

## **APPENDIX C**

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### **1999 PEIR ADOPTED MITIGATION MONITORING AND REPORTING PROGRAM**



**ORANGE COUNTY SANITATION DISTRICT  
MITIGATION MONITORING AND REPORTING PROGRAM  
FOR THE  
1999 STRATEGIC PLAN**

**Introduction**

This is the Mitigation Monitoring and Reporting Program (MMRP) for the 1999 Strategic Plan approved by the Orange County Sanitation District.

This project has been analyzed in accordance with the California Environmental Quality Act (CEQA) requirements in the Environmental Impact Report (EIR) for the OCSD 1999 Strategic Plan Project (certified October 27, 1999). This MMRP is required by Section 21081.6 of the Public Resources Code (the CEQA statutes).

**Mitigation Monitoring and Reporting Program**

The MMRP includes the mitigation measures identified in the EIR required to address only the significant impacts associated with the project components being approved. The significant impacts associated with this project and the required mitigation measures are summarized in this program; the full text of the impact analysis and mitigation measures is presented in the Draft PEIR (published June 29, 1999). The mitigation measures included in this program are those adopted by the OCSD's Board of Directors in its Findings of Fact, as required by CEQA.

**Table 1** summarizes the mitigation measures required for each project component. Compliance with these mitigation measures will be monitored and verified at different stages in the project implementation process. **Table 2** summarizes the mitigation measures by the schedule for compliance verification.

**TABLE 1  
MITIGATION MEASURE BY PROJECT COMPONENT**

Mitigation Measure	Project Facility / Action				
	Preferred Alternative, Treatment Scenario 2	Ocean Discharge	Treatment System	Collection System	Biosolids Management Program
<b>5 – OCEAN DISCHARGE</b>					
Measure 5-3a, Oil and Grease	X	X			
Measure 5-3b, Local Grease Ordinance	X				
Measure 5-5, Brine Effects Studies	X				
Measure 5-9, Pathogen Reduction	X	X			
Measure 5-11, Outfall Cleaning	X				
Measