3723472.24 2.69409 411489.53 3723472.24 2.65874
411519.53 3723472.24 2.60586 411369.53 3723502.24 2.50821
411399.53 3723502.24 2.52139 411429.53 3723502.24 2.52124
411459.53 3723502.24 2.50855 411489.53 3723502.24 2.48297
411519.53 3723502.24 2.44271 411369.53 3723532.24 2.33178
411399.53 3723532.24 2.34590 411429.53 3723532.24 2.34964
411459.53 3723532.24 2.34307 411489.53 3723532.24 2.32401
411519.53 3723532.24 2.29345 411369.53 3723562.24 2.17514
411399.53 3723562.24 2.18984 411429.53 3723562.24 2.19505
411459.53 3723562.24 2.19225 411489.53 3723562.24 2.18064

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 24
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: P2TR1 ***
INCLUDING SOURCE(S): L0001024 , L0001025 , L0001026 , L0001027 ,
L0001028 ,
L0001029 , L0001030 , L0001031 , L0001032 , L0001033 , L0001034 , L0001035 ,
L0001036 ,
L0001037 , L0001038 , L0001039 , L0001040 , L0001041 , L0001042 , L0001043 ,
L0001044 ,
L0001045 , L0001046 , L0001047 , L0001048 , L0001049 , L0001050 ,
L0001051 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
411519.53 3723562.24 2.15758 411549.53 3723562.24 2.12540
411369.53 3723592.24 2.03561 411399.53 3723592.24 2.05029
411429.53 3723592.24 2.05730 411459.53 3723592.24 2.05727
411489.53 3723592.24 2.05028 411519.53 3723592.24 2.03345
411549.53 3723592.24 2.00821 411369.53 3723622.24 1.90937
411399.53 3723622.24 1.92388 411429.53 3723622.24 1.93278
411459.53 3723622.24 1.93535 411489.53 3723622.24 1.93074
411519.53 3723622.24 1.91881 411549.53 3723622.24 1.90007
411369.53 3723652.24 1.79720 411399.53 3723652.24 1.81158
411429.53 3723652.24 1.82118 411459.53 3723652.24 1.82504
411489.53 3723652.24 1.82335 411519.53 3723652.24 1.81496
411549.53 3723652.24 1.80006 411369.53 3723682.24 1.69476
411399.53 3723682.24 1.70880 411429.53 3723682.24 1.71886
411459.53 3723682.24 1.72417 411489.53 3723682.24 1.72434
411519.53 3723682.24 1.71894 411549.53 3723682.24 1.70774
411369.53 3723712.24 1.60170 411399.53 3723712.24 1.61524
411429.53 3723712.24 1.62551 411459.53 3723712.24 1.63153
411489.53 3723712.24 1.63337 411519.53 3723712.24 1.63038
411549.53 3723712.24 1.62229 411369.53 3723742.24 1.51662
411399.53 3723742.24 1.52979 411429.53 3723742.24 1.54012
411459.53 3723742.24 1.54694 411489.53 3723742.24 1.54984
411519.53 3723742.24 1.54871 411549.53 3723742.24 1.54309
411369.53 3723772.24 1.43880 411399.53 3723772.24 1.45154
411429.53 3723772.24 1.46170 411459.53 3723772.24 1.46881
411489.53 3723772.24 1.47281 411519.53 3723772.24 1.47286
411549.53 3723772.24 1.46952 411369.53 3723802.24 1.36733
411399.53 3723802.24 1.37955 411429.53 3723802.24 1.38960
411459.53 3723802.24 1.39707 411489.53 3723802.24 1.40171
411519.53 3723802.24 1.40293 411549.53 3723802.24 1.40112
411519.81 3723347.24 3.46781 411543.34 3723339.90 3.38575
411523.48 3723364.16 3.31439 411543.34 3723364.90 3.20886
411543.34 3723389.90 3.04032 411543.34 3723414.90 2.88186
411549.95 3723436.96 2.72952 411559.53 3723464.16 2.55559
411568.34 3723489.90 2.40770 411574.95 3723514.90 2.28203
411577.15 3723539.90 2.17500 411583.03 3723561.22 2.08263

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 25
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: P2TR2 ***
INCLUDING SOURCE(S): L0001068 , L0001069 , L0001070 , L0001071 ,
L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 , L0001079 ,
L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 , L0001087 ,
L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
L0001095 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
410571.00 3722482.00 1.06960 410631.00 3722482.00 1.15678
410511.00 3722542.00 1.04187 410571.00 3722542.00 1.13277
410631.00 3722542.00 1.23378 410691.00 3722542.00 1.34505
410511.00 3722602.00 1.09709 410571.00 3722602.00 1.19799
410631.00 3722602.00 1.31213 410691.00 3722602.00 1.44164
410751.00 3722602.00 1.58861 410571.00 3722662.00 1.26099
410631.00 3722662.00 1.39001 410691.00 3722662.00 1.53890
410751.00 3722662.00 1.71109 410811.00 3722662.00 1.90647
410631.00 3722722.00 1.46920 410691.00 3722722.00 1.63959
410751.00 3722722.00 1.83847 410811.00 3722722.00 2.07122
410871.00 3722722.00 2.34948 410691.00 3722782.00 1.73717
410751.00 3722782.00 1.96535 410811.00 3722782.00 2.23666
410871.00 3722782.00 2.57059 410931.00 3722782.00 2.97498
410751.00 3722842.00 2.08655 410811.00 3722842.00 2.39869
410871.00 3722842.00 2.79443 410931.00 3722842.00 3.29380
410991.00 3722842.00 3.93243 410811.00 3722902.00 2.55199
410871.00 3722902.00 3.00441 410931.00 3722902.00 3.59885
410991.00 3722902.00 4.38408 411051.00 3722902.00 5.49118
410871.00 3722962.00 3.19114 410931.00 3722962.00 3.87070
410991.00 3722962.00 4.81086 411051.00 3722962.00 6.19303
410931.00 3723022.00 4.11183 410991.00 3723022.00 5.18306
411051.00 3723022.00 6.79025 411111.00 3723022.00 9.40712
410991.00 3723082.00 5.42243 411051.00 3723082.00 7.16904
411111.00 3723082.00 10.06069 411171.00 3723082.00 15.43612
411111.00 3723142.00 10.05692 411171.00 3723142.00 14.81502
411111.00 3723202.00 9.43355 411171.00 3723202.00 13.14507
411231.00 3723202.00 19.14621 411111.00 3723262.00 8.45779
411171.00 3723262.00 11.15380 411231.00 3723262.00 15.16885
411291.00 3723262.00 21.18886 411111.00 3723322.00 7.33220
411171.00 3723322.00 9.24195 411231.00 3723322.00 11.80759
411291.00 3723322.00 15.26345 411111.00 3723382.00 6.28319
411171.00 3723382.00 7.57582 411231.00 3723382.00 9.15543
411291.00 3723382.00 11.06465 411351.00 3723382.00 13.31328
411111.00 3723442.00 5.31350 411171.00 3723442.00 6.18619
411231.00 3723442.00 7.18562 411291.00 3723442.00 8.29172
411351.00 3723442.00 9.52622 411111.00 3723502.00 4.49867
411171.00 3723502.00 5.09356 411231.00 3723502.00 5.75191
411291.00 3723502.00 6.43732 411351.00 3723502.00 7.18721
411111.00 3723562.00 3.82770 411171.00 3723562.00 4.24219
411231.00 3723562.00 4.69038 411291.00 3723562.00 5.14038

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 26
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: P2TR2 ***
INCLUDING SOURCE(S): L0001068 , L0001069 , L0001070 , L0001071 ,
L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 , L0001079 ,
L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 , L0001087 ,
L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
L0001095 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
411351.00 3723562.00 5.62856 411111.00 3723622.00 3.28430
411171.00 3723622.00 3.58155 411231.00 3723622.00 3.88641
411291.00 3723622.00 4.20185 411351.00 3723622.00 4.53442
411111.00 3723682.00 2.83963 411171.00 3723682.00 3.05904
411231.00 3723682.00 3.28039 411291.00 3723682.00 3.51883
411351.00 3723682.00 3.76161 411111.00 3723742.00 2.47861
411171.00 3723742.00 2.64404 411231.00 3723742.00 2.81165
411291.00 3723742.00 2.98629 411351.00 3723742.00 3.16933
411111.00 3723802.00 2.18036 411171.00 3723802.00 2.30952
411231.00 3723802.00 2.43954 411291.00 3723802.00 2.57161
411351.00 3723802.00 2.71373 410709.53 3722302.24 1.02416
410679.53 3722332.24 1.03139 410709.53 3722332.24 1.06531
410649.53 3722362.24 1.03323 410679.53 3722362.24 1.06991
410709.53 3722362.24 1.10577 410739.53 3722362.24 1.14215
410649.53 3722392.24 1.07108 410679.53 3722392.24 1.10856
410709.53 3722392.24 1.14756 410739.53 3722392.24 1.18841
410769.53 3722392.24 1.22830 410619.53 3722422.24 1.06874
410649.53 3722422.24 1.10795 410679.53 3722422.24 1.14942
410709.53 3722422.24 1.19184 410739.53 3722422.24 1.23557
410769.53 3722422.24 1.28128 410799.53 3722422.24 1.32619
410589.53 3722452.24 1.06300 410619.53 3722452.24 1.10365
410649.53 3722452.24 1.14663 410679.53 3722452.24 1.19130
410709.53 3722452.24 1.23734 410739.53 3722452.24 1.28479
410769.53 3722452.24 1.33519 410799.53 3722452.24 1.38423
410649.53 3722482.24 1.18585 410679.53 3722482.24 1.23426
410709.53 3722482.24 1.28421 410739.53 3722482.24 1.33632
410769.53 3722482.24 1.38992 410799.53 3722482.24 1.44634
410829.53 3722482.24 1.50466 410679.53 3722512.24 1.27848
410709.53 3722512.24 1.33248 410739.53 3722512.24 1.38958
410769.53 3722512.24 1.44702 410799.53 3722512.24 1.51070
410829.53 3722512.24 1.57629 410859.53 3722512.24 1.64179
410709.53 3722542.24 1.38232 410739.53 3722542.24 1.44442
410769.53 3722542.24 1.50731 410799.53 3722542.24 1.57773
410829.53 3722542.24 1.64977 410859.53 3722542.24 1.72383
410739.53 3722572.24 1.50018 410769.53 3722572.24 1.57005
410799.53 3722572.24 1.64735 410829.53 3722572.24 1.72630
410859.53 3722572.24 1.80795 410889.53 3722572.24 1.89675
410769.53 3722602.24 1.63541 410799.53 3722602.24 1.71866
410829.53 3722602.24 1.80591 410859.53 3722602.24 1.89775
410889.53 3722602.24 1.99696 410919.53 3722602.24 2.09828

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 27
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: P2TR2 ***
INCLUDING SOURCE(S): L0001068 , L0001069 , L0001070 , L0001071 ,
L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 , L0001079 ,
L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 , L0001087 ,
L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
L0001095 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
410799.53 3722632.24 1.79300 410829.53 3722632.24 1.88839
410859.53 3722632.24 1.99175 410889.53 3722632.24 2.10087
410919.53 3722632.24 2.21603 410949.53 3722632.24 2.33783
410829.53 3722662.24 1.97324 410859.53 3722662.24 2.09085
410889.53 3722662.24 2.21338 410919.53 3722662.24 2.34350
410949.53 3722662.24 2.48158 410979.53 3722662.24 2.62461
410859.53 3722692.24 2.19117 410889.53 3722692.24 2.32727
410919.53 3722692.24 2.47383 410949.53 3722692.24 2.63134
410979.53 3722692.24 2.79618 410889.53 3722722.24 2.44487
410919.53 3722722.24 2.60774 410949.53 3722722.24 2.78931
410979.53 3722722.24 2.97736 411009.53 3722722.24 3.18799
410919.53 3722752.24 2.75228 410949.53 3722752.24 2.94900
410979.53 3722752.24 3.17040 411009.53 3722752.24 3.41389
411039.53 3722752.24 3.67541 410949.53 3722782.24 3.12322
410979.53 3722782.24 3.37892 411009.53 3722782.24 3.65119
411039.53 3722782.24 3.96181 411069.53 3722782.24 4.29471
410979.53 3722812.24 3.58827 411009.53 3722812.24 3.91143
411039.53 3722812.24 4.26106 411069.53 3722812.24 4.66917
411099.53 3722812.24 5.10732 411009.53 3722842.24 4.17254
411039.53 3722842.24 4.59110 411069.53 3722842.24 5.06050
411099.53 3722842.24 5.61236 411039.53 3722872.24 4.92407
411069.53 3722872.24 5.47531 411099.53 3722872.24 6.15108
411129.53 3722872.24 6.91024 411069.53 3722902.24 5.90473
411099.53 3722902.24 6.70371 411129.53 3722902.24 7.64594
411159.53 3722902.24 8.78906 411069.53 3722932.24 6.32650
411099.53 3722932.24 7.28184 411129.53 3722932.24 8.44374
411159.53 3722932.24 9.89456 411189.53 3722932.24 11.70465
411069.53 3722962.24 6.73876 411099.53 3722962.24 7.81701
411129.53 3722962.24 9.19324 411159.53 3722962.24 10.99378
411189.53 3722962.24 13.41235 411099.53 3722992.24 8.34677
411129.53 3722992.24 9.94119 411159.53 3722992.24 12.09844
411189.53 3722992.24 15.14810 411219.53 3722992.24 19.73468
411129.53 3723022.24 10.56997 411159.53 3723022.24 13.03536
411189.53 3723022.24 16.63569 411219.53 3723022.24 22.33373
411249.53 3723022.24 32.62137 411159.53 3723052.24 13.74083
411189.53 3723052.24 17.71321 411219.53 3723052.24 23.98181
411249.53 3723052.24 35.75652 411279.53 3723052.24 63.36339
411189.53 3723082.24 18.07381 411219.53 3723082.24 24.07809
411249.53 3723082.24 34.42402 411279.53 3723082.24 53.48805
411309.53 3723082.24 87.94839 411219.53 3723112.24 23.04175

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 28
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: P2TR2 ***
INCLUDING SOURCE(S): L0001068 , L0001069 , L0001070 , L0001071 ,
L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 , L0001079 ,
L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 , L0001087 ,
L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
L0001095 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
411249.53 3723112.24 31.43293 411279.53 3723112.24 43.66183
411309.53 3723112.24 64.93814 411219.53 3723142.24 21.37231
411249.53 3723142.24 27.97058 411279.53 3723142.24 37.22215
411309.53 3723142.24 50.92165 411339.53 3723142.24 75.17356
411249.53 3723172.24 24.71828 411279.53 3723172.24 31.79559
411309.53 3723172.24 41.65027 411339.53 3723172.24 57.51758
411369.53 3723172.24 84.75563 411249.53 3723202.24 21.77299
411279.53 3723202.24 27.04687 411309.53 3723202.24 34.71722
411339.53 3723202.24 45.23761 411369.53 3723202.24 62.66449
411399.53 3723202.24 91.47486 411279.53 3723232.24 23.17930
411309.53 3723232.24 28.76706 411339.53 3723232.24 36.40289
411369.53 3723232.24 46.75602 411399.53 3723232.24 64.54317
411309.53 3723262.24 23.87475 411339.53 3723262.24 29.02426
411369.53 3723262.24 35.48536 411399.53 3723262.24 45.15515
411429.53 3723262.24 58.03312 411339.53 3723292.24 23.40747
411369.53 3723292.24 27.55015 411399.53 3723292.24 32.60800
411429.53 3723292.24 39.08403 411339.53 3723322.24 18.94474
411369.53 3723322.24 21.61125 411399.53 3723322.24 24.64634
411429.53 3723322.24 27.79390 411459.53 3723322.24 31.32645
411369.53 3723352.24 17.32953 411399.53 3723352.24 19.23473
411429.53 3723352.24 21.06063 411459.53 3723352.24 23.22386
411369.53 3723382.24 14.05531 411399.53 3723382.24 15.33521
411429.53 3723382.24 16.63518 411459.53 3723382.24 17.94378
411489.53 3723382.24 19.07174 411369.53 3723412.24 11.75630
411399.53 3723412.24 12.66770 411429.53 3723412.24 13.59915
411459.53 3723412.24 14.52068 411489.53 3723412.24 15.31580
411369.53 3723442.24 9.90958 411399.53 3723442.24 10.57824
411429.53 3723442.24 11.24453 411459.53 3723442.24 11.91522
411489.53 3723442.24 12.54783 411369.53 3723472.24 8.53916
411399.53 3723472.24 9.04519 411429.53 3723472.24 9.52957
411459.53 3723472.24 10.04035 411489.53 3723472.24 10.55820
411519.53 3723472.24 10.90737 411369.53 3723502.24 7.41564
411399.53 3723502.24 7.81983 411429.53 3723502.24 8.20297
411459.53 3723502.24 8.61002 411489.53 3723502.24 9.01487
411519.53 3723502.24 9.30659 411369.53 3723532.24 6.51643
411399.53 3723532.24 6.84096 411429.53 3723532.24 7.15393
411459.53 3723532.24 7.49257 411489.53 3723532.24 7.82028
411519.53 3723532.24 8.07564 411369.53 3723562.24 5.78642
411399.53 3723562.24 6.04435 411429.53 3723562.24 6.28750
411459.53 3723562.24 6.55535 411489.53 3723562.24 6.82818

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 29
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: P2TR2 ***
INCLUDING SOURCE(S): L0001068 , L0001069 , L0001070 , L0001071 ,
L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 , L0001079 ,
L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 , L0001087 ,
L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
L0001095 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
411519.53 3723562.24 7.03723 411549.53 3723562.24 7.20086
411369.53 3723592.24 5.16543 411399.53 3723592.24 5.38462
411429.53 3723592.24 5.58713 411459.53 3723592.24 5.80608
411489.53 3723592.24 6.03663 411519.53 3723592.24 6.22157
411549.53 3723592.24 6.36627 411369.53 3723622.24 4.63743
411399.53 3723622.24 4.81607 411429.53 3723622.24 5.00023
411459.53 3723622.24 5.18714 411489.53 3723622.24 5.36699
411519.53 3723622.24 5.53030 411549.53 3723622.24 5.67501
411369.53 3723652.24 4.21299 411399.53 3723652.24 4.36452
411429.53 3723652.24 4.51769 411459.53 3723652.24 4.67175
411489.53 3723652.24 4.83601 411519.53 3723652.24 4.97880
411549.53 3723652.24 5.09828 411369.53 3723682.24 3.83756
411399.53 3723682.24 3.96760 411429.53 3723682.24 4.09849
411459.53 3723682.24 4.23582 411489.53 3723682.24 4.36726
411519.53 3723682.24 4.48840 411549.53 3723682.24 4.60214
411369.53 3723712.24 3.51033 411399.53 3723712.24 3.62399
411429.53 3723712.24 3.73471 411459.53 3723712.24 3.84880
411489.53 3723712.24 3.97228 411519.53 3723712.24 4.07973
411549.53 3723712.24 4.17704 411369.53 3723742.24 3.22247
411399.53 3723742.24 3.31967 411429.53 3723742.24 3.42211
411459.53 3723742.24 3.52430 411489.53 3723742.24 3.62789
411519.53 3723742.24 3.72178 411549.53 3723742.24 3.80963
411369.53 3723772.24 2.97816 411399.53 3723772.24 3.06234
411429.53 3723772.24 3.15057 411459.53 3723772.24 3.24124
411489.53 3723772.24 3.32899 411519.53 3723772.24 3.41643
411549.53 3723772.24 3.49163 411369.53 3723802.24 2.75686
411399.53 3723802.24 2.83193 411429.53 3723802.24 2.90869
411459.53 3723802.24 2.98837 411489.53 3723802.24 3.06602
411519.53 3723802.24 3.14456 411549.53 3723802.24 3.21348
411519.81 3723347.24 26.13406 411543.34 3723339.90 26.51349
411523.48 3723364.16 22.46641 411543.34 3723364.90 21.69199
411543.34 3723389.90 18.21719 411543.34 3723414.90 15.38697
411549.95 3723436.96 13.40161 411559.53 3723464.16 11.47620
411568.34 3723489.90 10.02550 411574.95 3723514.90 8.89918
411577.15 3723539.90 7.97844 411583.03 3723561.22 7.28899

```

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 30
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OS ***
INCLUDING SOURCE(S): L0001100 , L0001101 , L0001102 , L0001103 ,
L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 , L0001111 ,
L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 , L0001119 ,
L0001120 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
410571.00 3722482.00 10.98262 (13122518) 410631.00 3722482.00 11.60309
(13122518)
410511.00 3722542.00 10.66863 (12102622) 410571.00 3722542.00 11.37303
(12102622)
410631.00 3722542.00 12.11754 (13122518) 410691.00 3722542.00 12.96740
(13122518)
410511.00 3722602.00 11.11603 (16020820) 410571.00 3722602.00 11.80345
(16020820)
410631.00 3722602.00 12.65064 (12102622) 410691.00 3722602.00 13.45521
(12102622)
410751.00 3722602.00 14.59031 (13122518) 410571.00 3722662.00 12.10475
(16020820)
410631.00 3722662.00 13.07357 (16020820) 410691.00 3722662.00 13.99032
(12102622)
410751.00 3722662.00 15.18331 (12102622) 410811.00 3722662.00 16.34123
(13122518)
410631.00 3722722.00 13.22349 (14051406) 410691.00 3722722.00 14.53266
(16020820)
410751.00 3722722.00 15.84798 (16020820) 410811.00 3722722.00 17.15157
(12102622)
410871.00 3722722.00 18.74368 (12102622) 410691.00 3722782.00 14.80566
(15030622)
410751.00 3722782.00 16.05425 (14051406) 410811.00 3722782.00 17.75975
(16020820)
410871.00 3722782.00 19.64714 (16020820) 410931.00 3722782.00 21.65744
(12102622)
410751.00 3722842.00 16.70925 (15030622) 410811.00 3722842.00 18.18019
(15030622)
410871.00 3722842.00 19.89187 (14051406) 410931.00 3722842.00 22.54918
(16020820)
410991.00 3722842.00 25.45092 (16020820) 410811.00 3722902.00 18.37665
(15030622)
410871.00 3722902.00 20.57222 (15030622) 410931.00 3722902.00 23.07936
(15030622)
410991.00 3722902.00 25.69285 (15030622) 411051.00 3722902.00 29.83506
(16020820)
410871.00 3722962.00 20.42835 (15012423) 410931.00 3722962.00 22.97440
(15012423)
410991.00 3722962.00 25.90052 (15012423) 411051.00 3722962.00 30.03794
(15030622)
410931.00 3723022.00 23.38340 (14051404) 410991.00 3723022.00 26.21149
(14051404)
411051.00 3723022.00 29.60070 (14051404) 411111.00 3723022.00 33.83958
(15012423)
410991.00 3723082.00 25.48558 (14051404) 411051.00 3723082.00 28.98224
(14051404)
411111.00 3723082.00 33.22073 (14051404) 411171.00 3723082.00 38.15923
(14051404)
411111.00 3723142.00 32.18072 (14082004) 411171.00 3723142.00 36.74730
(13091805)
411111.00 3723202.00 31.57534 (14051324) 411171.00 3723202.00 36.25457
(16071005)
411231.00 3723202.00 42.52080 (16021505) 411111.00 3723262.00 31.39534
(14051324)
411171.00 3723262.00 36.01382 (14051324) 411231.00 3723262.00 42.86693
(14051324)
411291.00 3723262.00 51.81867 (14051324) 411111.00 3723322.00 29.95240
(14092624)
411171.00 3723322.00 34.62792 (14061605) 411231.00 3723322.00 41.09994
(14090203)
411291.00 3723322.00 50.42657 (14082001) 411111.00 3723382.00 29.27598
(15082205)
411171.00 3723382.00 33.57834 (14062501) 411231.00 3723382.00 39.19484
(15083103)
411291.00 3723382.00 47.05833 (16090303) 411351.00 3723382.00 58.82850
(15091502)
411111.00 3723442.00 27.90567 (16070102) 411171.00 3723442.00 31.73800
(16090303)
411231.00 3723442.00 36.99835 (15091502) 411291.00 3723442.00 43.34232
(15090205)
411351.00 3723442.00 52.83547 (14080321) 411111.00 3723502.00 26.47179

```


(14100902)						
411171.00	3723502.00	29.88155	(15091502)	411231.00	3723502.00	34.17900
(15090205)						
411291.00	3723502.00	39.45476	(13021520)	411351.00	3723502.00	46.13375
(15102819)						
411111.00	3723562.00	24.73114	(15091502)	411171.00	3723562.00	27.55896
(15090205)						
411231.00	3723562.00	31.40236	(15080705)	411291.00	3723562.00	35.37294
(14080321)						

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCS All Sources\OCS All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 31
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OS ***
INCLUDING SOURCE(S): L0001100 , L0001101 , L0001102 , L0001103 ,
L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 , L0001111 ,
L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 , L0001119 ,
L0001120 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
(15090205) 411351.00 3723562.00 40.12344 (14081921) 411111.00 3723622.00 23.07054
(14080321) 411171.00 3723622.00 25.61158 (15080705) 411231.00 3723622.00 28.46149
(14083122) 411291.00 3723622.00 31.00146 (15100420) 411351.00 3723622.00 34.42104
(14080321) 411111.00 3723682.00 21.51946 (15080705) 411171.00 3723682.00 23.56426
(14081921) 411231.00 3723682.00 25.44145 (15102819) 411291.00 3723682.00 28.11401
(13021520) 411351.00 3723682.00 30.39807 (14083122) 411111.00 3723742.00 19.92328
(15100420) 411171.00 3723742.00 21.54442 (14080321) 411231.00 3723742.00 22.98442
(16080502) 411291.00 3723742.00 24.80892 (13092523) 411351.00 3723742.00 26.52512
(15102819) 411111.00 3723802.00 18.54952 (14080321) 411171.00 3723802.00 19.58423
(14083122) 411231.00 3723802.00 21.10381 (14081921) 411291.00 3723802.00 22.39330
(15021121) 411351.00 3723802.00 23.50874 (15071423) 410709.53 3722302.24 11.00162
(15021121) 410679.53 3722332.24 10.88658 (15021121) 410709.53 3722332.24 11.33083
(15021121) 410649.53 3722362.24 10.51438 (16021723) 410679.53 3722362.24 10.99292
(15021121) 410709.53 3722362.24 11.49542 (15021121) 410739.53 3722362.24 11.92321
(15021121) 410649.53 3722392.24 10.82213 (16020724) 410679.53 3722392.24 11.10350
(16021723) 410709.53 3722392.24 11.55735 (15021121) 410739.53 3722392.24 12.13597
(15021121) 410769.53 3722392.24 12.57350 (15021121) 410619.53 3722422.24 10.94437
(16021721) 410649.53 3722422.24 11.18493 (16021721) 410679.53 3722422.24 11.41808
(16020724) 410709.53 3722422.24 11.71343 (16021723) 410739.53 3722422.24 12.20546
(15021121) 410769.53 3722422.24 12.83183 (15021121) 410799.53 3722422.24 13.31283
(15021121) 410589.53 3722452.24 10.91597 (13122518) 410619.53 3722452.24 11.15745
(16021721) 410649.53 3722452.24 11.52366 (16021721) 410679.53 3722452.24 11.83337
(16021721) 410709.53 3722452.24 12.06565 (16020724) 410739.53 3722452.24 12.35041
(16021723) 410769.53 3722452.24 12.92500 (15021121) 410799.53 3722452.24 13.52434
(15021121) 410649.53 3722482.24 11.76573 (13122518) 410679.53 3722482.24 12.15969
(16021721) 410709.53 3722482.24 12.49651 (16021721) 410739.53 3722482.24 12.76726
(16021721) 410769.53 3722482.24 13.04721 (16021723) 410799.53 3722482.24 13.64627
(15021121) 410829.53 3722482.24 14.39234 (15021121) 410679.53 3722512.24 12.47127
(13122518) 410709.53 3722512.24 12.82046 (16021721) 410739.53 3722512.24 13.22965
(16021721) 410769.53 3722512.24 13.49646 (16021721) 410799.53 3722512.24 13.85815
(16020724) 410829.53 3722512.24 14.53524 (15021121) 410859.53 3722512.24 15.32678
(15021121) 410709.53 3722542.24 13.19651 (13122518) 410739.53 3722542.24 13.55714
(16021721) 410769.53 3722542.24 13.96267 (16021721) 410799.53 3722542.24 14.42439
(16021721) 410829.53 3722542.24 14.80111 (16020724) 410859.53 3722542.24 15.45645
(15021121) 410739.53 3722572.24 13.97929 (13122518) 410769.53 3722572.24 14.32165
(13122518) 410799.53 3722572.24 14.91439 (16021721) 410829.53 3722572.24 15.39264

```

(16021721)	410859.53	3722572.24	15.78727	(16020724)	410889.53	3722572.24	16.52840
(15021121)	410769.53	3722602.24	14.84032	(13122518)	410799.53	3722602.24	15.33110
(13122518)	410829.53	3722602.24	15.86725	(16021721)	410859.53	3722602.24	16.43749
(16021721)	410889.53	3722602.24	16.99080	(16020724)	410919.53	3722602.24	17.69777
(15021121)							

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 32
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OS ***
INCLUDING SOURCE(S): L0001100 , L0001101 , L0001102 , L0001103 ,
L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 , L0001111 ,
L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 , L0001119 ,
L0001120 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
410799.53 3722632.24 15.81926 (13122518) 410829.53 3722632.24 16.36901
(13122518)
410859.53 3722632.24 16.94406 (16021721) 410889.53 3722632.24 17.65749
(16021721)
410919.53 3722632.24 18.26331 (16020724) 410949.53 3722632.24 19.03891
(16021723)
410829.53 3722662.24 16.80184 (13122518) 410859.53 3722662.24 17.60847
(13122518)
410889.53 3722662.24 18.25576 (13122518) 410919.53 3722662.24 19.07182
(16021721)
410949.53 3722662.24 19.82347 (16021721) 410979.53 3722662.24 20.57695
(16021723)
410859.53 3722692.24 18.02456 (13122518) 410889.53 3722692.24 18.89751
(13122518)
410919.53 3722692.24 19.69863 (13122518) 410949.53 3722692.24 20.58040
(16021721)
410979.53 3722692.24 21.45836 (16021721) 410889.53 3722722.24 19.23185
(13122518)
410919.53 3722722.24 20.26189 (13122518) 410949.53 3722722.24 21.34183
(13122518)
410979.53 3722722.24 22.20009 (14011623) 411009.53 3722722.24 23.46488
(16021721)
410919.53 3722752.24 20.77568 (12102622) 410949.53 3722752.24 21.78941
(13122518)
410979.53 3722752.24 23.07040 (13122518) 411009.53 3722752.24 24.31782
(13122518)
411039.53 3722752.24 25.73448 (14011623) 410949.53 3722782.24 22.45348
(12102622)
410979.53 3722782.24 23.65343 (12102622) 411009.53 3722782.24 25.11881
(13122518)
411039.53 3722782.24 26.74156 (13122518) 411069.53 3722782.24 28.31608
(14011623)
410979.53 3722812.24 24.38577 (12102622) 411009.53 3722812.24 25.88665
(12102622)
411039.53 3722812.24 27.36292 (13122518) 411069.53 3722812.24 29.49688
(13122518)
411099.53 3722812.24 31.36640 (13122518) 411009.53 3722842.24 26.47306
(16020820)
411039.53 3722842.24 28.26391 (12102622) 411069.53 3722842.24 30.05329
(12102622)
411099.53 3722842.24 32.65608 (13122518) 411039.53 3722872.24 28.90278
(16020820)
411069.53 3722872.24 30.71278 (16020820) 411099.53 3722872.24 33.46937
(12102622)
411129.53 3722872.24 36.11032 (12102622) 411069.53 3722902.24 31.18745
(16020820)
411099.53 3722902.24 33.93548 (16020820) 411129.53 3722902.24 36.75326
(16020820)
411159.53 3722902.24 40.37701 (12102622) 411069.53 3722932.24 31.07122
(15030622)
411099.53 3722932.24 33.89587 (14051406) 411129.53 3722932.24 37.14479
(16020820)
411159.53 3722932.24 40.85681 (16020820) 411189.53 3722932.24 45.02922
(16020820)
411069.53 3722962.24 31.33067 (15030622) 411099.53 3722962.24 33.84274
(15030622)
411129.53 3722962.24 36.66195 (15030622) 411159.53 3722962.24 39.93459
(15030622)
411189.53 3722962.24 44.25161 (14051406) 411099.53 3722992.24 33.45325
(15012423)
411129.53 3722992.24 36.31541 (15030622) 411159.53 3722992.24 39.55958
(15030622)
411189.53 3722992.24 43.33091 (15030622) 411219.53 3722992.24 48.04112
(14051405)
411129.53 3723022.24 35.45836 (15012423) 411159.53 3723022.24 38.36629
(15012423)
411189.53 3723022.24 41.62367 (14051405) 411219.53 3723022.24 45.49698
(14051405)
411249.53 3723022.24 50.19364 (14051404) 411159.53 3723052.24 37.81745
(14051404)
411189.53 3723052.24 40.70858 (14051404) 411219.53 3723052.24 43.53232

```

(14051404)	411249.53	3723052.24	47.68823	(14051405)	411279.53	3723052.24	52.72767
(14051406)	411189.53	3723082.24	39.73352	(14051404)	411219.53	3723082.24	42.04539
(14051404)	411249.53	3723082.24	46.22668	(14051405)	411279.53	3723082.24	51.50098
(16020819)	411309.53	3723082.24	57.95533	(14051406)	411219.53	3723112.24	41.66157
(14051404)							

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 33
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OS ***
INCLUDING SOURCE(S): L0001100 , L0001101 , L0001102 , L0001103 ,
L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 , L0001111 ,
L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 , L0001119 ,
L0001120 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
(16020819) 411249.53 3723112.24 45.96048 (14051405) 411279.53 3723112.24 50.41947
(14051404) 411309.53 3723112.24 57.29868 (14051406) 411219.53 3723142.24 41.47506
(14051405) 411249.53 3723142.24 45.94535 (14051404) 411279.53 3723142.24 50.32885
(16020819) 411309.53 3723142.24 56.21068 (16020819) 411339.53 3723142.24 64.80542
(14051404) 411249.53 3723172.24 45.72937 (14051404) 411279.53 3723172.24 50.83031
(16020819) 411309.53 3723172.24 55.55632 (13122507) 411339.53 3723172.24 64.23403
(16021505) 411369.53 3723172.24 75.40252 (16020819) 411249.53 3723202.24 45.39921
(13091806) 411279.53 3723202.24 50.02785 (16021505) 411309.53 3723202.24 56.75092
(13122507) 411339.53 3723202.24 63.75263 (13091804) 411369.53 3723202.24 75.53341
(14090205) 411399.53 3723202.24 91.05025 (12093007) 411279.53 3723232.24 49.60683
(16021505) 411309.53 3723232.24 56.54509 (16021505) 411339.53 3723232.24 65.33169
(13091804) 411369.53 3723232.24 74.71670 (16021505) 411399.53 3723232.24 92.50156
(14051324) 411309.53 3723262.24 56.63363 (14051324) 411339.53 3723262.24 64.24465
(14090206) 411369.53 3723262.24 73.28776 (14090206) 411399.53 3723262.24 89.56739
(14090204) 411429.53 3723262.24 124.48431 (12121616) 411339.53 3723292.24 63.55718
(12121616) 411369.53 3723292.24 76.47818 (12121616) 411399.53 3723292.24 100.33663
(12121616) 411429.53 3723292.24 134.85545 (12121616) 411339.53 3723322.24 64.90371
(12121616) 411369.53 3723322.24 79.24381 (12121616) 411399.53 3723322.24 96.84269
(12121616) 411429.53 3723322.24 117.88386 (12121616) 411459.53 3723322.24 148.72280
(14090103) 411369.53 3723352.24 68.56028 (15091501) 411399.53 3723352.24 79.53438
(14120316) 411429.53 3723352.24 92.12601 (12100403) 411459.53 3723352.24 135.79439
(16080324) 411369.53 3723382.24 63.70170 (14090103) 411399.53 3723382.24 73.00890
(14120316) 411429.53 3723382.24 84.97817 (14062722) 411459.53 3723382.24 118.22315
(15080705) 411489.53 3723382.24 134.23673 (14120316) 411369.53 3723412.24 60.78554
(14120316) 411399.53 3723412.24 69.25519 (14080321) 411429.53 3723412.24 78.69046
(15090407) 411459.53 3723412.24 96.61850 (14120316) 411489.53 3723412.24 101.60773
(15100420) 411369.53 3723442.24 56.41844 (14080321) 411399.53 3723442.24 62.18485
(14090121) 411429.53 3723442.24 69.42683 (14120316) 411459.53 3723442.24 75.85340
(15102819) 411489.53 3723442.24 83.76376 (16073022) 411369.53 3723472.24 52.49610
(14083122) 411399.53 3723472.24 57.59840 (14081921) 411429.53 3723472.24 61.99874
(16073022) 411459.53 3723472.24 66.68495 (16073023) 411489.53 3723472.24 72.50606
(14081921) 411519.53 3723472.24 75.58821 (14100722) 411369.53 3723502.24 48.44705
(16080502) 411399.53 3723502.24 52.52274 (14083122) 411429.53 3723502.24 55.66011
(16073022) 411459.53 3723502.24 59.34245 (16073023) 411489.53 3723502.24 63.11472
(14081921) 411519.53 3723502.24 64.93175 (14100722) 411369.53 3723532.24 44.91792
(14081921) 411399.53 3723532.24 48.22832 (14083122) 411429.53 3723532.24 50.33799

```

(15071423)	411459.53	3723532.24	53.35612	(16080801)	411489.53	3723532.24	56.15046
(16073022)	411519.53	3723532.24	57.56508	(14100722)	411369.53	3723562.24	41.56973
(14083122)	411399.53	3723562.24	44.00345	(14083122)	411429.53	3723562.24	45.52222
(14062402)	411459.53	3723562.24	47.51927	(16080801)	411489.53	3723562.24	49.42559
(16073022)							

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 34
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OS ***
INCLUDING SOURCE(S): L0001100 , L0001101 , L0001102 , L0001103 ,
L0001104 , L0001105 , L0001106 , L0001107 , L0001108 , L0001109 , L0001110 , L0001111 ,
L0001112 , L0001113 , L0001114 , L0001115 , L0001116 , L0001117 , L0001118 , L0001119 ,
L0001120 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
(16092724) 411519.53 3723562.24 50.23627 (14100722) 411549.53 3723562.24 50.98134
(16080502) 411369.53 3723592.24 38.55367 (14083122) 411399.53 3723592.24 40.33372
(12092023) 411429.53 3723592.24 41.59349 (14062402) 411459.53 3723592.24 42.98913
(14100722) 411489.53 3723592.24 44.50192 (14071522) 411519.53 3723592.24 45.18148
(14083122) 411549.53 3723592.24 45.61463 (16092724) 411369.53 3723622.24 35.42684
(16073023) 411399.53 3723622.24 36.67380 (15071423) 411429.53 3723622.24 37.99702
(14071522) 411459.53 3723622.24 39.22194 (12092023) 411489.53 3723622.24 40.04237
(16092724) 411519.53 3723622.24 40.56606 (14100722) 411549.53 3723622.24 41.22445
(14062402) 411369.53 3723652.24 33.14037 (14083122) 411399.53 3723652.24 34.23173
(16073022) 411429.53 3723652.24 35.27112 (16073023) 411459.53 3723652.24 36.09801
(14071521) 411489.53 3723652.24 37.10003 (14071522) 411519.53 3723652.24 37.46016
(16080502) 411549.53 3723652.24 37.72051 (16100618) 411369.53 3723682.24 30.90407
(16080801) 411399.53 3723682.24 31.93062 (14062402) 411429.53 3723682.24 32.64270
(14071522) 411459.53 3723682.24 33.52266 (16073022) 411489.53 3723682.24 34.01312
(16100618) 411519.53 3723682.24 34.15264 (14071521) 411549.53 3723682.24 34.58925
(14062402) 411369.53 3723712.24 28.83673 (15071423) 411399.53 3723712.24 29.76029
(16073022) 411429.53 3723712.24 30.29629 (16080801) 411459.53 3723712.24 30.84968
(14071521) 411489.53 3723712.24 31.52620 (14071522) 411519.53 3723712.24 31.63133
(15071423) 411549.53 3723712.24 31.87098 (16100618) 411369.53 3723742.24 26.84852
(16080801) 411399.53 3723742.24 27.57498 (14062402) 411429.53 3723742.24 28.26594
(14071522) 411459.53 3723742.24 28.79077 (16073022) 411489.53 3723742.24 29.22855
(16100618) 411519.53 3723742.24 29.25855 (14071521) 411549.53 3723742.24 29.48107
(14062402) 411369.53 3723772.24 25.30219 (14062402) 411399.53 3723772.24 25.87562
(16073022) 411429.53 3723772.24 26.48005 (16080801) 411459.53 3723772.24 26.95725
(14071521) 411489.53 3723772.24 27.21930 (14071522) 411519.53 3723772.24 27.36602
(14062402) 411549.53 3723772.24 27.42250 (16100618) 411369.53 3723802.24 23.83033
(16080801) 411399.53 3723802.24 24.25787 (16073023) 411429.53 3723802.24 24.75085
(14071522) 411459.53 3723802.24 25.15476 (16073022) 411489.53 3723802.24 25.38954
(16100618) 411519.53 3723802.24 25.52472 (14071521) 411549.53 3723802.24 25.60191
(15042107) 411519.81 3723347.24 221.56615 (14050807) 411543.34 3723339.90 264.85105
(15042107) 411523.48 3723364.16 170.54688 (14050807) 411543.34 3723364.90 185.61428
(16083121) 411543.34 3723389.90 135.64850 (15042107) 411543.34 3723414.90 105.96765
(13091620) 411549.95 3723436.96 91.40603 (12090420) 411559.53 3723464.16 77.85000
(13091620) 411568.34 3723489.90 67.63362 (13091620) 411574.95 3723514.90 60.20332
(13091620) 411577.15 3723539.90 54.61982 (13091620) 411583.03 3723561.22 50.01106
(13091620)

```



```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 35
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: P2TR1 ***
INCLUDING SOURCE(S): L0001024 , L0001025 , L0001026 , L0001027 ,
L0001028 , L0001029 , L0001030 , L0001031 , L0001032 , L0001033 , L0001034 , L0001035 ,
L0001036 , L0001037 , L0001038 , L0001039 , L0001040 , L0001041 , L0001042 , L0001043 ,
L0001044 , L0001045 , L0001046 , L0001047 , L0001048 , L0001049 , L0001050 ,
L0001051 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
(14051405) 410571.00 3722482.00 21.39056 (14051405) 410631.00 3722482.00 25.79136
(14051404) 410511.00 3722542.00 16.70282 (14051404) 410571.00 3722542.00 19.06831
(14051405) 410631.00 3722542.00 22.05024 (14051404) 410691.00 3722542.00 26.76159
(14051405) 410511.00 3722602.00 15.13399 (14051404) 410571.00 3722602.00 17.09385
(14051404) 410631.00 3722602.00 19.56314 (14051404) 410691.00 3722602.00 22.79142
(14051404) 410751.00 3722602.00 28.80563 (12093007) 410571.00 3722662.00 15.39924
(16021505) 410631.00 3722662.00 17.33112 (16021505) 410691.00 3722662.00 19.92203
(14051404) 410751.00 3722662.00 23.65638 (12093007) 410811.00 3722662.00 30.74666
(12093007) 410631.00 3722722.00 15.62779 (16021505) 410691.00 3722722.00 17.70287
(16021505) 410751.00 3722722.00 20.35479 (16021505) 410811.00 3722722.00 24.92741
(12093007) 410871.00 3722722.00 32.69400 (12093007) 410691.00 3722782.00 15.89571
(14051324) 410751.00 3722782.00 18.04902 (15081722) 410811.00 3722782.00 21.13942
(15091422) 410871.00 3722782.00 26.08403 (12093007) 410931.00 3722782.00 34.55109
(12093007) 410751.00 3722842.00 16.38539 (14090121) 410811.00 3722842.00 18.81543
(15091422) 410871.00 3722842.00 22.11519 (12082104) 410931.00 3722842.00 27.10768
(12093007) 410991.00 3722842.00 36.45381 (12093007) 410811.00 3722902.00 16.96635
(16073023) 410871.00 3722902.00 19.53081 (12082104) 410931.00 3722902.00 23.17332
(14100218) 410991.00 3722902.00 28.22314 (14100218) 411051.00 3722902.00 38.20750
(12093007) 410871.00 3722962.00 17.45757 (15091422) 410931.00 3722962.00 20.19463
(14100721) 410991.00 3722962.00 24.03711 (14100218) 411051.00 3722962.00 29.71417
(14100219) 410931.00 3723022.00 18.06549 (14071604) 410991.00 3723022.00 20.95997
(14100722) 411051.00 3723022.00 24.88228 (14100218) 411111.00 3723022.00 30.86960
(13100519) 410991.00 3723082.00 18.53359 (14100722) 411051.00 3723082.00 21.45599
(16083120) 411111.00 3723082.00 25.53577 (13091620) 411171.00 3723082.00 31.80112
(14090824) 411111.00 3723142.00 21.98402 (15091421) 411171.00 3723142.00 26.11006
(13091620) 411111.00 3723202.00 19.33182 (15091421) 411171.00 3723202.00 22.25663
(15091421) 411231.00 3723202.00 26.43071 (14080324) 411111.00 3723262.00 17.26530
(15091421) 411171.00 3723262.00 19.58256 (15091421) 411231.00 3723262.00 22.36916
(14080324) 411291.00 3723262.00 25.46470 (15092619) 411111.00 3723322.00 15.62232
(16100618) 411171.00 3723322.00 17.46780 (15091421) 411231.00 3723322.00 19.37876
(13071023) 411291.00 3723322.00 21.40592 (15092619) 411111.00 3723382.00 14.29018
(16100618) 411171.00 3723382.00 15.73218 (15091421) 411231.00 3723382.00 17.07885
(13091620) 411291.00 3723382.00 18.44368 (15092619) 411351.00 3723382.00 19.43909
(15101121) 411111.00 3723442.00 13.14061 (16100618) 411171.00 3723442.00 14.28304
(15091421) 411231.00 3723442.00 15.25164 (12090420) 411291.00 3723442.00 16.20807

```

(16092919)	411351.00	3723442.00	16.98576	(15101121)	411111.00	3723502.00	12.14221
(16100618)	411171.00	3723502.00	13.05514	(15091421)	411231.00	3723502.00	13.77226
(12090420)	411291.00	3723502.00	14.46028	(16092919)	411351.00	3723502.00	15.02090
(15092619)	411111.00	3723562.00	11.26720	(16100618)	411171.00	3723562.00	12.00372
(15091421)	411231.00	3723562.00	12.53955	(12090420)	411291.00	3723562.00	13.08472
(14100820)							

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCS All Sources\OCS All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 36
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: P2TR1 ***
INCLUDING SOURCE(S): L0001024 , L0001025 , L0001026 , L0001027 ,
L0001028 , L0001029 , L0001030 , L0001031 , L0001032 , L0001033 , L0001034 , L0001035 ,
L0001036 , L0001037 , L0001038 , L0001039 , L0001040 , L0001041 , L0001042 , L0001043 ,
L0001044 , L0001045 , L0001046 , L0001047 , L0001048 , L0001049 , L0001050 ,
L0001051 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
(16100618) 411351.00 3723562.00 13.54383 (15092619) 411111.00 3723622.00 10.49592
(16090722) 411171.00 3723622.00 11.09727 (15091421) 411231.00 3723622.00 11.50522
(15092619) 411291.00 3723622.00 11.92762 (13071023) 411351.00 3723622.00 12.27008
(15091421) 411111.00 3723682.00 9.80750 (16100618) 411171.00 3723682.00 10.30283
(13071023) 411231.00 3723682.00 10.61669 (16090722) 411291.00 3723682.00 10.97366
(16100618) 411351.00 3723682.00 11.21560 (16092919) 411111.00 3723742.00 9.19358
(16083121) 411171.00 3723742.00 9.60397 (15091421) 411231.00 3723742.00 9.85971
(16092919) 411291.00 3723742.00 10.13735 (13071023) 411351.00 3723742.00 10.33593
(15091421) 411111.00 3723802.00 8.63984 (16100618) 411171.00 3723802.00 8.98433
(13091620) 411231.00 3723802.00 9.20918 (16083121) 411291.00 3723802.00 9.41385
(14011620) 411351.00 3723802.00 9.57350 (14100820) 410709.53 3722302.24 79.39050
(12093007) 410679.53 3722332.24 75.27238 (12093007) 410709.53 3722332.24 123.71481
(12093007) 410649.53 3722362.24 44.50516 (12093007) 410679.53 3722362.24 58.37034
(12093007) 410709.53 3722362.24 83.14545 (12093007) 410739.53 3722362.24 99.10745
(12093007) 410649.53 3722392.24 38.16629 (12093007) 410679.53 3722392.24 47.84036
(12093007) 410709.53 3722392.24 63.10374 (12093007) 410739.53 3722392.24 91.82153
(12093007) 410769.53 3722392.24 77.75131 (14051323) 410619.53 3722422.24 29.28694
(16020819) 410649.53 3722422.24 33.41419 (12093007) 410679.53 3722422.24 40.60331
(12093007) 410709.53 3722422.24 51.07639 (12093007) 410739.53 3722422.24 68.11206
(12093007) 410769.53 3722422.24 101.95336 (12093007) 410799.53 3722422.24 82.18015
(12093007) 410589.53 3722452.24 24.33083 (14051405) 410619.53 3722452.24 26.91449
(16020819) 410649.53 3722452.24 30.05262 (16020819) 410679.53 3722452.24 35.30450
(12093007) 410709.53 3722452.24 42.99944 (12093007) 410739.53 3722452.24 54.41668
(12093007) 410769.53 3722452.24 73.56727 (12093007) 410799.53 3722452.24 114.12555
(12093007) 410649.53 3722482.24 27.49726 (16020819) 410679.53 3722482.24 31.24143
(12093007) 410709.53 3722482.24 37.16275 (12093007) 410739.53 3722482.24 45.41262
(12093007) 410769.53 3722482.24 57.92455 (12093007) 410799.53 3722482.24 79.77553
(12093007) 410829.53 3722482.24 98.72065 (12093007) 410679.53 3722512.24 28.04394
(16020819) 410709.53 3722512.24 32.71980 (12093007) 410739.53 3722512.24 38.99595
(12093007) 410769.53 3722512.24 47.80907 (12093007) 410799.53 3722512.24 61.69742
(12093007) 410829.53 3722512.24 86.84891 (12093007) 410859.53 3722512.24 103.40850
(12093007) 410709.53 3722542.24 29.20665 (12093007) 410739.53 3722542.24 34.16167
(12093007) 410769.53 3722542.24 40.78170 (12093007) 410799.53 3722542.24 50.46275
(12093007) 410829.53 3722542.24 65.82153 (12093007) 410859.53 3722542.24 95.21739
(12093007) 410739.53 3722572.24 30.36802 (12093007) 410769.53 3722572.24 35.55494

```

(12093007)						
410799.53	3722572.24	42.72680	(12093007)	410829.53	3722572.24	53.18707
(12093007)						
410859.53	3722572.24	70.24000	(12093007)	410889.53	3722572.24	105.23967
(12093007)						
410769.53	3722602.24	31.49574	(12093007)	410799.53	3722602.24	37.02275
(12093007)						
410829.53	3722602.24	44.64568	(12093007)	410859.53	3722602.24	56.02577
(12093007)						
410889.53	3722602.24	75.58239	(12093007)	410919.53	3722602.24	117.59872
(12093007)						

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 37
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: P2TR1 ***
INCLUDING SOURCE(S): L0001024 , L0001025 , L0001026 , L0001027 ,
L0001028 ,
L0001029 , L0001030 , L0001031 , L0001032 , L0001033 , L0001034 , L0001035 ,
L0001036 ,
L0001037 , L0001038 , L0001039 , L0001040 , L0001041 , L0001042 , L0001043 ,
L0001044 ,
L0001045 , L0001046 , L0001047 , L0001048 , L0001049 , L0001050 ,
L0001051 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
(12093007) 410799.53 3722632.24 32.62980 (12093007) 410829.53 3722632.24 38.44833
(12093007) 410859.53 3722632.24 46.66338 (12093007) 410889.53 3722632.24 59.21366
(12093007) 410919.53 3722632.24 81.34923 (12093007) 410949.53 3722632.24 98.72770
(12093007) 410829.53 3722662.24 33.71148 (12093007) 410859.53 3722662.24 39.98204
(12093007) 410889.53 3722662.24 48.86605 (12093007) 410919.53 3722662.24 62.80075
(12093007) 410949.53 3722662.24 88.50049 (12093007) 410979.53 3722662.24 76.33883
(12093007) 410859.53 3722692.24 34.88542 (12093007) 410889.53 3722692.24 41.51226
(12093007) 410919.53 3722692.24 51.13576 (12093007) 410949.53 3722692.24 66.67041
(12093007) 410979.53 3722692.24 96.46644 (12093007) 410889.53 3722722.24 36.00729
(12093007) 410919.53 3722722.24 43.05317 (12093007) 410949.53 3722722.24 53.59223
(12093007) 410979.53 3722722.24 70.78880 (12093007) 411009.53 3722722.24 106.76171
(12093007) 410919.53 3722752.24 37.17020 (12093007) 410949.53 3722752.24 44.67930
(12093007) 410979.53 3722752.24 56.11984 (12093007) 411009.53 3722752.24 75.89809
(12093007) 411039.53 3722752.24 119.43604 (12093007) 410949.53 3722782.24 38.31363
(12093007) 410979.53 3722782.24 46.52151 (12093007) 411009.53 3722782.24 59.01928
(12093007) 411039.53 3722782.24 81.68862 (12093007) 411069.53 3722782.24 97.58082
(12093007) 410979.53 3722812.24 39.52237 (12093007) 411009.53 3722812.24 48.36054
(12093007) 411039.53 3722812.24 62.16799 (12093007) 411069.53 3722812.24 88.47948
(12093007) 411099.53 3722812.24 77.23163 (12101802) 411009.53 3722842.24 40.71786
(12093007) 411039.53 3722842.24 50.26630 (12093007) 411069.53 3722842.24 65.71608
(12093007) 411099.53 3722842.24 96.63442 (12093007) 411039.53 3722872.24 41.89961
(12093007) 411069.53 3722872.24 52.16827 (12093007) 411099.53 3722872.24 69.80720
(12093007) 411129.53 3722872.24 106.48080 (12093007) 411069.53 3722902.24 42.98553
(12093007) 411099.53 3722902.24 54.33254 (12093007) 411129.53 3722902.24 74.03084
(12093007) 411159.53 3722902.24 118.56658 (12093007) 411069.53 3722932.24 36.20375
(12093007) 411099.53 3722932.24 44.11947 (12093007) 411129.53 3722932.24 56.48232
(12093007) 411159.53 3722932.24 79.07158 (12093007) 411189.53 3722932.24 93.52237
(12093007) 411069.53 3722962.24 31.90326 (14100219) 411099.53 3722962.24 36.64381
(12093007) 411129.53 3722962.24 44.96148 (12093007) 411159.53 3722962.24 58.42258
(12093007) 411189.53 3722962.24 84.29702 (12093007) 411099.53 3722992.24 32.68853
(13090520) 411129.53 3722992.24 37.63030 (14090824) 411159.53 3722992.24 45.54128
(12093007) 411189.53 3722992.24 60.18477 (12093007) 411219.53 3722992.24 90.14184
(12093007) 411129.53 3723022.24 33.34960 (14090824) 411159.53 3723022.24 38.51607
(14090824) 411189.53 3723022.24 45.87556 (14091524) 411219.53 3723022.24 60.75874
(12093007) 411249.53 3723022.24 94.86043 (12093007) 411159.53 3723052.24 33.97836

```

(14090824)						
411189.53	3723052.24	39.25005	(14091420)	411219.53	3723052.24	46.70247
(14091524)						
411249.53	3723052.24	58.64750	(14091524)	411279.53	3723052.24	92.35651
(12093007)						
411189.53	3723082.24	34.40589	(14090824)	411219.53	3723082.24	39.58092
(14091420)						
411249.53	3723082.24	47.21007	(14091420)	411279.53	3723082.24	59.29576
(15081419)						
411309.53	3723082.24	77.56986	(15101120)	411219.53	3723112.24	34.52006
(16110817)						

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSO All Sources\OCSO All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 38
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: P2TR1 ***
INCLUDING SOURCE(S): L0001024 , L0001025 , L0001026 , L0001027 ,
L0001028 , L0001029 , L0001030 , L0001031 , L0001032 , L0001033 , L0001034 , L0001035 ,
L0001036 , L0001037 , L0001038 , L0001039 , L0001040 , L0001041 , L0001042 , L0001043 ,
L0001044 , L0001045 , L0001046 , L0001047 , L0001048 , L0001049 , L0001050 ,
L0001051 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
(14091420) 411249.53 3723112.24 40.21582 (14091420) 411279.53 3723112.24 47.29038
(16110817) 411309.53 3723112.24 56.53382 (12100219) 411219.53 3723142.24 30.70289
(14091420) 411249.53 3723142.24 34.92523 (16110817) 411279.53 3723142.24 40.16273
(14091318) 411309.53 3723142.24 45.01442 (15091021) 411339.53 3723142.24 47.31232
(15101121) 411249.53 3723172.24 31.02982 (16110817) 411279.53 3723172.24 34.72959
(16092723) 411309.53 3723172.24 38.00110 (15091021) 411339.53 3723172.24 39.64823
(16092919) 411369.53 3723172.24 39.42878 (12090519) 411249.53 3723202.24 27.92728
(15101121) 411279.53 3723202.24 30.65152 (15092619) 411309.53 3723202.24 33.03939
(14091318) 411339.53 3723202.24 34.22354 (16092723) 411369.53 3723202.24 34.24999
(15092619) 411399.53 3723202.24 33.37808 (12090519) 411279.53 3723232.24 27.49815
(16102017) 411309.53 3723232.24 29.30041 (15101121) 411339.53 3723232.24 30.20583
(12090519) 411369.53 3723232.24 30.37921 (12081822) 411399.53 3723232.24 30.04357
(15091021) 411309.53 3723262.24 26.33585 (15101121) 411339.53 3723262.24 27.02421
(14091318) 411369.53 3723262.24 27.27436 (16092723) 411399.53 3723262.24 27.03212
(15091021) 411429.53 3723262.24 26.55293 (12090519) 411339.53 3723292.24 24.52112
(12081822) 411369.53 3723292.24 24.78102 (16102017) 411399.53 3723292.24 24.70344
(15101121) 411429.53 3723292.24 24.35165 (12090519) 411339.53 3723322.24 22.51374
(16092723) 411369.53 3723322.24 22.72693 (16102017) 411399.53 3723322.24 22.71380
(12090519) 411429.53 3723322.24 22.38834 (14091318) 411459.53 3723322.24 22.09093
(16092723) 411369.53 3723352.24 20.93116 (15091021) 411399.53 3723352.24 20.99250
(12090519) 411429.53 3723352.24 20.82836 (12081822) 411459.53 3723352.24 20.46860
(16102017) 411369.53 3723382.24 19.45811 (15091021) 411399.53 3723382.24 19.51482
(12081822) 411429.53 3723382.24 19.39489 (16092723) 411459.53 3723382.24 19.13175
(15101121) 411489.53 3723382.24 18.88406 (12090519) 411369.53 3723412.24 18.20566
(16092723) 411399.53 3723412.24 18.21900 (16102017) 411429.53 3723412.24 18.17495
(12102817) 411459.53 3723412.24 17.99981 (12081822) 411489.53 3723412.24 17.64434
(15091021) 411369.53 3723442.24 17.10574 (15101121) 411399.53 3723442.24 17.08277
(16092723) 411429.53 3723442.24 17.03004 (16102017) 411459.53 3723442.24 16.89867
(15101121) 411489.53 3723442.24 16.70081 (12081822) 411369.53 3723472.24 16.10337
(16102017) 411399.53 3723472.24 16.09595 (15091021) 411429.53 3723472.24 16.06673
(12081822) 411459.53 3723472.24 15.97346 (16092723) 411489.53 3723472.24 15.82696
(15101121) 411519.53 3723472.24 15.52837 (14091318) 411369.53 3723502.24 15.18511
(15092620) 411399.53 3723502.24 15.25106 (15101121) 411429.53 3723502.24 15.17334
(16092723) 411459.53 3723502.24 15.09064 (12100219) 411489.53 3723502.24 14.98466
411519.53 3723502.24 14.80515 (12081822) 411369.53 3723532.24 14.34007

```

(15101121)	411399.53	3723532.24	14.48097	(15101121)	411429.53	3723532.24	14.40593
(15091021)	411459.53	3723532.24	14.36370	(16102017)	411489.53	3723532.24	14.26298
(16092723)	411519.53	3723532.24	14.10315	(12081822)	411369.53	3723562.24	13.58111
(15092619)	411399.53	3723562.24	13.75939	(15101121)	411429.53	3723562.24	13.67629
(15091021)	411459.53	3723562.24	13.63198	(16102017)	411489.53	3723562.24	13.55517
(16092723)							


```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 39
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: P2TR1 ***
INCLUDING SOURCE(S): L0001024 , L0001025 , L0001026 , L0001027 ,
L0001028 , L0001029 , L0001030 , L0001031 , L0001032 , L0001033 , L0001034 , L0001035 ,
L0001036 , L0001037 , L0001038 , L0001039 , L0001040 , L0001041 , L0001042 , L0001043 ,
L0001044 , L0001045 , L0001046 , L0001047 , L0001048 , L0001049 , L0001050 ,
L0001051 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **
X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
(12081822) 411519.53 3723562.24 13.42801 (16092723) 411549.53 3723562.24 13.28138
(15101121) 411369.53 3723592.24 12.95426 (15092619) 411399.53 3723592.24 13.08297
(15091021) 411429.53 3723592.24 13.08009 (15101121) 411459.53 3723592.24 12.99061
(16092723) 411489.53 3723592.24 12.94879 (16102017) 411519.53 3723592.24 12.85268
(15092619) 411549.53 3723592.24 12.70661 (12081822) 411369.53 3723622.24 12.35492
(15101121) 411399.53 3723622.24 12.43345 (15101121) 411429.53 3723622.24 12.50651
(16102017) 411459.53 3723622.24 12.42215 (15091021) 411489.53 3723622.24 12.36175
(16092723) 411519.53 3723622.24 12.26528 (16092723) 411549.53 3723622.24 12.15642
(15101121) 411369.53 3723652.24 11.82026 (15092619) 411399.53 3723652.24 11.85180
(15101121) 411429.53 3723652.24 11.97671 (15101121) 411459.53 3723652.24 11.90384
(16102017) 411489.53 3723652.24 11.83874 (15092620) 411519.53 3723652.24 11.76740
(15092619) 411549.53 3723652.24 11.67989 (16092723) 411369.53 3723682.24 11.30613
(15101121) 411399.53 3723682.24 11.37174 (15092619) 411429.53 3723682.24 11.45715
(15091021) 411459.53 3723682.24 11.44964 (15101121) 411489.53 3723682.24 11.36151
(16092723) 411519.53 3723682.24 11.29886 (16102017) 411549.53 3723682.24 11.20127
(15092619) 411369.53 3723712.24 10.82356 (15092619) 411399.53 3723712.24 10.92106
(15101121) 411429.53 3723712.24 10.96185 (15101121) 411459.53 3723712.24 11.00269
(15092620) 411489.53 3723712.24 10.90939 (15091021) 411519.53 3723712.24 10.84550
(16092919) 411549.53 3723712.24 10.76842 (16102017) 411369.53 3723742.24 10.38046
(15101121) 411399.53 3723742.24 10.49233 (15092619) 411429.53 3723742.24 10.49071
(15101121) 411459.53 3723742.24 10.57703 (15101121) 411489.53 3723742.24 10.51590
(16102017) 411519.53 3723742.24 10.43687 (15091021) 411549.53 3723742.24 10.37895
(15092619) 411369.53 3723772.24 9.99242 (16092919) 411399.53 3723772.24 10.08730
(15101121) 411429.53 3723772.24 10.10403 (15092619) 411459.53 3723772.24 10.16301
(15091021) 411489.53 3723772.24 10.15139 (15101121) 411519.53 3723772.24 10.06108
(16092919) 411549.53 3723772.24 9.99098 (16102017) 411369.53 3723802.24 9.62407
(15092619) 411399.53 3723802.24 9.70088 (15092619) 411429.53 3723802.24 9.74825
(15101121) 411459.53 3723802.24 9.76590 (15101121) 411489.53 3723802.24 9.79558
(15092620) 411519.53 3723802.24 9.69955 (15101121) 411549.53 3723802.24 9.64057
(15101319) 411519.81 3723347.24 19.47281 (15100919) 411543.34 3723339.90 19.22149
(14051623) 411523.48 3723364.16 18.81493 (15100919) 411543.34 3723364.90 18.33124
(12090519) 411543.34 3723389.90 17.59585 (15100919) 411543.34 3723414.90 16.95850
(12090519) 411549.95 3723436.96 16.28535 (12090519) 411559.53 3723464.16 15.47811
(12090519) 411568.34 3723489.90 14.75870 (12090519) 411574.95 3723514.90 14.12648
(12090519) 411577.15 3723539.90 13.54430 (12090519) 411583.03 3723561.22 13.04090

```

(12102817)

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 40
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: P2TR2 ***
INCLUDING SOURCE(S): L0001068 , L0001069 , L0001070 , L0001071 ,
L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 , L0001079 ,
L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 , L0001087 ,
L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
L0001095 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
(16021721) 410571.00 3722482.00 12.86833 (13122518) 410631.00 3722482.00 13.63126
(13122518) 410511.00 3722542.00 12.65218 (12102622) 410571.00 3722542.00 13.46782
(16021721) 410631.00 3722542.00 14.54723 (13122518) 410691.00 3722542.00 15.44831
(12102622) 410511.00 3722602.00 13.28436 (16020820) 410571.00 3722602.00 14.25755
(13122518) 410631.00 3722602.00 15.26424 (12102622) 410691.00 3722602.00 16.54539
(16020820) 410751.00 3722602.00 17.71391 (13122518) 410571.00 3722662.00 14.87617
(12102622) 410631.00 3722662.00 16.05209 (16020820) 410691.00 3722662.00 17.47521
(13122518) 410751.00 3722662.00 18.94563 (13122518) 410811.00 3722662.00 20.65506
(16020820) 410631.00 3722722.00 16.66084 (14051406) 410691.00 3722722.00 18.48613
(12102622) 410751.00 3722722.00 20.18576 (12102622) 410811.00 3722722.00 22.17728
(13122518) 410871.00 3722722.00 24.65789 (13122518) 410691.00 3722782.00 18.83905
(15030622) 410751.00 3722782.00 21.17044 (16020820) 410811.00 3722782.00 23.74643
(16020820) 410871.00 3722782.00 26.53474 (12102622) 410931.00 3722782.00 29.70124
(13122518) 410751.00 3722842.00 22.23444 (15030622) 410811.00 3722842.00 24.55248
(15030622) 410871.00 3722842.00 28.07855 (16020820) 410931.00 3722842.00 32.46881
(16020820) 410991.00 3722842.00 37.35444 (12102622) 410811.00 3722902.00 25.53166
(15030622) 410871.00 3722902.00 29.56247 (15030622) 410931.00 3722902.00 34.16655
(15030622) 410991.00 3722902.00 39.99052 (14051406) 411051.00 3722902.00 48.73007
(16020820) 410871.00 3722962.00 29.65652 (15012423) 410931.00 3722962.00 35.05390
(15012423) 410991.00 3722962.00 41.77766 (15030622) 411051.00 3722962.00 52.09741
(15030622) 410931.00 3723022.00 36.32005 (14051404) 410991.00 3723022.00 43.50889
(14051404) 411051.00 3723022.00 53.29755 (14051404) 411111.00 3723022.00 67.49748
(14051404) 410991.00 3723082.00 42.05314 (14082004) 411051.00 3723082.00 51.31764
(14082004) 411111.00 3723082.00 64.78424 (14111621) 411171.00 3723082.00 84.83606
(14111621) 411111.00 3723142.00 60.67662 (14051324) 411171.00 3723142.00 74.15059
(14051324) 411111.00 3723202.00 54.15623 (14061605) 411171.00 3723202.00 64.76066
(15082205) 411231.00 3723202.00 76.72705 (15083103) 411111.00 3723262.00 49.01917
(14062501) 411171.00 3723262.00 57.15024 (15083103) 411231.00 3723262.00 67.70954
(15091502) 411291.00 3723262.00 79.49627 (16080324) 411111.00 3723322.00 43.69340
(16090303) 411171.00 3723322.00 50.83714 (15091502) 411231.00 3723322.00 58.86813
(16080401) 411291.00 3723322.00 70.05408 (14080321) 411111.00 3723382.00 39.81743
(15091502) 411171.00 3723382.00 44.86768 (15090205) 411231.00 3723382.00 51.59079
(14080321) 411291.00 3723382.00 58.84648 (14081921) 411351.00 3723382.00 67.92892
(16080502) 411111.00 3723442.00 35.38749 (12052324) 411171.00 3723442.00 39.79283
(15080705) 411231.00 3723442.00 44.55369 (14080321) 411291.00 3723442.00 49.79449

```

(14081921)	411351.00	3723442.00	55.68609	(14062402)	411111.00	3723502.00	31.97294
(15080705)	411171.00	3723502.00	35.49950	(14080321)	411231.00	3723502.00	38.91934
(14081921)	411291.00	3723502.00	42.79900	(14083122)	411351.00	3723502.00	46.10231
(14062402)	411111.00	3723562.00	28.83169	(14080321)	411171.00	3723562.00	31.10405
(15102819)	411231.00	3723562.00	34.12178	(14081921)	411291.00	3723562.00	36.41473
(16080502)							

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSO All Sources\OCSO All Sources.isc ***
 01/26/18
 *** AERMET - VERSION 16216 *** ***
 15:11:49

PAGE 41

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: P2TR2 ***
 INCLUDING SOURCE(S): L0001068 , L0001069 , L0001070 , L0001071 ,
 L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 , L0001079 ,
 L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 , L0001087 ,
 L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
 L0001095 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM ₁₀		IN MICROGRAMS/M ³		**		
X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC
(YYMMDDHH)						
411351.00	3723562.00	38.81396	(16080801)	411111.00	3723622.00	25.97828
(14080321)						
411171.00	3723622.00	27.73801	(14081921)	411231.00	3723622.00	29.78077
(14083122)						
411291.00	3723622.00	31.42017	(15071423)	411351.00	3723622.00	32.97683
(16080801)						
411111.00	3723682.00	23.20777	(15102819)	411171.00	3723682.00	24.96165
(14081921)						
411231.00	3723682.00	26.37795	(14083122)	411291.00	3723682.00	27.67509
(14062402)						
411351.00	3723682.00	28.70220	(16080801)	411111.00	3723742.00	21.05082
(14081921)						
411171.00	3723742.00	22.25260	(13092523)	411231.00	3723742.00	23.37088
(13071922)						
411291.00	3723742.00	24.40363	(14062402)	411351.00	3723742.00	25.12101
(16073022)						
411111.00	3723802.00	19.32566	(14081921)	411171.00	3723802.00	20.24316
(14083122)						
411231.00	3723802.00	20.98791	(15071423)	411291.00	3723802.00	21.63589
(14062402)						
411351.00	3723802.00	22.30080	(16073022)	410709.53	3722302.24	12.51059
(14011619)						
410679.53	3722332.24	12.66717	(15021121)	410709.53	3722332.24	12.98874
(14011619)						
410649.53	3722362.24	12.52942	(15021121)	410679.53	3722362.24	13.06408
(15021121)						
410709.53	3722362.24	13.43778	(15021121)	410739.53	3722362.24	13.75671
(14011619)						
410649.53	3722392.24	12.71632	(15021121)	410679.53	3722392.24	13.31889
(15021121)						
410709.53	3722392.24	13.84016	(15021121)	410739.53	3722392.24	14.26750
(15021121)						
410769.53	3722392.24	14.60307	(14011619)	410619.53	3722422.24	12.55185
(16020724)						
410649.53	3722422.24	12.88618	(16021723)	410679.53	3722422.24	13.48240
(15021121)						
410709.53	3722422.24	14.15708	(15021121)	410739.53	3722422.24	14.72571
(15021121)						
410769.53	3722422.24	15.18228	(15021121)	410799.53	3722422.24	15.56322
(14011619)						
410589.53	3722452.24	12.71608	(16021721)	410619.53	3722452.24	13.04773
(16021721)						
410649.53	3722452.24	13.32856	(16020724)	410679.53	3722452.24	13.68850
(16021723)						
410709.53	3722452.24	14.32774	(15021121)	410739.53	3722452.24	15.06149
(15021121)						
410769.53	3722452.24	15.71846	(15021121)	410799.53	3722452.24	16.13388
(15021121)						
410649.53	3722482.24	13.87556	(16021721)	410679.53	3722482.24	14.19292
(16020724)						
410709.53	3722482.24	14.54996	(16021723)	410739.53	3722482.24	15.25847
(15021121)						
410769.53	3722482.24	16.06672	(15021121)	410799.53	3722482.24	16.76731
(15021121)						
410829.53	3722482.24	17.29532	(15021121)	410679.53	3722512.24	14.79596
(16021721)						
410709.53	3722512.24	15.14587	(16021721)	410739.53	3722512.24	15.51422
(16021723)						
410769.53	3722512.24	16.24785	(15021121)	410799.53	3722512.24	17.22313
(15021121)						
410829.53	3722512.24	18.03327	(15021121)	410859.53	3722512.24	18.57313
(15021121)						
410709.53	3722542.24	15.78538	(16021721)	410739.53	3722542.24	16.22715
(16021721)						
410769.53	3722542.24	16.55261	(16020724)	410799.53	3722542.24	17.47913
(15021121)						
410829.53	3722542.24	18.54135	(15021121)	410859.53	3722542.24	19.40357
(15021121)						
410739.53	3722572.24	16.87986	(16021721)	410769.53	3722572.24	17.37157

(16021721)	410799.53	3722572.24	17.88729	(16020724)	410829.53	3722572.24	18.81356
(15021121)	410859.53	3722572.24	19.96243	(15021121)	410889.53	3722572.24	21.01162
(15021121)	410769.53	3722602.24	18.11121	(16021721)	410799.53	3722602.24	18.78432
(16021721)	410829.53	3722602.24	19.32123	(16020724)	410859.53	3722602.24	20.30192
(15021121)	410889.53	3722602.24	21.71581	(15021121)	410919.53	3722602.24	22.82697
(15021121)							

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 42
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: P2TR2 ***
INCLUDING SOURCE(S): L0001068 , L0001069 , L0001070 , L0001071 ,
L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 , L0001079 ,
L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 , L0001087 ,
L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
L0001095 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
410799.53 3722632.24 19.54135 (16021721) 410829.53 3722632.24 20.30947
(16021721)
410859.53 3722632.24 20.98403 (16020724) 410889.53 3722632.24 22.06818
(15021121)
410919.53 3722632.24 23.63849 (15021121) 410949.53 3722632.24 24.95642
(15021121)
410829.53 3722662.24 21.07237 (13122518) 410859.53 3722662.24 22.16266
(16021721)
410889.53 3722662.24 22.96738 (16020724) 410919.53 3722662.24 24.16579
(15021121)
410949.53 3722662.24 26.00276 (15021121) 410979.53 3722662.24 27.44048
(15021121)
410859.53 3722692.24 23.13568 (13122518) 410889.53 3722692.24 24.21008
(16021721)
410919.53 3722692.24 25.20661 (16021721) 410949.53 3722692.24 26.53506
(15021121)
410979.53 3722692.24 28.62859 (15021121) 410889.53 3722722.24 25.37138
(13122518)
410919.53 3722722.24 26.52071 (16021721) 410949.53 3722722.24 27.89332
(16021721)
410979.53 3722722.24 29.23561 (15021121) 411009.53 3722722.24 31.92776
(15021121)
410919.53 3722752.24 28.03513 (13122518) 410949.53 3722752.24 29.27136
(14011623)
410979.53 3722752.24 30.96346 (14011623) 411009.53 3722752.24 32.69237
(15021121)
411039.53 3722752.24 35.88764 (15021121) 410949.53 3722782.24 31.04984
(13122518)
410979.53 3722782.24 32.94010 (13122518) 411009.53 3722782.24 34.82417
(14011623)
411039.53 3722782.24 36.84107 (15021121) 411069.53 3722782.24 40.72021
(15021121)
410979.53 3722812.24 34.74763 (13122518) 411009.53 3722812.24 37.26294
(13122518)
411039.53 3722812.24 39.51692 (14011623) 411069.53 3722812.24 42.15429
(16020724)
411099.53 3722812.24 46.85963 (15021121) 411009.53 3722842.24 39.06145
(13122518)
411039.53 3722842.24 42.46039 (13122518) 411069.53 3722842.24 45.44696
(14011623)
411099.53 3722842.24 49.11512 (16020724) 411039.53 3722872.24 44.82295
(12102622)
411069.53 3722872.24 48.62649 (13122518) 411099.53 3722872.24 53.51097
(13122518)
411129.53 3722872.24 58.27619 (14011623) 411069.53 3722902.24 51.48573
(12102622)
411099.53 3722902.24 56.96450 (12102622) 411129.53 3722902.24 63.61879
(13122518)
411159.53 3722902.24 70.78652 (14011623) 411069.53 3722932.24 53.77398
(16020820)
411099.53 3722932.24 60.91920 (16020820) 411129.53 3722932.24 68.67098
(12102622)
411159.53 3722932.24 78.03440 (13122518) 411189.53 3722932.24 88.65389
(14011623)
411069.53 3722962.24 55.53489 (15030622) 411099.53 3722962.24 62.02458
(15030622)
411129.53 3722962.24 71.62237 (16020820) 411159.53 3722962.24 83.15092
(16020820)
411189.53 3722962.24 97.33066 (12102622) 411099.53 3722992.24 64.16340
(15030622)
411129.53 3722992.24 74.17883 (15030622) 411159.53 3722992.24 86.43224
(15030622)
411189.53 3722992.24 103.49112 (14051406) 411219.53 3722992.24 128.53817
(16020820)
411129.53 3723022.24 73.28366 (14051404) 411159.53 3723022.24 86.11760
(15012423)
411189.53 3723022.24 103.30925 (15012423) 411219.53 3723022.24 129.07664
(14051405)
411249.53 3723022.24 169.83913 (14051405) 411159.53 3723052.24 85.18718

```

(14051404)	411189.53	3723052.24	100.96023	(14051404)	411219.53	3723052.24	120.93848
(14051404)	411249.53	3723052.24	152.84775	(16021505)	411279.53	3723052.24	327.28343
(12121616)	411189.53	3723082.24	92.77418	(16071005)	411219.53	3723082.24	110.96220
(12121616)	411249.53	3723082.24	160.86478	(12121616)	411279.53	3723082.24	174.56836
(12121616)	411309.53	3723082.24	248.10462	(14120316)	411219.53	3723112.24	98.56411
(12121616)							


```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSO All Sources\OCSO All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 43
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: P2TR2 ***
INCLUDING SOURCE(S): L0001068 , L0001069 , L0001070 , L0001071 ,
L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 , L0001079 ,
L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 , L0001087 ,
L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
L0001095 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **
X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
(14062206) 411249.53 3723112.24 109.44623 (14082001) 411279.53 3723112.24 122.38490
(14090203) 411309.53 3723112.24 172.73393 (12093007) 411219.53 3723142.24 86.03136
(14090104) 411249.53 3723142.24 97.23894 (15082204) 411279.53 3723142.24 109.22529
(12093007) 411309.53 3723142.24 134.79489 (12093007) 411339.53 3723142.24 194.28143
(15091501) 411249.53 3723172.24 88.38279 (13091801) 411279.53 3723172.24 99.07499
(12093007) 411309.53 3723172.24 112.28354 (15101307) 411339.53 3723172.24 147.98838
(14081924) 411369.53 3723172.24 215.55717 (12093007) 411249.53 3723202.24 81.56618
(15101307) 411279.53 3723202.24 89.65548 (14090103) 411309.53 3723202.24 102.82087
(12093007) 411339.53 3723202.24 117.78946 (14120316) 411369.53 3723202.24 156.91440
(14090103) 411399.53 3723202.24 230.80750 (12093007) 411279.53 3723232.24 83.21315
(14030920) 411309.53 3723232.24 93.43935 (14070902) 411339.53 3723232.24 106.81247
(14120316) 411369.53 3723232.24 126.29457 (14120316) 411399.53 3723232.24 165.94028
(14071403) 411309.53 3723262.24 86.16067 (14080321) 411339.53 3723262.24 96.20480
(14120316) 411369.53 3723262.24 107.38702 (14080103) 411399.53 3723262.24 134.32264
(14071403) 411429.53 3723262.24 173.71480 (14120316) 411339.53 3723292.24 88.67189
(14120316) 411369.53 3723292.24 98.00427 (13071424) 411399.53 3723292.24 111.58958
(14081921) 411429.53 3723292.24 132.03495 (12082104) 411339.53 3723322.24 80.80187
(16073023) 411369.53 3723322.24 88.81481 (16080502) 411399.53 3723322.24 99.22022
(15091421) 411429.53 3723322.24 110.18729 (14071604) 411459.53 3723322.24 123.21819
(12092023) 411369.53 3723352.24 80.25848 (15071423) 411399.53 3723352.24 87.81921
(15091421) 411429.53 3723352.24 93.59196 (14071604) 411459.53 3723352.24 101.65666
(16073022) 411369.53 3723382.24 71.00164 (14062402) 411399.53 3723382.24 76.23207
(15091421) 411429.53 3723382.24 80.58403 (14100722) 411459.53 3723382.24 84.49484
(16073023) 411489.53 3723382.24 86.01939 (14080324) 411369.53 3723412.24 64.27017
(14100722) 411399.53 3723412.24 68.10051 (16073022) 411429.53 3723412.24 70.93983
(14080324) 411459.53 3723412.24 73.53889 (15091421) 411489.53 3723412.24 73.96957
(16073022) 411369.53 3723442.24 57.18151 (16080801) 411399.53 3723442.24 59.85277
(16092724) 411429.53 3723442.24 61.60012 (14100722) 411459.53 3723442.24 63.27298
(16080801) 411489.53 3723442.24 63.79010 (13091620) 411369.53 3723472.24 52.12847
(14100722) 411399.53 3723472.24 53.82512 (16073022) 411429.53 3723472.24 54.75144
(13091620) 411459.53 3723472.24 55.92918 (16092724) 411489.53 3723472.24 56.48019
(16080801) 411519.53 3723472.24 55.99585 (15092619) 411369.53 3723502.24 47.15757
(14100722) 411399.53 3723502.24 48.42862 (14071522) 411429.53 3723502.24 49.15625
(12090420) 411459.53 3723502.24 50.09384 (16092724) 411489.53 3723502.24 50.35528
411519.53 3723502.24 49.84367 (16092919) 411369.53 3723532.24 42.94634

```

(16080801)						
411399.53	3723532.24	44.02829	(14071522)	411429.53	3723532.24	44.53104
(14100722)						
411459.53	3723532.24	45.38962	(16092724)	411489.53	3723532.24	45.49525
(16090722)						
411519.53	3723532.24	45.25883	(14100820)	411369.53	3723562.24	39.43463
(12092023)						
411399.53	3723562.24	40.25191	(14071522)	411429.53	3723562.24	40.38023
(14071521)						
411459.53	3723562.24	40.88697	(16092724)	411489.53	3723562.24	41.09233
(16083121)						

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 44
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: P2TR2 ***
INCLUDING SOURCE(S): L0001068 , L0001069 , L0001070 , L0001071 ,
L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 , L0001079 ,
L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 , L0001087 ,
L0001088 , L0001089 , L0001090 , L0001091 , L0001092 , L0001093 , L0001094 ,
L0001095 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **
X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC
(YYMMDDHH)
-----
(15092619) 411519.53 3723562.24 40.73202 (13071023) 411549.53 3723562.24 40.35134
(14071522) 411369.53 3723592.24 36.23430 (16073022) 411399.53 3723592.24 36.95958
(16100618) 411429.53 3723592.24 37.01025 (14071521) 411459.53 3723592.24 37.32933
(13091620) 411489.53 3723592.24 37.62558 (16083121) 411519.53 3723592.24 37.31348
(16073022) 411549.53 3723592.24 36.85523 (16092919) 411369.53 3723622.24 33.32464
(14071521) 411399.53 3723622.24 33.82561 (14071522) 411429.53 3723622.24 34.04643
(16092724) 411459.53 3723622.24 34.37297 (16100618) 411489.53 3723622.24 34.45450
(14100820) 411519.53 3723622.24 34.15219 (13091620) 411549.53 3723622.24 33.89783
(14071522) 411369.53 3723652.24 31.15367 (16073022) 411399.53 3723652.24 31.56014
(16100618) 411429.53 3723652.24 31.65826 (14071521) 411459.53 3723652.24 31.86274
(12090420) 411489.53 3723652.24 32.13000 (16092724) 411519.53 3723652.24 31.79470
(16073022) 411549.53 3723652.24 31.48730 (14100820) 411369.53 3723682.24 29.02959
(14071521) 411399.53 3723682.24 29.37851 (14071522) 411429.53 3723682.24 29.42984
(16092724) 411459.53 3723682.24 29.68506 (16100618) 411489.53 3723682.24 29.78369
(13071023) 411519.53 3723682.24 29.37992 (12090420) 411549.53 3723682.24 29.24033
(14071522) 411369.53 3723712.24 27.08668 (16073022) 411399.53 3723712.24 27.41731
(16100618) 411429.53 3723712.24 27.40119 (14071521) 411459.53 3723712.24 27.55276
(16090722) 411489.53 3723712.24 27.79370 (16092724) 411519.53 3723712.24 27.41031
(16073022) 411549.53 3723712.24 27.24582 (13071023) 411369.53 3723742.24 25.29464
(14071521) 411399.53 3723742.24 25.56386 (14071522) 411429.53 3723742.24 25.64105
(16092724) 411459.53 3723742.24 25.81154 (16100618) 411489.53 3723742.24 25.95494
(13091620) 411519.53 3723742.24 25.61008 (16083121) 411549.53 3723742.24 25.46851
(14071522) 411369.53 3723772.24 23.83164 (16073022) 411399.53 3723772.24 24.06225
(16100618) 411429.53 3723772.24 24.09025 (14071521) 411459.53 3723772.24 24.24732
(16083121) 411489.53 3723772.24 24.31128 (16092724) 411519.53 3723772.24 24.13402
(16073022) 411549.53 3723772.24 23.88345 (13091620) 411369.53 3723802.24 22.40284
(14071521) 411399.53 3723802.24 22.63982 (14071522) 411429.53 3723802.24 22.63664
(16092724) 411459.53 3723802.24 22.76216 (16100618) 411489.53 3723802.24 22.80503
(12090420) 411519.53 3723802.24 22.70959 (16083121) 411549.53 3723802.24 22.48615
(15091019) 411519.81 3723347.24 104.13342 (14080322) 411543.34 3723339.90 103.35576
(16092723) 411523.48 3723364.16 93.06306 (15091021) 411543.34 3723364.90 88.29458
(15091021) 411543.34 3723389.90 78.60407 (12100219) 411543.34 3723414.90 69.59996
(15091021) 411549.95 3723436.96 62.65792 (15091021) 411559.53 3723464.16 55.57303
(15101121) 411568.34 3723489.90 49.95247 (15101121) 411574.95 3723514.90 45.75197
(15101121) 411577.15 3723539.90 42.48714 (15101121) 411583.03 3723561.22 39.58931

```

(15101121)

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 45

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***

** CONC OF PM_10 IN MICROGRAMS/M**3

**

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
OS	1ST HIGHEST VALUE IS	84.15523 AT (411543.34, 3723339.90,	3.08, 8.20,	0.00)	DC
	2ND HIGHEST VALUE IS	62.92378 AT (411519.81, 3723347.24,	2.81, 8.20,	0.00)	DC
	3RD HIGHEST VALUE IS	49.47014 AT (411543.34, 3723364.90,	2.26, 6.86,	0.00)	DC
	4TH HIGHEST VALUE IS	46.29148 AT (411523.48, 3723364.16,	2.53, 2.53,	0.00)	DC
	5TH HIGHEST VALUE IS	44.33099 AT (411459.53, 3723322.24,	2.68, 2.68,	0.00)	DC
	6TH HIGHEST VALUE IS	42.02096 AT (411429.53, 3723262.24,	2.03, 11.13,	0.00)	DC
	7TH HIGHEST VALUE IS	37.62679 AT (411429.53, 3723292.24,	2.53, 2.53,	0.00)	DC
	8TH HIGHEST VALUE IS	34.31211 AT (411543.34, 3723389.90,	2.76, 2.76,	0.00)	DC
	9TH HIGHEST VALUE IS	32.72408 AT (411399.53, 3723202.24,	2.17, 2.17,	0.00)	DC
	10TH HIGHEST VALUE IS	32.69829 AT (411459.53, 3723352.24,	2.78, 2.78,	0.00)	DC
P2TR1	1ST HIGHEST VALUE IS	49.98284 AT (411159.53, 3722902.24,	2.18, 2.18,	0.00)	DC
	2ND HIGHEST VALUE IS	49.94775 AT (411039.53, 3722752.24,	2.03, 2.03,	0.00)	DC
	3RD HIGHEST VALUE IS	49.54652 AT (410709.53, 3722332.24,	2.99, 2.99,	0.00)	DC
	4TH HIGHEST VALUE IS	48.77912 AT (410919.53, 3722602.24,	1.93, 1.93,	0.00)	DC
	5TH HIGHEST VALUE IS	46.64352 AT (410799.53, 3722452.24,	1.57, 1.57,	0.00)	DC
	6TH HIGHEST VALUE IS	45.13292 AT (411129.53, 3722872.24,	2.24, 2.24,	0.00)	DC
	7TH HIGHEST VALUE IS	44.81000 AT (411009.53, 3722722.24,	1.96, 1.96,	0.00)	DC
	8TH HIGHEST VALUE IS	44.53036 AT (410859.53, 3722512.24,	1.84, 1.84,	0.00)	DC
	9TH HIGHEST VALUE IS	43.91249 AT (410889.53, 3722572.24,	2.14, 2.14,	0.00)	DC
	10TH HIGHEST VALUE IS	43.50496 AT (410949.53, 3722632.24,	1.92, 1.92,	0.00)	DC
P2TR2	1ST HIGHEST VALUE IS	91.47486 AT (411399.53, 3723202.24,	2.17, 2.17,	0.00)	DC
	2ND HIGHEST VALUE IS	87.94839 AT (411309.53, 3723082.24,	2.16, 2.16,	0.00)	DC
	3RD HIGHEST VALUE IS	84.75563 AT (411369.53, 3723172.24,	2.51, 2.51,	0.00)	DC
	4TH HIGHEST VALUE IS	75.17356 AT (411339.53, 3723142.24,	2.52, 2.52,	0.00)	DC
	5TH HIGHEST VALUE IS	64.93814 AT (411309.53, 3723112.24,	2.44, 2.44,	0.00)	DC
	6TH HIGHEST VALUE IS	64.54317 AT (411399.53, 3723232.24,	2.62, 2.62,	0.00)	DC
	7TH HIGHEST VALUE IS	63.36339 AT (411279.53, 3723052.24,	2.16, 2.16,	0.00)	DC
	8TH HIGHEST VALUE IS	62.66449 AT (411369.53, 3723202.24,	2.46, 2.46,	0.00)	DC
	9TH HIGHEST VALUE IS	58.03312 AT (411429.53, 3723262.24,	2.03, 11.13,	0.00)	DC
	10TH HIGHEST VALUE IS	57.51758 AT (411339.53, 3723172.24,	2.17, 2.17,	0.00)	DC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

```

*** AERMOD - VERSION 16216r ***   *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc   ***
01/26/18
*** AERMET - VERSION 16216 ***   ***
15:11:49

```

PAGE 46

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

			** CONC OF PM ₁₀ IN MICROGRAMS/M ³				**	
			DATE					
NETWORK	GROUP ID		AVERAGE CONC	(YYMMDDHH)	RECEPTOR	(XR, YR, ZELEV, ZHILL, ZFLAG)	OF	
TYPE	GRID-ID							
OS	HIGH	1ST HIGH VALUE IS	264.85105	ON 15042107: AT (	411543.34,	3723339.90,	3.08,	8.20,
DC								0.00)
P2TR1	HIGH	1ST HIGH VALUE IS	123.71481	ON 12093007: AT (	410709.53,	3722332.24,	2.99,	2.99,
DC								0.00)
P2TR2	HIGH	1ST HIGH VALUE IS	327.28343	ON 12121616: AT (	411279.53,	3723052.24,	2.16,	2.16,
DC								0.00)

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR

```

*** AERMOD - VERSION 16216r *** *** C:\AERMOD Projects\OCSD All Sources\OCSD All Sources.isc ***
01/26/18
*** AERMET - VERSION 16216 *** ***
15:11:49

PAGE 47
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of          0 Fatal Error Message(s)
A Total of          2 Warning Message(s)
A Total of        1864 Informational Message(s)

A Total of      43848 Hours Were Processed

A Total of        1500 Calm Hours Identified

A Total of          364 Missing Hours Identified ( 0.83 Percent)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
ME W186      427      MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used      0.50
ME W187      427      MEOPEN: ADJ_U* Option for Low Winds used in AERMET

*****
*** AERMOD Finishes Successfully ***
*****

```

APPENDIX C

Greenhouse Gas Emissions Calculation Worksheets

- Assumptions
- GHG Emissions Summary
- Construction CalEEMod Winter Output (See Appendix A)
- Construction CalEEMod Summer Output (See Appendix A)
- Operational CalEEMod Annual Output

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Construction Assumptions

CalEEMod Inputs (Non-Default information only)

Project Location
 County Los Angeles
 Air District South Coast
 Climate Zone 11
 Construction Year 2018
 Operational Year 2020 Existing
 Utility Provider Southern California Edison

	Base	2015 ¹	2020 ¹
CO intensity	702.43634	531.744309	411.627695
% renewable	0%	24.30%	41.40%

<http://www.cpuc.ca.gov/renewables/>

Land Use	SF/ DU/ Seat/ Room /Spaces	KSF	Acres	CalEEMod Land Use Type
Pump Station	3,800	3.80	2	General Light Industrial

Modeling Scenarios

There are two modeling scenarios used. One for Criteria Pollutant Analysis, and one for Health Risk and GHG Emissions. The proposed project has various pieces of equipment operating throughout the given construction period for a given number of days. For a conservative criteria pollutant analysis it is assumed that all equipment may operate during one day at some point during the construction period resulting in maximum daily emissions. For Health Risk and GHG emissions estimates, the equipment emissions are estimated based on the total number of days for each piece of equipment, which includes the emissions for haul, vendor and worker trips. As well as determining daily emissions for each piece of equipment so as to determine the accurate emissions for health risk and GHG emissions. Note that for CalEEMod Modeling all phases start in 2020 to provide a worst case emissions scenario.

Construction Scenarios

Construction will consist of 4 phases beginning in August 2020 and concluding in December 2022. The phases will not overlap. The construction phases and schedule are as follows:

- Phase 1 Pump Station, Tanks, Pipeline/Meter Vault Excavation
- Phase 2 Construction of Pump Station Wet Wells, Tank Piles, Piping
- Phase 3 Construction of Tank, Pump Station Building, Valve/Meter Vault
- Phase 4 Equipmping of Pump Station, Tanks, Valve/Meter Vault

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Construction Assumptions

Construction Schedule

	Actual		Modeled		
	Start	End	Start	End	Days
Phase 1	9/1/2020	4/30/2021	1/1/2020	1/14/2020	18
Phase 2	5/1/2021	12/31/2021	2/1/2020	2/19/2020	13
Phase 3	1/1/2022	8/31/2022	3/1/2020	3/26/2020	19
Phase 4	9/1/2022	12/31/2022	4/1/2020	5/12/2020	30

Note: Days based on number of haul truck days (Phases 1-3) and Max schedule (Phase 4)

Construction Equipment

Phase 1

Grading Phase

7200 CY Dirt exported

Provided Equipment (CalEEMod Designation)	#	hrs/day	Total Days	HP	LF
Bull dozer (Rubber Tired Dozer)	2	6	30	250	0.4
Compactor (Roller)	1	6	10	200	0.3752
Excavator (Excavators)	2	6	20	200	0.3819
Dump Truck (Off-Highway Trucks)	6	6	18	350	0.3819
Water Trucks (Off-Highway Trucks)	1	8	45	350	0.3819

Phase 2

Building Construction Phase

2,120 cubic yards of concrete

Equipment	#	hrs/day	Total Days	HP	LF
Drill Rig (Bore/Drill Rig)	1	6	20	500	0.5
Backhoe (Tractor/Loader/Backhoe)	1	6	20	150	0.37
Concrete Truck (Off-Highway Trucks)	4	6	14	350	0.3819
Dump Truck (Off-Highway Trucks)	2	5	3	350	0.3819
Water Trucks (Off-Highway Trucks)	2	4	25	350	0.3819

Phase 3

Building Construction/Architectural Coating

2,900 cubic yards of concrete

Equipment	#	hrs/day	Total Days	HP	LF
Crane (Cranes)	1	6	10	300	0.29
Forklift (Forklifts)	4	6	30	120	0.2
Concrete Trucks (Off-highway Trucks)	4	6	19	350	0.3819
Manual Lift (Ariel Lift)	5	6	15	75	0.3082
Air Compressor	1	6	5	78	0.48

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Construction Assumptions

Phase 4

Building Construction					
Equipment	#	hrs/day	Total Days	HP	LF
Crane (Cranes)	1	6	10	300	0.29
Forklift (Forklifts)	4	6	30	120	0.2
Manual Lift (Ariel Lift)	5	6	15	75	0.3082

Trips and VMT

	Worker trips per day	Vendor Trips per Day	Total 1-way Trips	# Days
Phase 1	25	2	540	18
Phase 2	25	4	230	13
Phase 3	25	2	304	19
Phase 4	13	6	0	0

*Note: Project Description shows only Number of workers and total round trips for vendors and truck, not total one way trips. Worker trips are 2.5 per worker and Truck Trips are total round trips times 2.

Single Hour Emissions per vehicle

	#	hrs/day	Total Days	HP	LF
Building Construction Phase	Backhoe	1	1	150	0.37
	Bull dozer	1	1	250	0.4
	Compactor	1	1	200	0.3752
	Concrete Trucks/Dump Truck/Water Truck	1	1	350	0.3819
	Crane	1	1	300	0.29
	Drill Rig	1	1	500	0.5
	Excavator	1	1	200	0.3819
	Forklift	1	1	120	0.2
	Manual Lift	1	1	75	0.3082
	Air Compressor	1	1	78	0.48

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

GHG Emissions Calculations

CalEEMod 2016.3.1

Title: OCSD GWRS Plant No.2 - 1 Hour Construction
OCSD GWRS Plant No.2 - Operational

Date: 1/23/2018
1/23/2018

Construction Emissions

		lbs/hr*	Total Hours	# Days	CO ₂ e (lbs)	CO ₂ e (MT)
Phase 1	Bull dozer (Rubber Tired Dozer)	105.5202	360		37,987	17
	Compactor (Roller)	79.9545	60		4,797	2
	Excavator (Excavators)	79.0646	240		18,976	9
	Dump Truck (Off-Highway Trucks)	140.2786	648		90,901	41
	Water Trucks (Off-Highway Trucks)	140.28	360		50,500	23
	Offsite Haul*	5,143.73		18	92,587	42
	Offsite Worker & Vendor*	349.75		45	15,739	7
Phase 2	Drill Rig (Bore/Drill Rig)	259.3719	120		31,125	14
	Backhoe (Tractor/Loader/Backhoe)	57.6658	120		6,920	3
	Concrete Truck (Off-Highway Trucks)	140.28	336		47,134	21
	Dump Truck (Off-Highway Trucks)	140.28	30		4,208	2
	Water Trucks (Off-Highway Trucks)	140.28	200		28,056	13
	Offsite Haul*	3,033.48		13	39,435	18
	Offsite Worker & Vendor*	405.24		25	10,131	
Phase 3	Crane (Cranes)	91.3705	60		5,482	2
	Forklift (Forklifts)	25.1507	720		18,109	8
	Concrete Trucks (Off-highway Trucks)	140.28	456		63,967	29
	Manual Lift (Ariel Lift)	24.3951	450		10,978	5
	Air Compressor	46.9988	30		1,410	1
	Offsite Haul*	2,743.32		19	52,123	24
	Offsite Worker & Vendor*	349.75		30	10,492	
Phase 4	Crane (Cranes)	91.37	60		5,482	2
	Forklift (Forklifts)	25.15	720		18,109	8
	Manual Lift (Ariel Lift)	24.40	450		10,978	5
	Offsite Haul*	0.00		0	0	0
	Offsite Worker & Vendor*	319.48		30	9,585	4
Total						297
Amortized over 30 years						10

* Note: Offsite worker and haul emissions in the first column are lbs per day based on CalEEMod output.

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

Operational Assumptions

CalEEMod Inputs (Non-Default information only)

Project Location
 County Los Angeles
 Air District South Coast
 Climate Zone
 Operational Year Existing
 Utility Provider Southern California Edison

	Base	2015 ¹	2020 ¹	2030
CO intensity	702.43634	531.7443094	411.6276952	351.21817
% renewable	0%	24.30%	41.40%	50.00%

¹ <http://www.cpuc.ca.gov/renewables/>

Land Use	SF/ DU/ Seat/Room /Spaces	KSF	Acers	CalEEMod Land Use Type
Pump Station	3800	3.80	2	General Light Industrial

Information for the land use types are taken from the project description.

Trip Generation:

Employees Not modeled as there is no increase in employees with the project.
Truck Trips 0 New Vehicle Trips

Energy Use

Building Use CalEEMod Defaults (Electric Only, No Heating, no Natural Gas)
 Equipment 5 350-hp pumps (4 active, one stand-by), 24 hr per day use

350 HP
 349.1712 KVA
 331.71264 KW
 4 Quantity in Operation
 1,061 kW
 25,476 KW/day
 9,298,569 kW/year
 2446.99177 kW/square foot

Water Use

No New Water Usage

Solid Waste Generation -

No New Solid Waste Generation

Operational Emissions

2023 W/ Project

	Area	Energy	Mobile	Waste	Water	Total
2023	1.00E-04	1750.851		0	0	0
						1,751

Combined Construction & Operational Emissions

2023 Project	1,751
Amortized Construction	10
	1,761 CO ₂ e

OCSD GWRS Plant No.2 - Operational - Los Angeles-South Coast County, Annual

OCSD GWRS Plant No.2 - Operational

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.80	1000sqft	2.00	3,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	411.63	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment - See Assumptions

Grading -

Trips and VMT - See Assumptions

Vehicle Trips - See Assumptions

Energy Use - See Assumptions

Water And Wastewater - See Assumptions

Solid Waste - See Assumptions

Operational Off-Road Equipment -

Construction Off-road Equipment Mitigation - See Assumptions

Off-road Equipment - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	1.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblEnergyUse	NT24E	5.75	2,447.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24NG	13.65	0.00
tblLandUse	LotAcreage	0.09	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	411.63
tblSolidWaste	SolidWasteGenerationRate	4.71	0.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	2.00	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	878,750.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Construction Modeled Separately

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0155	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	1.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1,739.9582	1,739.9582	0.1226	0.0254	1,750.5806
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0155	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,739.9583	1,739.9583	0.1226	0.0254	1,750.5807

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0155	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	1.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1,739.9582	1,739.9582	0.1226	0.0254	1,750.5806
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0155	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,739.9583	1,739.9583	0.1226	0.0254	1,750.5807

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Modeled Separately

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
------------------------	-------	------	------	-------	-------	-------	----	---	---

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,739.9582	1,739.9582	0.1226	0.0254	1,750.5806
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,739.9582	1,739.9582	0.1226	0.0254	1,750.5806
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas
Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					

General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	9.31893e+006	1,739.9582	0.1226	0.0254	1,750.5806
Total		1,739.9582	0.1226	0.0254	1,750.5806

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	9.31893e+006	1,739.9582	0.1226	0.0254	1,750.5806
Total		1,739.9582	0.1226	0.0254	1,750.5806

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0155	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	1.0000e-004
Unmitigated	0.0155	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	1.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	1.0000e-004
Total	0.0155	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	1.0000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	1.0000e-004
Total	0.0155	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	1.0000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

APPENDIX D

NEPA Conformity Analysis Worksheets

- Emissions Summary
- Construction Emissions Calculations
- Construction CalEEMod Winter Output (See Appendix A)
- Construction CalEEMod Summer Output (See Appendix A)
- Construction CalEEMod 1-hour Emissions (See Appendix C)
- Operational CalEEMod Annual Output (See Appendix C)

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
Operational CalEEMod Summary

CalEEMod 2016.3.2

Title: OCSD GWRS Plant No.2 - Operational

Date: 1/23/2018

Unmitigated Emissions - NEPA Analysis

	ROG	NOx	CO	SO ₂	PM10	PM2.5
Tons per year Unmitigated						
Area	1.55E-02	0.00E+00	5.00E-05	0.00E+00	0.00E+00	0.00E+00
Energy - Building	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mobile	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total	1.55E-02	0.00E+00	5.00E-05	0.00E+00	0.00E+00	0.00E+00
Threshold	10	10	100	N/A	100	100
Exceed Threshold	No	No	No	No	No	No

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

NEPA Construction Analysis

CalEEMod 2016.3.1

Title: OCSD GWRS Plant No.2 - 1 Hour Construction

Date: 1/23/2018

Title: OCSD - Plant No. 2 GWRS - Max Daily Concentration

Date: 1/23/2018

Unmitigated Construction

	Tons/year					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1	0.07	0.79	0.38	0.00	0.04	0.03
Phase 2	0.03	0.37	0.23	0.00	0.02	0.01
Phase 3	0.04	0.38	0.26	0.00	0.02	0.02
Phase 4	0.01	0.13	0.13	0.00	0.01	0.01
Total:	0.15	1.67	1.00	0.00	0.09	0.06

Phase 1	#	Days	hrs/day	6
Bull dozer (Rubber Tired Dozer)	2	30		
Compactor (Roller)	1	10		
Excavator (Excavators)	2	20		
Dump Truck (Off-Highway Trucks)	6	18		
Water Trucks (Off-Highway Trucks)	1	45		
Phase 2				
Drill Rig (Bore/Drill Rig)	1	20		
Backhoe (Tractor/Loader/Backhoe)	1	20		
Concrete Truck (Off-Highway Trucks)	4	14		
Dump Truck (Off-Highway Trucks)	2	3		
Water Trucks (Off-Highway Trucks)	2	25		
Phase 3				
Crane (Cranes)	1	10		
Forklift (Forklifts)	4	30		
Concrete Trucks (Off-highway Trucks)	4	19		
Manual Lift (Ariel Lift)	5	15		
Air Compressor	1	5		
Phase 4				
Crane (Cranes)	1	10		
Forklift (Forklifts)	4	30		
Manual Lift (Ariel Lift)	5	15		

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
NEPA Construction Analysis

			Unmitigated Onsite (lbs/hr)					
			ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
te Trucks/Dump Truck/Water Truck	Backhoe		0.03	0.2955	0.3799	5.90E-04	1.49E-02	0.0137
	Bull dozer		0.1366	1.4337	0.5227	1.08E-03	0.0702	0.0646
	Compactor		0.0349	0.4609	0.21	8.20E-04	0.0149	0.0138
			0.0722	0.6881	0.4147	1.44E-03	0.0251	0.0231
	Crane		0.0615	0.7408	0.5103	9.40E-04	0.0297	0.0273
	Drill Rig		0.0686	0.7768	0.5581	2.66E-03	0.0246	0.0226
	Excavator		0.0297	0.3397	0.1873	8.20E-04	0.0103	9.46E-03
	Forklift		0.0243	0.2187	0.1989	2.60E-04	0.0163	0.015
	Manual Lift		5.98E-03	0.0958	0.1628	2.50E-04	2.13E-03	1.96E-03
	Air Compressor		0.0404	0.2806	0.3052	5.00E-04	0.0185	0.0185
			Unmitigated Offsite (lbs/day)					
		# Days	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1	Haul	18	0.5368	17.4758	4.0629	0.0474	0.2876	0.3411
	Vendor	45	7.44E-03	0.2127	0.0615	5.20E-04	0.0138	4.66E-03
	worker	45	0.1278	0.0906	1.0946	2.95E-03	0.2818	0.0763
Phase 2	Haul	13	0.3166	10.3062	2.3961	0.028	0.6517	0.2011
	Vendor	25	0.0149	0.4254	0.123	1.04E-03	0.0276	9.32E-03
	worker	25	0.1278	0.0906	1.0946	2.95E-03	0.2818	0.0763
Phase 3	Haul	19	0.2863	9.3204	2.1669	0.0253	0.5893	0.1819
	Vendor	30	7.44E-03	0.2127	0.0615	5.20E-04	0.0138	4.66E-03
	worker	30	0.2178	0.0906	1.0946	2.95E-03	0.2818	0.0763
Phase 4	Haul	30	0	0	0	0	0	0
	Vendor	30	0.0223	0.6381	0.1844	1.56E-03	0.0415	0.014
	worker	30	0.0664	0.0471	0.5692	1.54E-03	0.1465	0.0397

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
NEPA Construction Analysis

Unmitigated Construction

		Tons per phase					
		ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Phase 1	total	0.07	0.79	0.38	0.00	0.04	0.03
	onsite	0.06	0.63	0.31	0.00	0.03	0.02
	offsite	0.01	0.16	0.06	0.00	0.01	0.00
Phase 2	total	0.03	0.37	0.23	0.00	0.02	0.01
	onsite	0.03	0.30	0.20	0.00	0.01	0.01
	offsite	0.00	0.07	0.03	0.00	0.01	0.00
Phase 3	total	0.04	0.38	0.26	0.00	0.02	0.02
	onsite	0.03	0.28	0.22	0.00	0.01	0.01
	offsite	0.01	0.09	0.04	0.00	0.01	0.00
Phase 4	total	0.01	0.13	0.13	0.00	0.01	0.01
	onsite	0.01	0.12	0.12	0.00	0.01	0.01
	offsite	0.00	0.01	0.01	0.00	0.00	0.00

		<i>lbs/phase</i>					
		ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Phase 1	Onsite	125	1,257	626	2	52	48
	Offsite	16	328	125	1	18	10
	Total	140	1,585	752	3	70	57
Phase 2	Onsite	60	591	391	1	22	20
	Offsite	8	147	62	0	16	5
	Total	68	738	453	2	38	25
Phase 3	Onsite	58	567	445	1	26	24
	Offsite	12	186	76	1	20	6
	Total	70	753	521	2	47	30
Phase 4	Onsite	24	245	247	0	14	13
	Offsite	3	21	23	0	6	2
	Total	27	266	270	0	20	15

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
NEPA Construction Analysis

<i>Total Onsite Unmitigated Emissions by Phase (lbs/phase)</i>						
	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Phase 1 Total	125	1,257	626	2	52	48
Bull dozer (Rubber Tired Dozer)	49.176	516.132	188.172	0.3888	25.272	23.256
Compactor (Roller)	2.094	27.654	12.6	0.0492	0.894	0.828
Excavator (Excavators)	7.128	81.528	44.952	0.1968	2.472	2.2704
Dump Truck (Off-Highway Trucks)	46.7856	445.8888	268.7256	0.93312	16.2648	14.9688
Water Trucks (Off-Highway Trucks)	19.494	185.787	111.969	0.3888	6.777	6.237
Phase 2 Total	60	591	391	1	22	20
Drill Rig (Bore/Drill Rig)	8.232	93.216	66.972	0.3192	2.952	2.712
Backhoe (Tractor/Loader/Backhoe)	3.6	35.46	45.588	0.0708	1.788	1.644
Concrete Truck (Off-Highway Trucks)	24.2592	231.2016	139.3392	0.48384	8.4336	7.7616
Dump Truck (Off-Highway Trucks)	2.5992	24.7716	14.9292	0.05184	0.9036	0.8316
Water Trucks (Off-Highway Trucks)	21.66	206.43	124.41	0.432	7.53	6.93
Phase 3 Total	58	567	445	1	26	24
Crane (Cranes)	3.69	44.448	30.618	0.0564	1.782	1.638
Forklift (Forklifts)	17.496	157.464	143.208	0.1872	11.736	10.8
Concrete Trucks (Off-highway Trucks)	32.9232	313.7736	189.1032	0.65664	11.4456	10.5336
Manual Lift (Ariel Lift)	2.69E+00	4.31E+01	73.26	0.1125	0.9585	0.882
Air Compressor	1.212	8.418	9.156	0.015	0.555	0.555
Phase 4 Total	24	245	247	0	14	13
Crane (Cranes)	3.69	44.448	30.618	0.0564	1.782	1.638
Forklift (Forklifts)	17.496	157.464	143.208	0.1872	11.736	10.8
Manual Lift (Ariel Lift)	2.69E+00	4.31E+01	73.26	0.1125	0.9585	0.882

<i>Total Offsite Unmitigated emissions By Phase (lbs/phase)</i>						
	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Phase 1	16	328	125	1	18	10
Haul	9.6624	314.5644	73.1322	0.8532	5.1768	6.1398
Vendor	0.3348	9.5715	2.7675	0.0234	0.621	0.2097
worker	5.751	4.077	49.257	0.13275	12.681	3.4335
Phase 2	8	147	62	0	16	5
Haul	4.1158	133.9806	31.1493	0.364	8.4721	2.6143
Vendor	0.3725	10.635	3.075	0.026	0.69	0.233
worker	3.195	2.265	27.365	0.07375	7.045	1.9075
Phase 3	12	186	76	1	20	6
Haul	5.4397	177.0876	41.1711	0.4807	11.1967	3.4561
Vendor	0.2232	6.381	1.845	0.0156	0.414	0.1398
worker	6.534	2.718	32.838	0.0885	8.454	2.289
Phase 4	3	21	23	0	6	2
Haul	0	0	0	0	0	0
Vendor	0.669	19.143	5.532	0.0468	1.245	0.42
worker	1.992	1.413	17.076	0.0462	4.395	1.191

OCSD - Plant No. 2 GWRS Conveyance Facilities Project

NEPA Construction Analysis

Mitigated Construction

	Tons/year					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1	0.02	0.42	0.58	0.00	0.01	0.01
Phase 2	0.01	0.26	0.40	0.00	0.01	0.00
Phase 3	0.01	0.26	0.34	0.00	0.01	0.00
Phase 4	0.00	0.08	0.14	0.00	0.00	0.00
Total:	0.06	1.02	1.47	0.00	0.03	0.01

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
NEPA Construction Analysis

Mitigated (lbs/hr)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Backhoe	7.34E-03	0.2631	0.4527	5.90E-04	9.80E-04	9.80E-04
Bull dozer	0.0176	0.2844	0.5732	1.08E-03	1.76E-03	1.76E-03
Compactor	0.0134	0.2161	0.4356	8.20E-04	1.34E-03	1.34E-03
te Trucks/Dump Truck/Water Truck	0.0235	0.3783	0.7624	1.44E-03	2.35E-03	2.35E-03
Crane	0.0153	0.2474	0.4987	9.40E-04	1.53E-03	1.53E-03
Drill Rig	0.0441	0.711	1.433	2.66E-03	4.41E-03	4.41E-03
Excavator	0.0134	0.2161	0.4356	8.20E-04	1.34E-03	1.34E-03
Forklift	3.17E-03	0.1138	0.1958	2.60E-04	4.20E-04	4.20E-04
Manual Lift	5.64E-03	0.1097	0.1897	2.50E-04	4.10E-04	4.10E-04
Air Compressor	9.08E-03	0.1766	0.3054	5.00E-04	6.60E-04	6.60E-04

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
NEPA Construction Analysis

		Tons per phase					
		ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Phase 1	total	0.02	0.42	0.58	0.00	0.01	0.01
	onsite	0.02	0.26	0.52	0.00	0.00	0.00
	offsite	0.01	0.16	0.06	0.00	0.01	0.00
Phase 2	total	0.01	0.26	0.40	0.00	0.01	0.00
	onsite	0.01	0.19	0.37	0.00	0.00	0.00
	offsite	0.00	0.07	0.03	0.00	0.01	0.00
Phase 3	total	0.01	0.26	0.34	0.00	0.01	0.00
	onsite	0.01	0.16	0.31	0.00	0.00	0.00
	offsite	0.01	0.09	0.04	0.00	0.01	0.00
Phase 4	total	0.00	0.08	0.14	0.00	0.00	0.00
	onsite	0.00	0.07	0.13	0.00	0.00	0.00
	offsite	0.00	0.01	0.01	0.00	0.00	0.00

		<i>lbs/phase</i>					
		ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Phase 1	Onsite	32	514	1,037	2	3	3
	Offsite	16	328	125	1	18	10
	Total	48	843	1,162	3	22	13
Phase 2	Onsite	22	371	739	1	2	2
	Offsite	8	147	62	0	16	5
	Total	30	518	800	2	18	7
Phase 3	Onsite	17	324	613	1	2	2
	Offsite	12	186	76	1	20	6
	Total	29	510	689	2	22	8
Phase 4	Onsite	6	146	256	0	1	1
	Offsite	3	21	23	0	6	2
	Total	8	167	279	0	6	2

OCSD - Plant No. 2 GWRS Conveyance Facilities Project
NEPA Construction Analysis

<i>Total Onsite Mitigated Emissions by Phase (lbs/year)</i>						
	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Phase 1 Total	32	514	1,037	2	3	3
Bull dozer (Rubber Tired Dozer)	6.34E+00	1.02E+02	2.06E+02	3.89E-01	6.34E-01	6.34E-01
Compactor (Roller)	0.804	12.966	26.136	0.0492	0.0804	0.0804
Excavator (Excavators)	3.216	51.864	104.544	0.1968	0.3216	0.3216
Dump Truck (Off-Highway Trucks)	15.228	245.1384	494.0352	0.93312	1.5228	1.5228
Water Trucks (Off-Highway Trucks)	6.345	102.141	205.848	0.3888	0.6345	0.6345
Phase 2 Total	22	371	739	1	2	2
Drill Rig (Bore/Drill Rig)	5.292	85.32	171.96	0.3192	0.5292	0.5292
Backhoe (Tractor/Loader/Backhoe)	8.81E-01	3.16E+01	54.324	0.0708	0.1176	0.1176
Concrete Truck (Off-Highway Trucks)	7.896	127.1088	256.1664	0.48384	0.7896	0.7896
Dump Truck (Off-Highway Trucks)	0.846	13.6188	27.4464	0.05184	0.0846	0.0846
Water Trucks (Off-Highway Trucks)	7.05	113.49	228.72	0.432	0.705	0.705
Phase 3 Total	17	324	613	1	2	2
Crane (Cranes)	0.918	14.844	29.922	0.0564	0.0918	0.0918
Forklift (Forklifts)	2.28E+00	8.19E+01	140.976	0.1872	0.3024	0.3024
Concrete Trucks (Off-highway Trucks)	10.716	172.5048	347.6544	0.65664	1.0716	1.0716
Manual Lift (Ariel Lift)	2.54E+00	4.94E+01	85.365	0.1125	0.1845	0.1845
Air Compressor	0.27	5.30	9.162	0.015	0.0198	0.0198
Phase 4 Total	6	146	256	0	1	1
Crane (Cranes)	0.918	14.844	29.922	0.0564	0.0918	0.0918
Forklift (Forklifts)	2.28E+00	8.19E+01	140.976	0.1872	0.3024	0.3024
Manual Lift (Ariel Lift)	2.54E+00	4.94E+01	85.365	0.1125	0.1845	0.1845

<i>Total Offsite Unmitigated emissions By Phase (lbs/phase)</i>						
	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Phase 1	16	328	125	1	18	10
Haul	9.6624	314.5644	73.1322	0.8532	5.1768	6.1398
Vendor	0.3348	9.5715	2.7675	0.0234	0.621	0.2097
worker	5.751	4.077	49.257	0.13275	12.681	3.4335
Phase 2	8	147	62	0	16	5
Haul	4.1158	133.9806	31.1493	0.364	8.4721	2.6143
Vendor	0.3725	10.635	3.075	0.026	0.69	0.233
worker	3.195	2.265	27.365	0.07375	7.045	1.9075
Phase 3	12	186	76	1	20	6
Haul	5.4397	177.0876	41.1711	0.4807	11.1967	3.4561
Vendor	0.2232	6.381	1.845	0.0156	0.414	0.1398
worker	6.534	2.718	32.838	0.0885	8.454	2.289
Phase 4	3	21	23	0	6	2
Haul	0	0	0	0	0	0
Vendor	0.669	19.143	5.532	0.0468	1.245	0.42
worker	1.992	1.413	17.076	0.0462	4.395	1.191

Appendix B Orange County Water District Water Conveyance Facilities Project Biological Assessment

**Prepared By
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708
Contact: Daniel Bott**



February 2018

Table of Contents

Section	Page
SECTION 1.0 INTRODUCTION.....	1-1
SECTION 2.0 REGULATORY FRAMEWORK.....	2-1
2.1 Federal Regulations.....	2-1
2.2 State Regulations	2-2
SECTION 3.0 PROJECT DESCRIPTION.....	3-1
3.1 Study Area.....	3-1
3.2 Proposed Project.....	3-1
SECTION 4.0 BIOLOGICAL RESOURCES.....	4-1
4.1 Biological Resource Setting.....	4-1
4.2 Vegetation Communities	4-1
4.3 Special Status Plant Species.....	4-2
4.4 Special Status Wildlife Species.....	4-3
4.5 Critical Habitat	4-5
4.6 Federal and State Jurisdictional Aquatic Resources.....	4-5
SECTION 5.0 PROJECT IMPACTS	5-7
5.1 Threshold of Significance.....	5-7
5.2 Project Impacts	5-7
SECTION 6.0 REFERENCES	6-11

Tables

Table 1: Sensitive Plant List.....	4-3
Table 2: Special Status Wildlife.....	4-4

Figures

Figure 1 Regional Location	3-2
Figure 2 Site plan.....	3-3

Appendices

Appendix A-1: United States Fish and Wildlife Information, Planning and Conservation System Database Search and California Fish and Wildlife Natural Diversity Database	
---	--

SECTION 1.0 INTRODUCTION

Purpose

The Orange County Water District (OCWD) located at 18700 Ward Street, Fountain Valley, California, 92708 is proposing Groundwater Replenishment System (GWRS) Water Conveyance Facilities Project. The biological assessment was prepared by the OCWD Natural Resource Department in the spring of 2016 and evaluates potential impacts to biological resources associated with implementation of the project. The assessment identifies applicable laws and regulations that apply to biological resources within the project area, documents existing biological resources and the potential for sensitive species to occur within the project area, evaluates potential project impacts and where required identifies mitigation measures to avoid and minimize potential impacts to sensitive biological resources.

Methodology

Literature Review

A literature search and review was conducted in conjunction with biological surveys to document the presence and potential for biological resources to exist within the project area. To identify the potential for special status species to occur within the project area, database searches were conducted with the use of United States Fish and Wildlife (USFWS) Information, Planning, and Conservation System Database and the California Department of Fish and Wildlife (CDFW) Natural Diversity Database.

Onsite Field Survey

A Field survey was conducted by David McMichael, OCWD biologist, in January of 2018 to determine if sensitive vegetation communities, special status plant species and special status wildlife species were present and if the project area contained suitable habitat conditions to support special status plant species and special wildlife species. The survey was conducted by walking areas of the project area utilizing recognized techniques. Based on the results of the survey, sensitive vegetation communities, special status plants and special status wildlife species were determined to have either a low, moderate or high potential to occur within the project area.

SECTION 2.0 REGULATORY FRAMEWORK

The following federal, state and regional regulatory programs are applicable to the GWRs Conveyance Facilities Project.

2.1 Federal Regulations

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) designates threatened and endangered animals and plants and provides measures for their protection and recovery. The Take of listed animal and plant species in areas under the federal jurisdiction is prohibited without obtaining a federal permit. A Take is defined as to harass, harm, pursue, hunt, shot, wound, kill, trap, capture or collect or attempt to engage in any such conduct. Harm includes any act which kills or injures fish or wildlife, including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife. Activities that damage the habitat of listed species require approval from U.S. Fish and Wildlife Service (USFWS) for terrestrial species or from National Marine Fisheries Service (NMFS) for marine species. FESA also requires determination of critical habitat for listed species and impacts to the critical habitat is prohibited. ESA contains two pathways for obtaining permission to take listed species.

Under Section 7 of FESA, a federal agency that authorizes, funds or carries out a project that may affect a listed species or its critical habitat must consult with USFWS or NMFS, to ensure that their actions do not jeopardize the continued Existence of endangered or threatened species or result in the destruction or modification of the critical habitat of these species. A Biological Opinion (BO) would be prepared by USFWS and NMFS to determine if the activity would jeopardize the continued existence of the listed species. If the BO determines that the activity would not threaten the existence of the listed species and a no jeopardy opinion is provided, then the project may proceed. If the BO finds that the project would result in jeopardy to the listed species (jeopardy opinion), then reasonable and prudent measures would need to be incorporated into the project to reduce potential effects to a level that would not be likely to jeopardize the continued existence of the species.

Under Section 10 of FESA private parties with no federal nexus may obtain an Incidental Take Permit to harm listed wildlife species incidental to the lawful operation of a project. To obtain an Incidental Take Permit, the applicant must develop a habitat management plan that specifies impacts to listed species, provides conservation measures and alternatives to minimize impacts. If USFWS finds that the habitat conservation measures would not appreciably reduce the

likelihood of the survival and recovery of the species, USFWS would issue an incidental take permit.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act implements international treaties between the United States and other nations that protect migratory birds, including their nests and eggs, from killing, hunting, pursuing, capturing, selling and shipping unless expressly authorized or permitted.

2.2 State Regulations

California Environmental Quality Act

The California Environmental Quality Act (CEQA) was enacted in 1970 to provide for full disclosure of environmental impacts before issuance of a permit by a state or local public agency. In addition to state and federally listed species, sensitive plants and animals receive consideration under CEQA. Sensitive species include wildlife Species of Special Concern listed by California Department of Fish and Wildlife (CDFW) and plant species on the California Native Plant Society list 1A, 1B or 2.

California Endangered Species Act

The California Endangered Species Act (CESA) provides protection and prohibits the take of plant, fish and wildlife species listed by the State of California. Unlike FESA, state-listed plants have the same degree of protection as wildlife. A Take is defined similarly to FESA and it is prohibited for both listed and candidate species. A Take authorization may be obtained from the California Department of Fish and Wildlife (CDFW) under Section 2091 and 2081 of CESA. Section 2091 of CESA, similar to Section 7 of FESA provides for consultation between a state lead agency under the California Environmental Quality Act and CDFW, with issuance of take authorization if the project does not jeopardize the listed species. Section 2081 of CESA allows take of a listed species for educational, scientific or management purposes.

California Fish and Game Code Section 1600

The State of California defines Waters of the State as any surface water or groundwater, including saline waters within the boundaries of the State. In accordance with Section 1600 of the Fish and Game Code, CDFW must be notified prior to beginning any activity that would obstruct or divert the natural flow of, use material from or deposit or dispose of material into a river, stream, or lake, whether permanent, intermittent or ephemeral water bodies. The notification occurs through the issuance of a Streambed Alteration Agreement. CDFW has 60 days to review the proposed actions and propose measures to protect

affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is the Streambed Alteration Agreement.

California Fish and Game Code Fully Protected Species

The legislature of the State of California designated species as fully protected prior to the creation of the California Endangered Species Act. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, mammals, amphibians, reptiles and birds. Most fully protected species have since been listed as threatened or endangered under California Endangered Species Act and/or the Federal Endangered Species Act. These species may not be taken or possessed at any time, with the only exception being permits issued for limited scientific study.

California Fish and Game Code Sections 3503, 3513, 3800, 3801

These California Fish and Game Code Sections protect all birds, birds of prey and all non-game birds, as well as their eggs and nests, for species that are not already listed as fully protected and that occur naturally within the State. Specifically, it is unlawful to take any raptors or their nests and eggs.

SECTION 3.0 PROJECT DESCRIPTION

3.1 Study Area

The GWRS Water Conveyance Project would be constructed at the north end of OCSD Plant 2 at 22212 Brookhurst Street within the City of Huntington Beach. OCSD plant No. 2 Site is composed of 110 acres and is developed with wastewater treatment structures, offices, and paved parking areas and roadways. As shown in Figure 1, OCSD Plant No.2 Site is bounded by Hamilton Avenue to the north, Brookhurst Street to the west, Talbert Marsh and Talbert Marsh Bike Trail to the south and the Santa Ana River and the Santa Ana River Trail to the east. Primary regional access to plant No.2 would be from Interstate 405 from the Brookhurst Street exit. Primary local access would be from Brookhurst Street and Pacific Coast Highway.

3.2 Proposed Project

The GWRS Conveyance Facilities Project would involve the construction of three types of facilities. As shown in Figure 2 these three main facilities would include construction of a pump station, two flow equalization tanks, and associated piping with a valving/metering vault. The project would be implemented in four construction phases beginning in August 2020 and concluding in December of 2022.

Phase 1- Excavation for Pump Station, Tanks, Pipelines, Valve/Meter Vault

The first phase of work would be to excavate for the underground facilities. Excavation of dirt would be required for the pump station wet wells, tank piles, tank pads, 84-inch pump station feed pipeline, valve/meter vault, and associated tank feed/drain piping. For the pump station, the underground work involves drilling the five 30-inch diameter and 25-feet deep wet wells. Approximately 35 CY of dirt would be removed by this operation. The flow equalization tanks would most likely be constructed on 12-inch diameter concrete piles drilled to 50-feet below the ground surface. Approximately 15-piles are required for supporting each of the equalization tanks (a total of 30 piles). The 12-inch diameter pile holes would be drilled into the ground with a drill rig. Approximately, 45 CY of dirt would be removed with this operation. The tanks would be resting on 2-feet thick concrete pads partially buried 6-feet below ground surface. The amount of dirt excavated would be approximately 3200 CY. Excavation for the 84-inch pump station feed pipeline and diversion box, 54-inch pump station discharge pipeline and 66-inch pipe connection, and valve/meter vault would result in the removal of approximately 3800 CY of dirt. The excavation work for the underground components of all these facilities would involve excavating and hauling a total of

Section 3 Project Description



Section 3 Project Description



approximately 7200 CY of soil. During Phase 1 a total of 30 daily haul trips would occur over an 18 day period.

Phase 2 - Construction of Pump Station Wet Wells, Tank Piles, Piping

The second phase of work would be to build the pump station wet wells, the concrete support piles for the flow equalization tanks, and install the pump station feed/drain piping. The piles are then constructed by setting rebar support cages for the piles into the drilled holes with a crane. Lastly, 40 CY of concrete would be filled into the holes with the rebar and cured. The piles would be supporting a 2-foot thick concrete pad matching the diameter of the tank. This equates to 2120 CY of concrete for the tank pad. During Phase 2 a total of 4 daily haul trips would occur over a 3 day period.

Phase 3 - Construction of Tank, Pump Station Building, Valve/Meter Vault

The third phase of work would be to build the concrete pump station, the tank walls/roof, and the valve/meter vault. Once the piles and concrete pad have been constructed, the pre-stressed concrete tanks would be constructed. The pre-stressed concrete tanks would have seismic base restraint cables developed into the perimeter footing to account for site specific seismic loading. In addition, for this site, the pre-stressed concrete tanks would have an anchored flexible base connection between the floor and wall of the tanks to enhance ductility and reduces bending moments from hydrostatic, thermal, and seismic forces, allowing these structural elements to act independently. The thickness of the tank walls would be approximately 10-inches thick uniformly. The tank walls and roof would require approximately 2500 CY of concrete to be poured. Construction of the tanks would involve the use of a crane, installation of reinforcing steel and concrete pumping trucks to build up the walls and roof. The roof of the tanks would be a flat roof supported by interior concrete beams to minimize visibility. The pump station and valve/meter vault would also be constructed with concrete. To construct the floors, walls, and roofs of these facilities approximately 400 CY of concrete would be required. During Phase 2 there would be 21 haul trips over a 24 day period.

Phase 4 - Equipping of Pump Station, Tanks, Valve/Meter Vault

The fourth phase of work would be to equip the pump station, tanks and valve/meter vault with the use of laborers, fork lifts and cranes. The construction equipment for the pump station, tanks, and valve/meter vault would include; an excavator, crane, pile driller, bull dozer, backhoe, compactor, dump trucks, concrete trucks, water truck, man lifts and fork lifts. During Phase 3 there would be 9 haul trips over a 13 day period.

SECTION 4.0 BIOLOGICAL RESOURCES

4.1 Biological Resource Setting

The study area is included in USGS Newport beach Quadrangle, Township 6 South, Range 10 West, Section 20. OCSD Plant No. 2 site is composed of 110 acres, and is developed with wastewater treatment structures, offices, and paved parking areas and roadways. The site is bounded by Hamilton Avenue to the north, Brookhurst Street to the west, the Santa Ana River and the Santa Ana River Trail to the east and the Talbert Marsh and Talbert Marsh Bike Trail to the south. A survey conducted on OCSD Plant No. 2 did not identify any sensitive biological resources. South of the study area is the Talbert Marsh and the California Least tern Colony.

Talbert Marsh is a tidal marsh that has been restored to full tidal action. The water within Talbert Marsh is seawater from the ocean inlet located south of the marsh property that fluctuates in height up to 8 feet from tidal flows. Talbert Marsh provides habitat for both migratory and resident bird species.

South of Pacific Coast Highway is the location the California Least Tern Natural Preserve Area. The California Least Tern Natural Preserve Area was first established under the Huntington State Beach General Development Plan in 1976. It was originally dedicated on 2.5 acres and was fenced off with a cyclone fence (a heavy-duty, chain-link fence topped with barbed wire) to prevent predators from harassing the birds. Over the years, the California least tern's nesting area has expanded beyond the fenced area, State Parks has erected additional picket fencing to protect the birds. Currently, the cyclone fence area covers approximately 8.9 acres and the picket fence "front-yard" area is 3.8 acres. California State Parks protects the nesting area by limiting access, conducting trash removal, grooming the sand periodically, and conducting predator management.

4.2 Vegetation Communities

A biological assessment including a plant survey was conducted by David McMichael, OCWD biologist, on January 12, 2018

Brookhurst Street Fence Line

This site is dominated by a mature stand of Eucalyptus over story and a small number of assorted shrubs. This fence line was designed and landscaped to act as a visual barrier. This fence line runs roughly north and south and consists of 79 Red Box Eucalyptus (*Eucalyptus polyanthemos*). The shrub species' present include Pink Melaleuca (*Melaleuca nesophila*), Bottlebrush (*Callistemon citrinus*), and Purple-leafed Hopbush (*Dodonaea viscosa*). No groundcover species were

documented in this area. The size of the Eucalyptus trees were 40 to 50 feet in height with most trees falling into the trunk diameter size range of 6-20 inches (dbh). Most of the trees surveyed appeared to be over 20 years of age.

Santa Ana River Bike Trail Levee

This area is composed of two parts separated by the fence line, the bike trail levee and the inside of the fence. The adjacent public bike trail is landscaped with a mixture of native and drought tolerant selections. The levee is sparsely vegetated consisting mostly of rip rap rocks. The dominant native species in this area is Four wing Saltbush (*Atriplex canescens*) with a lesser representation by the non-native Canary Island Pine (*Pinus canariensis*).

The inside of the fence line is dominated by the non-native, ornamental Ice plant (*Carpobrotus edulis*) ground cover and an over story of Cajeput Tree (*Melaleuca quiquenervia*). The bike trail levee is not expected to be impacted by this project as a pipeline runs adjacent to the levee.

Tank Placement Location

The area slated for the circular tank placement is chiefly composed of bare ground. The western part of this area consists of a small slope that descends down to an access road. This slope is chiefly composed of two non-native Iceplant species' Hottentot Fig (*Carpobrotus edulis*) and Chrystalline Iceplant (*Mesembryanthemum crystallinum*). Also on this slope is a significant number of recruited, young Eucalyptus from the adjacent tree line. This open area appears to be on a rigorous weed abatement program as weedy species' were largely absent.

4.3 Special Status Plant Species

To determine the potential for special status plant species to be present within the study area, the OCWD Natural Resources Department conducted a search for special status plant species with the use of USFWS Information, Planning, and Conservation System Database and the CDFW Natural Diversity Database for the Newport Beach USGS Quadrangle. A summary of USFWS and CDFW database searches is provided in Appendix A-1.

A listing of special status plant species within potential to occur within the Newport Beach USGS Quadrangle is shown in Table 1. The determination on the potential for the special status plant species to occur within the study area was based on the following criteria:

- **Present:** Species was observed within the study area within the last year.
- **High:** The study area supports suitable habitat and the species has been observed within the last year.

- **Moderate:** The study area supports suitable and the species has not been observed within last two years.
- **Low:** The study area lacks suitable habitat for the species.

Table 1: Sensitive Plant List

Species	Federal	State	CNPS	General Habitat/Recent Occurrence	Potential for Occurrence Study Area
Ventura Marsh Milk-vetch (<i>Astragalus pycnostachy</i> var. <i>Lanosissimus</i>)	E	NL		Marshes, Swamps, Coastal Dunes, Coastal Scrub	Low Study Area lacks suitable habitat
Salt Marsh Birds-beak (<i>Chloropyron maritimum</i> ssp. <i>Maritimum</i>)	E	E	1B.2	Coastal Salt marsh, Coastal Dunes	Low Study Area lacks suitable habitat.
San Diego Button-Celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>)	E	E	1B.1	Vernal pools, Coastal Scrub, Valley and Foothill Grasslands	Low Study Area lacks suitable habitat
Gambels Water Cress (<i>Nasturtium gambelii</i>)	E	T	1B.1	Marshes and swamps	Low Study Area lacks suitable habitat
California Orcutt grass (<i>Orcuttia californica</i>)	E	E	1B.1	Wetlands, Vernal Pools	Low Study Area lacks suitable habitat
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> Federal E- Endangered T-Threatened SSC- Special Species of Concern C-Candidate for Listing NL-Not Listed </div> <div style="width: 30%;"> State Listing (California Endangered Species Act, CDFG) FP-Fully Protected E-Endangered T-Threatened S-Sensitive SSC-Special Species of Concern WL-Watch List NL-Not Listed </div> <div style="width: 35%;"> California Native Plant Society CNPS 1A-Plants presumed extinct in California 1B- Plants rare, threatened, or endangered in California and elsewhere 2-Plants rare, threatened, or endangered in California but more common elsewhere 3-Plants about which we need more review 4-Plants of limited distribution CNPS Threat Rank .1 Seriously Endangered .2 Fairly Endangered .3 Not Very Endangered </div> </div>					

4.4 Special Status Wildlife Species

To determine the potential for special status wildlife species to be present within the project area, the OCWD Natural Resources Department conducted a search for special status wildlife species with the USFWS Information, Planning, and Conservation System Database and the California Department of Fish and Wildlife Natural Diversity Database. A summary of USFWS and CDFW database searches is provided in Appendix A -1.

A listing of special wildlife species within potential to occur within the Newport Beach USGS Quadrangle is shown in Table 2. The determination on the potential for the special status wildlife species to occur at the project area was based on the following criteria:

- **Present:** Species was observed within the study area within the last year.
- **High:** The study area supports suitable habitat and the species has been observed within the last year.
- **Moderate:** The study area supports suitable and the species has not been observed within last two years.
- **Low:** The study area lacks suitable habitat for the species.

Table 2: Special Status Wildlife

Species	Federal	State	General Habitat/Recent Occurrence	Potential Occurrence Study Area
San Diego Fairy Shrimp (<i>Branchinecta sandiegonensis</i>)	E	SSC	Vernal pools	Low Study Area lacks suitable habitat
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>)	T	SSC	Sandy Beaches	Low Study Area lacks suitable habitat
Southwestern Willow Flycatcher (<i>Empidonax traillii eximius</i>)	E	E	Riparian woodlands	Low Study Area lacks suitable habitat
Pacific Pocket Mouse (<i>perognathus longimembris pacifus</i>)	E	SSC	Coastal Plains	Low Study Area lacks suitable habitat
Coastal California Gnatcatcher (<i>Poliophtila californica californica</i>)	T	SSC	Coastal sage scrub	Low Study Area lacks suitable habitat
Light-footed Ridgway rail (<i>Rallus longirostris levipes</i>)	E	E	Salt marshes	Low Study Area lacks suitable habitat
California Least Tern (<i>Sterna antillarum</i>)	E	E	Sandy Beaches	Low Study Area lacks suitable habitat

Least Bell's vireo (<i>Vireo bellii pusillus</i>)	E	E	Low growing riparian habitats	Low Study Area lacks suitable habitat
Western Yellow Billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	T	E	Riparian Woodlands	Low Study Area lacks suitable habitat
Legend Federal Endangered Species Act E- Endangered T-Threatened SSC- Special Species of Concern C-Candidate for Listing California Endangered Species Act/California Department Fish Game FP-Fully Protected E-Endangered T-Threatened S-Sensitive SSC-Special Species of Concern WL-Watch List				

4.5 Critical Habitat

The Federal Endangered Species Act requires the federal government to designate Critical Habitat for any species it lists under the Federal Endangered Species Act. Critical Habitat is defined as 1) specific areas within the geographical area occupied by the specie at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection and 2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. According to the of USFWS Information, Planning, and Conservation System Database and the California Department of Fish and Wildlife Natural Diversity Database, the study area is not located on lands that are designated as Critical Habitat.

4.6 Federal and State Jurisdictional Aquatic Resources

Waters of the United States

A water body is considered Waters of the U.S. if it is: (1) traditional navigable water (TNW); (2) wetlands adjacent to a TNW; (3) non-navigable tributaries of TNW that have perennial or seasonal flow of water; and (4) wetlands that are adjacent to non-navigable tributaries of TNW that have perennial or seasonal flow of water.

There are no Waters of the U.S. on the OCSD Plant No. 2 Site. The closest surface water body within the vicinity of the study area is the Santa Ana River. The Santa Ana River drains into the Pacific Ocean. The Pacific Ocean is navigable water and therefore Santa Ana River is classified as a tributary to a navigable water and Waters of the U.S. The Federal jurisdiction along the Santa

Ana River extends to the ordinary high water mark and to any adjacent wetland vegetation.

Waters of the State of California

According to the State Water Code, Waters of the State are defined as any surface water, groundwater or wetlands within the boundary of the state. There are no waters of the State on the OCSD Plant No. 2 Site. The Santa Ana River is classified as Waters of the State. The State jurisdiction along the Santa Ana River extends to the top of the slope to adjacent wetland vegetation.

Wetland Waters of the United States and State California

Wetland Waters are a subset of jurisdictional Waters of the U.S. and the State. Generally, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands generally include swamps, freshwater marshes, brackish water and saltwater marshes, bogs, vernal pools, periodically inundated salt flats, intertidal mudflats, wet meadows, wet pastures, springs and seeps, portions of lakes, ponds, rivers and streams and all areas which are periodically or permanently covered by shallow water, or dominated by hydrophilic vegetation, or in which the soils are predominantly hydric in nature.

Presently, there is no single definition for wetlands. However, all resource agencies recognize that wetlands must demonstrate the following three essential elements: (1) the site periodically supports hydrophytic vegetation, (2) the site contains hydric soil and (3) the site periodically contains water or the soil is saturated with water at some time during the growing season of each year.

SECTION 5.0 PROJECT IMPACTS

5.1 Threshold of Significance

The following threshold of significance was used to evaluate potential impacts to biological resources associated with implementation of the GWRS Water Conveyance Facilities Project.

- Would the project have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local regional plans, policies and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- Would the project have a substantially adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling hydrological interruption, or other means?
- Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Would the Project be in conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

5.2 Project Impacts

A: Would the project have a substantial adverse impact, 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 Services?

Onsite Impacts

Based on a review of databases from United State Fish and Wildlife Service and California Department of Fish and Wildlife and biological surveys conducted

within the study area, it has been determined that there would be low potential for special status plant species or special status wildlife species to be present on OCSD Plant No. 2. As shown in Table 1 and Table 2 Plant No. 2 lacks suitable habitat to support special status plant species or special status wildlife species that were identified in the database search. Additionally, no indications were found that any special status species were ever present. Therefore, implementation of the proposed project would not result in adverse impacts to any special status plant species or special status wildlife species.

Offsite Impacts

Located south of OCSD Plant No. 2 is the Talbert Marsh and south of Pacific Coast Highway is the California Least Tern Colony. Both of these biological resources could provide suitable nesting habitat for special status bird species. The construction operations for the proposed project would be confined to OCSD Plant No. 2. No construction activities would occur at the Talbert Marsh or at the California Least Tern Colony. Therefore, no direct impacts to special status plant or wildlife species would occur.

The construction activities for the proposed project would involve the operation of heavy construction equipment that could operate during nesting season. If the construction activity was to occur in close proximity to nesting birds there would be the potential that breeding patterns could be disturbed. The United States Fish and Wildlife Service as established a noise impact threshold of 60 dBA to identify potential adverse impacts to nesting birds. The Talbert Marsh is located approximately 3,300 feet from where the construction activities would occur and the California Least Tern Colony is located approximately 4,400 feet from the construction would occur. Based on the noisiest piece of construction equipment that would be used, the noise estimated level at the Talbert Marsh and at the California Least Tern Colony would be below 49 dBA. Additionally, with the presence of the block wall around Plant No. 2 and the traffic noise along Pacific Coast Highway, it would be very unlikely that construction noise would herd at either location. Potential indirect noise impacts to special status wildlife species would be less than significant. No mitigation measures are required.

B: Would the project have a substantial adverse impact on any riparian habitat or natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The location where the proposed flow equalization tanks and pump station structure would be constructed is in a disturbed condition. A survey conducted at the location where the flow equalization tanks and pump station structure would be constructed did not identify any sensitive vegetation communities. Therefore,

implementation of the proposed project would not result in adverse impacts to sensitive natural communities.

C: Would the project adversely impact federally protected wetlands either individually or in combination with the known or probable impacts of other activities through direct removal, filling hydrological interruption, or other means?

The location where the proposed flow equalization tanks and pump station structure would be constructed is paved or in a disturbed condition. A preliminary site survey conducted on the study area did not identify any required parameters that define Wetland Waters of the U.S. or State. Therefore, the implementation of the proposed project would not adversely impact Wetland Waters of the U.S or State.

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

The site is composed of well-maintained ornamental plant species' and there are few opportunities for nesting birds. Along the perimeter of Plant No.2 there are a row of large eucalyptus trees. Large Eucalyptus trees commonly harbor nesting raptors. At the time of the survey no evidence of a nest was found in any of the trees. Additionally, there was no sign of historical nesting.

The, construction activities for the proposed project would not involve the removal of any trees. Therefore, potential direct impacts to nesting migratory raptor bird species would be avoided. The proposed constructions would occur in close proximity to the Eucalyptus tree grove along the perimeter of the site and there would be the potential that construction noise equipment could disrupt the breeding patterns of nesting migratory birds. It is recommended that the project should not take place between February 15 and August 15. Raptors typically begin exhibiting nesting behavior in the winter months, and project commencement beyond February 15 runs the risk of resulting in noise impacts to nesting raptors and other tree inhabiting species'. All tree nesting species' including raptors should have completed by August 15. In event construction activities ae proposed before the completing of nesting season, a biologist would examine the site one week prior to initiating any activities to ensure that all nesting has completed. Ground nesting species would also be taken into account. If this project continues into another season the biologist would continue to monitor and work with all parties to ensure remaining activities are not harmful to nesting birds. With the implementation of Mitigation Measure BIO-1 potential impacts to migratory birds would be less than significant.

Offsite Impacts

The Talbert Marsh is located approximately 3,300 feet and the California Least tern Colony is located 4,400 feet from the proposed construction activities. At this distance the construction noise levels would be minimal and would not pose a potential disruption to nesting birds. The implementation of the proposed project would not result in significant impacts to both species.

Mitigation Measure

BIO-1: Construction activities should not take place between February 15 and August 15. In the event construction activities are proposed before the completing of nesting season, a biologist would examine the site one week prior to initiating any activities to ensure that all nesting has completed. Ground nesting species would also be taken into account.

E: Would the project conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

The City of Huntington Beach does not have any local policies or ordinances that provide for the protection of management of biological resources that would apply to the study area. Therefore, implementation of the GWRS Water Conveyance Facilities Project would not be in conflict with local policies or ordinances that provide for the protection of biological resources.

F: Would the project be in conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local regional or state habitat conservation plan.

The OCSD Plant No. 2 Site is not included within adopted Habitat Conservation Plan. Therefore, implementation of the GWRS Water Conveyance Facilities Project would not be in conflict with any approved Habitat Management Plan or Natural Community Conservation Plan.

SECTION 6.0 REFERENCES

California Department Fish and Game Natural Diversity Database, Accessed January 2018.

California Native Plant Society Inventory of Rare and Endangered Plants Database, Accessed January 2018.

City of Huntington Beach General Plan, Accessed January 2018.

U.S. Army Corps of Engineers List of Wetland Plants, 2008.

U.S. Army Corps of Engineers Regional Supplement to the Corps of Engineers Wetland Delineation Manual Arid West Region, September 2008.

United States Fish and Wildlife Information, Planning, and Conservation System Database, Accessed January 2018.

Appendix C Public Version

Groundwater Replenishment System Final Expansion Project and Water Production Enhancement Project

Phase I Cultural Resources Study

Prepared for
Orange County Water District

August 2016



Public Version

Groundwater Replenishment System Final Expansion Project and Water Production Enhancement Project

Phase I Cultural Resources Study

Prepared for
Orange County Water District

August 2016

2121 Alton Parkway
Suite 100
Irvine, CA 92606
949.753.7001
www.pcrnet.com

Irvine	Sacramento
Los Angeles	San Diego
Oakland	San Francisco
Orlando	Santa Monica
Pasadena	Seattle
Petaluma	Tampa
Portland	Woodland Hills

160387.01



Table of Contents

Groundwater Replenishment System Final Expansion Project and Water Production Enhancement Project Phase I Cultural Resources Study

	<u>Page</u>
1. Introduction.....	1
1.1 Project Location.....	2
1.2 Project Description.....	2
2. Area of Potential Effects	10
3. Setting	13
3.1 Environmental Setting.....	13
3.2 Prehistoric Setting.....	13
3.3 Ethnographic Setting	14
3.4 Historic Setting.....	16
4. Regulatory Framework.....	19
4.1 Federal	19
4.2 State	20
5. Archival Research	25
5.1 South Central Coastal Information Center Records Search	25
5.2 Historic Map and Aerial Review	27
5.3 Native American Heritage Commission	28
5.4 Geoarchaeological Review	32
6. Paleontological Records Search	35
7. Cultural Resources Survey and Results.....	36
8. Conclusions and Recommendations	37
8.1 Archaeological Resources	37
8.2 Historic Built Resources.....	39
8.3 Paleontological Resources	39
9. References	41

Appendices

- A. Resumes
- B. SCCIC Records Search Results (Confidential – Bound Separately)
- C. Native American Correspondence
- D. Photographs of the Project APE

List of Figures

Figure 1 Local Vicinity Map Topographic Base	3
Figure 2 Project Location Topographic Base	4
Figure 3 Site Plan	5
Figure 4 Area of Potential Effects	11

List of Tables

Table 1 Previous Cultural Resources Investigations including the Project APE	25
Table 2 Previously Recorded Cultural Resources within ½-mile of the Project APE	26
Table 3 Native American Outreach.....	29

Groundwater Replenishment System Final Expansion Project and Water Production Enhancement Project

Phase I Cultural Resources Study

1. Introduction

Environmental Science Associates (ESA) has been retained by the Orange County Water District (OCWD) to prepare a Cultural Resources Study for the proposed Groundwater Replenishment System (GWRS) Final Expansion Project and the Water Production Enhancement Project (referred below as the project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an existing advanced water treatment facility constructed by the OCWD and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high-quality source of treated water to recharge the Orange County Groundwater Basin, and to protect the Orange County Groundwater Basin from seawater intrusion. The project would provide facilities that would allow an increase in the amount of water to be conveyed to the GWRS and further supplement the local water supplies. The GWRS Final Expansion Project involves eight components: (1) increasing microfiltration (MF) capacity; (2) increasing reverse osmosis (RO) treatment capacity; (3) increasing ultraviolet (UV) treatment capacity; (4) increasing final product water capacity; (5) construction of an effluent pump station; (6) conversion of existing gravity pipeline to a pressurized pipeline; and (7) construction of a separate headworks and bypass pipeline. The Water Production Enhancement Project involves the proposed flow equalization tank with a pump station, and conveyance piping and flow meter vault.

The project is eligible for funding from the State Revolving Fund (SRF) Loan Program, which is administered by the California State Water Resources Control Board (SWRCB). Since the SRF Loan Program is partially funded by the U.S. Environmental Protection Agency (EPA), it is subject to federal environmental regulations including Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. This Phase I cultural resources study has been prepared in support of the environmental documentation being prepared for the GWRS Final Expansion Project and the environmental documentation being prepared for the Water Production Enhancement Project in compliance with CEQA and Section 106 of the NHPA. The OCWD is the lead agency responsible for compliance with CEQA.

ESA personnel involved in the preparation of this study include: Candace Ehringer, M.A., R.P.A., Principal Investigator; Arabesque Said-Abdelwahed, MPP, report author and surveyor; Vanessa Ortiz, M.A., R.P.A., literature review analyst. Resumes of key personnel are provided in **Appendix A**.

1.1 Project Location

The project is located within the cities of Fountain Valley and Huntington Beach (**Figure 1**). A portion of the project is located at the existing OCWD GWRS Facility in Fountain Valley. The project is also located at the southern portion of OCSD Treatment Plant No. 1 and OCSD Treatment Plant No. 2 in Huntington Beach. In addition, the project includes the renovation of an existing waste water pipeline located along the west side of the Santa Ana River that extends from Treatment Plant No. 2 to the OCWD GWRS Facility. The project is located within section 32 of Township 5 South/Range 10 West and it is located in sections 5, 17, 20, of Township 6 South/Range 10 West as shown on the Newport Beach, California 7.5-minute U.S. Geological Survey topographic map (**Figure 2**).

1.2 Project Description

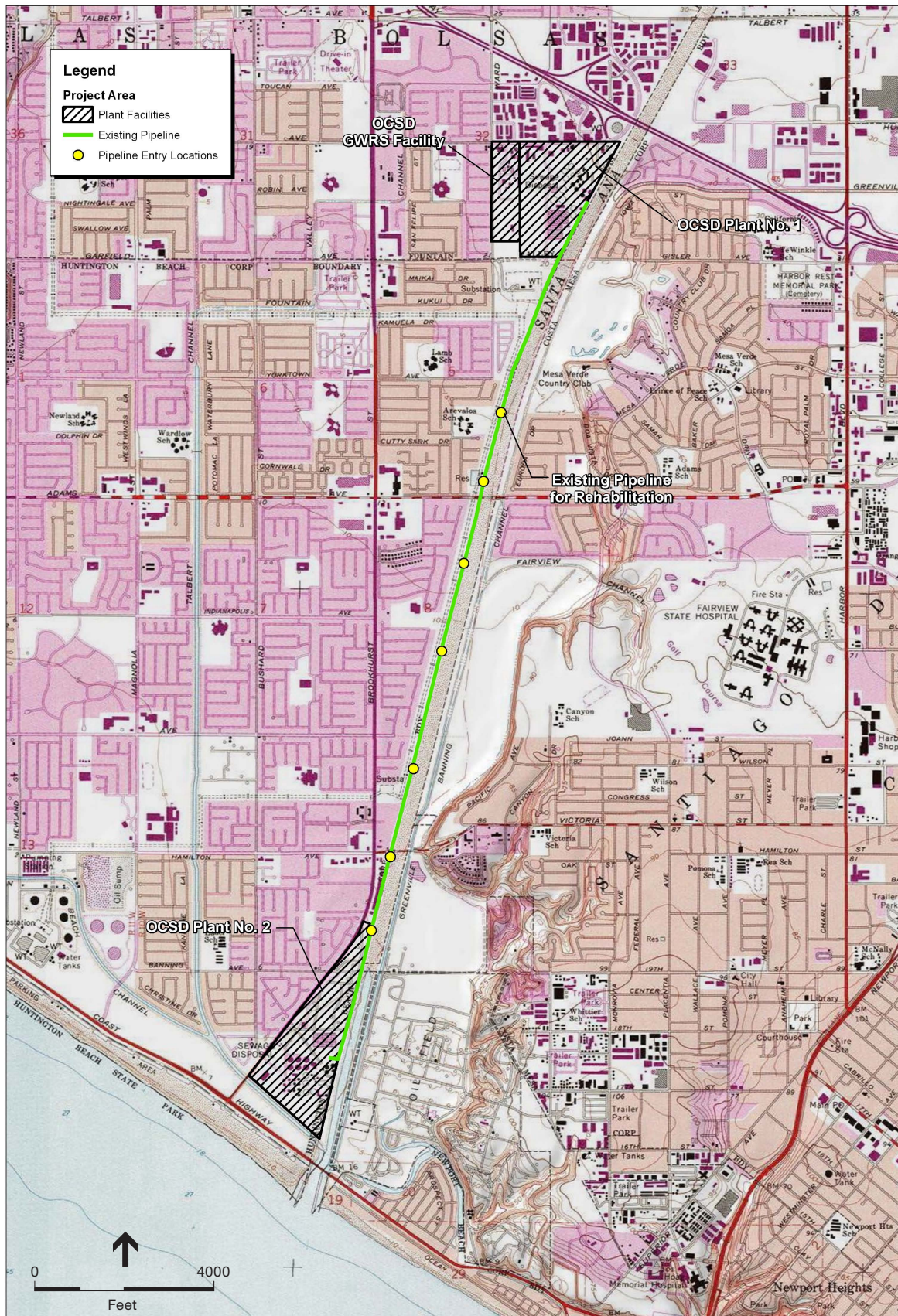
The project evaluated in this report comprises of two separate projects. The first is the GWRS Final Expansion Project. The second is the Water Production Enhancement Project. The components of each project are illustrated in **Figure 3** as well as the potential staging area.

1.2.1 GWRS Final Expansion Project

This project includes conversion of an existing gravity pipeline to a pressurized pipeline, increasing MF capacity, increasing RO Treatment Capacity, increasing UV treatment capacity at the OCWD GWRS Facility, final product water and construction of a pump station at the OCSD Plant No. 2. The GWRS takes highly treated wastewater that would have been previously discharged into the Pacific Ocean and purifies it using a three-step advanced treatment process consisting of MF, RO and UV light with hydrogen peroxide. Specifically, the project will include the following seven improvements, as well as potential staging areas:

1.2.1.1 Microfiltration Capacity

The project would increase the MF treatment capacity by approximately 45 million gallons per day (MGD). The expansion of the MF facility at the OCWD water treatment site involves construction of 12 new treatment basins increasing the overall number of treatment basins from 36 to 48. The construction of the 12 new basins would occur by increasing the size of the MF building and basement, which houses most of the actual MF equipment. The MF basement includes all piping, valves, pumps, instruments, and control panels. The basement would be expanded by excavating an area of approximately 88-feet long by 165-feet wide by 25-feet deep from finished grade. The depth of disturbed soils is unknown; therefore, excavations may extend to native and undisturbed soils.

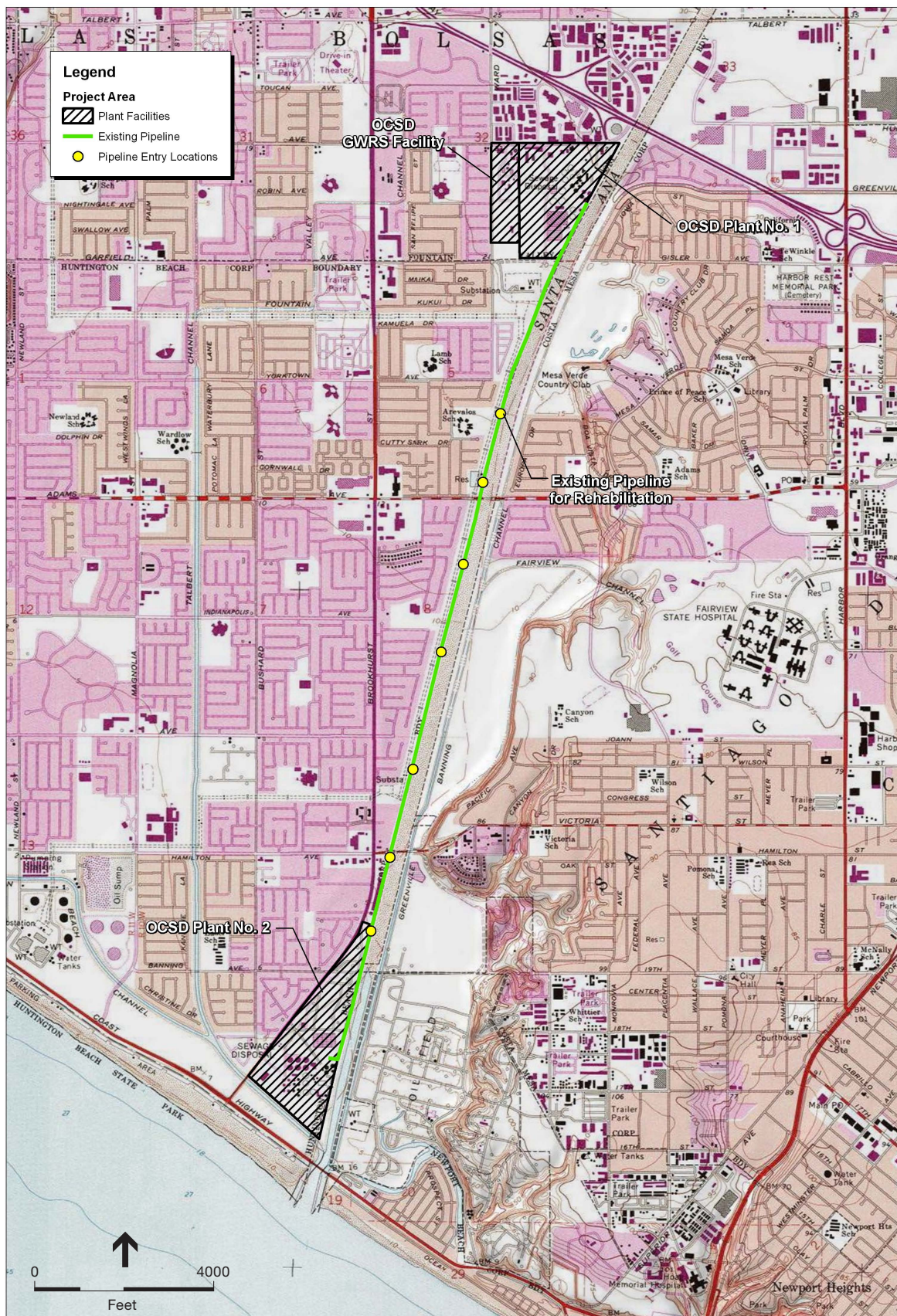


SOURCE: USGS Newport Beach, CA (1978) 7.5' DRG;

OCWD Groundwater Replenishment System Final Expansion Project . P160387.01

Figure 1

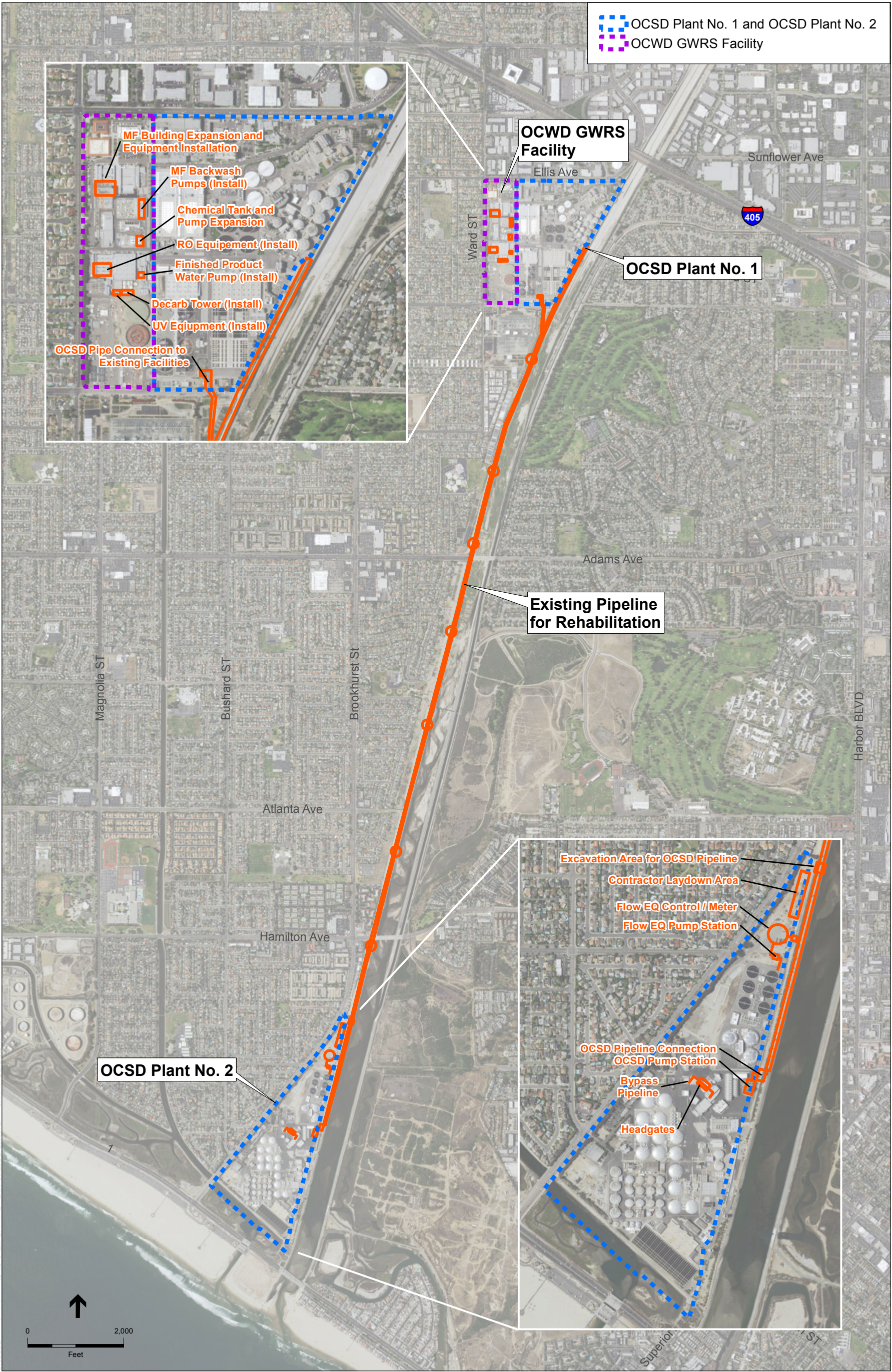
Local Vicinity Map Topographic Base



SOURCE: USGS Newport Beach, CA (1978) 7.5' DRG;

OCWD Groundwater Replenishment System Final Expansion Project . P160387.01

Figure 2
Project Location Topographic Base



This page left intentionally blank

In the excavated area, a foundation would be built including installation of foundation piles. The 12 new concrete treatment basins would be constructed on this foundation. Each basin would be installed with a centrifugal pump, associated piping, and other appurtenances. These 12 new treatment basins would make up a one and a half new treatment trains that would be added to the existing two trains within the MF West building. In addition, most of the electrical equipment associated with the new treatment basins would be added to the new expanded MF West electrical building.

The MF product water or effluent discharges into an existing 2 million gallon underground concrete reservoir commonly referred to as a break tank. This reservoir contains two sets of vertical turbine pumps. One set (six existing pumps) is used for pumping MF product water back to the MF facility for a backwashing process. The other set of pumps (six existing pumps) is used to transfer the MF product water from the reservoir to the RO Facility. As part of the final expansion, two new 200-horsepower vertical turbine pumps would be installed in the existing break tank facility to pump MF product water back to the MF facility for the backwash process. The break tank facility already has pump slots constructed for these two new pumps, and therefore, the construction work for these pumps only involves lifting the pumps into the slots and connecting up the piping and electrical.

1.2.1.2 Reverse Osmosis Treatment Capacity

The project would increase the RO treatment capacity by approximately 30 MGD. The project would include the installation of up to six additional treatment trains at the OCWD water treatment site. The treatment train includes pressure vessels, RO membranes, RO feed pumps, and associated piping for each train. The new equipment for the six new trains would be tied into the existing piping for the expansion. No excavation would be required.

1.2.1.3 Ultraviolet Treatment Capacity

The project would increase the UV Treatment capacity at the OCWD water treatment site by approximately 30 MGD. The project would install three additional treatment trains. Each train would consist of three steel vessels containing 432 total UV light lamps. Each vessel would be equipped with two electrical panels, feed and product piping, valves and instruments. The existing concrete pad and canopy would be sized to house the three new trains. Therefore, only the equipment for each of the three trains would need to be installed in their designated areas. Equipment required for this phase includes one crane, one fork lift and two man lifts. No excavation would be required.

1.2.1.4 Final Product Water

The project would also expand the chemical and final product water facilities at the OCWD water treatment site. As part of the project, one additional decarbonation tower would be added to the existing decarbonation area. The concrete pad for the decarbonation tower is already constructed. An additional pump would also be added to the existing product water pump station. The pump would be a 2,000-horsepower vertical turbine pump installed within an existing pump station building with a slot already in place. No excavation is required.

1.2.1.5 Construction of OCSD Plant No. 2 Effluent Pump Station

A new pump station (Effluent Pump Station) would be constructed at the OCSD Plant No. 2 to convey water flows within the existing OCSD pipeline to the OCWD water treatment facility site. The pump station would include four pumps (three duty and one standby) with the capacity to pump 30 MGD each. The pumps would be housed in a new concrete pump house, approximately 100-feet long by 50-feet wide by 20-feet high with a 25-foot deep wet well.

In addition to the Effluent Pump Station, a second smaller Plant Water Pump Station would be constructed at OCSD's Plant No. 2. The Plant Water Pump Station serves OCSD's Plant No. 2 with hose bib and washdown water for plant operations. The Plant Water Pump Station would have four plant water pumps housed in a 48-feet long by 58-feet wide by 20-feet high concrete building. The concrete wet well for the pumps is estimated to be 25-feet deep. The depth of disturbed soils is unknown; therefore, excavations may extend to native and undisturbed soils.

1.2.1.6 Pipeline Re-Lining

The source water for the project would come from both of the treatment plants owned and operated by the OCSD. Facilities are already in place to receive source water, secondary effluent, from OCSD's Plant No. 1 wastewater treatment facility. However, to provide an additional 60 MGD of source water for the project, OCWD would need to receive additional wastewater flows from OCSD Plant No. 2 wastewater treatment site. To convey the wastewater flows to the GWRS water treatment site, an existing 3.5-mile long, 66-inch diameter gravity concrete reinforced pipe (CRP) would be relined to become a 54-inch diameter pressure pipeline. The existing pipeline is located along an OCSD easement corridor that extends west of the Santa Ana River levee. The OCSD easement corridor is located on approximately 5 feet of fill material (OCWD, pers.comm. and SRI, 2007). The re-lining of the pipeline will be completed either by utilizing existing manholes (approximately spaced 2,000 feet from each one) for access into the pipeline or by excavating a 10-feet wide by 10-feet long by 5-feet deep area to expose the pipeline to allow entry into the pipe to re-line the existing pipeline. For each option, construction equipment would be staged at each pipeline opening. As shown in Figure 3, eight entry locations are proposed. All excavations along the eight entry locations would be within fill and recently disturbed soils. To connect the pipeline to the new Effluent Pump Station on the OCSD facility, approximately 100 feet of 54-inch diameter steel pipe would be constructed. Additionally, to connect the pipeline to OCWD facilities, approximately 100 feet of 54-inch diameter steel pipe would be installed by trenching and backing filling on OCWD property. The depth of fill material is unknown at this location in OCSD Plant No. 1.

1.2.1.7 OCSD Plant No. 2 Separate Headworks and Bypass Pipeline

The majority of the wastewater flows from OCSD Plant No. 2 are needed as source water to meet the demands of the project. Currently, OCSD Plant No. 2 receives reject concentrated brine waters from treatment processes from the Inland Water Agencies. These concentrated reject flows, i.e. brines, are currently not allowed to be recycled through the existing GWRS per the Division of Drinking Water permit for GWRS. Therefore, a separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that would segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. The bypass pipeline

would be a 66-inch diameter CRP with an alignment that runs approximately 200 feet around the existing headworks for Plant No. 2. Connected to the bypass pipeline would be a new separate headworks facility, including a screenings building (65-feet long by 55-feet wide by 20-feet deep) and a grit basin building (65-feet long by 40-feet wide by 20-feet deep). Also along the bypass pipeline alignment would be a 20-feet deep concrete metering vault with vault dimensions of 100-feet wide by 100-feet long by 14-feet deep. Excavation would be required for this component of the project. This project component location is underlain by disturbed soils from previous placement of several pipelines (OCSD, pers. comm.). The depth of disturbed soils is unknown; therefore, excavations may extend to native and undisturbed soils.

1.2.2 Water Production Enhancement Project

The Water Production Enhancement Project involves three construction activities: (1) construction of flow equalization tank, (2) construction of a pump station, and (3) construction of conveyance piping and flow meter vault.

A 6-million-gallon (MG) flow equalization storage tank would be constructed at the north end of OCSD Plant 2. The location of the flow equalization storage tank is shown in Figure 3. The storage tank would be a circular-welded steel tank approximately 200-feet in diameter and 30-feet tall from existing grade, with a 4-pump (3 duty + 1 standby), pump station, and approximately 500-linear feet of 36-inch diameter connection piping with a meter vault (15- x 20- x 10-ft deep) connected to the operations of the tank. The pump station would be housed in a 30- x 40- x 20-ft block wall building.

Excavation would be required for construction of the flow equalization tank, pump station, and pipeline/vault. In addition to excavation, an existing concrete parking lot would be demolished for the tank pad.

1.2.3 Potential Staging Areas

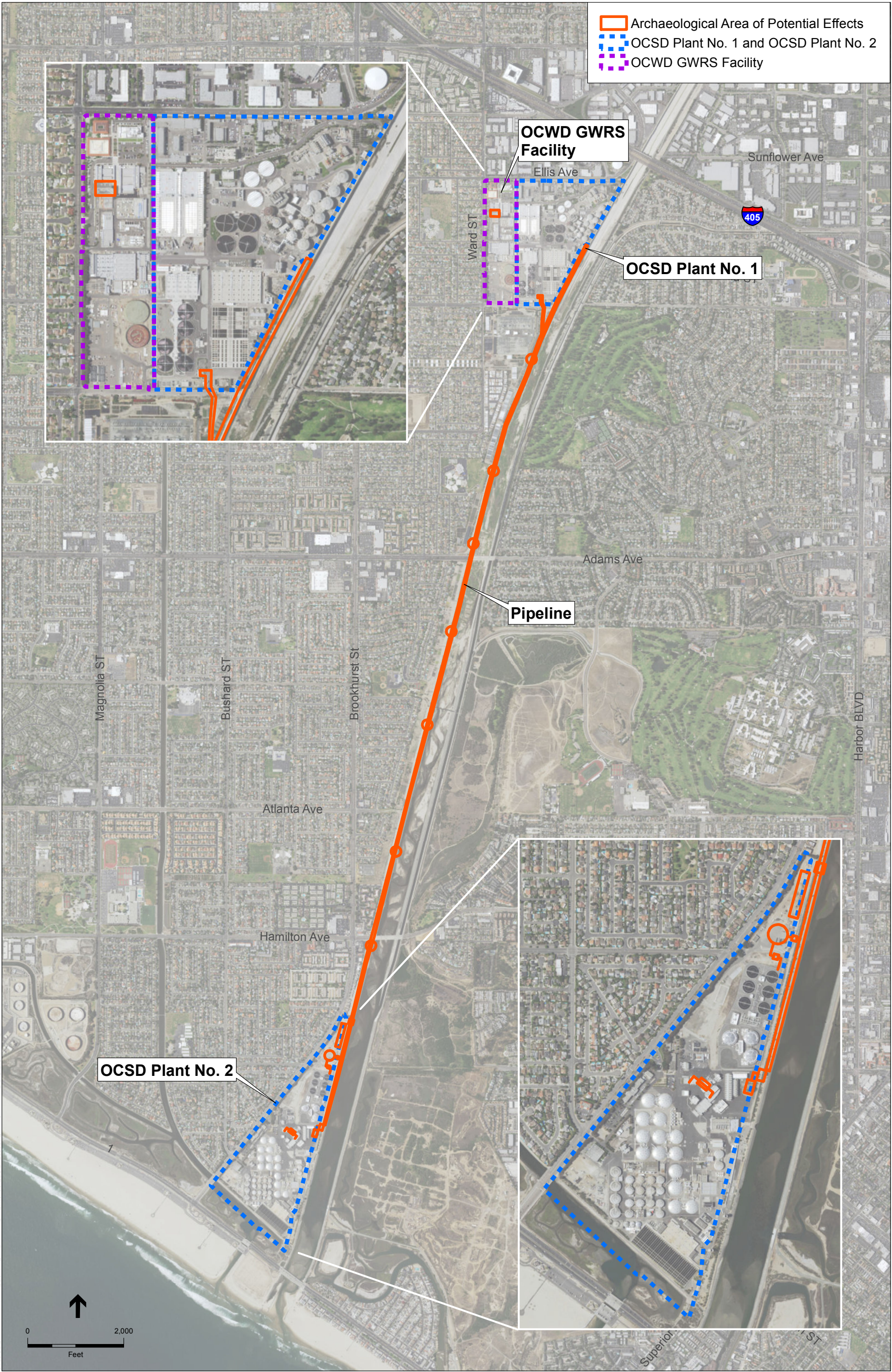
During construction of the project, construction equipment, vehicles, and materials could be stored at up to two staging areas: the OCSD Plant No. 2 and along the existing pipeline at each pipeline opening. No excavations would occur at the potential staging areas.

2. Area of Potential Effects

An Area of Potential Effects (APE) was established for the project according to Section 106 of the NHPA in coordination with the OCWD (**Figure 4**). An APE is defined as:

...the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (36 Code of Federal Regulations [CFR] 800.16[d]).

The horizontal APE encompasses the MF Building Expansion (about 0.50-acre), 3.5-mile long existing pipeline, the excavation area for OCSD pipeline (about 650 square feet), the contractor laydown area (about 0.70-acre), the area encompassing the Flow Equalization Pump Station and Flow Equalization Control/Meter (about 3.70-acres), the area encompassing the OCSD pump station (about 0.28 acre), and the area encompassing the headgates and bypass pipeline (about 0.5 acre). The vertical APE includes the anticipated maximum depth of ground disturbance of 25 feet below ground surface and the maximum height of the flow equalization tank of 30 feet above ground surface.



SOURCE: ESRI

OCWD Groundwater Replenishment System Final Expansion Project . P160387.01

Figure 4
Area of Potential Effects

This page left intentionally blank

3. Setting

3.1 Environmental Setting

The project is located in the cities of Huntington Beach and Fountain Valley, Orange County, in southern California. The topography of Orange County includes a combination of mountains, hills, flatlands, and shorelines. Urbanized Orange County is predominantly within an alluvial plain, 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 Santa Ana River is located adjacent to and just east of the project APE.

The City of Huntington Beach is located near the coastal margin of the Los Angeles Basin, which includes Orange County, and is underlain by more than 15,000 feet of stratified sedimentary rocks of marine origin (Oakeshott, 1978). Soils in the project APE are composed of younger alluvium that is divided into river floodplain deposits (washed in from the northeast as sand, gravel and silt), and tidal flat/lagoonal type deposits lie in the gaps (finer-grained silts and clays) (City of Huntington Beach, 1996).

3.2 Prehistoric Setting

The prehistory of the region has been summarized within four major horizons or cultural periods: Early [10,000 to 8,000 before present (B.P.)], Millingstone (8,000 to 3,000 B.P.), Intermediate (3,000 to 1,500 B.P.), and Late Prehistoric (1,500 B.P. to A.D. 1769) (Wallace, 1955; Warren, 1968).

3.2.1 Early Period (10,000 to 8,000 B.P.)

The southern California coast may have been settled as early as 10,000 years ago (Jones, 1992). These early inhabitants were likely maritime adapted groups exploiting shellfish and other marine resources found along the coastline (Dixon, 1999; Erlandson, 1994; Vellanoweth and Altschul, 2002). One site located in Newport Bay, Orange County (CA-ORA-64) dates to approximately 9,500 years B.P. and suggests early intensive utilization of shellfish, fish, and bird resources (Drover et al., 1983; Macko, 1998).

3.2.2 Millingstone Period (8,000 to 3,000 B.P.)

The Millingstone Period dates to about 8,000 to 3,000 B.P. The transition from the Early Period to the Millingstone Period is marked by an increased emphasis on the processing of seeds and edible plants. The increased utilization of seeds is evident by the high frequencies of handstones (manos) and milling slabs (metates). Around 5,000 B.P., mortar and pestles appear in the archaeological record. Mortars and pestles suggest the exploitation of acorns (Vellanoweth and Altschul, 2002).

Millingstone Period sites in Orange County generally date to between 8,000 and 4,000 B.P. Archaeological evidence suggests a low, stable population centered around semi-permanent residential bases. Sites are located along coastal marine terraces, near the shoreline, bays, or estuaries. Satellite camps were used to take advantage of seasonally available resources. Marine resources were supplemented by seeds and small terrestrial mammals. Later Millingstone Period sites indicate a growing reliance on shellfish (Cleland et al., 2007).

3.2.3 Intermediate Period (3,000 to 1,500 B.P.)

The Intermediate Period dates to between 3,000 to 1,500 B.P. Archaeological sites indicate a broader economic base, with increased reliance on hunting and marine resources. An expanded inventory of milling equipment is found at sites dated to this period. Intermediate Period sites are characterized by the rise of the mortar and pestle and small projectile points (Cleland et al., 2007).

The number of Intermediate Period sites in Orange County declined over time, particularly around Newport Bay. Climate changes and drier conditions led to the congregation of populations near freshwater sources. Settlement patterns indicate greater sedentism, with reduced exploitation of seasonal resources and a lack of satellite camps. Coastal terrace sites are not reoccupied during this time period. These shifts in settlement and subsistence strategies led to growing population densities, resource intensification, higher reliance on labor-intensive technologies, such as the circular fishhook, and more abundant and diverse hunting equipment. Rises in disease and interpersonal violence, visible in the archaeological record, may be due to the increased population densities (Cleland et al., 2007; Raab et al., 1995).

3.2.4 Late Prehistoric Period (1,500 B.P. to A.D. 1769)

The Late Prehistoric Period began around 1,500 B.P. and lasted until Spanish contact in 1769. The Late Prehistoric Period resulted in concentration of larger populations in settlements and communities, greater utilization of the available food resources, and the development of regional subcultures (Cleland et al., 2007). Artifacts from this period include milling implements, as well as bone and shell tools and ornaments.

Newport Bay and San Joaquin Hills, abandoned during the Intermediate Period, were reoccupied during the Late Prehistoric Period. These settlements were smaller than in the Intermediate. Village sites were located in areas with a multitude of resources. Small collector groups moved between a small number of these permanent settlements (Cleland et al., 2007).

3.3 Ethnographic Setting

The project is located at the southern extent of Gabrielino-Tongva territory, near the boundary with the Juaneño, or more properly Acjachemen, to the south. Traditionally, the boundary between the two is identified as either Aliso Creek or the drainage divide to the north of the creek, roughly 20 miles south of the project APE, respectively. Both are included here.

3.3.1 Gabrielino-Tongva

Prior to European colonization, the Gabrielino-Tongva, a Takic-speaking group, occupied a diverse area that included: the watersheds of the Los Angeles, San Gabriel, and Santa Ana rivers; the Los Angeles basin; and the islands of San Clemente, San Nicolas, and Santa Catalina (Kroeber, 1925). The Gabrielino-Tongva are reported to have been second only to the Chumash in terms of population size and regional influence (Bean and Smith, 1978).

The Gabrielino-Tongva were hunter-gatherers and lived in permanent communities located near the presence of a stable food supply. Community populations generally ranged from 50-100 inhabitants, although larger settlements may have existed. The Gabrielino-Tongva are estimated to have had a population numbering around 5,000 in the pre-contact period, with many recorded villages along the drainages mentioned above and in the Los Angeles basin proper (Kroeber, 1925).

Beginning with the Spanish Period and the establishment of Mission San Gabriel Arcángel, Native Americans throughout the Los Angeles area suffered severe depopulation and their traditional culture was radically altered. Nonetheless, Gabrielino-Tongva descendants still reside in the greater Los Angeles and Orange County areas and maintain an active interest in their heritage.

3.3.2 Juaneño-Acjachemen

The Juaneño or Acjachemen, also Takic-speaking, occupied a more restricted area extending across southern Orange County and northern San Diego County. Juaneño territory extended along the Pacific coast from midway between Arroyo San Onofre and Las Pulgas Canyon in the south to Aliso Creek in the north, and continued east into the Santa Ana Mountains from Santiago Peak in the northwest to the headwaters of Arroyo San Mateo in the southeast (Kroeber 1925). The Juaneño were bounded by the Gabrielino-Tongva to the north, and the Luiseño to the east and south.

The Juaneño-Acjachemen, like the Gabrielino-Tongva, subsisted on small game, coastal marine resources, and a wide variety of plant foods such as grass seeds and acorns. Their houses were conical thatched reed, brush, or bark structures. The Juaneño inhabited permanent villages centered around patrilineal clans, with each village headed by a chief, known as a *nu* (Kroeber 1925; Sparkman 1908). Seasonal camps associated with villages were also used. Each village or clan had an associated territory and hunting, collecting, and fishing areas. Villages were typically located in proximity to a food or water source, or in defensive locations, often near valley bottoms, streams, sheltered coves or canyons, or coastal strands (Bean and Shipek 1978).

The Juaneño-Acjachemen population was estimated to have numbered approximately 1,000 at the time of European contact. Beginning with the Spanish Period and the establishment of Mission San Juan Capistrano, the Juaneño-Acjachemen suffered severe depopulation and their traditional culture was radically altered. Nonetheless, descendants still reside in the Orange County area and maintain an active interest in their heritage.

3.4 Historic Setting

The historic setting for the project is divided into three primary periods: the Spanish Period (A.D. 1769-1821), the Mexican Period (A.D. 1821-1846), and the American Period (A.D. 1846 to present).

3.4.1 Spanish Period (A.D. 1769-1821)

The first European exploration of Orange County began in 1769 when the Gaspar de Portola expedition passed through on its way from Mexico to Monterey. A permanent Spanish presence was established with the founding of Mission San Juan Capistrano in 1776 (Hoover et al., 2002). The mission was founded to break the long journey from Mission San Diego to Mission San Gabriel (near Los Angeles). A large, ornate church was constructed at the mission from 1797 to 1806, but was destroyed only six years later in an earthquake. The church was not rebuilt.

In an effort to promote Spanish settlement of Alta California, Spain granted several large land concessions from 1784 to 1821. At this time, Spain retained title to the land; individual ownership of lands in Alta California was not granted. The parts of Orange County that would become the City of Huntington Beach and the City of Fountain Valley began as a Spanish land concession, known as Rancho Los Nietos. A grant of 300,000 acres was given to Manuel Nieto in 1784 in consideration of his military service (City of Huntington Beach, 2000; Logan, 1990).

3.4.2 Mexican Period (A.D. 1821-1846)

In 1821, Mexico won its independence from Spain. Mexico continued to promote settlement of California with the issuance of land grants. In 1833, Mexico secularized the missions, reclaiming the majority of mission lands and redistributing them as land grants. During this time, Rancho Los Nietos was divided into five smaller ranchos. The area of Huntington Beach became part of Rancho Las Bolsas, a 33,460-acre rancho granted to Maria Catarina Ruiz in 1834 (County of Orange, 2011). Maria was the widow of Jose Antonio Nieto, Manuel Nieto's son.

Many ranchos continued to be used for cattle grazing by settlers during the Mexican Period. Hides and tallow from cattle became a major export for Californios (Hispanic Californians), many of whom became wealthy and prominent members of society. These Californios led generally easy lives, leaving the hard work to vaqueros (Hispanic cowhands) and Indian laborers. Californios lives centered primarily around enjoying the fruits of their labors, throwing parties and feasting on Catholic holidays (Pitt, 1994; Starr, 2007).

3.4.3 American Period (A.D. 1846 to present)

Mexico ceded California to the United States as part of the Treaty of Guadalupe Hildalgo, which ended the Mexican-American War (1846-1848). The treaty also recognized right of Mexican citizens to retain ownership of land granted to them by Spanish or Mexican authorities. However, the claimant was required to prove their right to the land before a patent was given. The process was lengthy and costly, and generally resulted in the claimant losing at least a portion of their land to attorney's fees and other costs associated with proving ownership (Starr, 2007).

The Gold Rush (1849-1855) saw the first big influx of American settlers to California. Most of these settlers were men hoping to strike it rich in the gold fields. The increasing population provided an additional outlet for Californios' cattle (Bancroft, 1890). As demand increased, the price of beef skyrocketed and Californios reaped the benefits.

The culmination of the Gold Rush, followed by devastating floods in 1861 and 1862 and droughts in 1863 and 1864, led to the rapid decline of the cattle industry (Bancroft, 1890). Many Californios lost their lands during this period, and former ranchos were subsequently divided and sold for agriculture and residential settlement.

Following the admission of California into the United States in 1850, the region of modern day Orange County was originally part of Los Angeles County. Orange County was established in 1889, with the City of Santa Ana as County Seat (Armor, 1921).

3.4.4 History of the Project Vicinity

The project vicinity was once part of a 300,000-acre Spanish land grant, Rancho Los Nietos, a part of which became Rancho Las Bolsas during the Mexican Period. Abel Stearns later acquired the land for ranching and cultivation of barley. During the land boom of the 1880s, the area was subdivided for agricultural and residential development (County of Orange, 2011; Milkovich, 1986).

Previously called Shell Beach and later Pacific City, the town changed its name to Huntington Beach in 1904 when Henry E. Huntington extended Pacific Electric Railway service to the little community (Carlberg and Epting, 2009; Milkovich, 1986). Discovery of oil in the 1920s led to a population explosion in the town. In one month, the population of Huntington Beach went from 1,500 to 6,000.

3.4.4.1 History of OCSD Plant No. 1 and No. 2 and OCWD GWRS

OCSD

In 1921, the cities of Santa Ana and Anaheim agreed to construct a sewer outfall extending into the Pacific Ocean, thus forming the Orange County Joint Outfall Sewer (JOS), and marking the beginning of the OCSD. In 1924, JOS construction was completed and the first sewage from member cities was discharged into the system. Three years later, the outfall was extended to a distance of 3,000 feet from shore, and a new screening plant and pumping station was constructed. In 1941, the first units of the Primary Treatment Plant, now referred to as Plant No. 1) were constructed. In 1954, OCSD assumed the duties of JOS and officially commenced operations. Over the next 50 years, additional services and facilities were constructed at OCSD Plant No. 1. The portion of the existing facility where the proposed OCSD pipe connection would connect was constructed within the last 10 years. In 1954, Plant No. 2 was constructed near the ocean and adjoining Santa Ana River and the second ocean outfall was constructed. OCSD is currently a public agency that provides wastewater collection, treatment, and disposal services for approximately 2.5 million people in central and northwest Orange County. OCSD is a special district that is governed by a Board of Directors consisting of 25 board members appointed from 21 cities, sanitary districts, and one representative from the Orange County Board of Supervisors.

OCSD has two operating facilities (Plants 1 and 2) that treat wastewater from residential, commercial and industrial sources (ocsd.com).

OCWD GWRS

In the 1950s, traces of salt water were detected in the Orange County Groundwater Basin as far as 5 miles inland, although the area of intrusion was focused primarily across a 3-mile stretch between the cities of Newport Beach and Huntington Beach.

In order to protect the basin from further seawater intrusion, the OCWD constructed the Water Factory 21 (WF-21) in 1978. This facility treated wastewater utilizing a purification process including RO, and injected it into 23 multi-casing injection wells along the Talbert Gap forming a hydraulic barrier to seawater intrusion. (gwrsystem.com).

In 2004, WF-21 discontinued production and was demolished in February 2007 to provide space for the construction of GWRS. GWRS provides new technology and is a larger water purification plant compared to the previous WF-21. Construction of the GWRS broke ground in September 2004 and was completed in late 2007. The GWRS consists primarily of membrane processes, replacing the physical-chemical processes of WF-21. Unlike WF-21, the GWRS utilizes MF as pre-treatment prior to RO and UV light with hydrogen peroxide. The GWRS product water not only supplies water to an expanded seawater barrier, but is also pumped to two of OCWD's recharge basins where it blends with Santa Ana River and imported waters and naturally filters into the groundwater basin, ultimately becoming part of north and central Orange County's drinking water supply (gwrsystem.com).

4. Regulatory Framework

4.1 Federal

4.1.1 Section 106 of the National Historic Preservation Act

Archaeological resources are protected through the NHPA of 1966, as amended (54 United States Code of Laws [USC] 300101 et seq.), and its implementing regulation, Protection of Historic Properties (36 CFR Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an “undertaking” (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (National Register). As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the National Register. Under the NHPA, a resource is considered significant if it meets the National Register listing criteria at 36 CFR 60.4.

4.1.2 National Register of Historic Places

The National Register was established by the NHPA of 1966, as “an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment” (36 CFR 60.2). The National Register recognizes both historic-period and prehistoric archaeological properties that are significant at the national, state, and local levels.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (U.S. Department of the Interior, 2002):

- A. Are associated with events that have made a significant contribution to the broad patterns of our history;
- B. Are associated with the lives of persons significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or,
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for National Register listing (U.S. Department of the Interior, 2002). In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance” (U.S. Department of the Interior, 2002). The National Register recognizes seven qualities that, in various combinations, define integrity. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling,

and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.

4.2 State

4.2.1 California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the state and is codified at Public Resources Code (PRC) Section 21000 et seq. CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or unique archaeological resources.

Under CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. An archaeological resource may qualify as an “historical resource” under CEQA. The CEQA Guidelines (Title 14 California Code of Regulations [CCR] Section 15064.5) recognize that an historical resource includes: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (California Register); (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the CEQA Guidelines apply. If a project may cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (CEQA Guidelines Sections 15064.5(b)(1), 15064.5(b)(4)).

If an archaeological site does not meet the criteria for a historical resource contained in the CEQA Guidelines, then the site may be treated in accordance with the provisions of Section 21083, which is as a unique archaeological resource. As defined in Section 21083.2 of CEQA a “unique” archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;

- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site is to be treated in accordance with the provisions of Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (Section 21083.1(a)). If preservation in place is not feasible, mitigation measures shall be required.

The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064.5(c)(4)).

4.2.2 CEQA-Plus

The EPA sponsors the SRF Loan Program to provide funding for construction of publicly-owned treatment facilities and water reclamation projects. This funding for capital improvements to wastewater treatment and water recycling facilities is authorized under the federal Clean Water Act. In order to comply with requirements of the SRF Loan Program, which is administered by the SWRCB in California, a CEQA document must fulfill additional requirements known as CEQA-Plus. The CEQA-Plus requirements have been established by the EPA and are intended to supplement the CEQA Guidelines with specific requirements for environmental documents acceptable to the SWRCB when reviewing applications for wastewater treatment facility loans. They are not intended to supersede or replace CEQA Guidelines. The EPA's CEQA-Plus requirements have been incorporated into the SWRCB's *Environmental Review Process Guidelines for SRF Loan Applicants* (2004). The SWRCB's *SRF Guidelines* require that a proposed project comply with Section 106 of the NHPA.

4.2.3 California Register of Historical Resources

The California Register is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from Register are based upon National Register criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, state, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally determined
- eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and,
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historical resources;
- Historical resources contributing to historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as a historic preservation overlay zone.

4.2.4 California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 requires that in the event human remains are discovered, the County Coroner be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin, the Coroner is required to contact the California Native American Heritage Commission (NAHC) within 24 hours to relinquish jurisdiction.

4.2.5 California Public Resources Code Section 5097.98

California PRC Section 5097.98, as amended by Assembly Bill 2641, provides procedures in the event human remains of Native American origin are discovered during project implementation. PRC Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the

discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. PRC Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

4.2.6 California Public Resources Code Section 21080.3.1

California PRC Section 21080.3.1, as amended by Assembly Bill (AB) 52, requires lead agencies to consider the effects of projects on tribal cultural resources and to conduct consultation with federally and non-federally recognized Native American Tribes early in the environmental planning process and applies specifically to projects for which a Notice of Preparation (NOP) or a notice of Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The goal is to include California Tribes in determining whether a project may result in a significant impact to tribal cultural resources that may be undocumented or known only to the Tribe and its members and specifies that a project that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. Tribal cultural resources are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources (PRC Section 21074 (a)(1)).

Prior to determining whether a Negative Declaration, MND, or Environmental Impact Report (EIR) is prepared for a project, the lead agency must consult with California Native American Tribes, defined as those identified on the contact list maintained by the California Native American Heritage Commission (NAHC), who are traditionally and culturally affiliated with the geographic area of the proposed project, and who have requested such consultation in writing. Consultation may include:

- The type of environmental review necessary
- The significance of tribal cultural resources
- The significance of the project’s impacts on the tribal cultural resources
- Project alternatives or the appropriate measures for preservation
- Recommended mitigation measures

Consultation should be initiated by a lead agency within 14 days of determining that an application for a project is complete or that a decision by a public agency to undertake a project (PRC Section 21080.3.1(d) and (e)). The lead agency shall provide formal notification to the

designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American Tribes that have requested notice. At minimum, notice should consist of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American Tribe has 30 days to request consultation pursuant to this section. The lead agency shall begin the consultation process within 30 days of receiving a California Native American Tribe's request for consultation. According to PRC Section 21080.3.2(b), consultation is considered concluded when either the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

5. Archival Research

5.1 South Central Coastal Information Center Records Search

A records search for the APE and a ½-mile radius was conducted on June 21, 2016 at the South Central Coastal Information Center (SCCIC), located at California State University, Fullerton. The records search included a review of all recorded cultural resources within a ½-mile radius of the project APE, as well as a review of cultural resource reports on file. The Historic Properties Directory was also examined for any documented historic-period built resources within or adjacent to the project APE. The results of the SCCIC records search are included in **Appendix B**.

5.1.1 Previous Cultural Resources Investigations

A total of 61 cultural resources studies have been conducted within a ½-mile radius of the project APE. Of the 61 previous studies, five studies included a pedestrian survey of portions of the APE, and four included archival research for the APE (**Table 1**). A complete list of the 61 studies located within ½-mile of the project APE is located in Appendix B. Less than 50 percent of the project APE has been included in previous cultural resources surveys.

TABLE 1
PREVIOUS CULTURAL RESOURCES INVESTIGATIONS INCLUDING THE PROJECT APE

Author	SCIC # (OR-)	Title	Year
Mason, Roger D. Ph.D., RPA	3607*	<i>Cultural Resources Survey Report for the Le Bard Park Extension Project, Huntington Beach, Orange County, California</i>	2005
Padon, Beth	1836*	<i>Cultural Resources Review for Groundwater Replenishment System Program EIR/Tier I/EIS, Orange County Water District and County Sanitation Districts of Orange County</i>	1998
P&D Consultants, Inc.	4087*	<i>Final Program EIR for the Groundwater Replenishment System</i>	1999
Historic Resource Associates	4256*	<i>The Cultural Resources Study of the SCE – Monroe Pacific Nursery project, Metropcs California, LLC Site no. MLAX04188, 20462 Ravenwood Lane, Huntington Beach, Orange County, California 92646</i>	2012
Ecos Management Criteria, Inc	801*	<i>Phase II Archaeological Studies Prado Basin and the Lower Santa Ana River</i>	1985
Michael Brandman Associates	3682	<i>Direct APE Historic Architectural Assessment for Royal Street Communications, LLC Candidate LA2812A (SCE Lebard Park), SCE Tower M2 T5 Ellis/HB Number 2 South of Ravenwood, Huntington Beach, Orange County, California</i>	2007
Mason, Roger D.	2033*	<i>Research Design for Evaluation of Coastal Archaeological Sites in northern Orange County, California</i>	1987
Statistical Research, Inc	4259*	<i>Cultural Resources Monitoring Report, Orange County Water District Groundwater Replenishment System, Orange County, California</i>	2007
Leonard, III, N. Nelson	270*	<i>Description and Evaluation of Cultural Resources within the U.S. Army Corps</i>	1975
Unknown City of Huntington Beach	4313*	<i>The City of Huntington Beach General Plan</i>	2013

* Indicates study overlaps the Archaeological APE

5.1.2 Previously Recorded Cultural Resources

The records search indicated that nine cultural resources have been previously recorded within a ½-mile radius of the project APE (**Table 2**). No cultural resources have been previously recorded within the project APE. However, two historic-age Southern California Edison (SCE) transmission towers (30-177464 and 30-177612) are located adjacent to the pipeline alignment. Several prehistoric sites have been recorded within the search radius.

TABLE 2
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN ½-MILE OF THE PROJECT APE

Primary # (P-30)	Trinomial (CA-ORA-)	Other Designation	Description	Date Recorded
000058	CA-ORA-58	OR-13	Prehistoric Habitation Site	2003; 1975; and 1949
000076	CA-ORA-76	OR-9	Prehistoric Habitation Site with shell midden	1949
000163	CA-ORA-163	Griset Site	Prehistoric archaeological site consisting of shell midden with associated firepits, burials, stone tools, pottery, and charmstones	1966
000165	CA-ORA-165	Banning Extract, Portion A	Prehistoric archaeological site consisting of stone bowl fragments, lithic fragments, and pestels	1960
000576	CA-ORA-576	-	Prehistoric feature consisting of a single human burial	1974
000845	CA-ORA-845	ACE-SAR-8	Prehistoric archaeological site consisting of a single shell midden	1998; 1979
000906	CA-ORA-906	-	Prehistoric archaeological site consisting of a single shell midden	1998; 1979
001740	CA-ORA-1740H	SRS1759-1	Two historic-period trash scatters	2014
177464	-	SCE Transmission Tower M2-T6, Ellis Huntington Beach No.2	Historic-period steel transmission tower	2012
177467	-	William Lamb Elementary School	Historic-period architectural resource consisting of an Educational Building	2013
177612	-	SCE Transmission Tower M2-T5, Ellis Huntington Beach No.2	Historic-period steel transmission tower	2007

5.1.2.1 Resource 30-177464

SCE Transmission Tower M2-T6 (30-177464), consists of one of a pair of SCE high-lead electrical transmission towers that run general north-south tying into the SCE power plant located along the Pacific Coast Highway (PCH) near Brookhurst Street. The riveted steel, truncated pair of towers were built in 1964 and each stand approximately 121 feet tall, resting on concrete piers, and having three arms with porcelain insulators conducting electricity along wires affixed to each arm. The tower parallels the Santa Ana River flood control channel immediately to the east. This resource was previously evaluated for its historical significance. While the tower appeared to

retain very good integrity of design, materials, location, setting, association, and feeling, this resource was found to be a ubiquitous property type constructed in 1964 to provide additional electrical power to the expanding suburban communities of west Orange County, including Huntington Beach. This resource was not associated with any significant events (Criterion A), nor did it appear to embody distinctive construction techniques or represent the work of a master (Criterion C), and it was recommended not eligible for listing in the National Register (Supernowicz, 2012).

5.1.2.2 Resource 30-177612

SCE Transmission Tower M2-T5 (30-177612) consists of a steel lattice type, 122-foot tall transmission tower. The base of the tower measures 30 feet on each side. The footings are rectangular shaped concrete bases. The transmission tower was constructed with bolted steel L-shaped profiles. The tower was installed by SCE as part of its expansion of electrical service in the Huntington Beach area. The center of the tower base contains a square, concrete block building. The building has a hipped roof with Spanish tile. The transmission tower was constructed as part of the overall development of electrical power in Southern California in the 1940s in the post-World War II period. This resource was previously evaluated for its historical significance. While the tower appeared to retain integrity of design, materials, location, setting, association, feeling, and workmanship, the tower was not associated with any significant events or persons (Criterion A and B), it did not represent distinctive construction techniques or the work of a master (Criterion C), and it was not the principal source of information about this property type and did not have the potential to yield information important in prehistory or history (Criterion D). Thus it was recommended not eligible for the National Register (Crawford, 2007). It has not been previously evaluated for listing in the California Register.

5.2 Historic Map and Aerial Review

Historic maps and aerial photographs were examined in order to provide historical information about the APE and to contribute to an assessment of the APE's archaeological sensitivity. Available maps include: the 1868 U.S. Surveyor General's survey plat map of Townships 5 and 6 South, Range 10 West the 1895 and 1901 Santa Ana 1:62,500 topographic quadrangles; the 1902 Corona 1:125,000 topographic quadrangle; and the 1935 Newport Beach 1:31,600 topographic quadrangles; and 1965 and 1975 Newport Beach 7.5-minute topographic quadrangle. Historic aerial photographs of the APE from 1938, 1953, 1963, 1972, 1994, 2002, 2003, 2004, 2005, 2009, and 2010 were also examined (historicaerials.com, 2016).

The 1868 U.S. Surveyor General's survey plat map shows the APE as being located within Rancho Las Bolsas. The plat map indicates salt marshes within the current location of OCS D Plant No. 2. The available historic maps and aerial photographs indicate that the APE and surrounding area was largely used for agricultural purposes throughout the 20th century, and did not become urbanized until the latter half of the century. The Santa Ana River is shown confined with artificial levees in the 1938 historic aerial photograph. The OCS D Plant No. 1 is visible on the 1953 aerial photograph. The southern portion of OCS D Plant No. 1 was undeveloped until The OCWD GWRS and OCS D Plant No. 2 are not shown on the 1953 aerial. The OCS D Plant No. 2 facility is shown on the 1965 Newport Beach 7.5-minute topographic quadrangle. The

OCWD GWRS facility is shown on the 1972 7.5-minute topographic quadrangle. Based on a detailed review of the 1972 and 2016 aerials of the OCSD Plant No.2, there are structures shown on the 1972 aerial that remain visible on the 2016 aerial photograph.

5.3 Native American Heritage Commission

In 2014, the project environmental documentation, including a cultural resources study, was initiated, and it was put on hold shortly after. However, Native American outreach was completed. The Native American outreach was restarted as part of the project and new project features. The results of previous Native American outreach and current outreach are presented below. Documentation related to Native American outreach is provided in **Appendix C**.

5.3.1 Native American Outreach – 2014

On August 13, 2014, a records search request letter was sent to the NAHC in an effort to determine whether any sacred sites are listed on its Sacred Lands File (SLF) for the project APE. A response was provided on August 22, 2014 that indicated that no Native American cultural resources were identified within a ½-mile radius of the project APE. The NAHC recommended outreach to nine specific tribal authorities who may want to comment on the search request. A letter to the NAHC-listed tribal authorities was mailed on August 26, 2014. Phone calls were made to each of the named tribal members on September 9, 2014 and again on September 18, 2014. Four Tribal representatives responded and provided input (**Table 3**).

5.3.2 Native American Outreach – 2016

On June 2, 2016, a SLF search request letter was sent to the NAHC in an effort to determine whether any sacred sites are listed on SLF for the APE. A response was provided on June 6, 2016 indicating negative results for Native American cultural resources within the project APE. The NAHC recommended outreach to 12 specific tribal authorities who may want to comment on our search request. A letter to the NAHC-listed tribal authorities was mailed on June 20, 2016. Phone calls were made to each of the named tribal members on June 28, 2016. Two Tribal representatives responded and provided input (see Table 3).

5.3.3 AB 52

In August 2016, OCWD sent letters to two Native American representatives who have requested to be informed on activities conducted by the OCWD, under PRC Section 21080.3.1. The OCWD reached out to the Juaneño Band of Mission Indians Acjachemen Nation and Gabrieleno Band of Mission Indians – Kizh Nation. Consultation efforts are currently on-going.

TABLE 3
NATIVE AMERICAN OUTREACH

Contact	Tribe/Organization	Date Letter Mailed	Date of Follow-up Phone Call	Response
2014				
John Tommy Rosas	Tongva Acentral Territorial Tribal Nation	8/27/2014	9/9/2014	John Tommy Rosas was concerned about project because it is located within a sensitive archaeological area. He recommended testing prior to excavation or full time archaeological and Native American monitoring.
Anthony Morales	Gabrielino/Tongva San Gabriel Band of Mission	8/28/2014	9/9/2014	Anthony Morales was concerned about the project because of its location along the Santa Ana River. He suggested archaeological and paleontological monitoring.
Sandonne Goad	Gabrielino/Tongva Nation	8/29/2014	9/9/2014	Referred to Sam Dunlap
Robert F Dorame	Gabrielino Tongva Indians of California Tribal Council	8/30/2014	9/9/2014	No Response
	Gabrielino Tongva Indians of California Tribal Council	8/31/2014	9/18/2014	No Response
Bernie Acuna	Gabrielino-Tongva Tribe	9/1/2014	9/10/2014	No Response
Linda Candelaria	Gabrielino Band of Mission Indians	9/2/2014	9/9/2014	No Response
Andrew Salas	Gabrielino-Tongva Tribe	9/3/2014	9/10/2014	Mr. Salas expressed concerned about the project due to its location in an archaeological sensitive area. Mr. Salas suggested archaeological and Native American monitoring take place to protect and preserve any cultural resources that may be discovered during excavations.
Conrad Acuna	Gabrielino/Tongva Nation	9/4/2014	N/A	No number or email provided.

5. Archival Research

Contact	Tribe/Organization	Date Letter Mailed	Date of Follow-up Phone Call	Response
Sam Dunlap	Gabrielino/Tongva Nation	9/5/2014	9/10/2014	In an email dated September 11, 2014, Mr. Dunlap expressed concerns about construction and recommended archaeological and Native American monitoring.
2016				
Matias Belardes	Juaneno Band of Mission Indians, Acjachemen Nation	6/20/2016	6/28/2016	See response from Joyce Stanfield-Perry
Adolph Sepulveda	Juaneno Band of Mission Indians	6/20/2016	6/28/2016	A voicemail was left; No response to date
Anthony Morales	Gabrielino/Tongva Band of Mission Indians	6/20/2016	6/28/2016	Mr. Morales recommended Native American and archaeological monitoring due to the cultural and spiritual sensitivity of the area
Sonia Johnston	Juaneno Band of Mission Indians	6/20/2016	6/28/2016	An email was sent on June 20, 2016. No response to date
Sandonne Goad	Gabrielino/Tongva Nation	6/20/2016	6/28/2016	See response from Sam Dunlap
Bernie Acuna	Gabrielino-Tongva Tribe	6/20/2016	6/28/2016	A voicemail was left; No response to date
Teresa Romero	Juaneno Band of Mission Indians, Acjachemen Nation	6/20/2016	6/28/2016	A voicemail was left; No response to date
Joyce Stanfield-Perry	Juaneno Band of Mission Indians, Acjachemen Nation	6/20/2016	6/28/2016	Ms. Stanfield-Perry recommended Native American and archaeological monitoring during all ground disturbing activities and in the event of a discovery, that the project be stopped and the mitigation plan be re-evaluated.
Robert Dorame	Gabrielino Tongva Indians of California Tribal Council	6/20/2016	6/28/2016	Mr. Dorame requested an emailed version of the letter ; No response to date
Linda Candelaria	Gabrielino-Tongva Tribe	6/20/2016	6/28/2016	A voicemail was left; No response to date
Sam Dunlap	Gabrielino/Tongva Nation	6/20/2016	6/28/2016	Mr. Dunlap requested a PDF copy of the letter be emailed. The PDF copy was emailed on June 20, 2016. No response to date

Contact	Tribe/Organization	Date Letter Mailed	Date of Follow-up Phone Call	Response
Andy Salas	Gabrielino Band of Mission Indians-Kizh Nation	6/20/2016	6/28/2016	Mr. Salas recommended Native American and archaeological monitoring during all ground disturbing activities
Conrad Acuna	Gabrielino-Tongva Tribe	6/20/2016	N/A	No contact information was listed on the NAHC contact list

5.4 Geoarchaeological Review

Chris Lockwood, Ph.D., R.P.A., conducted a desktop geoarchaeological review of the project APE and vicinity in order to evaluate the potential for buried archaeological resources within the APE. The following section presents the results of Dr. Lockwood's analysis.

5.4.1 Geology and Geomorphology

The APE is located in Fountain Valley and Huntington Beach on the Santa Ana coastal plain in Orange County, California. It is immediately west of a stretch of the Santa Ana River that is confined to a flood control channel.

5.4.1.1 OCSD Plant No. 1

The portion of the APE at OCSD Plant No. 1 is situated on a landform dominated by a low-gradient, sandy alluvial fan that merges with marine deposits at the coast. During the late Pleistocene, sea-level was approximately 120 meters below present level, leaving the vicinity of the APE approximately 9.3 miles (15.0 km) inland. Sea level rose throughout the Holocene, attaining near present conditions by approximately 2,000 to 4,000 years ago. Near surface deposits within the portion of the APE where new piping would be installed between OCSD Plant No. 1 and the existing pipeline are mapped as late Holocene to latest Pleistocene alluvial fan deposits (Morton 2004; Morton and Miller 2006), and consist of gravel, sand, and silt transported and deposited by the Santa Ana River. The APE is covered by a paved surface that likely is underlain by fill and required grading prior to construction.

5.4.1.2 OCWD GWRS Facility

The portion of the APE at OCWD GWRS Facility APE is on the same landform as the portion of the APE at OCSD Plant No. 1 and therefore shares similar geomorphological characteristics. The OCWD GWRS Facility APE has been previously developed.

5.4.1.3 OCSD Plant No. 2

The portion of the APE at OCSD Plant No. 2 is on the distal portion of the alluvial fan that also contains the portion of the APE at the OCSD Plant No. 1 and the portion of the APE at the OCWD GWRS Facility. During the late Pleistocene, the portion of the APE at OCSD Plant No. 2 was approximately 5.5 miles (9.0 km) inland. Historically, the APE consisted largely of salt marsh, which would have been at or just above sea level, and was divided by small channels. The area was for celery agriculture in historic times.

The OCSD Plant No. 2 was initially developed for sanitation in 1954, but the parcel, including the APE, was progressively developed towards the north over the next five decades. The APE is covered with a paved surface that is at elevation 3-4 meters above mean sea level (amsl), suggesting the APE contains several meters of fill overlying the native salt marsh deposits. Some of the fill material may have originated as dredge spoils from channelization of the Santa Ana River. Near surface geology the APE is mapped as late Holocene to latest Pleistocene alluvial fan deposits (Morton 2004; Morton and Miller 2006). These deposits consist of gravel, sand, and silt

transported and deposited by the Santa Ana River. To the south of the APE, the OCSD Plant No. 2 site contains unconsolidated eolian dune deposits.

5.4.2 Soils

5.4.2.1 OCSD Plant No. 1

Soils within the portion of the APE at OCSD Plant No. 1 are mapped as Metz loamy sand (NRCS 2016). The Metz soil series consists of very deep, somewhat excessively drained soils. Metz soils are formed in alluvial parent material on floodplains and alluvial fans with slopes of 0 to 15 percent. Since Metz soils are commonly cultivated, the typical soil pedon possesses a shallow plowzone A-horizon (Ap) overlying multiple layers of sandy loam to sand parent material (C1, C2, C3, C4 horizons). The absence of a B-horizon is likely due to the short geological time that has passed since deposition of the last unit of parent material (C1), although agricultural activity has the potential to have partially disrupted B-horizon development. The sequence of several units of parent material (C-horizon) reflects changes over time in the behavior of the Santa Ana River, including periodic overbank flooding. Because the C-horizons represent vertical accretion (i.e., building) on the floodplain, there is a potential that successive fluvial deposits covered and preserved archaeological resources that had accumulated between depositional events. Therefore, Metz soils are considered to have a high sensitivity for buried archaeological resources.

5.4.2.2 OCWD GWRS Facility

Soils within the portion of the APE at the OCWD GWRS Facility are mapped as Hueneme fine sandy loam (NRCS 2016). The Hueneme soils series are formed on alluvial fans in stratified alluvium derived from sedimentary rock. The typical soil pedon consists of a plowed A-horizon (Ap1, Ap2) developed at the top of relatively unaltered alluvial parent material (C1 through C5) extending more than 70 inches deep. The absence of a B-horizon is likely due to the short geological time that has passed since deposition of parent material, although agricultural activity has the potential to have disrupted the development of a recognizable B-horizon as well. The sequence of several units of parent material (C-horizon) reflects changes over time in the behavior of the Santa Ana River, including periodic overbank flooding. Because the C-horizons represent vertical accretion (i.e., building) on the floodplain, there is a potential that successive fluvial deposits covered and preserved archaeological resources that had accumulated between depositional events. Therefore, Hueneme soils are considered to have a high sensitivity for buried archaeological resources.

5.4.2.3 OCSD Plant No. 2

Soils within the portion of the APE at OCSD Plant No. 2 are mapped primarily as Bolsa silt loam (NRCS 2016). Bolsa series soils are deep, somewhat poorly drained soils developed in mixed alluvium parent material on flood plains and basins. The typical soil pedon consists of a plowed A-horizon (Ap1, Ap2) developed at the top of relatively unaltered alluvial parent material (C1 through C6) extending more than 69 inches deep. The absence of a B-horizon is likely due to the short geological time that has passed since deposition of the parent material, although agricultural activity has the potential to have disrupted the development of a recognizable B-horizon as well. The A-horizon in Bolsa soils ranges from sandy loam to silty clay loam, while the C-horizon is mainly silt loam and silty clay loam but may contain thin strata of sandier material (USDA 1997).

Significantly, many Bolsa soil pedons contain buried A-horizons (paleosols). These buried A-horizons represent periods of time in the past during which landform conditions were relatively stable, and during which deposition and erosion were sufficiently balanced to allow for development and retention of a soil weathering profile. From an archaeological perspective, periods of landform stability, such as those signified by buried A-horizons, should be correlated with the accumulation and preservation of cultural remains. Therefore, Bolsa soils are considered to have a high sensitivity for buried archaeological resources.

5.4.3 Archaeological Potential

Although paved and filled, the portion of the APE at the OCSD Plant No. 2 appears to retain high sensitivity for buried archeological resources. During the latest Pleistocene and Holocene, the geomorphic setting of the portion of the APE at the OCSD Plant No. 2 changed from inland to coastal, and rising sea level resulted in fluvial deposition capable of burying archaeological resources. The portion of the APE at the OCSD Plant No. 2 was largely salt marsh into the early 20th century, but this is an area that would have offered important resources. Owing to its marshy environment, this area may not have been favored for any substantial occupation, but nonetheless is likely to have been visited for resource procurement and could contain artifacts associated with those activities. Additionally, the saturated conditions offered within this setting may have aided in the preservation of relatively rare organic artifacts.

Although paved and filled, the portion of the APE where new piping would be installed between OCSD Plant No. 1 and the existing pipeline appears to retain high sensitivity for buried archaeological resources. During the latest Pleistocene and Holocene rising sea levels reduced fluvial downcutting and increased deposition capable of burying archaeological resources. Historically, the APE was north of a large salt marsh, an area that would have offered important resources. Owing to its proximity to both the salt marsh and the Santa Ana River, the APE may have been selected for occupation, and could contain buried artifacts and features associated with such use.

6. Paleontological Records Search

Dr. Samuel A. McLeod, Ph.D., of the Natural History Museum of Los Angeles County, Vertebrate Paleontology Section, conducted a thorough search on June 16, 2016 of the paleontology collection records for the locality and specimen data for the proposed project. No vertebrate fossil localities lie within the project APE; however, there are localities nearby from the same sedimentary units that may occur subsurface in the project APE. The closest vertebrate fossil locality from Quaternary Terrace deposits is LACM 7366. LACM 7366 produced specimens of marine, freshwater, and terrestrial specimens including leopard shark, *Triakis*, three-spined stickleback, *Gasterosteus*, garter snake, *Thamnophis*, desert shrew, *Notiosorex*, and most prominently, pocket gopher, *Thomomys*. A series of fossil localities, LACM 7422-7425, produced fossil specimens of mammoth, *Mammuthus*, bison, *Bison*, and horse, *Equus*, from Alluvium or dune deposits. The closest vertebrate fossil locality from Quaternary deposits is LACM 6370, which produced a specimen of a fossil horse, *Equus*. Fossil locality LACM 3267 produced a specimen of a fossil elephant, *Proboscidea* in Quaternary deposits. Fossil locality LACM 4219 produced fossil specimens of turtle, *Chelonia*, and camel, *Camelidae*. Vertebrate fossil locality LACM 1339 produced fossil specimens of mammoth, *Mammuthus*, and camel, *Camelidae*, bones from sands approximately 15 feet below the top of the mesa that is overlain by shell bearing silts and sands.

The entire APE has surface deposits of younger Quaternary Alluvium, derived as fluvial deposits from the Santa Ana River to the east of the project APE. No fossil vertebrate localities are located nearby these deposits, and they are unlikely to contain significant vertebrate fossils, at least in the uppermost layers. However, mapped exposures of marine Quaternary Terrace deposits are located in the vicinity of the APE. These or other older Quaternary deposits may occur in the project APE at unknown depth. There is a low potential to uncover significant vertebrate fossil remains during surface grading or shallow excavations in the APE. However, excavations that extend down into the older Quaternary deposits may encounter significant fossil vertebrate specimens.

7. Cultural Resources Survey and Results

A cultural resources pedestrian survey of the APE was conducted on June 16, 2016 by Arabesque Said-Abdelwahed to identify the presence of surface archaeological materials. Intensive-level survey was conducted of areas with greater surface visibility with intervals spaced at 10 meter. Survey of the OCWD GWRS Facility showed that the entire project APE has been previously developed and is completely paved. The buildings that exist on the OCWD site were constructed after 1972. No cultural resources were observed during the survey at the OCWD GWRS Facility.

A pedestrian survey was conducted on June 16, 2016 of the existing pipeline alignment for rehabilitation is located along an OCSD easement corridor that extends west of the Santa Ana River levee. The pipe would connect to existing facilities at the OCSD Plant No. 1 and proposed facilities in OCSD Plant No. 2. The soils were previously disturbed during placement of the existing pipeline located 5 feet below the existing ground surface. The corridor consists of fill material and is elevated approximately 2-4-feet above natural grade (OCWD, pers. comm.). No cultural resources were observed during the survey of the existing pipeline route. Cultural resources were not observed during the survey of the pipe connection locations to existing facilities.

New facilities (Flow Equalization Control/Meter, Flow Equalization Pump Station, OCSD Pipeline Connection, pump station, bypass pipeline, and headgates) would be constructed at the OCSD Plant No. 2. The bypass pipeline, headgates, Flow Equalization Control/Meter, and proposed pump station locations are currently paved and natural ground was not visible. The OCSD Plant No. 2 consists of existing tanks and waste water treatment buildings. Portions of the proposed location for the Flow Equalization Pump Station and OCSD Pipeline Connection are unpaved and were surveyed in regular intervals. No archaeological or historic built resources were observed within the APE. Potential historic-period buildings/structures were noted at the OCSD Plant No. 2 outside of the APE.

A photographic narrative of the survey results can be found in the attached Appendix D.

8. Conclusions and Recommendations

8.1 Archaeological Resources

As a result of this study, no archaeological resources were identified within the APE. However, based on the results of study, the project APE should be considered highly sensitive for subsurface archaeological resources. Native American respondents indicated sensitivity for archaeological resources in the APE and surrounding area given the proximity to the Santa Ana River corridor. In addition, the geoarchaeological review indicates that the portion of the APE within OCSD Plant No. 2 was largely salt marsh into the early 20th century and would have offered important resources. Owing to its marshy environment, this area may not have been favored for any substantial occupation, but nonetheless is likely to have been visited for resource procurement and could contain artifacts associated with those activities. Additionally, the saturated conditions offered within this setting may have aided in the preservation of relatively rare organic artifacts. Since the project includes ground-disturbing activities, there is a potential for discovery of subsurface archaeological deposits that could qualify as historic properties under Section 106 of the NHPA and/or historical or unique archaeological resources under CEQA. This potential impact to unknown archaeological resources is considered significant. The following mitigation measures are recommended to ensure that the project would result in No Historic Properties Affected under Section 106 of the NHPA and less than significant impacts to historical or unique archaeological resources under CEQA.

- 1. Construction Worker Cultural Resources Sensitivity Training:** Prior to earth moving activities, a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior, 2008) shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of cultural resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. OCWD shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.
- 2. Archaeological Monitoring:** Prior to the start of any ground-disturbing activities, OCWD shall retain an archaeological monitor to observe all ground-disturbing activities. Archaeological monitoring shall be conducted by a monitor familiar with the types of archaeological resources that could be encountered and shall work under the direct supervision of the qualified archaeologist. Monitoring may be reduced or discontinued by the qualified archaeologist, in coordination with OCWD, based on observations of subsurface soil stratigraphy and/or the presence of older C-horizon deposits. The monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of a discovery until the qualified archaeologist has evaluated the discovery and determined appropriate treatment. The monitor shall keep daily logs detailing the types of activities and soils observed, and any discoveries. After monitoring has been completed, the qualified archaeologist shall prepare a monitoring report that details the results of

monitoring. The report shall be submitted to OCWD, SCCIC, and any Native American groups who request a copy.

3. **Native American Monitoring:** Prior to issuance of a grading permit and prior to start of any ground-disturbing activities, OCWD shall retain a Native American monitor to observe all ground-disturbing activities. The monitor shall be obtained from a Tribe that is traditionally and culturally affiliated with the area, according to the NAHC list. The monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of a discovery until the qualified archaeologist has evaluated the discovery and determined appropriate treatment. Monitoring may be reduced or discontinued, in coordination with OCWD and the qualified archaeologist, based on observations of subsurface soil stratigraphy and/or the presence of older C-horizon deposits.
4. **Archaeological Discoveries:** In the event of the discovery of archaeological materials, OCWD or its contractor shall immediately cease all work activities in the area (within approximately 100 feet) of the discovery until it can be evaluated by the qualified archaeologist. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone or concrete footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Construction shall not resume until the qualified archaeologist has conferred with OCWD on the significance of the resource. SWRCB shall be afforded the opportunity to determine whether the discovery requires addressing under Section 106 Post-Review Discoveries provisions provided in 36 CFR 800.13.

If it is determined that the discovered archaeological resource constitutes a historic property under Section 106 of the NHPA or a historical resource under CEQA, avoidance and preservation in place shall be the preferred manner of mitigation. Preservation in place maintains the important relationship between artifacts and their archaeological context and also serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, an Archaeological Resources Treatment Plan that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource shall be prepared and implemented by the qualified archaeologist in consultation with OCWD. The appropriate Native American representatives shall be consulted in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond that which is scientifically important, are considered.

5. **Human Remains:** If human remains are encountered, OCWD or its contractor shall halt work in the vicinity (within 100 feet) of the find and contact the Orange County Coroner in accordance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the County Coroner determines that the remains are Native American, the NAHC will be notified in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC Section 5097.98. The NAHC will designate an MLD for the remains per PRC Section 5097.98. Until the landowner has conferred with the MLD, OCWD shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities take into account the possibility of multiple burials.

8.2 Historic Built Resources

As a result of this study, two historic built resources (30-177464 – SCE Transmission Tower M2-T6 Ellis-Huntington Beach No. 2 and 30-177612 – SCE Transmission Tower M2-T5 Ellis/HB No. 2) were identified adjacent to the existing pipeline portion of the project APE. Both resources were previously recommended not eligible for the National Register and therefore do not qualify as historic properties under Section 106 of the NHPA. Neither resource has been previously evaluated for listing in the California Register; however, for the same reasons outlined in Section 5.1.2, these resources do not appear to meet the criteria for listing in the California Register and they do not qualify as historical resources under CEQA. No further work or treatment is recommended for these two resources.

Two potential historic built resources, OCSD Plant No. 1 and OCSD Plant No. 2, were identified as a result of this study. Both plants were initially constructed more than 45 years ago¹, although none of the historic-age buildings/structures appear to be within the APE². Project-related activities OCSD Plant No. 1 will be limited to installation of a below-ground piping to connect to existing facilities. No above-ground facilities would be constructed at this location and existing potential historic buildings/structures are not located near the pipeline. Therefore, the project does not have the potential to result in a significant impact to any potential historic resources on OCSD Plant No. 1. Since above-ground buildings/structures are proposed at OCSD Plant No. 2, a historical evaluation should be prepared for OCSD Plant No. 2.

8.3 Paleontological Resources

Based on the results of the paleontological database search, there are no known fossil localities in the APE and there is a low potential to uncover significant vertebrate fossil remains during surface grading or shallow excavations in the APE. However, excavations that extend down into the older Quaternary deposits may encounter significant fossil vertebrate specimens. Since the project includes ground-disturbing activities, there is a potential for discovery of fossils that may

¹ The California OHP recommends including all resources over 45 years of age in the planning process given the lag time between environmental documentation and project implementation. Generally, resources more than 50 years of age require evaluation for listing in the National Register and California Register to assess impacts to historic properties under Section 106 of the NHPA and historical resources under CEQA.

² The project may require creation of a separate architectural APE in order to adequately address direct/indirect effects to historic built resources.

be considered significant paleontological resources. This potential impact to unknown paleontological resources is considered significant. The following mitigation measures are recommended to ensure that the project would result in less than significant impacts to unique paleontological resources under CEQA.

- 1. Retention of a Qualified Paleontologist:** Prior to the start of any ground-disturbing activities, OCWD shall retain a qualified paleontologist meeting the Society of Vertebrate Paleontology (SVP) Standards (SVP, 2010). The qualified paleontologist shall contribute to any construction worker cultural resources sensitivity training either in person or via a training module provided to the qualified archaeologist. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the project site and the procedures to be followed if they are found. The qualified paleontologist shall also conduct periodic spot checks in order to ascertain when older deposits are encountered and where monitoring shall be required.
- 2. Paleontological Monitoring:** Prior to the start of any ground-disturbing activities, OCWD shall retain a paleontological monitor to observe all ground-disturbing activities within older Quaternary deposits. Paleontological resources monitoring shall be performed by a qualified paleontological monitor, or cross-trained archaeological/paleontological monitor, under the direction of the qualified paleontologist. The monitor shall have the authority to temporarily halt or divert work away from exposed fossils in order to recover the fossil specimens. Monitoring may be reduced or discontinued by the qualified paleontologist, in coordination with OCWD, based on observations of subsurface soil stratigraphy and/or other factors and if the qualified paleontologist determines that the possibility of encountering fossiliferous deposits is low. The monitor shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring a report to be submitted to OCWD and filed with the local repository. Any recovered significant fossils shall be curated at an accredited facility with retrievable storage.
- 3. Paleontological Discoveries:** If construction or other project personnel discover any potential fossils during construction, regardless of the depth or presence of a monitor, work in the vicinity (within 100 feet) of the find shall cease until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment.

9. References

- Armor, Samuel, *History of Orange County, California: with biographical sketches of the leading men and women of the county who have been identified with its earliest growth and development from the early days to the present*, Los Angeles: Historic Record Co., 1921.
- Bancroft, Hubert Howe, *The Works of Hubert Howe Bancroft, Vol. XXIV, History of California, Vol. VII, 1860-1890*, The History Company Publishers, San Francisco, CA, 1890.
- Bean, L.J. and C.R. Smith. 1978. "Gabrieliño." In *Handbook of North American Indians*, Vol. 8: California, edited by R.F. Heizer, 538-549. Washington, DC: Smithsonian Institution.
- Bean, L.J. and F.C. Shipek. 1978. Luiseño. In R.F. Heizer, (ed.) *Handbook of North American Indians*, Vol. 8: California. Washington, D.C. Smithsonian Institution.
- Carlberg, Marvin and Chris Epting, *Postcard History Series: Huntington Beach*, Arcadia Publishing, Charleston, S.C., 2009.
- City of Huntington Beach, General Plan, Environmental Hazards Element, 1996a.
- City of Huntington Beach, History, electronic document accessed at <http://www.huntingtonbeachca.gov/about/history/> on November 2, 2011, 2000.
- Cleland, J.H., A.L. York, and L.M. Willey, *Piecing Together the Prehistory of Landing Hill: A Place Remembered*, EDAW Cultural Publications No. 3, San Diego, CA, 2007.
- County of Orange, Spanish and Mexican Ranchos, electronic document accessed at http://egov.ocgov.com/vgnfiles/ocgov/Clerk-Recorder/Docs/Archives/Spanish_and_Mexican_Ranchos.pdf on November 2, 2011.
- Crawford, K. 2007. DPR Site Form for 30-177612. Record on file at the South Central Coastal Information Center, California State University Fullerton.
- Dixon, Keith A., Early Holocene Human Adaptation on the Southern California Coast: A Summary Report of Investigations at the Irvine Site (CA-ORA-64), Newport Bay, Orange County, California. *Pacific Coast Archaeological Society Quarterly*, 19(3&4):1-84, 1983.
- Drover, C.E., H.C. Koerper, and P. Langenwaller II, Early Holocene Human Adaptation on the Southern California Coast: A Summary Report of Investigations at the Irvine Site (CA-ORA-64), Newport Bay, Orange County, California. *Pacific Coast Archaeological Society Quarterly*, 19(3&4): 1-84, 1983.
- Erlandson, Jon M., *Early Hunter-Gatherers of the California Coast*. Plenum Press, New York, 1994.
- Groundwater Replenishment System. <http://www.gwrsystem.com/>. Website accessed June 2016.
- Historicaerials.com, Aerial photographs for the years 1953, 1963, 1972, 1994, 1995, 2002, 2003, 2004, 2005, 2009, and 2019, online document accessed at <http://www.historicaerials.com/> in July, 2016.

- Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78: Bureau of American Ethnology. Washington, DC: Smithsonian Institution.
- Logan, Dan, Land of Memories: Glimpses of Old Ranchos Survive, *Los Angeles Times*, May 3, 1990.
- Milkovich, Barbara, *A Brief History Of Huntington Beach*, electronic document accessed online at <http://www.hbsurfcity.com/history/history1.htm> on September 1, 2011, 1986.
- Morton, D.M. 2004. Preliminary Digital Geological Map of the 30' X 60' Santa Ana Quadrangle, southern California, version 2.0. U.S. Geological Survey, Open-File Report OF-99-172. Electronic resource, <https://pubs.usgs.gov/of/1999/of99-172/sanana2dmu.pdf>, accessed July 26, 2016.
- Morton, D.M., and Miller, F.K. 2006. Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California. U.S. Geological Survey, Open-File Report OF-2006-1217, scale 1:100,000. Electronic resource, http://ngmdb.usgs.gov/ngm-bin/pdp/zui_viewer.pl?id=14379, accessed July 26, 2016.
- Natural Resources Conservation Service (NRCS). 2016. Web Soil Survey. Electronic resource, <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>, accessed July 26, 2016.
- Oakeshott, G.B., *California's Changing Landscapes, A guide to the Geology of the States*, 2nd Edition. McGraw-Hill Book Company, San Francisco, 1978.
- Orange County Sanitation District. <http://www.ocsd.com/about-ocsd/general-information/history>. Website accessed June 2016.
- Orange County Water District (OCWD). Scott-Roberts, Sandy. Principal Engineer, OCWD. Personal Communication: in person meeting. June 16, 2016.
- Pitt, Leonard, *The Decline of the Californios: A Social History of the Spanish-speaking Californians, 1846-1890*, University of California Press, Berkeley, 1994.
- Raab, L.M., J.L. Porcasi, K. Bradford, and A. Yatsko, Beyond the 50-Percent Solution: Maritime Intensification at Eel Point, San Clemente Island, California. Presented at the Annual Meetings of the Society for California Archaeology, Eureka, 1995.
- Starr, Kevin, *California: A History*, Modern Library, 2007.
- Supernowicz, Sana E. 2012. DPR Site Form for 30-177464. Record on file at the South Central Coastal Information Center, California State University Fullerton.
- United States Department of Agriculture (USDA). 1997. Bolsa Series. Electronic resource, https://soilseries.sc.egov.usda.gov/OSD_Docs/B/BOLSA.html, accessed July 26, 2016.
- Vellanoweth, R.L. and J.H. Altschul, Antiquarians, Culture Historians, and Scientists: The Archaeology of the Bight, in *Islanders and Mainlanders: Prehistoric Context for the*

Southern California Bight, edited by J.H. Altschul and D.G. Grenda, pp. 85-111, SRI Press, Tucson, 2002.

Wallace, W.J. 1955. "A Suggested Chronology for Southern California Coastal Archaeology." *Southwestern Journal of Anthropology* 11(3):214-230.

Warren, C.N. 1968. "Cultural Tradition and Ecological Adaptation on the Southern California Coast In Archaic Prehistory in the Western United States," edited by Cynthia Irwin-Williams, pp. 1-14. Eastern New Mexico University Contributions in Anthropology No. 1.

APPENDIX A

Resumes



Candace R. Ehringer, RPA

Senior Cultural Resources Specialist

EDUCATION

M.A., Anthropology,
California State
University, Northridge

B.A., Anthropology, East
Carolina University

18 YEARS EXPERIENCE

AREAS OF EXCELLENCE

CEQA, NEPA, and
Section 106 proficient

Manages multi-
disciplinary CRM
projects

Strong historic resources
research skills

QUALIFICATIONS

Exceeds Secretary of the
Interior's Standards

CA State BLM Permitted

CONTINUING EDUCATION

AEP Advanced CEQA
Workshop, 2011

ACHP Section 106
Essentials training
course, 2010

Riverside County
certification course, 2009
and 2011

PROFESSIONAL PAPERS & PRESENTATIONS

Ehringer, C. 2014 Dead
Men Do Wear Plaid:
Garments and Notions
for City Cemetery, Los
Angeles, California. Oral
paper presentation at
the Society for Historical
Archaeology 47th Annual
Meeting, Quebec City,
Quebec, Canada.

Candace is a cultural resources project manager with 18 years of experience working across California. Candace manages multi-disciplinary cultural resources projects which include archaeological, historic architectural, and paleontological resources components. She is adept at building teams of specialists from these resource areas that are uniquely qualified for the particular project at hand and has brought hundreds of projects to successful completion for both public agency and private development clients. Candace provides technical and compliance oversight for projects involving archaeological survey, evaluation, and treatment; built environment studies including the documentation and evaluation of buildings, structures, and districts; and paleontological resources survey and sensitivity assessments. She is proficient in the areas of CEQA, NEPA, and Section 106 and routinely provides planning and strategic guidance to clients within the larger scope of state and federal regulations.

Relevant Experience

Los Angeles Unified School District, Historic Resources Evaluation of Five Campuses, Los Angeles, CA. Project Manager. ESA provided historic resources services in support of proposed improvements to George Washington Carver Middle School, Graham Elementary School, Morris K. Hamasaki Elementary School, Van Nuys Elementary School, and West Vernon Elementary School. Candace managed the preparation of historic resources evaluations of the five campuses. ESA identified Van Nuys Elementary School and West Vernon Elementary School as eligible.

California Department of Water Resources, California Aqueduct Bridges Seismic Retrofit, Kern and San Bernardino Counties, CA. Project Manager. Candace managed the completion of an Archaeological Survey Report, a Historical Resources Evaluation Report, a Historic Properties Survey Report, and Finding of Effect document in coordination with the California Department of Transportation (Caltrans) and the California Department of Water Resources (DWR). DWR proposes to remedy structural seismic deficiencies for six existing bridges spanning the California Aqueduct. The California Aqueduct was determined eligible for listing in the National Register under Criteria A and C for its association with irrigation and agricultural development of California and water conveyance engineering and design. The six bridges are considered contributors to the aqueduct system.

Cooper Molera Adobe, Monterey County, CA. Project Manager. The National Trust for Historic Preservation has spearheaded a shared use program that aims to create a revitalized Cooper Molera Adobe. The intent is to balance compelling historic interpretation and education programs with appropriate and complementary commercial uses. Candace co-authored the Archaeological Research Design and

Treatment Plan (ARDTP) and implemented archaeological resources testing and data recovery at the adobe.

California Department of Water Resources, Cantua Creek Stream Group Improvements Project, Fresno County, CA. *Project Manager.* The California Department of Water Resources (DWR) proposes to implement the Cantua Creek Stream Group (CCSG) Improvements Project (Project). The CCSG is composed of five major creeks: Arroyo Hondo, Cantua, Salt, Martinez, and Domengine. The CCSG drains a portion of the Coast Range, located west of the Project area. Presently, floodwaters from the CCSG terminate at four locations (Basins 1-4) along an approximately 13-mile stretch of the San Luis Canal; Martinez Creek flows into Salt Creek about 3 miles upstream of the San Luis Canal. Candace managed the preparation of a Cultural Resource Inventory and Evaluation Report, Finding of Effect, and Paleontological Resources Report in compliance with Section 106 of the National Historic Preservation Act and CEQA. The Bureau of Reclamation was the lead federal agency.

Monterey Regional Desalinization Project, Monterey County, CA. *Senior Cultural Resources Specialist.* In support of the NEPA phase of this project, Candace compiled information on cultural resources located along the proposed alternative routes and authored a technical memo providing recommendations for the route that would pose the least impact to known resources. She has also conducted several surveys of pipeline routes and potential staging areas. The Bureau of Reclamation is the lead federal agency for the project.

Los Angeles Unified School District, Historic Architectural Review of Twelve Campuses, Los Angeles, CA. *Project Manager.* ESA provided historic resources services in support of proposed improvements to 12 campuses. Candace conducted site visits and oversaw the preparation of letter reports assessing the improvements for compliance with the Secretary of the Interior's Standards.

City of Santa Barbara, Mission Creek Lagoon and Laguna Channel Restoration Project, Santa Barbara County, CA. *Project Manager.* Candace managed the preparation of a technical memorandum documenting a preliminary cultural resource study and conducted the field survey. The study identified several cultural resources that could pose a regulatory constraint on the project, including 18 historic built resources. The area was also identified as sensitive for archaeological resources. ESA is currently assisting the City of Santa Barbara identify a design alternative within the Project area that is economically feasible and meets the multiple objectives of flood control, water quality improvement, public safety and access, and habitat restoration.

DWR, Hyatt River Outlet Facility Life Extension Study, Oroville, CA. *Project Manager.* The Hyatt River Outlet Facility Life Extension Study Project involves the construction of outlet tunnels at the Edward Hyatt Power Plant to replace/repair the River outlet. The Edward Hyatt Power Plant (1963-1969) and the Oroville Dam (1961-1967) have been evaluated and appear eligible for listing in the National Register of Historic Places. Candace managed the preparation of a technical report/document which analyzed the existing records/data, assessed potential effects to historic resources by the proposed activities, and concluded with a finding of effect.



Arabesque Said-Abdelwahed, MPP

Senior Associate

EDUCATION

Master of Public Policy,
University of California,
Irvine

B.A., Anthropology,
University of California,
Riverside

8 YEARS EXPERIENCE

PROFESSIONAL AFFILIATIONS

Association of
Environmental
Professionals

Register of Professional
Archaeologists

California Department of
Toxic Substances
Control Registered
Environmental Assessor

Arabesque has professional experience specializing in CEQA and NEPA-level environmental documentation processes with a technical background in cultural resources management, hazards and hazardous materials. She has focused on management and preparation of cultural resources literature reviews, archaeological surveys, archaeological site testing, and data collection. She has also authored cultural resources reports required for environmental analysis. Arabesque also brings significant experience performing Phase I environmental site assessments/environmental site reports. As an ASTM-trained environmental site assessment professional, she has conducted dozens of Phase I ESAs in California. She has managed the preparation of Initial Studies and assisted in the preparation of Environmental Impact Reports.

Relevant Experience

County of Orange, Cerritos Avenue Single-family residential project Initial Study Mitigated Negative Declaration, Deputy Project Manager. Arabesque was the assistant project manager for the preparation of an Initial Study Mitigated Negative Declaration for a proposed 40-unit single-family residential project in unincorporated Orange County. Arabesque was responsible for analysis and content editing.

City of Santa Ana, Heritage Mixed-Use Development project EIR, Senior Associate. Arabesque conducted analysis and prepared the cultural resources and hazards and hazardous materials sections of the Environmental Impact Report.

Indian Wells valley Land Use Management Plan, Kern County, CA, Senior Associate. ESA prepared a Program Environmental Impact Report (PEIR) for the Indian Wells Valley Land Use Management Plan. This plan would evaluate the existing and potential General Plan land use designation changes to support a water balanced approach to land use planning. Arabesque prepared the hazards and hazardous materials section of the EIR.

Sweetwater Authority, Richard A. Reynolds Desalination Plant Phase 2 Expansion Solar Project MND, Chula Vista, CA, Deputy Project Manager. Arabesque was responsible for analysis and preparation of the Initial Study Mitigated Negative Declaration including content editing, schedule maintenance, staff coordination, and budget tracking. The Mitigated Negative Declaration was prepared to address impacts associated with the installation of a solar photovoltaic project on an existing desalination facility.

City of Baldwin Park Specific Plan EIR, Baldwin Park, CA, Senior Associate. ESA

will be providing CEQA documentation and environmental planning services associated with the Baldwin Park Transit Oriented District (TOD) Specific Plan for the Downtown Area of Baldwin Park. This project aims to encourage transit-oriented development, promote active transportation, reduce vehicle miles traveled, and streamline the environmental review process for future projects.

Department of Toxic Substances Control, Santa Susana Field Laboratory EIR, Ventura County, CA, Deputy Project Manager. Arabesque conducted analysis and prepared the utilities section of the PEIR for the Santa Susana Field Laboratory. She also coordinated the preparation of figures for the EIR.

City of Corona Department of Water and Power, Water Facilities Project, Riverside County, CA, Assistant Project Manager. Arabesque assisted in the preparation of the Initial Study and technical reports for the proposed water production wells, pump houses, linear wells water transmission main and water treatment facility.

City of Santa Ana Planning and Building Agency, Park View at Town and Country Manor Project, Orange County, CA, Assistant Project Manager. Arabesque prepared the Final EIR, MMRP, and Findings of Fact for the proposed multi-story building at the existing Town and Country Manor “Continuing Care Residential Community.” Arabesque also supported the Project Director at two Planning Commission meetings and City Council hearing.

The Shopoff Group, L.P. 333 North Prairie Avenue Project, City of Inglewood, Los Angeles County, CA, Assistant Project Manager. Arabesque assisted in the preparation of EIR sections. Arabesque managed the preparation of the Cultural Resources Assessment for the project area.

City of Wildomar, Riverside County, CA, Assistant Project Manager. Arabesque assisted in the preparation of the EIR for the proposed residential project on approximately 9-acres in the City of Wildomar. Arabesque prepared the project description and impact sections including cultural resources, geology and soils, hazards, land use, population and housing.

County of Riverside, Cabazon II Outlet Expansion Project, Riverside County, CA, Project Manager. Arabesque coordinated the preparation of an Initial Study for the proposed outlet mall expansion project in the community of Cabazon, CA. Arabesque also coordinated the preparation of technical studies including a Biological Habitat Assessment and Phase I Cultural Resources Assessment.



Vanessa N. Ortiz, MA, RPA

Cultural Resources Specialist

EDUCATION

M.A., Anthropology
emphasis Archaeology,
California State
University, Los Angeles

B.A. Anthropology,
California State
University, Los Angeles

7 YEARS EXPERIENCE

PROFESSIONAL AFFILIATIONS

Register of Professional
Archaeologists

Society for American
Archaeology

California Cultural
Resources Preservation
Alliance

Society for California
Archaeology

Lambda Alpha Honors
Society

Vanessa is an archaeologist with over seven years of documentation, records searches, survey, excavation, and monitoring experience. She is cross trained in archaeology and paleontology. She has worked extensively throughout California, with particular experience in the context of the Mojave and California Great Basin, prehistoric food processing sites, and historic artifacts.

Relevant Experience

City of Beverly Hills Metro Purple Line Extension, Beverly Hills, CA.

Compliance Coordinator. ESA is retained by the City of Beverly Hills to conduct general compliance monitoring during the advanced utilities relocation phase of construction for the segment of the Metro Purple Line Extension Project located in the City of Beverly Hills. Vanessa oversees ESA monitors, prepare weekly reports and 3-week look-ahead projections based on estimated contractor planned activities. As needed, she issues violations in the event a non-compliance issue is identified. ESA's primary objective is to assist contractors in avoiding non-compliance issues through thorough observation and open communication.

Ballona Wetland Restoration, Playa Del Rey, CA. *Archaeologist.* As part of the development of the restoration plan for the Ballona Wetlands, the ESA project team characterized existing conditions that included water and sediment sampling and analysis. The water and sediment quality sampling was performed to develop and evaluate potential restoration alternatives, and to develop a conceptual plan. The ESA project team compiled existing data on and conducted additional sampling for water and sediment to assess potential effects on the proposed wetland restoration habitat from the use of urban runoff and tidal inflow from Ballona Creek. These data were used to complete a baseline report and restoration alternatives assessment. Vanessa assisted in survey, data recovery and artifact analysis.

Los Angeles Department of Water and Power (LADWP), Path 46 Clearance Surveys, San Bernardino, CA. *Archaeologist.* ESA has been tasked by LADWP to conduct required surveys for the Path 46 Transmission Line Clearances Project. The project's objective is to restore required code clearances to the transmission conductors, which will be accomplished by grading the ground surface underneath the transmission lines to achieve required height consistency. The work is being conducted in compliance with BLM guidelines and federal laws and statutes. Biological, archaeological, and paleontological resource surveys are currently being conducted for the 77 proposed grading areas, staging areas, and roads. Pending reports will document results of the surveys and provide recommendations for minimally invasive access areas, staging areas, and soil distribution. Vanessa provided field surveys and documentation of archaeological sites for submission to the California State Parks.

Los Angeles Department of Water and Power (LADWP), Scattergood Olympic Transmission Line (SOTL) Cultural Resources Monitoring, Los Angeles, CA.

Archaeologist. LADWP is constructing and will operate approximately 11.4 miles of new 230 kilovolt (kv) underground transmission line. LADWP installed 55 vaults and underground conduit for the SOTL Project. ESA provided cultural resources services, including archaeological, Native American, and paleontological monitoring, to fulfill the requirements of the Project EIR mitigation measures for cultural resources. Reports documenting the monitoring findings were submitted at the end of the project. Vanessa provided oversight and scheduling to monitors and assisted in preparing the final report.

California High Speed Rail, Fresno, CA. *Archaeological Monitor.* ESA was retained as a sub-consultant to the Tutor Perini Zachary Parsons Joint Venture. The project consisted of pre-construction surveys for biological and cultural resources, compliance monitoring during construction, and compliance tracking and reporting. Approximately 29 miles in length, the project also included both biological and cultural resources such as the historic Chinatown in downtown Fresno, vernal pool and seasonal wetland habitat and crossings of the San Joaquin and Fresno Rivers. Vanessa provided archaeological monitoring for the Project during construction.

Los Angeles Department of Water and Power, La Kretz Innovation Campus Project, Los Angeles, CA. *Archaeological Monitor and Lab Technician.* ESA provided archaeological monitoring in connection with the La Kretz Innovation Campus Project located in downtown Los Angeles. ESA conducted construction worker cultural resources sensitivity training; archaeological monitoring; and prepared a monitoring report. The Project involved the rehabilitation of the 61,000-square-foot building located at 518-524 Colyton Street, the demolition of the building located at 537-551 Hewitt Street, and the construction of an open space public plaza, and surface parking lot, and involved compliance with Section 106 of the National Historic Preservation Act and consultation with the California State Historic Preservation Officer. Vanessa provided monitoring for the duration of the Project as well as a lab technician during the curation of the artifacts recovered from the Project and co-authored the final cultural report.

Los Angeles Department of Water and Power (LADWP), Silver Lake Reservoir Complex (SLRC) Storage Replacement and River Supply Conduit 1A, Los Angeles County, CA. *Archaeological and Paleontological Monitor.* ESA is providing archaeological and paleontological monitoring for SLRC Storage Replacement and River Supply Conduit 1A Project. As part of this task, ESA conducted construction worker cultural resources sensitivity training and archaeological and paleontological monitoring. A final monitoring report will be prepared at the end of construction. Vanessa was the field monitor on this project.

APPENDIX B

SCCIC Records Search Results *(Confidential, Bound Separately)*

APPENDIX C

Native American Correspondence

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Section 106 Cultural Resources Assessment for the Groundwater Replenishment System Final Expansion

County: Orange

USGS Quadrangle Name: Newport Beach
Townships: 5 and 6 South --- **Range:** 10 West **Section(s):** Multiple

Company: Environmental Science Associates

Contact Person: Arabesque Said, MPP

Street Address: 2121 Alton Parkway, Suite 100, Irvine, CA 92606

Cell 951.310.7031

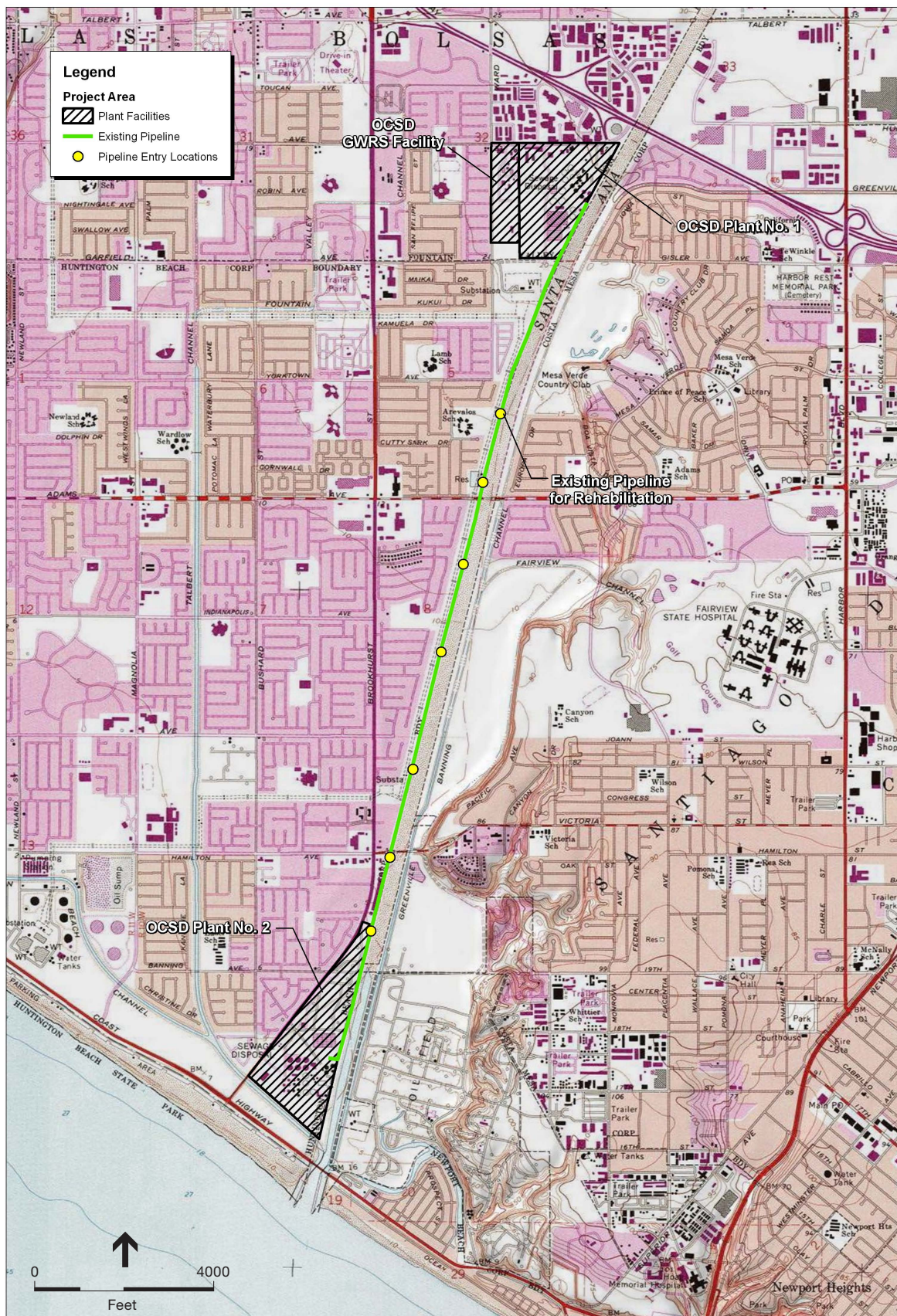
Office Phone: 213.599.4300

Fax: 213.599.4301

Email as needed: aabdelwahed@esassoc.com

SEE ATTACHED MAP

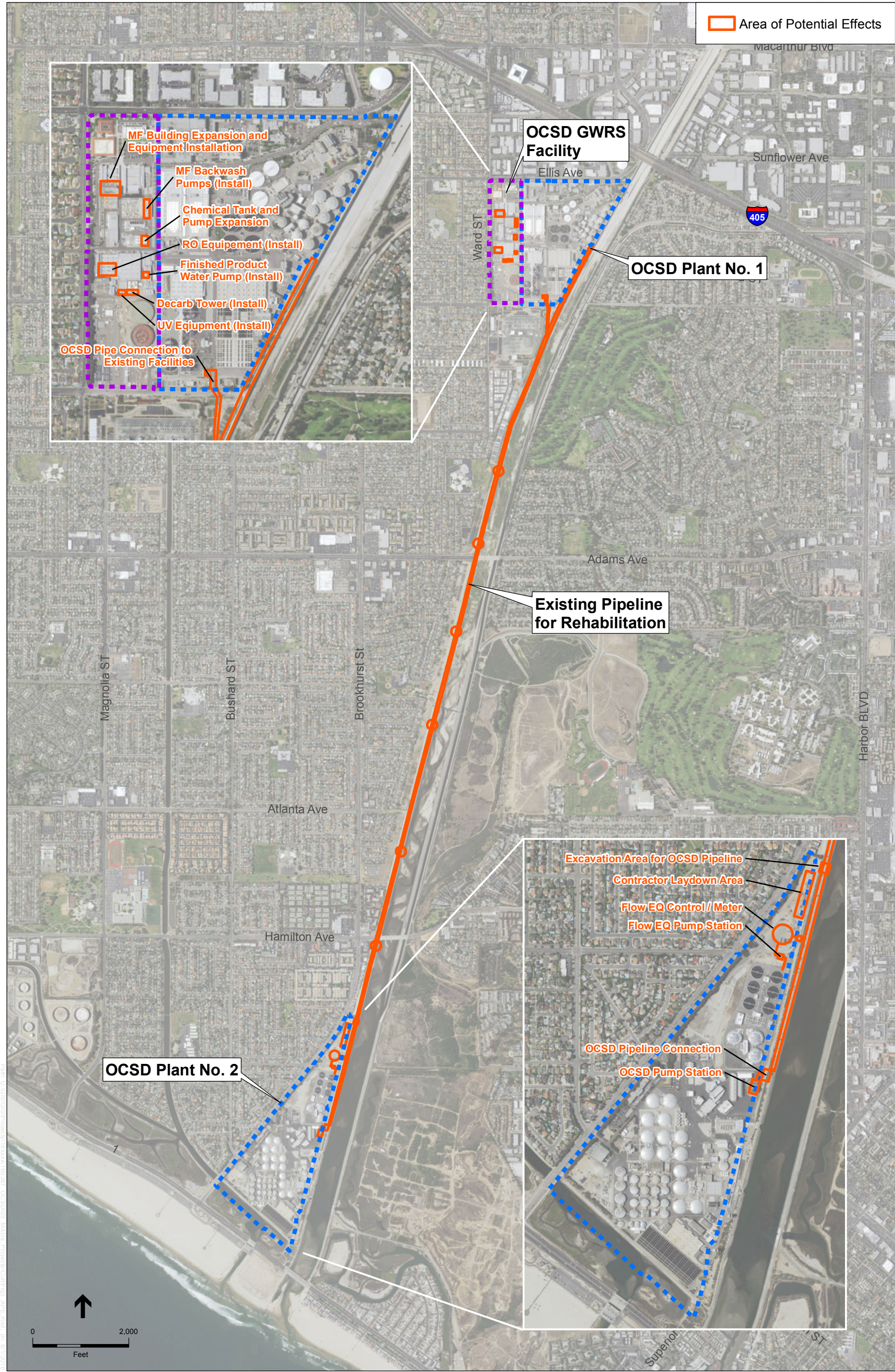
The GWRS Final Expansion Project involves five construction activities; 1) Increasing microfiltration capacity, 2) Increasing reverse osmosis treatment capacity, 3) Increasing ultraviolet treatment capacity, 4) final product water and 5) construction of a pump station, 6) construction of a flow equalization tank and associated appurtenances, and 7) conversion of existing gravity pipeline to a pressurized pipeline. The project is located in multiple sections of Townships 5 and 6 South; Range 10 West of the Newport Beach, CA 7.5' United States Geological Survey Topographic Quadrangle Map.



SOURCE: USGS Newport Beach, CA (1978) 7.5' DRG;

OCWD Groundwater Replenishment System Final Expansion Project . P160387.01

Figure 1
Local Vicinity Map Topographic Base



NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
Fax (916) 373-5471



June 6, 2016

Arabesque Said, MPP
Environmental Science Associates

Sent by Email: aabdelwahed@esassoc.com

RE: Proposed Groundwater Replenishment System Final Expansion, Cultural Resources
Assessment Project, City of Huntington Beach; Newport Beach USGS Quadrangle,
Orange County, California

Dear M. Said:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

I suggest you contact all of the listed Tribes. If they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

**Native American Contact List
Orange County
June 3, 2016**

Juaneno Band of Mission Indians Acjachemen Nation
Chairperson, Matias Belardes
32161 Avenida Los Amigos Juaneno
San Juan Capistrano , CA 92675
(949) 293-8522
(949) 444-4340 (Cell)

Juaneno Band of Mission Indians
Adolph 'Bud' Sepulveda, Vice Chairperson
P.O. Box 25828 Juaneno
Santa Ana , CA 92799
bssepul@yahoo.net
(714) 838-3270
(714) 914-1812 Cell

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 483-3564 Cell

Juaneño Band of Mission Indians
Sonia Johnston, Tribal Chairperson
P.O. Box 25628 Juaneno
Santa Ana , CA 92799
sonia.johnston@sbcglobal.net

(626) 286-1262 Fax

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 Gabrielino Tongva
Los Angeles , CA 90012
sgoad@gabrielino-tongva.com
(951) 807-0479

Gabrielino-Tongva Tribe
Bernie Acuna, Co-Chairperson
1999 Avenue of the Stars, Suite 1100 Gabrielino
Los Angeles , CA 90067
(310) 428-5690 Cell

Juaneno Band of Mission Indians Acjachemen Nation
Teresa Romero, Chairwoman
31411-A La Matanza Street Juaneno
San Juan Capistrano , CA 92675
tromero@juaneno.com
(949) 488-3484
(530) 354-5876 Cell
(949) 488-3294 Fax

Juaneno Band of Mission Indians Acjachemen Nation
Joyce Perry, Tribal Manager
4955 Paseo Segovia Juaneno
Irvine , CA 92612
kaamalam@gmail.com
(949) 293-8522

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490 Gabrielino Tongva
Bellflower , CA 90707
gtongva@verizon.net
(562) 761-6417 Voice/Fax

Gabrielino-Tongva Tribe
Linda Candelaria, Co-Chairperson
1999 Avenue of the Stars, Suite 1100 Gabrielino
Los Angeles , CA 90067
(626) 676-1184 Cell

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person or agency of statutory responsibility as defined in Public Resources Code Sections 21080.3.1 Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Groundwater Replenishment System Final Expansion, Section 106 Cultural Resources Assessment Project, City of Huntington Beach, Newport Beach USGS Quadrangle, Orange County, California.

**Native American Contact List
Orange County
June 3, 2016**

Gabrieleno Band of Mission Indians - Kizh Nation

Andrew Salas, Chairperson

P.O. Box 393

Gabrielino

Covina , CA 91723

gabrielenoindians@yahoo.com

(626) 926-4131

Gabrielino-Tongva Tribe

Conrad Acuna

1999 Avenue of the Stars, Suite 1100

Gabrielino

Los Angeles , CA 90067

Gabrielino /Tongva Nation

Sam Dunlap, Cultural Resources Director

P.O. Box 86908

Gabrielino Tongva

Los Angeles , CA 90086

samdunlap@earthlink.net

(909) 262-9351

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person or agency of statutory responsibility as defined in Public Resources Code Sections 21080.3.1 Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Groundwater Replenishment System Final Expansion, Section 106 Cultural Resources Assessment Project, City of Huntington Beach, Newport Beach USGS Quadrangle, Orange County, California.



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Chairperson Matias Belardes
Juaneño Band of Mission Indians Acjachemen Nation
32161 Avenida Los Amigos
San Juan Capistrano, CA 92675

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Chairperson Belardes :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Chairperson Matias Belardes
June 20, 2016
Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed", written in a cursive style.

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Chairperson Anthony Morales
Gabrieleno/Tongva San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA 91778

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Chairperson Morales, :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Chairperson Anthony Morales

June 20, 2016

Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed". The signature is fluid and cursive, with a large, sweeping initial "A" and a long, horizontal stroke at the end.

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Chaiperson Sandonne Goad
Gabrielino/Tongva Nation
106 1/2 Judge John Aliso St.
#231
Los Angeles, CA 90012

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Chaiperson Goad :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Chairperson Sandonne Goad
June 20, 2016
Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed", written in a cursive style.

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Chairwoman Teresa Romero
Juaneño Band of Mission Indians Acjachemen Nation
31411-A La Matanza Street
San Juan Capistrano, CA 92675

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Chairwoman Romero :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Chairperson Teresa Romero
June 20, 2016
Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed", written in a cursive style.

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Vice Chairperson Adolph "Bud" Sepulveda
Juaneño Band of Mission Indians
P.O. Box 25828
Santa Ana, CA 92799

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Vice Chairperson Sepulveda :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Vice Chairperson Adoplh "Bud" Sepulveda
June 20, 2016
Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed". The signature is fluid and cursive, with a large, sweeping initial "A".

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Tribal Chairperson Sonia Johnston
Juaneño Band of Mission Indians
P.O. Box 25628
Santa Ana, CA 92799

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Tribal Chairperson Johnston :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Tribal Chairperson Sonia Johnston
June 20, 2016
Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed", written in a cursive style.

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Co-Chairperson Bernie Acuna
Gabrielino-Tongva Tribe
1999 Avenue of the Stars
Suite 1100
Los Angeles, CA 90067

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Co-Chairperson Acuna :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Co-Chairperson Bernie Acuna
June 20, 2016
Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed", written in a cursive style.

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Tribal Manager Joyce Perry
Juaneño Band of Mission Indians Acjachemen Nation
4955 Paseo Segovia
Irvine, CA 92612

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Tribal Manager Perry :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Tribal Manager Joyce Perry
June 20, 2016
Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed", written in a cursive style.

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Co-Chairperson Linda Candelaria
Gabrielino-Tongva Tribe
1999 Avenue of the Stars
Suite 1100
Los Angeles, CA 90067

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Co-Chairperson Candelaria :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Co-Chairperson Linda Candelaria
June 20, 2016
Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed", written in a cursive style.

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Chairperson Andrew Salas
Gabrieleno Band of Mission Indians - Kizh Nation
P.O. Box 393
Covina, CA 91723

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Chairperson Salas :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Chairperson Andrew Salas
June 20, 2016
Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed", written in a cursive style.

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Conrad Acuna
Gabrielino-Tongva Tribe
1999 Avenue of the Stars
Suite 1100
Los Angeles, CA 90067

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Conrad Acuna :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Conrad Acuna
June 20, 2016
Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed". The signature is fluid and cursive, with a long, sweeping tail that extends to the right.

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Cultural Resources Director Sam Dunlap
Gabrielino/Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Cultural Resources Director Dunlap :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.



Cultural Resources Director Sam Dunlap
June 20, 2016
Page 2

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arabesque Said-Abdelwahed", written in a cursive style.

Arabesque Said-Abdelwahed, MPP
Community Development



2121 Alton Parkway
Suite 100
Irvine, CA 92606
213.599.4300 phone
213.599.4301 fax

www.esassoc.com

June 20, 2016

Subject: Groundwater Replenishment System Final Expansion Project – D160387.01

Dear Sir or Madam, :

ESA is conducting a cultural resources assessment as part of CEQA-Plus documentation for the Groundwater Replenishment System (GWRS) Final Expansion Project (project) located in the cities of Huntington Beach and Fountain Valley, California. The GWRS is an advanced water treatment facility constructed by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) that supplements local water supplies by providing reliable, high quality source of treated water to recharge the Orange County Groundwater Basin and to protect the Orange County Groundwater Basin from seawater intrusion. The GWRS consists of three major components: an advanced water purification facility and pumping stations, a major pipeline connecting the treatment facilities to existing recharge basins and an existing seawater intrusion barrier. The proposed project would include the construction and operation of an expanded microfiltration treatment facility, expanded Reverse Osmosis Treatment Capacity, expanded ultraviolet light treatment facility at the existing OCWD GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the OCSD Treatment Plant No. 2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. A separate headworks facility and a bypass pipeline would be constructed on OCSD's Plant No. 2 that will segregate the brine flows from the typical influent domestic wastewater flows to Plant No. 2. As seen on the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 south; Range 10 West of the United States Geologic Survey (USGS) Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, ESA has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicate that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.

We would appreciate your comments identifying any sensitive sites in or near the project area that you may be aware of, any concerns or issues pertinent to this project, or the names of others who may be interested in this project. Thank you for your cooperation on this matter. If you have any questions or comments, please contact me at 949.870.1524 (cell) or aabdelwahed@esassoc.com.

Sincerely,



Name of recipient

Date

Page 2

A handwritten signature in blue ink, appearing to read 'Arabesque Said-Abdelwahed', is positioned above the printed name.

Arabesque Said-Abdelwahed, MPP
Community Development

Native American Contact Log

Individual Contacted/Affiliation	Number/Email	Letter Sent	Response	Follow-up Phone Call	Response	Action Item
Matias Belardes, Chairperson Juaneno Band of Mission Indians, Acjachemen Nation	949.293.8522	20-Jun-16	No response	28-Jun-16	SW: Ms Joyce Stanfield-Perry (Cultural Resources); Recommends NA and Arch monitoring during all ground disturbing activities. She also recommends that in the event of a discovery, the project stop and the tribe and agency evaluates the mitigation plan	-
Adolph Sepulveda, Vice-Chaiperson Juaneno band of Mission Indians	714.914.1812 / bssepul@yahoo.com	20-Jun-16	No response	28-Jun-16	Left VM. No response to date.	-
Anthony Morales, Chairperson, Gabrielino/Tongva San Gabriel Band of Mission Indians	(626) 483-3564 / GTTribalcouncil@aol.com	20-Jun-16	No response	28-Jun-16	SW: Mr. Anthony Morales stated that he is very familiar with the Project area and its vicinity, and he knows it to be very sensitive for Native American cultural resources. Mr. Anthony Morales also stated that although that Project is located within an industrial area, any ground disturbances may still encounter previously undisturbed soils and resources and should therefore be closely monitored by a Native American monitor.	-
Sonia Johnston, Tribal Chairperson Juaneno Band of Mission Indians	sonia.johnston@sbcglobal.net	20-Jun-16	No response	28-Jun-16	Sent email. No response to date	
Sandone Goad, Chairperson, Gabrielino/Tongva Nation	(951) 807-0479 / sgoad@gabrielino=tongva.com	20-Jun-16	No response	28-Jun-16	SW: Ms. Sadonne Goad stated that she would prefer to forward all comments to San Dunlap; No response from Mr. Dunlap	
Bernie Acuna, Co-Chairperson, Gabrielino/Tongva Tribe	310.428.5690	20-Jun-16	No response	28-Jun-16	Left VM. No response to date.	-
Teresa Romero, Chairwoman, Juaneno Band of Mission Indians Acjachemen Nation	949.488.3484 / tromero@juaneno.com	20-Jun-16	No response	28-Jun-16	Left VM. No response to date.	-
Joyce Perry, Tribal Manager, Juaneno Band of Mission Indians Acjachemen Nation	949.293.8522 / kaamalam@gmail.com	20-Jun-16	No response	28-Jun-16	SW: Ms Joyce Stanfield-Perry (Cultural Resources); Recommends NA and Arch monitoring during all ground disturbing activities. She also recommends that in the event of a discovery, the project stop and the tribe and agency evaluates the mitigation plan	
Robert Dorame, Tribal Chair, Grarielino Tongva Indians of California Tribal Council	562.761.6417 / gtongva@verizon.net	20-Jun-16	No response	28-Jun-16	SW: Mr Dorame and he requested an email copy of the letter for review	Forwarded a PDF copy of letter to gtongva@verizon.net on June 28, 2016
Linda Candelaria, Co-Chairperson, Gabrielino Tongva Tribe	626.676.1184	20-Jun-16	No response	28-Jun-16	Left VM. No response to date.	
Andrew Salas, Chairperson, Gabrielino Band of Mission Indians - Kizh Nation	(626) 926-4131 / gabrielinoindians@yahoo.com	20-Jun-16	No response	28-Jun-16	SW: Mr. Salas and he recommends that NA and Arch monitoring be conducted during all ground disturbance. He also requested a digital copy of the letter that was sent out.	Forwarded a PDF copy of letter to andysalas07@yahoo.com on June 28, 2016
Sam Dunlap, Cultural Resources Director, Gabrielino/Tongva Nation	(909) 262-9351 / samdunlap@earthlink.net	20-Jun-16	No response	28-Jun-16	SW: Mr Dunlap and he requested an email copy of the letter for review	Forwarded a PDF copy of the letter to samdunlap@earthlink.net on June 28, 2016
Conrad Acuna, Gabrielin-Tongva Tribe		20-Jun-16	No response			No contact info provide by the NAHC
SW = Spoke with						
VM = Voicemail						



GABRIELENO BAND OF MISSION INDIANS - KIZH NATION

Historically known as The San Gabriel Band of Mission Indians

Recognized by the State of California as the aboriginal tribe of the Los Angeles basin

Dear Vanessa Ortiz,

*"The project locale lies in an area where the Ancestral & traditional territories of the Kizh(Kitc) Gabrieleno villages, adjoined and overlapped with each other, at least during the Late Prehistoric and Protohistoric Periods. The homeland of the Kizh (Kitc) Gabrielenos , probably the most influential Native American group in aboriginal southern California (Bean and Smith 1978a:538), was centered in the Los Angeles Basin, and reached as far east as the San Bernardino-Riverside area. The homeland of the Serranos was primarily the San Bernardino Mountains, including the slopes and lowlands on the north and south flanks. Whatever the linguistic affiliation, Native Americans in and around the project area exhibited similar organization and resource procurement strategies. Villages were based on clan or lineage groups. Their home/ base sites are marked by midden deposits, often with bedrock mortars. During their seasonal rounds to exploit plant resources, small groups would migrate within their traditional territory in search of specific plants and animals. Their gathering strategies often left behind signs of special use sites, usually grinding slicks on bedrock boulders, at the locations of the resources. Therefore in order to protect our resources we're requesting one of our experienced & certified **Native American monitors as well as Arceo-Monitoring** to be on site during any & all ground disturbances (this includes but is not limited to pavement removal, pot-holing or auguring, boring, grading, excavation and trenching).*

In all cases, when the NAHC states there are "No" records of sacred sites" in the subject area; they always refer the contractors back to the Native American Tribes whose tribal territory the project area is in. This is due to the fact, that the NAHC is only aware of general information on each California NA Tribe they are "NOT" the "experts" on our Tribe. Our Elder Committee & Tribal Historians are the experts and is the reason why the NAHC will always refer contractors to the local tribes.

In addition, we are also often told that an area has been previously developed or disturbed and thus there are no concerns for cultural resources and thus minimal impacts would be expected. I have two major recent examples of how similar statements on other projects were proven very inadequate. An archaeological study claimed there would be no impacts to an area adjacent to the Plaza Church at Olvera Street, the original Spanish settlement of Los Angeles, now in downtown Los Angeles. In fact, this site was the Gabrieleno village of Yangna long before it became what it is now today. The new development wrongfully began their construction and they, in the process, dug up and desecrated 118 burials. The area that was dismissed as culturally sensitive was in fact the First Cemetery of Los Angeles where it had been well documented at the Huntington Library that 400 of our Tribe's ancestors were buried there along with the founding families of Los Angeles (Pico's, Sepulveda's, and Alvarado's to name a few). In addition, there was another inappropriate study for the development of a new sports complex at Fedde Middle School in the City of Hawaiian Gardens could commence. Again, a village and burial site were desecrated despite their mitigation measures. Thankfully, we were able to work alongside the school district to quickly and respectfully mitigate a mutually beneficial resolution.

Given all the above, the proper thing to do for your project would be for our Tribe to monitor ground disturbing construction work. Native American monitors and/or consultant can see that cultural resources are treated appropriately from the Native American point of view. Because we are the lineal descendants of the vast area of Los Angeles and Orange Counties, we hold sacred the ability to protect what little of our culture remains. We thank you for taking seriously your role and responsibility in assisting us in preserving our culture.

With respect,

Please contact our office regarding this project to coordinate a Native American Monitor to be present. Thank You

Andrew Salas, Chairman
Cell (626) 926-4131

Addendum: clarification regarding some confusions regarding consultation under AB52:

Andrew Salas, Chairman

Nadine Salas, Vice-Chairman

Christina Swindall Martinez, secretary

Albert Perez, treasurer I

Martha Gonzalez Lemos, treasurer II

Richard Gradias, Chairman of the council of Elders

AB52 clearly states that consultation must occur with tribes that claim traditional and cultural affiliation with a project site. Unfortunately, this statement has been left open to interpretation so much that neighboring tribes are claiming affiliation with projects well outside their traditional tribal territory. The territories of our surrounding Native American tribes such as the Luiseno, Chumash, and Cahuilla tribal entities. Each of our tribal territories has been well defined by historians, ethnographers, archaeologists, and ethnographers – a list of resources we can provide upon request. Often, each Tribe as well educates the public on their very own website as to the definition of their tribal boundaries. You may have received a consultation request from another Tribe. However we are responding because your project site lies within our Ancestral tribal territory, which, again, has been well documented. What does Ancestrally or Ancestral mean? The people who were in your family in past times, Of, belonging to, inherited from, or denoting an ancestor or ancestors <http://www.thefreedictionary.com/ancestral>. . If you have questions regarding the validity of the “traditional and cultural affiliation” of another Tribe, we urge you to contact the Native American Heritage Commission directly. Section 5 section 21080.3.1 (c) states “...the Native American Heritage Commission shall assist the lead agency in identifying the California Native American tribes that are traditionally and culturally affiliated with the project area.” In addition, ***please see the map below.***

CC: NAHC

APPENDIX 1: Map 1-2; Bean and Smith 1978 map.

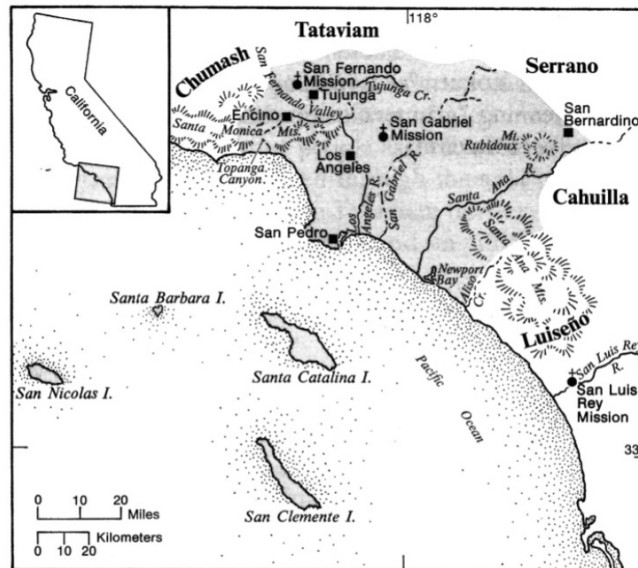


Fig. 1. Tribal territory.

The United States National Museum's Map of Gabrielino Territory:

Bean, Lowell John and Charles R. Smith
1978 Gabrielino IN *Handbook of North American Indians, California*, Vol. 8, edited by R.F. Heizer, Smithsonian Institution Press, Washington, D.C., pp. 538-549

Andrew Salas, Chairman
Albert Perez, treasurer I

Nadine Salas, Vice-Chairman
Martha Gonzalez Lemos, treasurer II

Christina Swindall Martinez, secretary
Richard Gradias, Chairman of the council of Elders

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Section 106 Cultural Resources Assessment for the Groundwater Replenishment System Phase 3 Expansion

County: Orange

USGS Quadrangle Name: Newport Beach
Townships: 5 and 6 South --- **Range:** 10 West **Section(s):** Multiple

Company: FirstCarbon Solutions

Contact Person: Arabesque Said, MPP

Street Address: 220 Commerce, Suite 200

Cell 951.310.7031

Office Phone: 714.508.4100

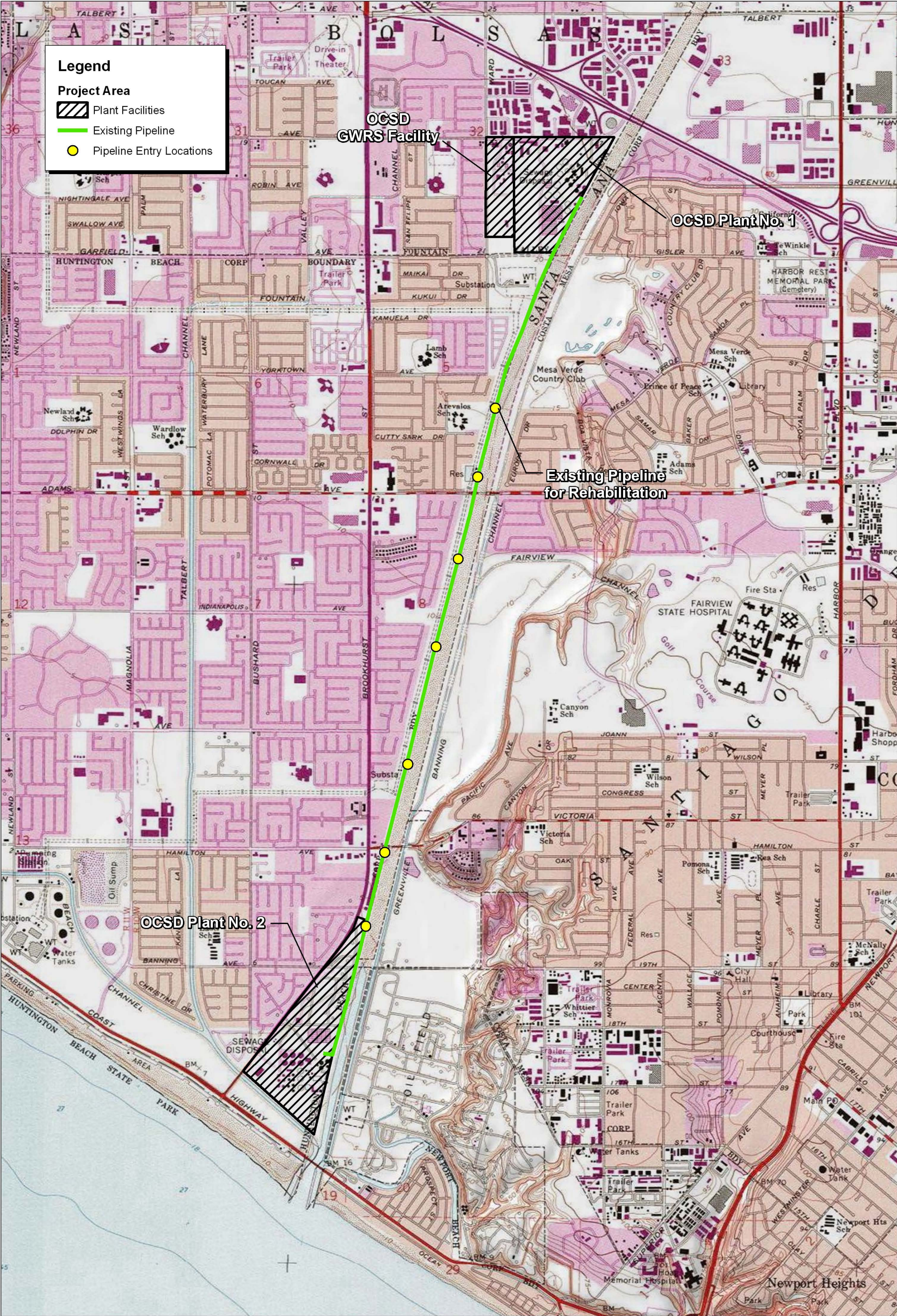
Fax: 714.508.4110

Email as needed: asaid@brandman.com

SEE ATTACHED MAP

The project will include the construction and operation of an expanded microfiltration treatment facility, expanded reverse osmosis treatment facility, expanded ultraviolet light treatment facilities at existing Orange County Sanitations District's Treatment Plant No.2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. Excavation will be necessary to access the pipeline.

FCS' project 0435.0043



Source: TOPO! USGS Newport Beach, CA (1978) 7.5' DRG.

STATE OF CALIFORNIA

Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95891
(916) 373-3710
Fax (916) 373-5471



August 22, 2014

Arabesque Said
First Carbon Solutions
220 Commerce, Suite 200
Irvine, CA 92602

Sent by Fax: (714) 508-4110
Number of Pages: 2

Re: Project Section 106 Cultural Resources Assessment for the Groundwater Replenishment
System Phase 3 Expansion, Orange County.

Dear Mr. Said,

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3712.

Sincerely,

A handwritten signature in cursive script that reads "Katy Sanchez".

Katy Sanchez
Associate Government Program Analyst

Native American Contact List

Orange County
August 21, 2014

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin. ✓

tattnlaw@gmail.com
(310) 570-6567

Gabrielino Tongva

Gabrielino-Tongva Tribe
Linda Candelaria, Co-Chairperson

P.O. Box 180
Bonsall, CA 92003
palmssprings9@yahoo.com
(626) 676-1184 Cell
(760) 636-0854 Fax

Gabrielino/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson ✓

P.O. Box 693
San Gabriel, CA 91778

GTTribalcouncil@aol.com
(626) 483-3564 Cell
(626) 286-1262 Fax

Gabrielino Tongva

Gabrielino Band of Mission Indians
Andrew Salas, Chairperson ✓

P.O. Box 393
Covina, CA 91723
gabrielinoindians@yahoo.
(626) 926-4131

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson ✓

106 1/2 Judge John Aiso St.
Los Angeles, CA 90012

sgoad@gabrielino-tongva.com
(951) 807-0479

Gabrielino Tongva

Gabrielino-Tongva Tribe
Conrad Acuna,

P.O. Box 180
Bonsall, CA 92003
(760) 636-0854 Fax

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources

P.O. Box 490
Bellflower, CA 90707

gtongva@verizon.net
(562) 761-6417 Voice/Fax

Gabrielino Tongva

Gabrielino /Tongva Nation
Sam Dunlap, Cultural Resources Director ✓

P.O. Box 86908
Los Angeles, CA 90086
samdunlap@earthlink.net
(909) 262-9351

Gabrielino Tongva

Gabrielino-Tongva Tribe
Bernie Acuna, Co-Chairperson

P.O. Box 180
Bonsall, CA 92003

bacuna1@gabrielinotribe.org
(619) 294-6660 Office
(310) 428-5690 Cell

Gabrielino

(760) 636-0854 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Section 106 Cultural Resources Assessment for the Groundwater Replenishment System Phase 3 Expansion, Orange County.



August 27, 2014

Subject: **Proposed Groundwater Replenishment System Phase 3 Expansion, 5650 East Avenue, Cities of Huntington Beach and Fountain Valley, California (Newport Beach, CA USGS Topographic Quadrangle).**

Dear

FirstCarbon Solutions is completing CEQA-Plus documentation associated with the proposed Groundwater Replenishment System Phase 3 Expansion Project located in the Cities of Huntington Beach and Fountain Valley, California. The proposed project will include the construction and operation of an expanded microfiltration treatment facility, expanded reverse osmosis treatment facility, expanded ultraviolet light treatment facilities at the existing Orange County Water District GWRS Facility in Fountain Valley. The project would also include construction and operation of a new pump station at the Orange County Sanitation District's (OCSD) Treatment Plant No.2 in Huntington Beach and the renovation of an existing water supply pipeline located on the west side of the Santa Ana River. As seen in the attached topographic map, the project area is located within multiple sections of Townships 5 and 6 South; Range 10 West of the USGS Newport Beach, CA 7.5' topographic quadrangle.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) considers the effects a project may have on historic properties. The definition of "historic properties" can include properties of traditional religious and cultural significance to Native American groups. To determine whether the proposed project may impact any historic properties, including traditional cultural properties, FCS has reviewed background information and consulted with the Native American Heritage Commission (NAHC). Our records search at the South Central Coastal Information Center (SCCIC), indicated that there are no known cultural resources in the Area of Potential Effect (APE). A record search of the NAHC's Sacred Land File has failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC has listed you as a tribal contact for this project.

FCS is sending this letter to ask if you have any information or concerns about this proposed project and/or if the proposed project may have an impact on cultural resources that are important to you. Please

Please feel free to contact me at **714.508.4100** or via email at asaid@brandman.com if you have any questions or would like to discuss the project in more detail.

Sincerely,

A handwritten signature in cursive script, appearing to read "Arabesque Said-Abdelwahed".

Arabesque Said-Abdelwahed, MPP
Assistant Project Manager
FirstCarbon Solutions
220 Commerce, Suite 200
Irvine, CA 92602
Enclosures: Map of Survey Area

Call log

[illegible]

APPENDIX D

Photographs of the Project APE



Photo 1: Excavation area and laydown area for OCSD Pipeline (pipeline entry location 1) at the northern portion of the OCSD Plant No. 2 Facility; facing north.



Photo 2: View to the east of the rip rap and Santa Ana River Trail from the contractor laydown area.



Photo 3: Pump Station and Pipe Connection; facing west.



Photo 4: Headgates and Bypass Pipeline location.



Photo 5: Flow EQ Pump Station. The surficial soils were previously disturbed during construction of the OCSD Plant No. 2.



Photo 6: Flow EQ Meter/Control.



Photo 7: Second pipeline entry location along the OCSD easement corridor.



Photo 8: Santa Ana River Trail situated on the levee; view facing east.



Photo 9: Third pipeline entry location along the OCSD easement corridor; facing south.



Photo 10: Fourth pipeline entry location along the OCSD easement corridor; facing south.



Photo 11: Fifth pipeline entry location along the OCSD easement corridor; facing north.



Photo 12: Sixth pipeline entry location along the OCSD easement corridor; facing southwest.



Photo 13: Seventh pipeline entry location along the OCSD easement corridor; facing west.



Photo 14: Eighth pipeline entry location along the OCSD easement corridor.



Photo 15: OCSD Pipe Connection to existing facilities. Note the area is paved and previously disturbed during construction of the facility.



Photo 16: MF Building Expansion location; facing west.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Carlsbad Fish And Wildlife Office

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

Phone: (760) 431-9440 Fax: (760) 431-5901

<http://www.fws.gov/carlsbad/>



In Reply Refer To:

January 15, 2018

Consultation Code: 08ECAR00-2018-SLI-0417

Event Code: 08ECAR00-2018-E-00945

Project Name: Groundwater Replenishment System Conveyance Facilities Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Project Summary

Consultation Code: 08ECAR00-2018-SLI-0417

Event Code: 08ECAR00-2018-E-00945

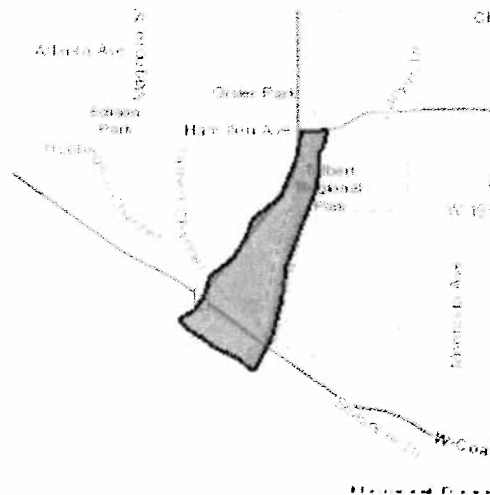
Project Name: Groundwater Replenishment System Conveyance Facilities Project

Project Type: WATER SUPPLY / DELIVERY

Project Description: Construction of two three million gallon flow equalization tanks, pump station, meter vault and associated piping

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/33.63957869587394N117.95710129548047W>



Counties: Orange, CA

Endangered Species Act Species

There is a total of 11 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Pacific Pocket Mouse <i>Perognathus longimembris pacificus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8080	Endangered

Birds

NAME	STATUS
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Coastal California Gnatcatcher <i>Poliophtila californica californica</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Light-footed Clapper Rail <i>Rallus longirostris levipes</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6035	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Western Snowy Plover <i>Charadrius alexandrinus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

Crustaceans

NAME	STATUS
San Diego Fairy Shrimp <i>Branchinecta sandiegonensis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6945	Endangered

Flowering Plants

NAME	STATUS
Salt Marsh Bird's-beak <i>Cordylanthus maritimus ssp. maritimus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6447	Endangered
San Diego Button-celery <i>Eryngium aristulatum var. parishii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5937	Endangered
Ventura Marsh Milk-vetch <i>Astragalus pycnostachyus var. lanosissimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1160	Endangered

Critical habitats

There are 2 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Coastal California Gnatcatcher <i>Poliophtila californica californica</i> https://ecos.fws.gov/ecp/species/8178#crithab	Final
Western Snowy Plover <i>Charadrius alexandrinus nivosus</i> https://ecos.fws.gov/ecp/species/8035#crithab	Final

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species

¹ are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service.

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Pacific Pocket Mouse <i>Perognathus longimembris pacificus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8080	Endangered

IPaC Information for Planning and Consultation **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

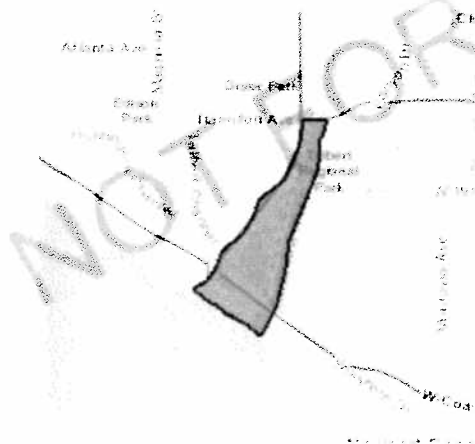
Project information

NAME

Groundwater Replenishment System Conveyance Facilities Project

LOCATION

Orange County, California

**DESCRIPTION****Construction**

of two three million gallon flow equalization tanks, pump station, meter vault and associated piping

Local office

Carlsbad Fish And Wildlife Office

San Diego Button-celery *Eryngium aristulatum* var. *parishii* **Endangered**
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/5937>

Ventura Marsh Milk-vetch *Astragalus pycnostachyus* var. *lanosissimus* **Endangered**
 There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/1160>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Coastal California Gnatcatcher <i>Poliophtila californica californica</i> https://ecos.fws.gov/ecp/species/8178#crithab	Final
Western Snowy Plover <i>Charadrius alexandrinus nivosus</i> https://ecos.fws.gov/ecp/species/8035#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds
<http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the USEWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list **will** be found in your project area. To see maps of where birders and the general public have sighted birds in and around your project area, visit E-bird tools such as the E-bird data mapping tool (search for the name of a bird on your list to see specific locations where that bird has been reported to occur within your project area over a certain timeframe) and the E-bird Explore Data Tool (perform a query to see a list of all birds sighted in your county or region and within a certain timeframe). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Allen's Hummingbird *Selasphorus sasin*

Breeds Feb 1 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9637>

Ashy Storm-petrel *Oceanodroma homochroa*

Breeds May 1 to Jan 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/7237>

Bald Eagle *Haliaeetus leucocephalus*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Black Oystercatcher *Haematopus bachmani*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9591>

Breeds Apr 15 to Oct 31

Black Skimmer *Rynchops niger*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/5234>

Breeds May 20 to Sep 15

Black Storm-petrel *Oceanodroma melania*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 15 to Nov 15

Black Swift *Cypseloides niger*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8878>

Breeds Jun 15 to Sep 10

Black Turnstone *Arenaria melanocephala*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Black-chinned Sparrow *Spizella atrogularis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9447>

Breeds Apr 15 to Jul 31

Black-footed Albatross *Phoebastria nigripes*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8033>

Breeds elsewhere

Black-vented Shearwater *Puffinus opisthomelas*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Burrowing Owl *Athene cunicularia*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9737>

Breeds Mar 15 to Aug 31

California Thrasher *Toxostoma redivivum*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Jul 31

Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Costa's Hummingbird <i>Calypte costae</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9470	Breeds Jan 15 to Jun 10
Craveri's Murrelet <i>Synthliboramphus craveri</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Gull-billed Tern <i>Gelochelidon nilotica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9501	Breeds May 1 to Jul 31
Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Lewis's Woodpecker <i>Melanerpes lewis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Long-billed Curlew <i>Numenius americanus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511	Breeds elsewhere
Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere

Mountain Plover *Charadrius montanus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3638>

Nuttall's Woodpecker *Picoides nuttallii*

Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9410>

Oak Titmouse *Baeolophus inornatus*

Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9656>

Pink-footed Shearwater *Puffinus creatopus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-throated Loon *Gavia stellata*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Rufous Hummingbird *elasphorus rufus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8002>

Scripps's Murrelet *Synthliboramphus scrippsi*

Breeds Feb 20 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Short-billed Dowitcher *Limnodromus griseus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9480>

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Whimbrel *Numenius phaeopus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9483>

Willet *Tringa semipalmata*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit *Chamaea fasciata*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds.

Probability of Presence (📊)

Each green bar represents the bird's relative probability of presence in your project's counties during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (📅)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (📊)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the counties of your project area. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

Birds

NAME	STATUS
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Coastal California Gnatcatcher <i>Polioptila californica californica</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Light-footed Clapper Rail <i>Rallus longirostris levipes</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6035	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered
Western Snowy Plover <i>Charadrius alexandrinus nivosus</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened

Crustaceans

NAME	STATUS
San Diego Fairy Shrimp <i>Branchinecta sandiegonensis</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6945	Endangered

Flowering Plants

NAME	STATUS
Salt Marsh Bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>maritimus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6447	Endangered

<https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>

CALIFORNIA DEPARTMENT OF

FISH and WILDLIFE RareFindVersion 5.2.14 | User: cnddb_gov | [Logout](#)

Query	Results	Occurrence Details	Reports	BIOS	Export/Import	Help
-------	---------	--------------------	---------	------	---------------	------

Query tool for CNDDDB | [License Agreement](#)

☐ **Elements**

Change visible columns Print View Clear Search Boxes 4 elements (5 total occurrences) r

Image Search	Scientific Name	Common Name	Taxonomic Group
	Case sensitive filter...		
g+ / Ca	Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	Dicots
g+ / Ca	Eryngium aristulatum var. parishii	San Diego button-celery	Dicots
g+ / Ca	Nasturtium gambelii	Gambel's water cress	Dicots
g+ / Ca	Orcuttia californica	California Orcutt grass	Monocots

☐ **Occurrences by Selected Element**

Change visible columns 1 occurrence returned from a total of 30 occurrences for CHLOROPY

<input type="checkbox"/>	Occ Number	EOn dx	Date Element Last Seen	Date Site Last Seen	Presence	
<input type="checkbox"/>	37	17502	2015-04-15	2015-04-15	Presumed Extant	Specific bounded a



626 Wilshire Boulevard
Suite 1100
Los Angeles, CA 90017
213.599.4300 **phone**
213.599.4301 **fax**

www.esassoc.com

February 1, 2018

Daniel Bott, Principal Planner
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Subject: Supplemental Cultural Resources Letter Report for the Plant No. 2 Groundwater Replenishment System Conveyance Facilities Project

Dear Mr. Bott:

This report supplements the Phase I Cultural Resources Study that was prepared for the *Groundwater Replenishment System (GWRS) Final Expansion Project and the Water Production Enhancement Project* that was prepared by Environmental Science Associates (ESA) in August 2016. This supplement addresses the modifications to the Water Production Enhancement Project currently known as the Plant No. 2 Groundwater Replenishment System Conveyance Facilities Project. This supplement includes an overview of the proposed changes to the project, brief description of the previous cultural resources study, a sensitivity assessment of the proposed new location, analysis of the potential for impacts to cultural resources, and recommendations to reduce impacts, if deemed necessary. This report is required to analyze the potential significant impacts to historical and unique archaeological resources under the California Environmental Quality Act (CEQA) and potential adverse effects to historic properties under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (Section 106).

Introduction

ESA was retained by the Orange County Water District (OCWD or District) to prepare a Cultural Resources Study for the proposed Groundwater Replenishment System (GWRS) Final Expansion Project and the Water Production Enhancement Project (Project), located in the cities of Huntington Beach and Fountain Valley, California. Since completion of the Phase I Study in 2016 (Ehringer et al., 2016), the District has proposed a revision to the Water Production Enhancement Project that is located on the Orange County Sanitation District (OCSD) Plant No. 2, and the revised project is known as the Plant No. 2 Groundwater Replenishment System Conveyance Facilities Project. The original Water Production Enhancement Project included one flow equalization tank with a pump station, conveyance piping, flow meter vault and contractor laydown and staging area located in the northern portion of the OCSD Plant No. 2. The revised Project would include modification to the location of the proposed facilities, but will still be located in the northern portion of the OCSD Plant No. 2. The revised project includes two 3-million-gallon equalization tanks compared to the original one 6-million-gallon equalization tank, and includes a pump station, conveyance piping, valving and metering connections as well as a contractor laydown and staging area similar to the original project within the northern portion of the OCSD Plant No. 2. The two new proposed tanks would be located in an area originally proposed for construction



Mr. Bott
February 1, 2018
Page 2

staging, and the construction staging area would be located between the original location of the equalization tank and the proposed location of the two equalization tanks. The proposed pump station would be located adjacent to the two proposed equalization tanks compared to the original location near the originally proposed equalization tank. The conveyance piping, valving and metering connections would be located in similar areas as the original locations. As stated above, the proposed facilities are located in the northern portion of the OCSD Plant No. 2 in the City of Huntington Beach, California. Specifically, the new location is located within an un-sectioned portion of the Las Bolsas land grant on the Newport Beach, California 7.5-minute U.S. Geological Survey topographic map (**Figure 1**).

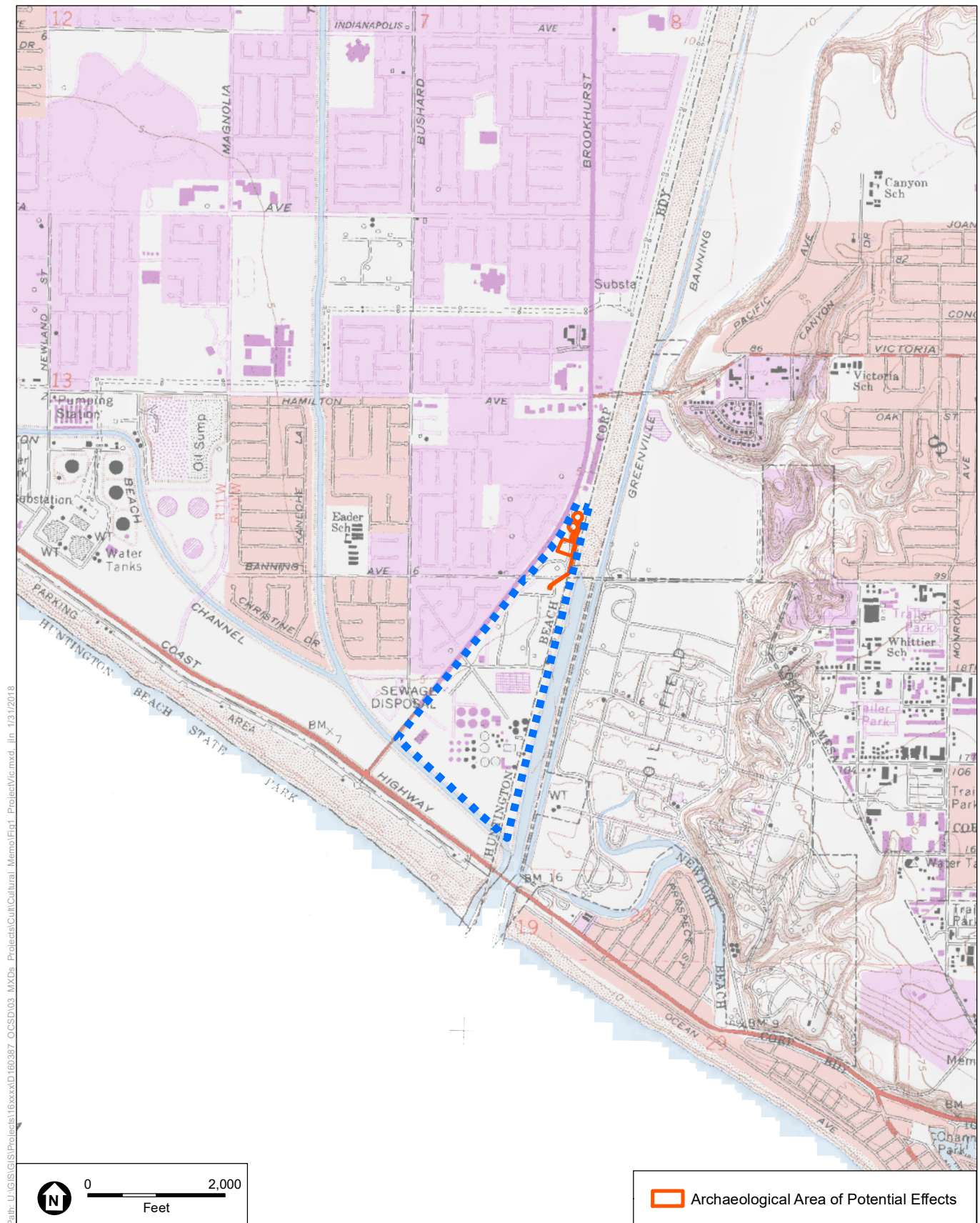
Since the Project is eligible for federal funding, it is subject to Section 106. As such, this letter report was prepared in compliance with both CEQA and Section 106. The Area of Potential Effects (APE) includes the two equalization tanks, pump station, conveyance piping, valving and metering connections as well as a contractor laydown and staging area (**Figure 2**). A comparison of the previous and new proposed location of the equalization tanks, pump station, conveyance piping, valving and metering connections as well as a contractor laydown and staging area is depicted in **Figure 3**. The original location is shown on the left and the new location is shown on the right. The new location is within the area that was previously analyzed.

Summary of Previous Cultural Resources Study

In 2016, ESA prepared a Phase I Cultural Resources Study for improvements within the Project area (Ehringer et al., 2016). This study included a records search at the California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC), Sacred Lands File search at the California Native American Heritage Commission (NAHC), Native American outreach, historic map and aerial photography review, geo-archaeological review, paleontological records search at the Natural History Museum of Los Angeles County (LACM), and pedestrian survey. In 2017, ESA also conducted a Historic Resources Assessment of Plant No. 2 for OCSD (Taylor, 2017), which is available under separate cover.

SCCIC Records Search

A records search was conducted on June 21, 2016 at the SCCIC, located at California State University, Fullerton, which included the APE. The records search included a review of all recorded cultural resources within a 0.5-mile radius, as well as a review of cultural resource reports on file. The results of the SCCIC records search indicated that the APE had not been previously surveyed for cultural resources. The results also indicated that two cultural resources (CA-ORA-845 and CA-ORA-906) had been previously documented within a 0.5-mile radius of the



SOURCE: Newport Beach Topoquad; County of Orange Water District, 2016.

Plant No. 2 GWRS Conveyance Facilities Project

Figure 1
Project Location



SOURCE: DigitalGlobe, 2016 (Aerial); County of Orange Water District, 2016.

Plant No. 2 GWRS Conveyance Facilities Project

Figure 2
Area of Potential Effects



SOURCE: ESRI

Plant No. 2 GWRs Conveyance Facilities Project

Figure 3
Site Plan Comparison

Mr. Bott
February 1, 2018
Page 6

APE (**Table 1**). Both resources are prehistoric archaeological sites.

TABLE 1
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN ½-MILE OF THE PROJECT APE

Primary # (P-30)	Trinomial (CA-ORA-)	Other Designation	Description	Date Recorded
000845	CA-ORA-845	ACE-SAR-8	Prehistoric archaeological site consisting of a single shell midden	1998; 1979
000906	CA-ORA-906	-	Prehistoric archaeological site consisting of a single shell midden	1998; 1979

Native American Outreach

A search of the Sacred Lands File was completed by the NAHC for the Project on June 6, 2016, which included the APE. The results indicated there were no documented Native American cultural resources within the APE. Attached to the response was a list of Native American groups and representatives who may have knowledge of Native American resources within the Project area, which included the APE. Letters were mailed on June 20, 2016 and follow-up phone calls were conducted on June 28, 2016. Three Tribes responded to express their concerns (**Table 2**). Anthony Morales of the Gabrieleno/Tongva Band of Mission Indians indicated that the area is cultural and spiritually sensitive and recommended Native American and archaeological monitoring. Joyce Stanfield-Perry of the Juaneño Band of Mission Indians, Acjachemen Nation, recommended Native American and archaeological monitoring during all ground disturbing activities and in the event of a discovery, that the project be stopped and the mitigation plan re-evaluated. Anthony Salas of the Gabrieleño Band of Mission Indians-Kizh Nation recommended Native American and archaeological monitoring during all ground disturbing activities.

TABLE 2
NATIVE AMERICAN OUTREACH

Contact	Tribe/Organization	Date Letter Mailed	Date of Follow-up Phone Call	Response
Matias Belardes	Juaneño Band of Mission Indians, Acjachemen Nation	6/20/2016	6/28/2016	See response from Joyce Stanfield-Perry
Adolph Sepulveda	Juaneño Band of Mission Indians	6/20/2016	6/28/2016	A voicemail was left; No response to date



Mr. Bott
February 1, 2018
Page 7

TABLE 2
NATIVE AMERICAN OUTREACH

Contact	Tribe/Organization	Date Letter Mailed	Date of Follow-up Phone Call	Response
Anthony Morales	Gabrielino/Tongva Band of Mission Indians	6/20/2016	6/28/2016	Mr. Morales recommended Native American and archaeological monitoring due to the cultural and spiritual sensitivity of the area
Sonia Johnston	Juaneno Band of Mission Indians	6/20/2016	6/28/2016	An email was sent on June 20, 2016. No response to date
Sandonne Goad	Gabrielino/Tongva Nation	6/20/2016	6/28/2016	See response from Sam Dunlap
Bernie Acuna	Gabrielino-Tongva Tribe	6/20/2016	6/28/2016	A voicemail was left; No response to date
Teresa Romero	Juaneno Band of Mission Indians, Acjachemen Nation	6/20/2016	6/28/2016	A voicemail was left; No response to date
Joyce Stanfield-Perry	Juaneno Band of Mission Indians, Acjachemen Nation	6/20/2016	6/28/2016	Ms. Stanfield-Perry recommended Native American and archaeological monitoring during all ground disturbing activities and in the event of a discovery, that the project be stopped and the mitigation plan be re-evaluated.
Robert Dorame	Gabrielino Tongva Indians of California Tribal Council	6/20/2016	6/28/2016	Mr. Dorame requested an emailed version of the letter ; No response to date
Linda Candelaria	Gabrielino-Tongva Tribe	6/20/2016	6/28/2016	A voicemail was left; No response to date
Sam Dunlap	Gabrielino/Tongva Nation	6/20/2016	6/28/2016	Mr. Dunlap requested a PDF copy of the letter be emailed. The PDF copy was emailed on June 20, 2016. No response to date

TABLE 2
NATIVE AMERICAN OUTREACH

Contact	Tribe/Organization	Date Letter Mailed	Date of Follow-up Phone Call	Response
Andy Salas	Gabrielino Band of Mission Indians-Kizh Nation	6/20/2016	6/28/2016	Mr. Salas recommended Native American and archaeological monitoring during all ground disturbing activities
Conrad Acuna	Gabrielino-Tongva Tribe	6/20/2016	N/A	No contact information was listed on the NAHC contact list

Geoarchaeological Review

Chris Lockwood, Ph.D., R.P.A., conducted a desktop geoarchaeological review of the Project and vicinity, which included the APE, in order to evaluate the potential for buried archaeological resources.

Geology and Geomorphology

The APE is on the distal portion of an alluvial fan. During the late Pleistocene, the APE was approximately 5.5 miles (9.0 km) inland. Historically, the area consisted largely of salt marsh, which would have been at or just above sea level, and was divided by small channels. The area was used for celery agriculture in historic times. OCSD Plant No. 2 was initially developed for sanitation in 1954, but the parcel, including the APE, was progressively developed towards the north over the next five decades. The APE is covered with a paved surface that is at elevation 3-4 meters above mean sea level (amsl), suggesting the APE contains several meters of fill overlying the native salt marsh deposits. Some of the fill material may have originated as dredge spoils from channelization of the Santa Ana River. Near surface geology of the APE is mapped as late Holocene to latest Pleistocene alluvial fan deposits (Morton, 2004; Morton and Miller, 2006). These deposits consist of gravel, sand, and silt transported and deposited by the Santa Ana River. To the south of the APE, the OCSD Plant No. 2 site contains unconsolidated eolian dune deposits.

Soils

Soils within the portion of the APE are mapped primarily as Bolsa silt loam (NRCS, 2016). Bolsa series soils are deep, somewhat poorly drained soils developed in mixed alluvium parent material on flood plains and basins. The typical soil pedon consists of a plowed A-horizon (Ap1, Ap2) developed at the top of relatively unaltered alluvial parent material (C1 through C6) extending more than 69 inches deep. The absence of a B-horizon is likely due to the short geological time that has passed since deposition of the parent material, although agricultural activity has the potential to have disrupted the development of a recognizable B-horizon as well. The A-horizon in Bolsa soils

ranges from sandy loam to silty clay loam, while the C-horizon is mainly silt loam and silty clay loam but may contain thin strata of sandier material (USDA 1997).

Significantly, many Bolsa soil pedons contain buried A-horizons (paleosols). These buried A-horizons represent periods of time in the past during which landform conditions were relatively stable, and during which deposition and erosion were sufficiently balanced to allow for development and retention of a soil weathering profile. From an archaeological perspective, periods of landform stability, such as those signified by buried A-horizons, should be correlated with the accumulation and preservation of cultural remains. Therefore, Bolsa soils are considered to have a high sensitivity for buried archaeological resources.

Archaeological Potential

Although paved and filled, the APE appears to retain high sensitivity for buried archeological resources. During the latest Pleistocene and Holocene, the geomorphic setting of the APE changed from inland to coastal, and rising sea level resulted in fluvial deposition capable of burying archaeological resources. The APE was largely salt marsh into the early 20th century, but this is an area that would have offered important resources. Owing to its marshy environment, this area may not have been favored for any substantial occupation, but nonetheless is likely to have been visited for resource procurement and could contain artifacts associated with those activities. Additionally, the saturated conditions offered within this setting may have aided in the preservation of relatively rare organic artifacts.

Paleontological Resources Records Search

A records search of the paleontology collection records for the locality and specimen data for the Project was conducted by LACM on June 16, 2016, which included the APE. No vertebrate fossil localities were identified within the APE; however, there were localities nearby from the same sedimentary units that may occur subsurface. These included fossil locality LACM 7366, which produced specimens of marine, freshwater, and terrestrial specimens including leopard shark, *Triakis*, three-spined stickleback, *Gasterosteus*, garter snake, *Thamnophis*, desert shrew, *Notiosorex*, and most prominently, pocket gopher, *Thomomys*. A series of fossil localities, LACM 7422-7425 produced fossil specimens of mammoth, *Mammuthus*, bison, *Bison*, and horse, *Equus*, from Alluvium or dune deposits. Fossil locality LACM 6370 produced a specimen of a fossil horse, *Equus*. Fossil locality LACM 3267 produced a specimen of a fossil elephant, *Proboscidea* in Quaternary deposits. Fossil locality LACM 4219 produced fossil specimens of turtle, *Chelonia*, and camel, *Camelidae*. Fossil locality LACM 1339 produced fossil specimens of mammoth, *Mammuthus*, and camel, *Camelidae*, bones from sands approximately 15 feet below the top of the mesa that is overlain by shell bearing silts and sands.

The entire APE has surface deposits of younger Quaternary Alluvium, derived as fluvial deposits from the Santa Ana River to the east of the APE. No fossil vertebrate localities are located nearby these deposits, and they are unlikely to contain significant vertebrate fossils, at least in the uppermost layers. However, mapped exposures of marine Quaternary Terrace deposits are located within the vicinity of the APE. These or other older Quaternary

Mr. Bott
February 1, 2018
Page 10

deposits may occur in the APE at unknown depth. There is a low potential to uncover significant vertebrate fossil remains during surface grading or shallow excavations in the APE. However, excavations that extend down into the older Quaternary deposits may encounter significant fossil vertebrate specimens.

Cultural Resources Survey

A cultural resources pedestrian survey was conducted for the Project on June 16, 2016 by Arabesque Said-Abdelwahed, which included the APE. The purpose of the survey was to identify the presence of surface archaeological materials. Intensive-level survey was conducted of areas with greater surface visibility with intervals spaced at 10 meter. No archaeological or historic built resources were observed within or adjacent to the APE.

Conclusions and Recommendations

Archaeological and Historical Resources

No archaeological or historic built resources are located within or adjacent to the APE. However, the APE should be considered highly sensitive for subsurface archaeological resources. Native American respondents indicated sensitivity for archaeological resources in the APE and surrounding area given the proximity to the Santa Ana River corridor. In addition, the geo-archaeological review indicates that the APE was largely salt marsh into the early 20th century and would have offered important resources to prehistoric inhabitants. Owing to its marshy environment, this area may not have been favored for any substantial occupation, but nonetheless is likely to have been visited for resource procurement and could contain artifacts associated with those activities. Additionally, the saturated conditions offered within this setting may have aided in the preservation of relatively rare organic artifacts. Since the Project includes ground-disturbing activities, there is a potential for discovery of subsurface archaeological deposits that could qualify as historic properties under Section 106 and/or historical or unique archaeological resources under CEQA. This potential impact to unknown archaeological resources is considered significant. The following mitigation measures are recommended to ensure that no historic properties will be adversely affected and there will be a less than significant impact to historical or unique archaeological resources.

- 1) **Construction Worker Cultural Resources Sensitivity Training:** Prior to earth moving activities, a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior, 2008) shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of cultural resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. OCWD shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.
- 2) **Archaeological Monitoring:** Prior to the start of any ground-disturbing activities, OCWD shall retain an archaeological monitor to observe all ground-disturbing activities. Archaeological monitoring shall be

conducted by a monitor familiar with the types of archaeological resources that could be encountered and shall work under the direct supervision of the qualified archaeologist. Monitoring may be reduced or discontinued by the qualified archaeologist, in coordination with OCWD, based on observations of subsurface soil stratigraphy and/or the presence of older C-horizon deposits. The monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of a discovery until the qualified archaeologist has evaluated the discovery and determined appropriate treatment. The monitor shall keep daily logs detailing the types of activities and soils observed, and any discoveries. After monitoring has been completed, the qualified archaeologist shall prepare a monitoring report that details the results of monitoring. The report shall be submitted to OCWD, SCCIC, and any Native American groups who request a copy.

- 3) **Native American Monitoring:** Prior to issuance of a grading permit and prior to start of any ground-disturbing activities, OCWD shall retain a Native American monitor to observe all ground-disturbing activities. The monitor shall be obtained from a Tribe that is traditionally and culturally affiliated with the area, according the NAHC list. The monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of a discovery until the qualified archaeologist has evaluated the discovery and determined appropriate treatment. Monitoring may be reduced or discontinued, in coordination with OCWD and the qualified archaeologist, based on observations of subsurface soil stratigraphy and/or the presence of older C-horizon deposits.
- 4) **Archaeological Discoveries:** In the event of the discovery of archaeological materials, OCWD or its contractor shall immediately cease all work activities in the area (within approximately 100 feet) of the discovery until it can be evaluated by the qualified archaeologist. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone or concrete footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Construction shall not resume until the qualified archaeologist has conferred with OCWD on the significance of the resource. SWRCB shall be afforded the opportunity to determine whether the discovery requires addressing under Section 106 Post-Review Discoveries provisions provided in 36 CFR 800.13.

If it is determined that the discovered archaeological resource constitutes a historic property under Section 106 of the NHPA or a historical resource under CEQA, avoidance and preservation in place shall be the preferred manner of mitigation. Preservation in place maintains the important relationship between artifacts and their archaeological context and also serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource. Preservation in place may be accomplished

by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, an Archaeological Resources Treatment Plan that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource shall be prepared and implemented by the qualified archaeologist in consultation with OCWD. The appropriate Native American representatives shall be consulted in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond that which is scientifically important, are considered.

- 5) **Human Remains:** If human remains are encountered, OCWD or its contractor shall halt work in the vicinity (within 100 feet) of the find and contact the Orange County Coroner in accordance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the County Coroner determines that the remains are Native American, the NAHC will be notified in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC Section 5097.98. The NAHC will designate an MLD for the remains per PRC Section 5097.98. Until the landowner has conferred with the MLD, OCWD shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities take into account the possibility of multiple burials.

Paleontological Resources

Based on the results of the paleontological database search, there are no known fossil localities in the APE and there is a low potential to uncover significant vertebrate fossil remains during surface grading or shallow excavations in the APE. However, excavations that extend down into the older Quaternary deposits may encounter significant fossil vertebrate specimens. Since the project includes ground-disturbing activities, there is a potential for discovery of fossils that may be considered significant paleontological resources. This potential impact to unknown paleontological resources is considered significant. The following mitigation measures are recommended to ensure that the project would result in less than significant impacts to unique paleontological resources under CEQA.

1. **Retention of a Qualified Paleontologist:** Prior to the start of any ground-disturbing activities, OCWD shall retain a qualified paleontologist meeting the Society of Vertebrate Paleontology (SVP) Standards (SVP, 2010). The qualified paleontologist shall contribute to any construction worker cultural resources sensitivity training either in person or via a training module provided to the qualified archaeologist. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the project site and the procedures to be followed if they are found. The qualified paleontologist shall also conduct periodic spot checks in order to ascertain when older deposits are encountered and where monitoring shall be required.

- 2. Paleontological Monitoring:** Prior to the start of any ground-disturbing activities, OCWD shall retain a paleontological monitor to observe all ground-disturbing activities within older Quaternary deposits. Paleontological resources monitoring shall be performed by a qualified paleontological monitor, or cross-trained archaeological/paleontological monitor, under the direction of the qualified paleontologist. The monitor shall have the authority to temporarily halt or divert work away from exposed fossils in order to recover the fossil specimens. Monitoring may be reduced or discontinued by the qualified paleontologist, in coordination with OCWD, based on observations of subsurface soil stratigraphy and/or other factors and if the qualified paleontologist determines that the possibility of encountering fossiliferous deposits is low. The monitor shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring report to be submitted to OCWD and filed with the local repository. Any recovered significant fossils shall be curated at an accredited facility with retrievable storage.
- 3. Paleontological Discoveries:** If construction or other project personnel discover any potential fossils during construction, regardless of the depth or presence of a monitor, work in the vicinity (within 100 feet) of the find shall cease until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment.



Mr. Bott
February 1, 2018
Page 14

If you have any questions about the information contained in this report, please do not hesitate to contact me. I can be reached by phone at 831.737.7438 or by email at cehringer@esassoc.com.

Sincerely,

A handwritten signature in black ink that reads "Candace Ehringer". The signature is fluid and cursive, with the first name "Candace" being more prominent than the last name "Ehringer".

Candace Ehringer, M.A., RPA

References Cited

- Ehringer, Candace, Arabesque Said-Abdelwahed, and Vanessa Ortiz. 2016. *Groundwater Replenishment System Final Expansion Project and Water Production Enhancement Project: Phase I Cultural Resources Study*, prepared for Orange County Water District, prepared by Environmental Science Associates, August 2016.
- Morton, D.M. 2004. Preliminary Digital Geological Map of the 30' X 60' Santa Ana Quadrangle, southern California, version 2.0. U.S. Geological Survey, Open-File Report OF-99-172. Electronic resource, <https://pubs.usgs.gov/of/1999/of99-172/sanana2dmu.pdf>, accessed July 26, 2016.
- Morton, D.M., and Miller, F.K. 2006. Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California. U.S. Geological Survey, Open-File Report OF-2006-1217, scale 1:100,000. Electronic resource, http://ngmdb.usgs.gov/ngm-bin/pdp/zui_viewer.pl?id=14379, accessed July 26, 2016.
- Taylor, Christian. 2018. *Orange County Sanitation District Plant No. 2: Historical Resources Assessment*, prepared for Orange County Sanitation District, prepared by Environmental Science Associates, February 2018.

Appendix D Plant No. 2 GWRS Conveyance Facilities Project

Noise and Vibration Technical Report

Prepared for
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

January 2018



PLANT NO. 2 GWRS CONVEYANCE FACILITIES PROJECT

Noise and Vibration Technical Report

Prepared for
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

January 2018

2121 Alton Parkway
Suite 100
Irvine, CA 92606
949.753.7001
www.pcrnet.com

Irvine	Sacramento
Los Angeles	San Diego
Oakland	San Francisco
Orlando	Santa Monica
Pasadena	Seattle
Petaluma	Tampa
Portland	Woodland Hills

160387.04



Table of Contents

Plant No. 2 GWRS Conveyance Facilities Project Noise and Vibration Technical Report

	<u>Page</u>
Executive Summary.....	ES-1
1.0 Introduction.....	1
1.1 Project Location	1
2.0 Project Description	3
3.0 Environmental Setting	3
3.1 Noise Principles and Descriptors.....	3
3.2 Noise Exposure and Community Noise	6
3.3 Effects of Noise on People.....	8
3.4 Noise Attenuation.....	9
3.5 Fundamentals of Vibration.....	10
3.6 Existing Conditions.....	11
3.7 Regulatory Setting.....	13
4.0 Impacts and Mitigation Measures	19
4.1 Methodology.....	19
4.2 Thresholds of Significance.....	20
4.3 Project Impacts	22
5.0 Conclusion	28
6.0 References	28

Appendices

- A. Ambient Noise Data
- B. Construction Noise Calculations
- C. Off-Site Construction Traffic Noise Calculations

List of Figures

1	Vicinity Location Map	2
2	Proposed Site Plan	4
3	Decibel Scale and Common Noise Sources	7
4	Noise Measurement Locations	12

List of Tables

1	OCSD Flow Equalization Tank, Pump Station, & Pipeline/Meter Vault Construction Equipment Mix	3
2	OCSD Flow Equalization Tank, Pump Station, & Pipeline/Meter Vault Worker & Daily Trip Summary	5
3	Summary of ambient noise measurement	13
4	Construction Vibration Damage Criteria	14
5	Groundborne Vibration Impact Criteria for General Assessment	15
6	Caltrans Vibration Damage Potential Threshold Criteria	16
7	Caltrans Vibration Annoyance Potential Criteria	17
8	Huntington Beach Exterior Noise Standards	18
9	Construction Equipment Noise Levels	22
10	Estimated Construction Noise Levels at Offsite Sensitive Uses	23
11	Vibration Source Levels for Construction Equipment	25
12	Groundborne Vibration Levels at Offsite Sensitive Uses Compared to Caltrans' and FTA Vibration Damage Potential Threshold	26

EXECUTIVE SUMMARY

The purpose of this Noise and Vibration Technical Report is to evaluate the potential short- and long-term noise and vibration impacts resulting from implementation of the proposed Orange County Water District's (OCWD) Groundwater Replenishment System (GWRS) Conveyance Facilities Project. The project site is located at the Orange County Sanitation District (OCSD) Plant 2 wastewater treatment facility site at 22212 Brookhurst Street within the City of Huntington Beach (City). The OCSD Plant 2 wastewater treatment facility site is generally bounded by Hamilton Avenue to the north, the Santa Ana River (SAR) to the east, Pacific Coast Highway (PCH) to the south, and Brookhurst Street to the west. The OCSD Plant 2 wastewater treatment facility site is composed of 110 acres, and is developed with wastewater treatment structures, offices, paved parking areas, and roadways.

Based on the assessment conducted in this report, ambient noise and vibration levels would not substantially increase ambient noise levels as a result of the construction and operation of the proposed project. Construction activities generate noise and vibration from the ground disturbances caused by the usage of the equipment, and also by noise emanating from the exhaust of these vehicles' motors. However, construction activities would not increase the ambient noise levels by 5 dBA and would not exceed the identified vibration significance thresholds at noise sensitive receptors. Operational noise would not result in the increase in ambient noise levels from daily onsite operation of the proposed pump station.

The report summarizes the potential for the project to conflict with applicable noise and vibration regulations, standards, and thresholds. The findings of the analyses are as follows:

- The noise levels from construction of the project would not exceed significance thresholds at the nearest residential uses west and north of the project site. Therefore, impacts would be less than significant.
- Construction activities would result in sporadic, temporary vibration effects adjacent to the project area, but would not exceed established thresholds for potential structural damage or human annoyance. Thus, construction vibration impacts to structures and residential receptors would be less than significant.
- Operation of the project would result in less than significant noise and vibration impacts to off-site noise sensitive receptors.

PLANT NO. 2 GWRS CONVEYANCE FACILITIES PROJECT

Noise and Vibration Technical Report

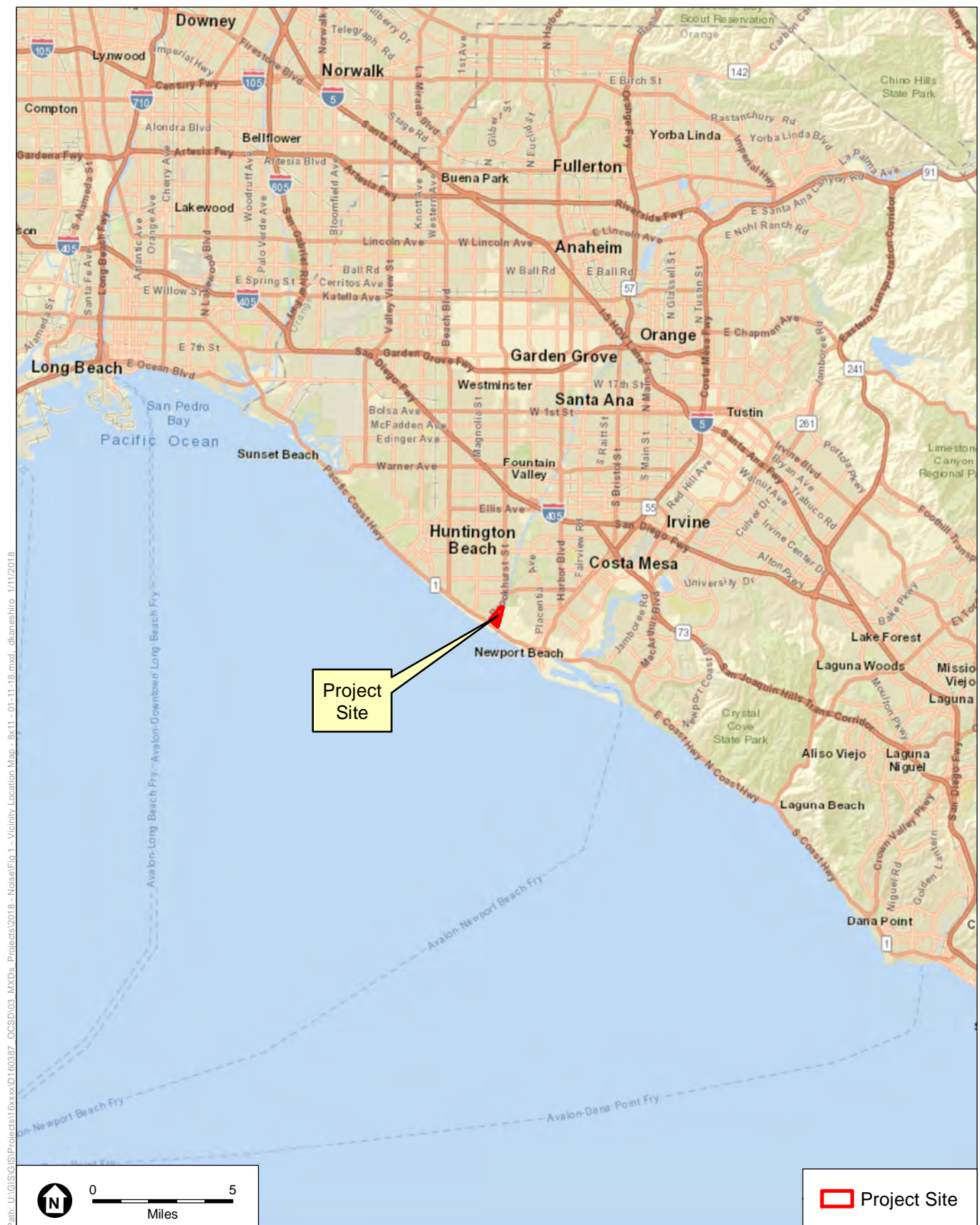
1.0 Introduction

The OCSD provides secondary effluent to the OCWD for further treatment through the Advanced Purification Treatment Facility referred to as the GWRS. This technical report has been prepared to support the GWRS project's environmental review process and provide information regarding potential impacts to ambient noise and vibration associated with the approval of the Plant No. 2 GWRS Conveyance Facilities Project (project). The project consists of a pump station, two secondary effluent flow equalization tanks, and associated piping, valving, and metering connections.

This report describes the existing ambient noise in the project area, identifies applicable noise regulations, and evaluates potential short- and long-term noise impacts associated with the build-out of the project. Additionally, this report provides background information on vibration and evaluates potential impacts associated with the project's contribution to ambient vibration levels. Where applicable, measures to mitigate or minimize noise and vibration impacts associated with the project are included. Information used to prepare this analysis was obtained from OCWD, City of Huntington Beach General Plan and Noise Ordinance, and other sources identified herein.

1.1 Project Location

The project is located in the City of Huntington Beach as shown in **Figure 1, Vicinity Location Map**. Specifically, the OCSD Plant 2 wastewater treatment facility site is located at 22212 Brookhurst Street within the City of Huntington Beach. The OCSD Plant 2 wastewater treatment facility site is generally bounded by Hamilton Avenue to the north, the Santa Ana River (SAR) to the east, Pacific Coast Highway (PCH) to the south, and Brookhurst Street to the west. OCSD Plant 2 wastewater treatment facility site is composed of 110 acres, and is developed with wastewater treatment structures, offices, paved parking areas, and roadways.



SOURCE: ESRI StreetMap, 2009.

Plant No. 2 GWRS Conveyance Facilities Project

Figure 1
Vicinity Location Map

2.0 Project Description

The project will involve the construction of three types of facilities. The three main facilities associated with the project is a pump station, two flow equalization tanks, and associated piping with a valving/metering vault. These proposed facilities for the project are shown in **Figure 2, Site Plan**. The project facilities will be constructed at the north end of OCSD Plant No. 2.

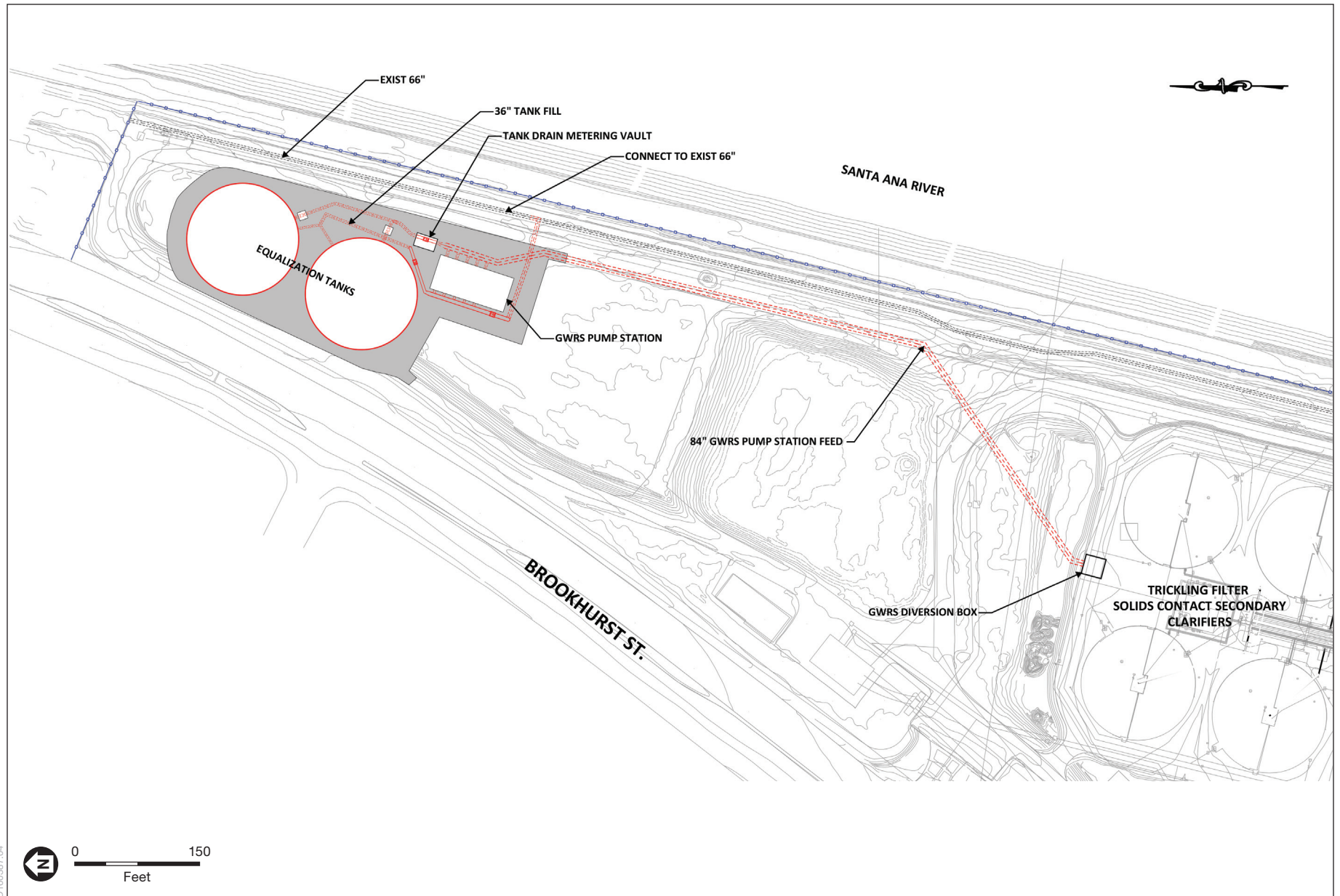
The pump station will be a 25-foot tall concrete building (from grade) with five 350-hp pumps located within the building. The five pumps will be configured as four active duty pumps and one standby pump. The five pumps will be installed within individual 30-inch diameter wet wells. Each of the wet wells will be drilled to 25-feet below grade. In addition to the pumps, the pump station building (95-ft x 40-ft x 25-ft tall) will have a portioned off electrical room within it. The pump station discharge pipeline (54-inches in diameter) splits into two 36-inch diameter steel pipes which will feed each of the two 3-million gallon (MG) flow equalization tanks.

The tanks will be circular pre-stressed concrete storage tanks approximately 135-feet in diameter and 28-feet tall from existing grade. The 84-inch pump station feed pipeline will connect to an existing 108-inch diameter trickling filter effluent line with a diversion box to bring the secondary effluent to the pump station. The 84-inch pump station feed pipeline alignment is shown in Figure 2 and is approximately 800-linear feet. The 54-inch pump station discharge pipeline will have a valve and meter vault (15-ft x 20-ft x 10-ft deep) which will measure and control the flows from the pump station. In addition, each tank will have separate piping and control valves for filling and draining each tank. The two flow equalization tanks will be partially buried at 4-feet below existing grade. There will be a concrete tank pad approximately 2-feet thick under each of the flow equalization tanks. The project would be implemented in four construction phases beginning in August 2020 and concluding in December of 2022. The mix of construction equipment for each construction phase is shown in the **Table 1** below. **Table 2** shows the daily haul trips and laborer estimates.

3.0 Environmental Setting

3.1 Noise Principles and Descriptors

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air). Noise is generally defined as unwanted sound (i.e., loud, unexpected, or annoying sound). Acoustics is defined as the physics of sound. In acoustics, the fundamental scientific model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. Acoustics addresses primarily the propagation and control of sound.



SOURCE: Black & Veatch Corporation, 2018

Plant No. 2 GWRS Conveyance Facilities Project

Figure 2
Site Plan

TABLE 1
FLOW EQUALIZATION TANK, PUMP STATION, & PIPELINE/METER VAULT CONSTRUCTION EQUIPMENT MIX

Activity	Equipment Description	Equipment Quantity	Time (Hrs/Day)	Total (Days)	Total (Hours)	HP Rating
Phase 1 – Pump Station, Tanks, Pipeline/Meter Vault Excavation	Bull Dozer	2	6	30	360	250
	Compactor	1	6	10	60	200
	Excavator	2	6	20	240	200
	Dump Trucks	6	6	18	648	350
	Water Trucks	1	8	45	360	350
Phase 2 – Construction of Pump Station Wet Wells, Tanks Piles, Piping	Drill Rig	1	6	20	120	500
	Backhoe	1	6	20	120	150
	Concrete Trucks	4	6	14	336	350
	Dump Trucks	2	5	3	30	350
	Water Truck	2	4	25	200	350
Phase 3 – Construction of Tank, Pump Station Building, Meter Vault	Crane	1	6	10	60	300
	Forklift	4	6	30	720	120
	Concrete Trucks	4	6	19	456	350
	Man Lift	5	6	15	450	75
Phase 4 – Equipping of Pump Station, Tanks, Valve/Meter Vault	Crane	1	6	10	60	300
	Forklift	4	6	30	720	120
	Man Lift	5	6	15	450	75

SOURCE: OCWD, 2018

TABLE 2
FLOW EQUALIZATION TANK, PUMP STATION, & PIPELINE/METER VAULT WORKER & DAILY TRIP SUMMARY

Activity Description	Worker	Vendor	Daily Haul Trips	Total Haul Trips
Phase 1 – Pump Station, Tanks, Pipeline/Meter Vault Excavation	10	1	30	540
Phase 2 – Construction of Pump Station Wet Wells, Tanks Piles, Piping	10	2	18	230
Phase 3 – Construction of Tank, Pump Station Building, Meter Vault	10	2	16	304
Phase 4 – Equipping of Pump Station, Tanks, Valve/Meter Vault	5	4	--	--

SOURCE: OCWD, 2016

Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement. The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the theoretical threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude. When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

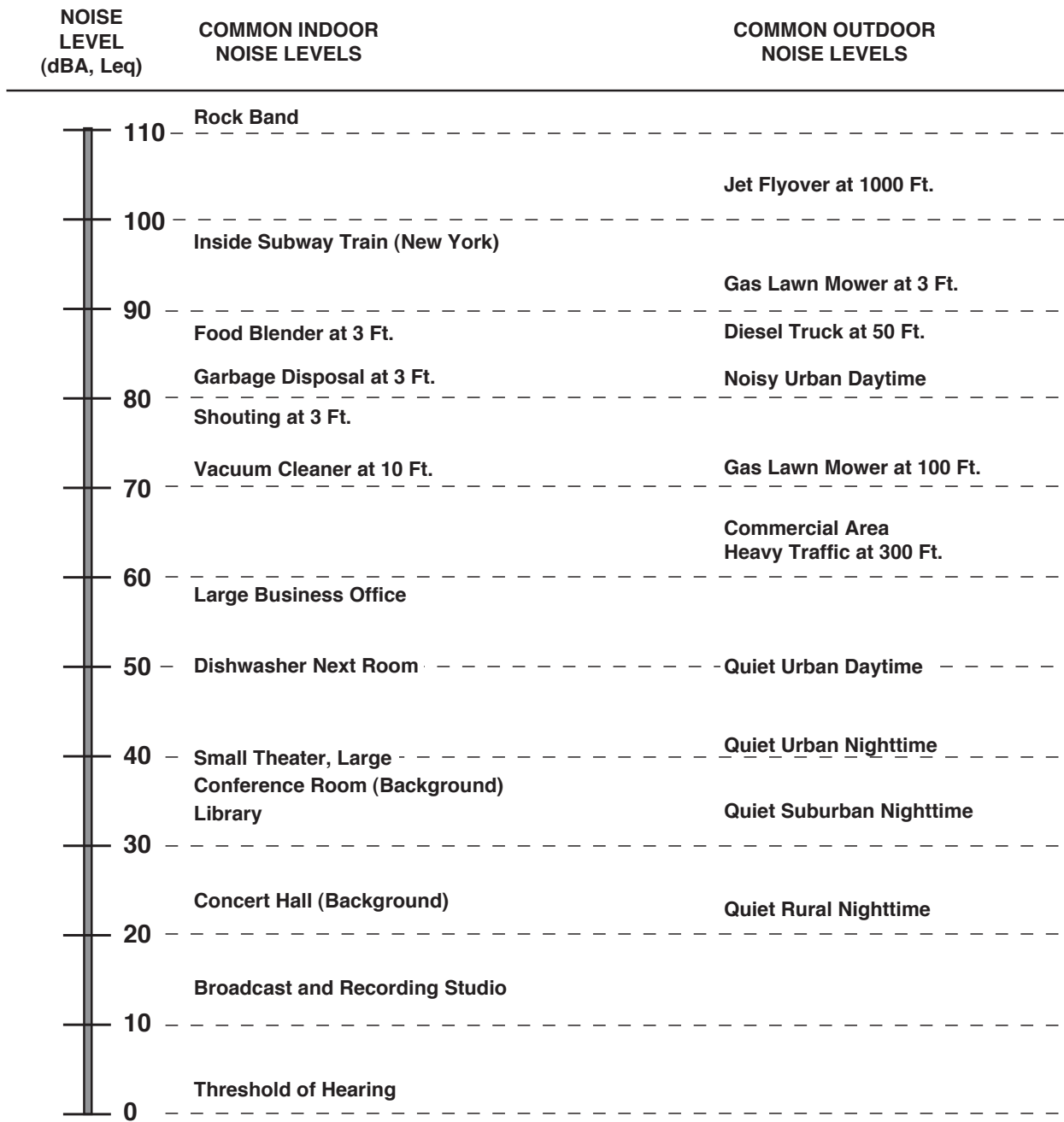
The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to extremely low and extremely high frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). A-weighting follows an international standard methodology of frequency deemphasis and is typically applied to community noise measurements. Some representative common outdoor and indoor noise sources and their corresponding A-weighted noise levels are shown in **Figure 3, Decibel Scale and Common Noise Sources**.

3.2 Noise Exposure and Community Noise

An individual's noise exposure is a measure of noise over a period of time. A noise level is a measure of noise at a given instant in time. The noise levels presented in Figure 3 are representative of measured noise at a given instant in time; however, they rarely persist consistently over a long period of time. Rather, community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic. What makes community noise variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment change the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

L_{eq} : The equivalent sound level, is used to describe noise over a specified period of time in terms of a single numerical value; the L_{eq} of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The L_{eq} may also be referred to as the average sound level.



SOURCE: State of California, Department of Transportation (Caltrans), Technical Noise Supplement (TeNS). October 1998. Available: [http://www.dot.ca.gov/hq/env/noise/pub/Technical Noise Supplement.pdf](http://www.dot.ca.gov/hq/env/noise/pub/Technical%20Noise%20Supplement.pdf)

Plant No. 2 GWRS Conveyance Facilities Project

Figure 3
Decibel Scale and Common Noise Sources

L_{\max} : The maximum, instantaneous noise level experienced during a given period of time.

L_{\min} : The minimum, instantaneous noise level experienced during a given period of time.

L_x : The noise level exceeded a percentage of a specified time period. For instance, L_{50} and L_{90} represent the noise levels that are exceeded 50 percent and 90 percent of the time, respectively.

L_{dn} : the average A-weighted noise level during a 24-hour day, obtained after an addition of 10 dB to measured noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account nighttime noise sensitivity. The L_{dn} is also termed the day-night average noise level (DNL).

CNEL: The Community Noise Equivalent Level (CNEL) is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dB to measured noise levels between the hours of 7:00 a.m. to 10:00 p.m. and after an addition of 10 dB to noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

3.3 Effects of Noise on People

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance);
- Interference effects (e.g., communication, sleep, and learning interference);
- Physiological effects (e.g., startle response); and
- Physical effects (e.g., hearing loss).

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects of environmental noise refer to those effects that interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep. Sleep interference effects can include both awakening and arousal to a lesser state of sleep. With regard to the subjective effects, the responses of individuals to similar noise events are diverse and are influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity.

Overall, there is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction on people. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted (i.e., comparison to the ambient noise environment). In general, the more a new

noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships generally occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change in noise levels is considered to be a barely perceivable difference;
- A change in noise levels of 5 dBA is considered to be a readily perceivable difference; and
- A change in noise levels of 10 dBA is subjectively heard as doubling of the perceived loudness.

These relationships occur in part because of the logarithmic nature of sound and the decibel scale. The human ear perceives sound in a non-linear fashion hence the dB scale was developed. Because the dB scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. Under the dB scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two sources are each producing sound of the same loudness, the resulting sound level at a given distance would be approximately 3 dBA higher than one of the sources under the same conditions. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. Under the dB scale, three sources of equal loudness together produce a sound level of approximately 5 dBA louder than one source, and ten sources of equal loudness together produce a sound level of approximately 10 dBA louder than the single source.

3.4 Noise Attenuation

When noise propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on factors such as the type of noise source and the propagation path. Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern; therefore, this type of propagation is referred to as “spherical spreading.” Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dBA for acoustically “hard” sites and 7.5 dBA for “soft” sites for each doubling of distance from the reference measurement as their energy is continuously spread out over a spherical surface. Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites.

Roadways and highways consist of several localized noise sources on a defined path, and hence are treated as “line” sources, which approximate the effect of several point sources. Noise from a line source propagates over a cylindrical surface, often referred to as “cylindrical spreading.” Line sources (e.g., traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites

and 4.5 dBA for soft sites for each doubling of distance from the reference measurement.¹ Therefore, noise due to a line source attenuates less with distance than that of a point source with increased distance.

Additionally, receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

3.5 Fundamentals of Vibration

Vibration can be interpreted as energy transmitted in waves through the ground or man-made structures. These energy waves generally dissipate with distance from the vibration source. Because energy is lost during the transfer of energy from one particle to another, vibration becomes less perceptible with increasing distance from the source.

As described in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment*, ground-borne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard.² In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, heavy trucks traveling on rough roads, and construction activities such as blasting, pile-driving, and operation of heavy earth-moving equipment.

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 effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The relationship of PPV to RMS velocity is expressed in terms of the "crest factor," defined as the ratio of the PPV amplitude to the RMS amplitude. PPV is typically a factor of 1.7 to 6 times greater than RMS vibration velocity.³ The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration sensitive equipment.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most

¹ California Department of Transportation (Caltrans), *Technical Noise Supplement* (TeNS). September, 2013.

² FTA, 2006. *Transit Noise and Vibration Impact Assessment*. May.

³ Ibid.

projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration levels exceed the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 in/sec PPV.⁴

In residential areas, the background vibration velocity level is usually around 50 VdB (approximately 0.0013 in/sec PPV). This level is well below the vibration velocity level threshold of perception for humans, which is approximately 65 VdB. A vibration velocity level of 75 VdB is considered to be the approximate dividing line between barely perceptible and distinctly perceptible levels for many people.⁵

3.6 Existing Conditions

Some land uses are considered more sensitive to ambient noise levels than others are, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. According to the General Plan, residential areas are to be the most sensitive type of land use to noise and industrial/commercial areas are considered to be the least sensitive. Existing noise sensitive uses in the vicinity of the project site include the following:

- Residential Uses: single-family residences and multi-family residential uses are located to the west and north of the project site along Brookhurst Street.

Ambient Noise Levels

The predominant existing noise source surrounding the project site is roadway noise from Brookhurst Street to the west.

Ambient noise measurements were conducted at two locations, representing the nearby land uses in the vicinity of the project site to establish conservative ambient noise levels. The measurement locations along with existing development and nearby future development are shown on **Figure 4, Noise Measurement Locations**. Long-term (24-hour) measurements were conducted at locations R1 and R2. Ambient sound measurements were conducted on Wednesday, July 13, 2016, to characterize the existing noise environment in the project vicinity.

The ambient noise measurements were conducted using the Larson-Davis 820 Precision Integrated Sound Level Meter (“SLM”). The Larson-Davis 820 SLM is a Type 1 standard instrument as defined in the American National Standard Institute S1.4. All instruments were calibrated and operated according to the applicable manufacturer specification.

⁴ Ibid.

⁵ Ibid.



SOURCE: DigitalGlobe, 2016 (Aerial); County of Orange Water District, 2016.

Plant No. 2 GWRS Conveyance Facilities Project

Figure 4
Noise Measurement Locations

The microphone was placed at a height of 5 feet above the local grade, at the following locations as shown in Figure 4:

- **Measurement Location R1:** represents the existing noise environment of single-family residential uses west of the project site along Brookhurst Street. The SLM was placed on the west of the project site along Brookhurst Street.
- **Measurement Location R2:** represents the existing noise environment of multi-family residential uses north of the project site along Brookhurst Street. The SLM was placed on the southwestern boundary of the multi-family residential uses along Brookhurst Street.

TABLE 3
SUMMARY OF AMBIENT NOISE MEASUREMENT

Location, Duration, Existing Land Uses and, Date of Measurements	Daytime (7 A.M. to 10 P.M.) Hourly L_{eq}	Daytime Average Hourly L_{eq}	Nighttime (10 P.M. to 7 A.M.) Hourly L_{eq}	Nighttime Average Hourly L_{eq}	24-Hour Average, CNEL
R1 – Single-family Residential Uses 7/13/16 (24 hour)/Wednesday	66 – 69	67	56 – 67	61	69
R2 – Multi-family Residential Uses 7/13/16 (24 hour)/Wednesday	68 – 70	69	58 – 66	62	71

SOURCE: ESA, 2016

A summary of noise measurement data is provided in **Table 3, Summary of Ambient Noise Measurements**. As shown in Table 3, the existing ambient daytime noise levels ranged from 66 dBA to 69 dBA L_{eq} at R1 and from 68 dBA to 70 dBA L_{eq} at R2. The existing ambient nighttime noise levels ranged from 56 dBA to 67 dBA L_{eq} at R1 and from 58 dBA to 66 dBA L_{eq} at R2.

Existing Groundborne Vibration Levels

Aside from periodic construction work that may occur throughout the City, other sources of groundborne vibration in the project site vicinity may include heavy-duty vehicular travel (e.g., refuse trucks, delivery trucks, etc.) on local roadways. Truck traffic at a distance of 50 feet typically generate groundborne vibration velocity levels of approximately 63 VdB (approximately 0.006 in/sec PPV), and these levels could reach 72 VdB (approximately 0.016 in/sec PPV) where trucks pass over irregularities in the road surface.⁶

3.7 Regulatory Setting

Detailed below is a discussion of the relevant regulatory setting and noise regulations, plans, and policies.

⁶ FTA, *Transit Noise and Vibration Impact Assessment*. May 2006.

Federal

Federal Noise Standards

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, the USEPA issued guidance levels for the protection of public health and welfare in residential land use areas⁷ of an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA. These guidance levels are not considered as standards or regulations and were developed without consideration of technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the project.

Under the Occupational Safety and Health Act of 1970 (29 U.S.C. §1919 et seq.), the Occupational Safety and Health Administration (OSHA) has adopted regulations designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring the noise to which workers are exposed, ensuring that workers are made aware of overexposure to noise, and periodically testing the workers' hearing to detect any degradation.

Federal Vibration Standards

The FTA has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. The vibration damage criteria adopted by the FTA are shown in **Table 4, Construction Vibration Damage Criteria**.

TABLE 4
CONSTRUCTION VIBRATION DAMAGE CRITERIA

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12
SOURCE: FTA, 2006. Transit Noise and Vibration Impact Assessment. May.	

In addition, the FTA has also adopted standards associated with human annoyance for groundborne vibration impacts for the following three land-use categories: Vibration Category 1 – High Sensitivity, Vibration Category 2 – Residential, and Vibration Category 3 – Institutional. The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment

⁷ USEPA, *EPA Identifies Noise Levels Affecting Health and Welfare*. April 1974.

includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference. The vibration thresholds associated with human annoyance for these three land-use categories are shown in **Table 5, Groundborne Vibration Impact Criteria for General Assessment**. No vibration thresholds have been adopted or recommended for commercial and office uses.

TABLE 5
GROUNDBORNE VIBRATION IMPACT CRITERIA FOR GENERAL ASSESSMENT

Land Use Category	Frequent Events ^a	Occasional Events ^b	Infrequent Events ^c
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB ^d	65 VdB ^d	65 VdB ^d
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

^a "Frequent Events" is defined as more than 70 vibration events of the same source per day.

^b "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

^c "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day.

^d This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.

SOURCE: FTA, 2006. Transit Noise and Vibration Impact Assessment. May.

State

California Noise Standards

The State of California does not have statewide standards for environmental noise, but the California Department of Health Services (DHS) has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The purpose of these guidelines is to maintain acceptable noise levels in a community setting for different land use types. Noise compatibility by different land use types is categorized into four general levels: "normally acceptable," "conditionally acceptable," "normally unacceptable," and "clearly unacceptable." For instance, a noise environment ranging from 50 dBA CNEL to 65 dBA CNEL is considered to be "normally acceptable" for multi-family residential uses, while a noise environment of 75 dBA CNEL or above for multi-family residential uses is considered to be "clearly unacceptable." In addition, California Government Code Section 65302(f) requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(g) requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community; (2) recognize Office of Noise Control guidelines; and (3) analyze and quantify current and projected noise levels.

The state has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (Title 24, California Code of Regulations). The noise insulation standards set forth an interior standard of 45 dBA CNEL in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dBA CNEL. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

California Vibration Standards

There are no state vibration standards. Moreover, according to the California Department of Transportation's (Caltrans) *Transportation and Construction Vibration Guidance Manual*, there are no official Caltrans standards for vibration.⁸ However, this manual provides guidelines that can be used as screening tools for assessing the potential for adverse vibration effects related to structural damage and human perception. The manual is meant to provide practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. The vibration criteria established by Caltrans for assessing structural damage and human perception are shown in **Table 6, Caltrans Vibration Damage Potential Threshold Criteria**, and **Table 7, Caltrans Vibration Annoyance Potential Criteria**, respectively.

TABLE 6
CALTRANS VIBRATION DAMAGE POTENTIAL THRESHOLD CRITERIA

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

NOTE: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

SOURCE: Caltrans, 2013. *Transportation and Construction Vibration Guidance Manual*. September.

⁸ Caltrans, *Transportation and Construction Vibration Guidance Manual*. September 2013.

TABLE 7
CALTRANS VIBRATION ANNOYANCE POTENTIAL CRITERIA

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

NOTE: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

SOURCE: Caltrans, 2013. Transportation and Construction Vibration Guidance Manual. September.

Local

In California, local regulation of noise involves implementation of general plan policies and noise ordinance standards. Local general plans identify general principles intended to guide and influence development plans, and noise ordinances set forth the specific standards and procedures for addressing particular noise sources and activities. General plans recognize that different types of land uses have different sensitivities toward their noise environment; residential areas are considered to be the most sensitive type of land use to noise and industrial/commercial areas are considered to be the least sensitive.

City of Huntington Beach

General Plan Noise Element

The Noise Element of the General Plan acknowledges that a number of residential, commercial, and industrial land uses in the City of Huntington Beach, particularly along arterial roadways, are impacted by vehicular noise levels that exceed city noise/land use compatibility standards (City of Huntington Beach, 1995). For residential land uses, the normally acceptable interior and exterior noise standards are 45 and 60 L_{dn} , respectively.

Relevant noise policies from the Noise Element include:

Policy N 1.2.2 – Require new industrial and commercial land uses or the major expansion of existing land uses to demonstrate that the new or expanded use would not be directly responsible for causing exterior noise levels to exceed 65 L_{dn} in areas containing noise sensitive land uses.

Policy N 1.2.5 – Require development that generates increased traffic and subsequent increases in ambient noise levels adjacent to noise sensitive land uses to provide for appropriate mitigation measures in accordance with acceptable limits of the City's Noise Ordinance.

Policy N 1.6.1 – Ensure that construction activities be regulated to establish hours of operation, to prevent and/or mitigate the generation of excessive or adverse noise impacts through implementation of the City’s Noise Ordinance.

Policy N 1.12.1 – Require detailed and independent acoustical studies be completed for any new or renovated land uses or structures determined to be potential major stationary noise sources.

Municipal Code

Chapter 8.40 of the Huntington Beach Municipal Code (HBMC) serves as the City’s Noise Ordinance, which establishes noise standards to control unnecessary, excessive, and annoying noise levels in the City. **Table 8, Huntington Beach Exterior Noise Standards**, presents the applicable exterior noise standards for the designated noise zones established in the City’s Noise Ordinance.

TABLE 8
HUNTINGTON BEACH EXTERIOR NOISE STANDARDS

Noise Zone	Exterior Noise Standards	Time Period
1 – All residential properties.	55 db(A) 50 db(A)	7:00 a.m. – 10:00 p.m. 10:00 p.m. – 7:00 a.m.
2 – All professional office & public institution properties.	55 db(A)	Anytime
3 – All commercial properties with the exception of professional office properties.	60 db(A)	Anytime
4 – All industrial properties.	70 db(A)	Anytime
SOURCE: City of Huntington Beach Municipal Code Section 8.40.050		

The exterior noise levels shown in Table 8 are meant to be further applied as noise standards based on the duration of the noise; i.e., the louder the noise, the shorter the time it can last. According to Section 8.40.060 of the City Noise Ordinance, it is unlawful for any person at any location within the incorporated area of the City to create noise levels that, when measured on any residential, public institutional, professional, commercial, or industrial property, to exceed the exterior noise standards shown in Table 8:

- a) For a cumulative period of more than thirty (30) minutes in any hour;
- b) Plus 5 dB(A) for a cumulative period of more than fifteen (15) minutes in any hour;
- c) Plus 10 dB(A) for a cumulative period of more than five (5) minutes in any hour;
- d) Plus 15 dB(A) for a cumulative period of more than one (1) minute in any hour; or
- e) Plus 20 dB(A) for any period of time.

Section 8.40.060 further states that in the event the ambient noise level exceeds any of the first four noise limit categories provided above, the cumulative period noise level applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level

exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

According to Section 8.40.090(D) of the City Noise Ordinance, construction noise is among one of the noise sources that are exempt from the City's established noise standards. Provided that a permit has been obtained from the City, noise sources associated with construction, repair, remodeling, or grading of any real property are deemed to be exempt from the City's noise standards as long as such activities are not conducted between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a federal holiday.

4.0 Impacts and Mitigation Measures

This section describes the impact analysis relating to noise and vibration impacts for the Project. It describes the methods and applicable thresholds used to determine the impacts of the proposed Project.

4.1 Methodology

Onsite Construction Noise Levels

Project construction noise levels were estimated using the Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM) and construction equipment information provided by the OCWD. Potential noise levels were identified for the nearest sensitive receptors located offsite based on their respective distances from the project site. To present a conservative impact analysis, the estimated noise levels were calculated for a scenario in which all construction equipment was assumed to be operating simultaneously and located at the construction area nearest to the affected receptors. These assumptions represent the worst-case noise scenario because construction activities would typically be spread out throughout the project site and would be located further away from the affected receptors. The estimated noise levels at the affected receptors were then analyzed against the construction noise standards established in the HBMC.

Offsite Construction Roadway Noise Levels

Off-site construction related traffic noise levels were calculated based on traffic information provided by the OCWD. Brookhurst Street was selected for analysis and is expected to be most directly impacted by construction-related traffic. Noise levels along Brookhurst Street were calculated using the FHWA-RD-77-108 model and construction-related traffic volumes provided by the OCWD.

Onsite Stationary Source Noise Levels

During operation of the project, noise levels would be generated onsite by stationary noise sources such as the proposed pump station. The noise levels generated by the proposed pump station are assessed based on the HBMC requirements and measured data. The potential impacts on the nearby offsite receptors are determined based on the proposed pump station's distance

from these receptors. The noise levels determined at the offsite, noise-sensitive receptors are then compared to the stationary source noise significance thresholds identified in the HBMC.

Groundborne Vibration Levels

Groundborne vibration levels resulting from construction activities at the project site were estimated using data in the FTA *Transit Noise and Vibration Impact Assessment* document.⁹ Potential vibration levels resulting from construction of the project are identified for offsite locations that are sensitive to vibration (i.e., existing residential buildings) based on their distance from construction activities.

Operations

Employee and truck trips to support daily operations of the facility would not increase with implementation of the proposed project. Therefore, off-site roadway noise impacts during operations is not discussed further.

4.2 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, a project would have a significant effect on the environment with respect to noise and/or ground-borne vibration if it would 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;
- Exposure of persons to, or generation of, excessive ground-borne vibration or ground-borne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- Exposure of people residing or working in the project area to excessive noise levels (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); or
- Exposure of people residing or working in the project area to excessive noise levels (for a project within the vicinity of a private airstrip).

The project site is not located within two miles of an airport, and no public airport or private airstrip is currently located in the vicinity of the project site. The nearest airport to the project site is the John Wayne Airport, which is located approximately five miles northeast of the project site. Therefore, the project would not expose people to excessive noise from a public airport or private airstrip, and these issue areas would not be further analyzed in this report.

⁹ FTA, *Transit Noise and Vibration Impact Assessment*. May 2006.

Noise Criteria

As set forth in the HBMC, a project would normally have a significant impact on noise levels from construction if construction activities are undertaken between 8:00 p.m. and 7:00 a.m. on weekdays or 8:00 p.m. and 8:00 a.m. on Saturdays or without a permit.

A change in noise levels of less than 3 dBA is not discernible to the general population, while an increase in average noise levels of 3 to 5 dBA is clearly discernible to most people (California DOT, 1991). An increase in the noise environment of 5 dBA or greater is considered to be the minimum required increase for a change in community reaction (U.S. DOT, 1990) and, for the purposes of this analysis, constitutes a significant noise impact. With temporary construction noise impacts, identification of “substantial increases” depends upon the duration of the impact, the temporal daily nature of the impact, as well as the absolute change in dBA levels. Substantial increase in noise levels are defined as follows.

- Project construction activities cause the exterior ambient noise level to increase by 5 dBA or more at a noise-sensitive use, as measured at the property line of any sensitive use.
- Noise from project-related operational (non-transportation) noise sources such as the proposed pump station exceeds the nighttime average ambient noise levels in Table 3.

Vibration Criteria

The *CEQA Guidelines* do not define the levels at which groundborne vibration or groundborne noises are considered “excessive.” The City of Huntington Beach currently does not have a significance threshold to assess vibration impacts during construction. Additionally, there are no federal, state, or local vibration regulations or guidelines directly applicable to the project. However, publications of the FTA and Caltrans are two of the seminal works for the analysis of vibration relating to transportation and construction-induced vibration. The project is not subject to FTA or Caltrans regulations; nonetheless, these guidelines serve as a useful tool to evaluate vibration impacts. For the purpose of this analysis, the vibration criteria for structural damage and human annoyance established in the most recent Caltrans’ *Transportation and Construction Vibration Guidance Manual*, which are shown previously in Tables 6 and 7, respectively, are used to evaluate the potential vibration impacts of the project on nearby sensitive receptors.

Given the nature of the project, “excessive” groundborne vibration or noises that could occur at the project site would only be those generated during project construction. Construction activities at the project site have the potential to generate low levels of groundborne vibration as the operation of heavy equipment (i.e., dozer, excavators, backhoes, haul trucks, etc.) generates vibrations that propagate through the ground and diminish in intensity with distance from the source. No high-impact activities, such as pile driving or blasting, would be used during project construction. The nearest offsite sensitive receptors are located approximately 330 feet from the proposed pump station, on the west side of Brookhurst Street. Due to the rapid attenuation of ground-borne vibration and distance between the project and the nearest single-family residential uses (approximately 330 feet), there is no potential for operational-period impacts with respect to ground-borne vibration. Accordingly, the groundborne vibration analysis presented in this report is limited to the project’s construction activities.

4.3 Project Impacts

Impact 1: The project would not result in the 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. (Less than Significant)

Construction Noise

Onsite Construction Noise

Construction of the proposed project would require the use of heavy equipment during the demolition, grading, and excavation activities at the project site. During each stage of development, there would be a different mix of equipment. As such, construction activity noise levels at and near the project site would fluctuate depending on the particular type, number, and duration of use of the various pieces of construction equipment.

Individual pieces of construction equipment anticipated during Project construction could produce maximum noise levels of 60 dBA to 82 dBA L_{max} at a reference distance of 50 feet from the noise source, as shown in **Table 9, Construction Equipment Noise Levels**. These maximum noise levels would occur when equipment is operating at full power. The estimated usage factor for the equipment is also shown in Table 9. The usage factors are based on FHWA's RCNM User's Guide.¹⁰

TABLE 9
CONSTRUCTION EQUIPMENT NOISE LEVELS

Construction Equipment	Noise Level at 50 Feet (dBA, L_{max})	Estimated Usage Factor, %
Backhoe ²	69	50
Bull Dozer ¹	82	40
Concrete Truck ²	75	25
Crane ¹	81	40
Dump Truck ¹	76	20
Drill Rig Truck ²	76	50
Excavator ¹	81	40
Forklift ²	60	50
Man Lift ²	68	25
Water Truck ¹	80	10

¹ Obtained from FHWA Roadway Construction Noise Model, 2006.

² Obtained from Noise Abatement Plan Mid-Basin Monitoring Well SAR-11, prepared by Vista Environmental, August 11, 2011.

During project construction, the nearest and most notable offsite sensitive receptors that would be exposed to increased noise levels would be the existing single-family residential uses located in

¹⁰ Federal Highway Administration, Roadway Construction Noise Model User's Guide, 2006.

proximity to the project site. Specifically, the nearest offsite noise sensitive receptors include the following:

- Single-family residences along Brookhurst Street approximately 170 feet west of the project site; and
- Multi-family residences along Brookhurst Street approximately 90 feet north of the project site.

Over the course of a construction day, the highest noise levels would be generated when multiple pieces of construction equipment are being operated concurrently. As discussed previously, the project's estimated construction noise levels were calculated for a scenario in which all construction equipment was assumed to be operating simultaneously and some of them located at the construction area nearest to the affected receptors to present a conservative impact analysis. The estimated noise levels at the offsite sensitive receptors were calculated using the FHWA's RCNM, and were based on the concurrent operation of 14 pieces of equipment (i.e., drill rig truck, backhoe, concrete truck, dump truck, water truck, etc.) which is considered a worst-case evaluation because the project would use less overall equipment on a daily basis, and as such would generate lower noise levels. **Table 10, Estimated Construction Noise Levels at Offsite Sensitive Uses**, shows the estimated construction noise levels that would occur at the nearest offsite sensitive uses during a peak day of construction activity at the project site.

TABLE 10
ESTIMATED CONSTRUCTION NOISE LEVELS AT OFFSITE SENSITIVE USES

Offsite Sensitive Land Uses	Location	Approximate Distance to Project site (ft.) ¹	Estimated Maximum Construction Noise Levels (dBA L _{eq})	Significance Threshold (dBA L _{eq}) ³	Exceeds Threshold?
Single-family residential uses	West of the project site along Brookhurst Street	170	66 ²	71	No
Multi-family residential uses	North of the project site Brookhurst Street	90	69 ²	73	No

¹ The distance represents the nearest construction area on the project site to the property line of the offsite receptor.

² Receptors are partially shielded from the construction site by existing walls; and such shielding is included in the analyses representing a 5 dBA reduction in noise levels.

³ The significance thresholds are the lowest daytime ambient noise levels as shown in Table 3 plus 5 dBA.

SOURCE: ESA, 2016.

As shown in Table 10, the peak day construction noise levels experienced by the offsite sensitive receptors would range from 66 dBA L_{eq} at the single-family residential uses located west of the project site to 69 dBA L_{eq} at the multi-family residential uses located north of the project site. Thus, construction activities associated with the project would generate episodic noise levels below the significance thresholds of 71 dBA (the lowest daytime ambient noise level of 66 dBA as shown in Table 3 plus 5 dBA) and 73 dBA (the lowest daytime ambient noise level of 68 dBA as shown in Table 3 plus 5 dBA) at the residential uses west and north of the project site, respectively. Because construction noise levels associated with the project would not exceed the significance thresholds at the offsite sensitive locations, construction activities associated with the

project would not expose persons to, or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, Therefore, impacts would be less than significant, and no mitigation measures would be required.

Off-Site Construction Traffic Noise

Delivery truck and haul truck trips would occur throughout the construction period. Trucks traveling to and from the project site would be required to travel along Brookhurst Street. As shown in Table 2, an estimated maximum of approximately 10 worker's vehicle trips, 1 vendor truck trip, and 30 haul truck trips would occur per day.

The project's truck trips would generate noise levels of approximately 50 dBA CNEL at 25 feet distance along Brookhurst Street. As shown in Table 3, the existing noise levels along Brookhurst Street ranged from 69 dBA to 71 dBA CNEL. Noise levels of 50 dBA CNEL generated by construction-related traffic as shown in Appendix C would not increase the ambient noise levels of 69 dBA to 71 dBA CNEL along Brookhurst Street when combining the ambient noise levels and noise from project construction traffic. Because construction traffic would not increase ambient noise levels along Brookhurst Street, the 5 dBA ambient noise increase threshold would not be exceeded. Therefore, off-site construction traffic noise impacts would be less than significant.

Operational Noise

Once the proposed pump station is operational, noise levels generated at the project site would mainly occur from the pump station. The pump station will be a 25-foot tall concrete building (from grade) with five 350-hp pumps located within the building. The five pumps will be configured as four active duty pumps and one standby pump. The five pumps will be installed within individual 30-inch diameter wet wells. Each of the wet wells will be drilled to 25-feet below grade.

The analysis of the pump station-related noise is based upon reference noise measurement conducted on July 15, 2016 at a pump station located in the OCWD facility at 18700 Ward Street, Fountain Valley, CA. Pump station-related noise levels were measured inside of the pump station and outside of the pump station at 5 feet from a louver. A noise level of 80 dBA was measured inside of the pump station and a noise level of 66 dBA was measured at 5 feet from the louver outside of the pump station. The pump station structure with louvers would provide approximately a 14 dBA noise reduction.

The single-family residential uses (R1) west of the project site would be located approximately 330 feet from the proposed pump station. Based on a noise level source strength of 66 dBA at a reference distance of 5 feet, and accounting for distance attenuation (minimum 36 dBA insertion loss) and barrier insertion loss by block walls (minimum 5 dBA insertion loss), pump station related noise would be reduced to 25 dBA at the single-family residential uses (R1). As such, pump station related noise would not exceed the significance threshold of 61 dBA (the lowest nighttime ambient noise level of 56 dBA as shown in Table 3 plus 5 dBA).

The multi-family residential uses (R2) north of the project site would be located approximately 360 feet from the proposed pump station. Based on a noise level source strength of 66 dBA at a reference distance of 5 feet, and accounting for distance attenuation (minimum 37 dBA insertion loss) and barrier insertion loss by block walls (minimum 5 dBA insertion loss), pump station related noise would be reduced to 24 dBA at the nearest noise sensitive uses (R2). As such, pump station related noise would not exceed the significance threshold of 63 dBA (the lowest nighttime ambient noise level of 58 dBA as shown in Table 3 plus 5 dBA). Operation of the project would not expose persons to, or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Therefore, impacts would be less than significant.

Impact 2: The project would not expose persons to, or generate, excessive ground-borne vibration or ground-borne noise levels. (Less than Significant)

Construction activities at the project site have the potential to generate low levels of groundborne vibration as the operation of heavy equipment (i.e., compactor, backhoe, dozer, excavators, haul trucks, etc.) generates vibrations that propagate through the ground and diminish in intensity with distance from the source. No high-impact activities, such as pile driving or blasting, would be used during project construction. The nearest offsite receptors to the project site that could be exposed to vibration levels generated from project construction include single-family residential uses west and north of the project site. Groundborne vibrations from construction activities very rarely reach the levels that can damage structures, but they may be perceived in buildings very close to a construction site.

The PPV vibration velocities for several types of construction equipment, along with their corresponding RMS velocities (in VdB), that can generate perceptible vibration levels are identified in **Table 11, Vibration Source Levels For Construction Equipment**. Based on the information presented in Table 11, vibration velocities could range from 0.003 to 0.089 in/sec PPV at 25 feet from the source of activity.

TABLE 11
VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Approximate PPV (in/sec)					Approximate RMS (VdB)				
	25 Feet	50 Feet	60 Feet	75 Feet	100 Feet	25 Feet	50 Feet	60 Feet	75 Feet	100 Feet
Large Bulldozer	0.089	0.031	0.024	0.017	0.011	87	78	76	73	69
Caisson Drilling	0.089	0.031	0.024	0.017	0.011	87	78	76	73	69
Loaded Trucks	0.076	0.027	0.020	0.015	0.010	86	77	75	72	68
Jackhammer	0.035	0.012	0.009	0.007	0.004	79	70	68	65	61
Small Bulldozer	0.003	0.001	0.0008	0.0006	0.0004	58	49	47	44	40

SOURCE: FTA, 2006. Transit Noise and Vibration Impact Assessment. May.

Table 12, Groundborne Vibration Levels at Offsite Sensitive Uses Compared to Caltrans' and FTA Vibration Damage Potential Threshold, shows the estimated construction-related groundborne vibration levels that could occur at the nearest offsite structures during construction at the project site and a comparison to the identified significance threshold.

As shown in Table 12, the vibration velocities forecasted to occur at the offsite sensitive receptors could potentially be up to 0.013 in/sec PPV (or 70 VdB) at the nearest single-family residential uses.

TABLE 12
GROUNDBORNE VIBRATION LEVELS AT OFFSITE SENSITIVE USES COMPARED TO CALTRANS' AND FTA VIBRATION DAMAGE POTENTIAL THRESHOLD

Offsite Sensitive Land Use	Approximate Distance to Project Site (ft.) ^a	Estimated PPV (in/sec)/VdB	Caltrans' Vibration Damage Potential Threshold, PPV (in/sec) ^b	FTA Vibration Damage Potential Threshold, PPV (in/sec) ^c	Exceed Caltrans' or FTA Vibration Threshold? (Yes or No)
Multi-family residential uses north of the project site along Brookhurst Street	90	0.013/70	0.5	0.5	No

ft. = feet
in/sec = inches per second.

^a Approximate distances are measured from the nearest construction area within the project site where vibration levels would be generated to the nearest offsite structure.

^b Caltrans' Vibration Damage Potential Thresholds were taken from Table 6.

^c FTA Vibration Damage Potential Thresholds were taken from Table 4.

SOURCE: ESA, 2016.

Under the FTA construction vibration damaged criteria, the existing residential structures are considered “reinforce-concrete, steel or timber (no plaster)”. With respect to the vibration sources associated with project construction, it is anticipated that continuous/frequent intermittent sources of vibration, as defined under Caltrans' criteria, would occur from compaction activities at the project site, although no pile-driving would be required. As such, the vibration level criteria for continuous/frequent intermittent sources are used in this analysis.

Based on the information shown in Table 12, which shows an estimated PPV of 0.013, none of the existing offsite residential structures (considered as “new residential structures” and “reinforced-concrete, steel or timber” under the Caltrans' and FTA construction vibration damage criteria, respectively) located to the north of the project site would be exposed to PPV groundborne vibration levels exceeding the FTA and Caltrans' 0.5 inches per second criteria as shown in Tables 4 and 6, respectively. As such, the vibration impacts at these residential structures would be less than significant.

With respect to human annoyance, the City Noise Element identifies residential areas as noise-sensitive land uses. Currently, these types of sensitive uses that are located nearest to the project site include the multiple-family uses that are located immediately north of the project site. Under the Caltrans' vibration annoyance potential criteria (refer to Table 7), vibration levels exceeding

0.04 inches per second PPV for continuous/frequent intermittent sources would be considered distinctly perceptible. In addition, under the FTA vibration impact criteria for general assessment, residential receptors are considered to be a Category 2 land use (refer to Table 5). Land uses under this FTA category exposed to vibration levels exceeding 80 VdB for infrequent events would be considered an impact. As shown in Table 12, the multiple-family residential receptors located immediately north of the project site would be exposed to vibration levels of 0.013 in/sec PPV (or 70 VdB) which is well below the Caltrans' 0.04 in/sec PPV distinctly perceptible threshold and the FTA's 80 VdB impact threshold. Thus, vibration impacts related to human annoyance would be less than significant.

Impact 3: The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

As discussed previously under Impact 1, due to the proximity of the existing offsite sensitive uses to the project site, project operations would not expose sensitive receptors to increased exterior noise levels. As set forth in Section 4.2 above, a project would normally have a significant impact on noise levels from operation if the project would exceed the nighttime average ambient noise levels in Table 3 at a noise-sensitive use. Based on the measured noise levels at the nearest offsite sensitive receptors to the project site, it was determined that the pump station-related noise levels would not exceed the nighttime average ambient noise levels at the offsite sensitive receptors. As such, there would not be a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, and impacts would be less than significant. No mitigation measures are required.

Impact 4: The project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (Less than Significant Impact)

As discussed previously under Impact 1, due to the distances of the existing offsite sensitive uses to the project site, the project's construction activities would not expose sensitive receptors to a substantial increased exterior noise levels. As set forth in Section 4.2 above, a project would normally have a significant impact on noise levels from construction if the project would exceed the ambient noise levels by 5 dBA or more at a noise-sensitive use. Based on the estimated construction noise levels at the nearest offsite sensitive receptors to the project site that are shown in Table 10, it was determined that construction noise levels would not exceed the ambient noise levels by 5 dBA at offsite sensitive receptors. Thus, short-term noise impacts from construction would be less than significant.

Impact 5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (No Impact)

The nearest airport to the project area is the John Wayne Airport, located approximately 5 miles to the northeast. Therefore, the proposed project is not located within an airport land use plan or within 2 miles of a public airport or public use airport. No impact would occur.

Impact 6: 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? (No Impact)

The project area is not located within the vicinity of a private airstrip. No impacts would occur.

5.0 Conclusion

Construction noise and vibration levels associated with the project would not exceed the significance threshold at the studied offsite sensitive locations, construction activities associated with the project would not expose persons to, or generate noise and vibration levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, Therefore, construction noise and vibration impacts would be less than significant.

Operation of the project would not expose persons to, or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, Therefore, operation noise impacts would be less than significant.

As discussed above, the project construction and operation would not result in a substantial temporary or permanent increase in ambient noise and vibration levels at offsite sensitive receptor locations. Therefore, impacts would be less than significant.

6.0 References

California Department of Transportation (Caltrans), *Technical Noise Supplement (TeNS)*. September, 2013.

Caltrans, *Transportation and Construction Vibration Guidance Manual*. September 2013.

Federal Highway Administration, *Roadway Construction Noise Model User's Guide*, 2006.

FTA, 2006. *Transit Noise and Vibration Impact Assessment*. May.

USEPA, *EPA Identifies Noise Levels Affecting Health and Welfare*. April 1974.

Appendix A

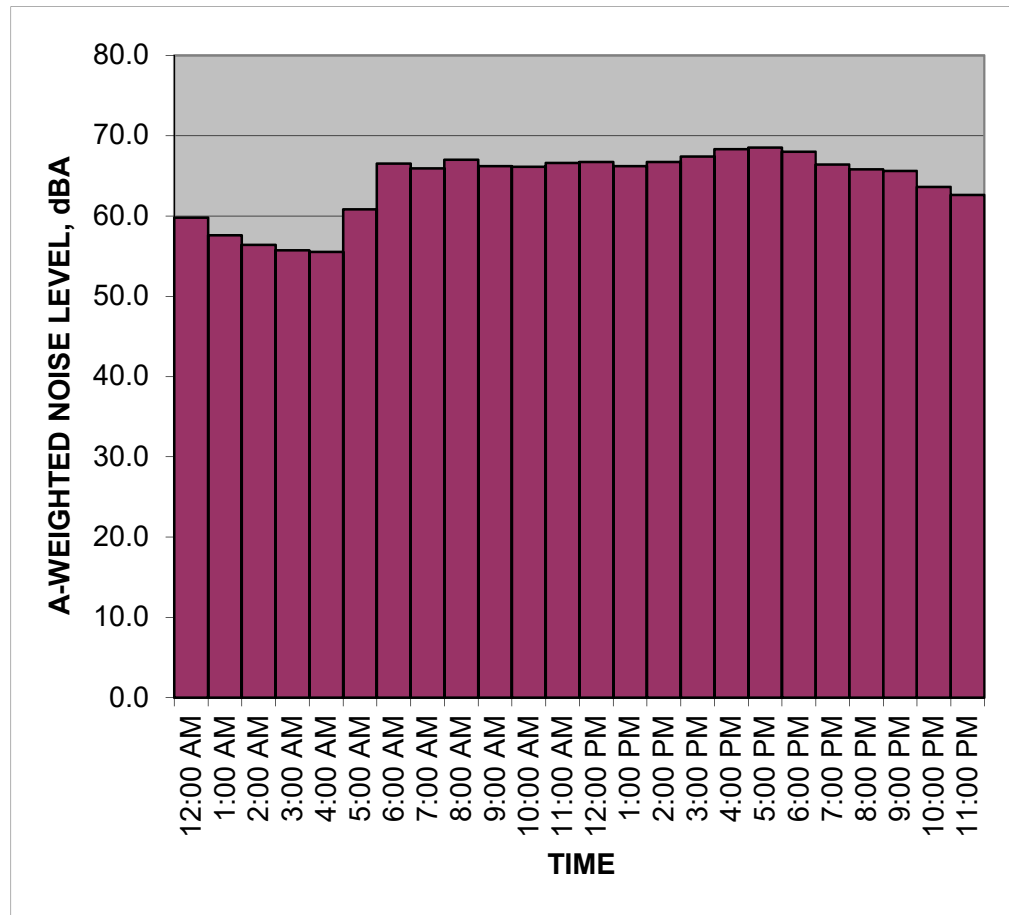
Ambient Noise Data

Measured Ambient Noise Levels

Project: Plant No. 2 GWRS Conveyance Facilities Project
 Location: R1 - West of the Project Site
 Sources: Ambient

Date: July 13, 2016

TIME	HNL, dB(A)
12:00 AM	59.8
1:00 AM	57.6
2:00 AM	56.4
3:00 AM	55.7
4:00 AM	55.5
5:00 AM	60.8
6:00 AM	66.5
7:00 AM	65.9
8:00 AM	67.0
9:00 AM	66.2
10:00 AM	66.1
11:00 AM	66.6
12:00 PM	66.7
1:00 PM	66.2
2:00 PM	66.7
3:00 PM	67.4
4:00 PM	68.3
5:00 PM	68.5
6:00 PM	68.0
7:00 PM	66.4
8:00 PM	65.8
9:00 PM	65.6
10:00 PM	63.6
11:00 PM	62.6
CNEL, dB(A):	69.7



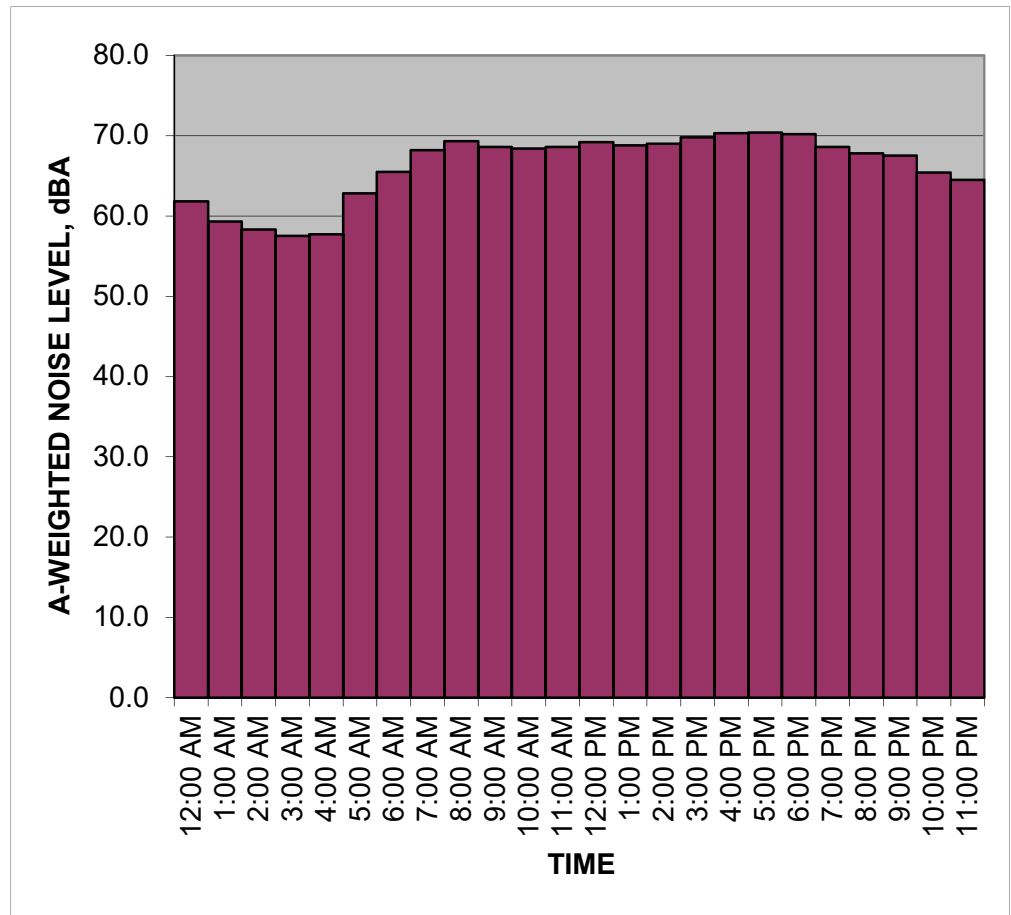
NOTES:

Measured Ambient Noise Levels

Project: Plant No. 2 GWRS Conveyance Facilities Project
 Location: R2 - Southwestern Boundary of Multi-family Residential Uses
 Sources: Ambient

Date: July 13, 2016

TIME	HNL, dB(A)
12:00 AM	61.8
1:00 AM	59.3
2:00 AM	58.3
3:00 AM	57.5
4:00 AM	57.7
5:00 AM	62.8
6:00 AM	65.5
7:00 AM	68.2
8:00 AM	69.3
9:00 AM	68.6
10:00 AM	68.4
11:00 AM	68.6
12:00 PM	69.2
1:00 PM	68.8
2:00 PM	69.0
3:00 PM	69.8
4:00 PM	70.3
5:00 PM	70.4
6:00 PM	70.2
7:00 PM	68.6
8:00 PM	67.8
9:00 PM	67.5
10:00 PM	65.4
11:00 PM	64.5
CNEL, dB(A):	71.3



NOTES:

Appendix B

On-Site Construction Noise Calculations

Project: Plant No. 2 GWRS Conveyance Facilities Project

Construction Noise Impact on Sensitive Receptors

Project Number: D160387.04

Parameters

Construction Hours:	8 Daytime hours (7 am to 7 pm)
	0 Evening hours (7 pm to 10 pm)
	0 Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3

				R1					R2				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Phase 1 - Pump Station, Tanks, Pipeline/Meter Vault Excavation					67	66				73	69		
Compactor (Ground)	1	83	20%	170	67	60	63	5	90	73	66	69	5
Dozer	2	82	40%	270	65	61	64	5	190	68	64	67	5
Excavators	2	81	40%	340	62	58	61	5	260	65	61	64	5
Dump Truck	6	76	20%	340	62	55	58	5	260	64	57	60	5
Water Truck	1	80	10%	340	58	48	51	5	260	61	51	54	5
Phase 2 - Construction of Pump Station Wet Wells, Tank Piles, Piping					61	60				66	65		
Drill Rig	1	76	50%	170	60	57	60	5	90	66	63	66	5
Backhoe	1	69	50%	270	49	46	49	5	190	52	49	52	5
Concrete Truck	4	75	25%	340	59	53	56	5	260	62	56	59	5
Dump Truck	2	76	20%	340	57	50	53	5	260	60	53	56	5
Water Truck	2	80	10%	340	61	51	54	5	260	64	54	57	5
Phase 3 - Construction of Tank, Pump Station Building Valve/Meter Vault					65	62				71	67		
Cranes	1	81	40%	170	65	61	64	5	90	71	67	70	5
Forklifts	4	60	50%	270	46	43	46	5	190	49	46	49	5
Concrete Truck	4	75	25%	340	59	53	56	5	260	62	56	59	5
Man Lift	5	68	25%	340	53	47	50	5	260	56	50	53	5
Phase 4 - Equipping of Pump Station, Tanks, Valve/Meter Vault					65	62				71	67		
Cranes	1	81	40%	170	65	61	64	5	90	71	67	70	5
Forklifts	4	60	50%	270	46	43	46	5	190	49	46	49	5
Man Lift	5	68	25%	340	53	47	50	5	260	56	50	53	5

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Appendix C

Off-Site Construction Traffic Noise Calculations

Off-Site Traffic Noise Calculations

Project: Plant No. 2 GWRS Conveyance Facilities Project

Off-site Construction Traffic Noise

Roadway/Segment	Traffic Volumes			Leq			CNEL		
	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street			41	55.6	53.0	51.3	52.6	50.0	48.3
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
Roadway/Segment	Traffic Volumes			Leq			CNEL		
	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
Roadway/Segment	Traffic Volumes			Leq			CNEL		
	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-

CNEL				
Summary	25 ft. from ROW		At ROW	
	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Roadway/Segment				
Brookhurst Street	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-

Appendix E

Orange County Water District Groundwater Replenishment System Final Expansion Water Conveyance Facilities Project

Draft Initial Study/Mitigated Negative Declaration &CEQA-Plus Federal Consultation Review Response to Comments and Mitigation Monitoring Program



**Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708
Contact; Daniel Bott**

April 2018

Section	Page
---------	------

Table of Contents

SECTION 1.0	INTRODUCTION.....	1-1
SECTION 2.0	COMMENT LETTERS.....	2-1
SECTION 3.0	MITIGATION MONITORING PROGRAM	3-1
3.1	Project Description.....	3-1
3.2	Purpose of Mitigated Negative Declaration	3-1
3.3	Development of Mitigation Monitoring Reporting Program	3-1
3.4	Requirement to Approve Mitigation Monitoring Plan	3-2

TABLE

Table 1	List of Comment Letters	2-1
Table 2	.....	3-4

SECTION 1.0 INTRODUCTION

The Groundwater Replenishment System Final Expansion Water Conveyance Facilities Project Draft Mitigated Negative Declaration (MND) was circulated for public review from February 16, 2018 to March 17, 2018. During the public review period, comments were received on the Draft MND. This appendix includes a photocopy of the comment letters or e-mails received and OCWD responses to those comments. Where necessary or appropriate, this information which includes additional analyses, clarifications and corrections has been incorporated into the Final MND. Section 2.0 provides listing of agencies and organizations who commented on the Draft MND.

SECTION 2.0 COMMENT LETTERS

Below is a listing of the public agencies that provided comments on the Draft EIR/EA.

Table 1 List of Comment Letters

Sender	Date Received
California State Clearinghouse	March 16, 2018
California Department Fish and Wildlife	March 6, 2018
Orange County Public Works	March 13, 2018



EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX
DIRECTOR

March 16, 2018

Daniel Bott
Orange County Water District
18700 Ward St
Fountain Valley, CA 92708

Subject: Orange County Water District Groundwater Replenishment System Conveyance Facilities Project
SCH#: 2018021038

Dear Daniel Bott:

The State Clearinghouse submitted the above named Negative Declaration to selected state agencies for review. The review period closed on March 15, 2018, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
1-916-445-0613 FAX 1-916-558-3164 www.opr.ca.gov

**Comment Letter A
California State Clearinghouse
March 16, 2018**

Comment 1

The comment identifies that Orange County Water District has complied with CEQA public review requirements.

Response 1

No response required.

Bott, Daniel

From: Turner, Jennifer@Wildlife <Jennifer.Turner@wildlife.ca.gov>
Sent: Tuesday, March 06, 2018 10:32 AM
To: Bott, Daniel
Subject: Comments on the Notice of Intent to Adopt a Mitigated Negative Declaration for the Orange County Water District Groundwater Replenishment System Conveyance Facilities Project, Huntington Beach, CA (SCH# 2018021038)

Dear Mr. Bott,

The California Department of Fish and Wildlife (Department) has reviewed the above-referenced draft Mitigated Negative Declaration (MND) dated February 2018, for the Orange County Water District Groundwater Replenishment System Conveyance Facilities Project. The comments provided herein are based on information provided in the MND, our knowledge of sensitive and declining vegetation communities in the County of Orange (County), and our participation in regional conservation planning efforts.

The Department is a Trustee Agency and a Responsible Agency pursuant to the California Environmental Quality Act (CEQA; §§ 15386 and 15281, respectively) and is responsible for ensuring appropriate conservation of the state's biological resources, including rare, threatened, and endangered plant and animal species, pursuant to the California Endangered Species Act (Fish and Game Code § 2050 *et seq.*) and other sections of the Fish and Game Code (1600 *et seq.*). The Department also administers the Natural Community Conservation Planning (NCCP) program.

Mitigation Measure BIO-1 is insufficient to reduce potential impacts to nesting birds to below significant because preconstruction surveys will be conducted seven days prior to construction activities. The further a preconstruction survey occurs from construction activities, the more likely the chance that significant impacts to avian species may occur, as birds may nest in the surveyed area after the survey is conducted. The Department, therefore, recommends that BIO-1 be amended to state that preconstruction surveys will be conducted no more than three days prior to construction activities.

We appreciate the opportunity to comment on the draft MND for this project and to assist in further minimizing and mitigating project impacts to biological resources by ensuring that the proposed project is consistent with the CEQA. If you should have any questions or comments regarding this email, please contact me using the information provided below.

Sincerely,

Jennifer Turner
Environmental Scientist
California Department of Fish and Wildlife
3883 Ruffin Road
San Diego, CA 92123
(858)467-2717
Jennifer.Turner@wildlife.ca.gov

Comment Letter B
California Department Fish and Wildlife
March 6, 2018

Comment 1

The comment letter comments that Mitigation Measure BIO-1 in the Draft MND is insufficient to reduce potential impacts to nesting birds to below significant because pre-construction surveys were proposed seven days prior to construction. To reduce potential impacts to a less than significant level, California Department Fish and Wildlife recommends that pre-construction surveys be conducted no more than three days prior to construction activities.

Response 1

Per the recommendation from California Department Fish and Wildlife, Mitigation Measure BIO-1 in the Final MND has revised as follows

BIO-1: Construction activities should not take place between February 15 and August 15. In the event construction activities are proposed before the completing of nesting season, a biologist would examine the site no more than three days prior to initiating any activities to ensure that all nesting has completed. Ground nesting species would also be taken into account.

.

March 13, 2018

NCL-18-010

Daniel Bott
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Subject: Initial Study/Mitigated Negative Declaration for the Groundwater Replenishment System Water Conveyance Facilities Project

Dear Mr. Bott:

Thank you for the opportunity to comment on the Initial Study/Mitigated Negative Declaration (IS/MND) for the Groundwater Replenishment System Water Conveyance Facilities Project. The County of Orange offers the following comments for your consideration.

OC Public Works – Environmental Resources

1. Section 4.9, Hydrology/Water Quality: The discussion under the drainage pattern of the site refers to Mitigation Measure GEO-2. The IS/MND does not define Mitigation Measure GEO-2 anywhere in the document. The discussion under the project's degradational impacts to water quality refers to Mitigation Measure GEO-2 and Mitigation Measure HWQ-1. The IS/MND does not define Mitigation Measure GEO-2 or Mitigation Measure HWQ-1 anywhere in the document.

OC Health Care Agency – Environmental Health Division

1. The Orange County Health Care Agency (OCHCA) Environmental Health Division (EH) has noted two listings for the project site on the State Water Resources Control Board's GeoTracker database due to former leaking underground storage tank cleanup cases associated with the site. The IS/MND should address the potential for impacted material to be encountered during the proposed site improvement activities.
2. A qualified person should be onsite during excavation/grading activities to identify areas that may be impacted by potential releases at the site to ensure that removal, disposal, and waste tracking is conducted in accordance with applicable regulation. Where residual impacts from petroleum hydrocarbons or volatile organic compounds (VOCs) are present, disturbance of site soils might expose VOCs or fugitive dust that are subject to Air Quality Management District permitting or oversight and should be identified.
3. Records for environmental cleanup sites currently or formerly maintained by OCHCA-EH may be obtained by contacting the OCHCA Custodian of Records at (714) 834-3536.

4. If subsurface contamination should necessitate further site assessment or remedial activities or if previously unidentified underground storage tanks/piping are encountered, please contact the Hazardous Materials Mitigation Supervisor for OCHCA-EH at (714) 433-6000.

If you have any questions regarding these comments, please contact Matt Tucker at (714) 955-0669 in Environmental Resources; Geniece Higgins at (714) 433-6263 in Environmental Health; or Ashley Brodtkin at (714) 667-8854 in OC Development Services.

Sincerely,



Richard Vuong, Manager, Planning Division
OC Public Works Service Area/OC Development Services
300 North Flower Street
Santa Ana, California 92702-4048
Richard.Vuong@ocpw.ocgov.com

cc: Matt Tucker, OC Public Works – Environmental Resources
Geniece Higgins, OC Health Care Agency – Environmental Health Division

Comment Letter C
Orange County Public Works and Health Care Agency
March 13, 2018

Environmental Resources Comment 1

The comment identifies that Draft MND does not define Mitigation Measure GEO-2 or Mitigation Measure HWQ-1.

OC Public Works Response 1

Mitigation Measure GEO-2 is identified in the Geology Section under Impact B on Page 4-16. GEO-2 is also required the Hydrology/Water Quality Section under Impact B on page 4-80. Both Geology Impact A and Hydrology/Water Quality Impact B evaluate the potential of the project to result in adverse erosion impacts and Mitigation Measure GEO-1 is applicable to both and would reduce potential erosion impacts to a less than significant level. Below is Mitigation Measure GEO-2 from the Draft MND.

GEO-2: Prior to the start of construction OCWD will file a Notice of Intent (NOI) with the State Water Resources Control Board and prepare and implement Storm Water Pollution Prevention Plan to minimize potential erosion impacts.

Mitigation Measure HWQ-1 is identified in the Hydrology Section under Impact D on Page 4-81.

Presently, OCSD Plant No. 1 and Plant No. 2 have a National Pollutant Discharge Elimination System (NPDES) Individual Permit for discharges of storm water associated with their industrial activities. The Individual Permit regulates activities that may affect storm water runoff quality at certain types of industrial facilities, including publicly owned wastewater treatment plants with design flows greater than 1.0 MGD, such as the OCSD. Under the Individual Permit, facilities which discharge storm water to municipal sanitary sewer systems instead of to waters of the United States are not required to obtain a General Construction Permits or Industrial Permit providing an onsite storm water management plan is prepared and implement that contains BMPs to ensure that construction site surface water runoff and long term surface water runoff is retained onsite and incorporated into existing wastewater treatment processes.

The additional surface water runoff generated from the proposed project would be incorporated into onsite existing drainage systems consistent with OCSD (NPDES) Individual Permit at Plant No.2 To ensure that adequate drainage facilities would be available, OCWD would implement Mitigation Measure HWQ-1, which requires OCWD to coordinate with OCSD on the capacity of existing drainage systems and the ability of those drainage systems to accommodate surface water runoff generated by the proposed project. Below is Mitigation Measure HWQ-1 from the Draft MND.

HWQ-1: OCWD will coordinate with OCSD on the capacity of existing drainage systems to receive surface water runoff generated from the proposed project and would participate in any drainage improvements required accommodate the surface water runoff flows.

OC Health Care Agency Comment 1

The comment notes that the State Water Resources Control Boards GEO Tracker identified that the Plant 2 Site as two listings for former leaking underground storage tank clean up cases and the Draft MND should address potential impacts if hazardous substances are encountered.

OC Health Care Agency Response 1

Page 4-71 of Draft MND identifies that a database search of hazardous materials sites was performed to identify potential contaminated sites in the study area using the online State Water Resources Control Board (SWRCB) GeoTracker Database and Department of Toxic Substances Control (DTSC) EnviroStor Database. The only reported hazardous site identified on OCSD Plant No. 2 Site was two closed leaking underground storage tanks. Both sites were determined to not pose significant risks to human health or the environment. It would be very unlikely hazardous substances would be encountered from the two former leaking underground storage tank clean-up cases. In the unlikely event hazardous substances are encountered, the proposed project would be required to comply with local, state and federal laws and regulations regarding the handling and storage of hazardous materials.

OC Health Care Agency Comment 2

The comment recommends that a qualified person be onsite during excavation/grading activities to identify areas that may been impacted by potential releases at the site to ensure that removal disposal and waste tracking is conducted in accordance with applicable regulations

OC Health Care Agency Response 2

Prior to grading and excavation activities, the project geotechnical consult would take boring samples of the project site to determine the chemical profile of the soil. Additionally, prior to disposal of any removed soils from the site, grab samples would be taken and analyzed. In the event elevated levels of contaminants are present OCWD would coordinate with Orange County Health Care Agency Environmental Health Division on appropriate remedial activities.

OC Health Care Agency Comment 3

The comment identifies that records for environmental clean-up sites may be obtained by contacting the Orange County Health Care Agency Custodian of Records.

OC Health Care Agency Response 3

Comment noted. No response required.

OC Health Care Agency Comment 4

The comment identifies if subsurface contamination requires further site assessment or remedial activities, the hazardous Materials Mitigation Supervisor for Orange County Health Care Agency Health Division should be contacted.

OC Health Care Agency Response 4

Comment noted. No response required.

SECTION 3.0 MITIGATION MONITORING PROGRAM

The following is a Mitigation Monitoring Report Program (MMRP) for the Orange County Water District Groundwater Replenishment System Final Expansion Water Conveyance Facilities Project Mitigated Negative Declaration (MND) prepared pursuant to Section 15097 of the CEQA Guidelines and Section 21081.6 of the Public Resources Code. This MMRP lists all applicable mitigation measures from the Draft MND. The appropriate timing of implementation and responsible party are identified to ensure proper enforcement of the mitigation measures.

3.1 Project Description

The purpose of this Initial Study/Mitigated Negative Declaration is to evaluate potential impacts associated with the construction and operation of two flow equalization tanks and pump station on the Orange County Sanitation District Plant No. 2 wastewater treatment facility site. The secondary effluent from the flow equalization tanks would provide an additional 6,000 acre-feet per year of secondary effluent for treatment at the Orange County Water District Groundwater Replenishment System (GWRS) advanced recycled water treatment facility, increasing the GWRS total full build-out treatment capacity to 134,000 acre feet per year.

3.2 Purpose of Mitigated Negative Declaration

The Initial Study/Mitigated Negative Declaration prepared for the Groundwater Replenishment System Final Expansion Water Conveyance Facilities Project would be used as the supporting CEQA environmental documentation for the following approvals and permits.

Agency	Approvals/Discretionary Actions
Orange County Water District	<ul style="list-style-type: none">• Project Approval• Approval for Agreements Construction Contracts
State Regional Water Quality Control Board, Santa Ana Region	Approval of amendment to Regional Water Control Board Producer/User Water Recycling Permit Orange County Water District Groundwater Replenishment System (R8-2008-0058)
City Huntington Beach	Coastal Development Permit

3.3 Development of Mitigation Monitoring Reporting Program

The basic elements of the Mitigation Monitoring and Reporting Program are the mitigation measures identified by each impact category addressed in the Draft

MND. The development of the program was based on the following procedures necessary to initiate and complete the monitoring process.

- Identification of the key periods and events in the project implementation schedule.
- Identification of the key personnel and agencies responsible for environmental monitoring.
- Monitoring of the implementation of the mitigation measures and documentation that the measures have been properly and thoroughly implemented.
- Development of the written document on the implementation of all the mitigation measures, identification of any areas of non-compliance, and proposed activities to bring the project into compliance with the mitigation monitoring and reporting program.

3.4 Requirement to Approve Mitigation Monitoring Plan

The OCWD has the authority to require and enforce the provisions of California Resource Code Section 21081.6. The OCWD will be responsible for approving the Mitigation Monitoring and Reporting Program and for preparing the written report documenting the implementation of project mitigation measures.

Table 1 summarizes the mitigation measures that have been adopted for the Project, specifies the timing for implementation of each measure and identifies the responsible parties for ensuring implementation and the satisfactory completion of each measure. The procedures for implementing the Mitigation Monitoring and Reporting Program are:

Monitoring Procedures

1. An Environmental Monitor, appointed by OCWD, will be responsible for coordinating review of project plans and activities, the construction site, and/or operations to ensure that the mitigation measures are properly and thoroughly implemented through the course of the project.
2. Written documentation that each mitigation measure in Table 1 has been implemented will be prepared. This documentation can be on an OCWD mitigation monitoring checklist or a similar form that clearly indicates the timing or schedule for implementation, whether the measure has, in fact, been implemented, or in the case of measures that are ongoing, that a process has been developed to ensure continued implementation of the measure.

Reporting Procedures

1. The Environmental Monitor appointed by OCWD on this project will be responsible for periodically reviewing the program in Table 1 with the OCWD Environmental Compliance Advisor.
2. The Environmental Monitor will prepare a written report for the OCWD documenting the completion of the implementation of all the mitigation measures. For those measures not implemented or for activities that do not fully comply with mitigation measures included in Table 1, an explanation of the areas of noncompliance will be prepared, including a proposal to bring those elements of the project into compliance with the Mitigation Monitoring and Reporting Program.

Table 2
Groundwater Replenishment System Final Expansion Water Conveyance
Facilities Project

Mitigation Monitoring Plan Reporting Program

Mitigation Measure	Responsible for Implementation	Monitoring	Verification
Aesthetics			
A-1: All onsite lighting shall be directed away from adjacent residential, business uses and away from the Santa Ana River right-of-way.	OCWD	During Construction	
A-2: During operation of the project the onsite lighting creates a light or glare issues for sensitive receptor properties, OCWD will implement corrective measures to resolve the issue. Such corrective measures may include providing additional shielding on light fixtures, relocating lighting fixtures and reducing the intensity of lighting.	OCWD	During Construction	
Air Quality			
AQ-1: Mobile off-road construction equipment (wheeled or tracked) used during construction of the conveyance facilities of the proposed Project shall meet the USEPA Tier 4 interim standards, either as original equipment or equipment retrofitted to meet the Tier 4 interim standards. A copy of each unit's certified tier specification or model year specification shall be available upon request at the time of mobilization of each applicable unit of equipment.	OCWD	During Construction	
Biology			
BIO-1: Construction activities should not take place between February 15 and August 15. In the event construction activities are proposed before the completing of nesting season, a biologist would examine the site one week prior to initiating any activities to ensure that all nesting has completed. Ground nesting species would also be taken into account.	OCWD	Prior to Construction	
Cultural Resources			

CR-1: Prior to earth moving activities, a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior, 2008) will conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of cultural resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. OCWD will ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.	OCWD	Prior to Grading	
CR-2: Prior to the start of any ground-disturbing activities, OCWD will retain an archaeological monitor to observe all ground-disturbing activities. Archaeological monitoring will be conducted by a monitor familiar with the types of archaeological resources that could be encountered and shall work under the direct supervision of the qualified archaeologist. Monitoring may be reduced or discontinued by the qualified archaeologist, in coordination with OCWD, based on observations of subsurface soil stratigraphy and/or the presence of older C-horizon deposits. The monitor will be empowered to halt or redirect ground-disturbing activities away from the vicinity of a discovery until the qualified archaeologist has evaluated the discovery and determined appropriate treatment. The monitor will keep daily logs detailing the types of activities and soils observed, and any discoveries. After monitoring has been completed, the qualified archaeologist shall prepare a monitoring report that details the results of monitoring. The report shall be submitted to OCWD, SCCIC, and any Native American groups who request a copy.	OCWD	Prior to Grading	
CR-3: In the event of the discovery of archaeological materials, OCWD or its contractor shall immediately cease all work	OCWD	During Construction	

<p>activities in the area (within approximately 100 feet) of the discovery until it can be evaluated by the qualified archaeologist. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammer stones and pitted stones. Historic-period materials might include stone or concrete footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Construction shall not resume until the qualified archaeologist has conferred with OCWD on the significance of the resource. SWRCB shall be afforded the opportunity to determine whether the discovery requires addressing under Section 106 Post-Review Discoveries provisions provided in 36 CFR 800.13.</p> <p>If it is determined that the discovered archaeological resource constitutes a historic property under Section 106 of the NHPA or a historical resource under CEQA, avoidance and preservation in place shall be the preferred manner of mitigation. Preservation in place maintains the important relationship between artifacts and their archaeological context and also serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, an Archaeological Resources Treatment Plan that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource shall be prepared</p>			
--	--	--	--

and implemented by the qualified archaeologist in consultation with OCWD. The appropriate Native American representatives shall be consulted in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond that which is scientifically important, are considered.			
CR-4: Project-related earth disturbance has the potential to unearth previously undiscovered human remains, resulting in a potentially significant impact. If human remains are encountered during excavation activities, all work will halt and the County Coroner will be notified (California Public Resources Code §5097.98). The Coroner will determine whether the remains are of forensic interest. If the Coroner determines that the remains are prehistoric, s/he will contact the Native American Heritage Commission (NAHC). The NAHC will be responsible for designating the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the California Health and Safety Code. The MLD will make his/her recommendation within 48 hours of being granted access to the site. The MLD's recommendation will be followed if feasible, and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials (California Health and Safety Code §7050.5). If the landowner rejects the MLD's recommendations, the landowner will rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (California Public Resources Code §5097.98).	OCWD	During Construction	
CR-5: Prior to the start of any ground-disturbing activities, OCWD shall retain a qualified paleontologist meeting the Society of Vertebrate Paleontology (SVP) Standards (SVP, 2010). The qualified paleontologist shall contribute to any construction worker	OCWD	Prior to Grading	

<p>cultural resources sensitivity training either in person or via a training module provided to the qualified archaeologist. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the project site and the procedures to be followed if they are found. The qualified paleontologist shall also conduct periodic spot checks in order to ascertain when older deposits are encountered and where monitoring shall be required.</p>			
<p>CR-6: Prior to the start of any ground-disturbing activities, OCWD shall retain a paleontological monitor to observe all ground-disturbing activities within older Quaternary deposits. Paleontological resources monitoring shall be performed by a qualified paleontological monitor, or cross-trained archaeological/paleontological monitor, under the direction of the qualified paleontologist. The monitor shall have the authority to temporarily halt or divert work away from exposed fossils in order to recover the fossil specimens. Monitoring may be reduced or discontinued by the qualified paleontologist, in coordination with OCWD, based on observations of subsurface soil stratigraphy and/or other factors and if the qualified paleontologist determines that the possibility of encountering fossiliferous deposits is low. The monitor shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring report to be submitted to OCWD and filed with the local repository. Any recovered significant fossils shall be curated at an accredited facility with retrievable storage.</p>	OCWD	Prior to Grading	
<p>CR-7: If construction or other project personnel discover any potential fossils during construction, regardless of the depth or presence of a monitor, work in the vicinity (within 100 feet) of the find shall cease until the qualified paleontologist has assessed the discovery and made recommendations as to</p>	OCWD	During Grading	

the appropriate treatment.			
Geology/Soils			
GEO-1: The OCWD will ensure that all structures for the proposed project are designed and constructed in compliance with current engineering practices, including the California Uniform Building Code and all applicable seismic engineering guidelines.	OCWD	During Design and Construction	
GEO-2: Prior to the start of construction OCWD will file a Notice of Intent (NOI) with the State Water Resources Control Board and prepare and implement Storm Water Pollution Prevention Plan to minimize potential erosion impacts.	OCWD	Prior to Construction	
GEO-3: The OCWD will ensure that all structures for the proposed project are designed and constructed in compliance with building site specific geotechnical studies and the California Uniform Building Code.	OCWD	During Design and Construction	
Hazards/Hazardous Materials			
HZ-1: Any use of hazardous materials involved with the proposed project must be conducted in accordance with applicable federal, state and local regulations.	OCWD	During Construction	
Hydrology/Water Quality			
HWQ-1: OCWD will coordinate with OCSD on the capacity of existing drainage systems to receive surface water runoff generated from the proposed project and would participate in any drainage improvements required accommodate the surface water runoff flows.	OCWD	Prior to Construction	
Land Use/Planning Programs			
LU-1: OCWD will provide residents and business owners with notifications of upcoming construction activities.	OCWD	Prior to Construction	
LU-2: Prior to construction of the Flow Equalization Tank OCWD will obtain approval of Coastal Development Permit from the City of Huntington Beach.	OCWD	Prior to Construction	
Traffic/Transportation			

T-1: OCWD will be responsible for preparing adequate detour and access plans to ensure the safe movement of vehicles and pedestrians during the construction period.	OCWD	During Design and Construction	
Tribal Resources			
CR-5: Prior to issuance of a grading permit and prior to start of any ground-disturbing activities, OCWD will retain a Native American monitor to observe all ground-disturbing activities. The monitor shall be obtained from a Tribe that is traditionally and culturally affiliated with the area, according to the NAHC list. The monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of a discovery until the qualified archaeologist has evaluated the discovery and determined appropriate treatment. Monitoring may be reduced or discontinued, in coordination with OCWD and the qualified archaeologist, based on observations of subsurface soil stratigraphy and/or the presence of older C-horizon deposits.	OCWD	Prior to Grading	
Utility Service Systems			
U-1: OCWD will investigate all available alternatives, and then select the best method of solid waste disposal and reduction of solid waste stream as required in the California Integrated Waste Management Act prior to the start of construction.	OCWD	During Design and Construction	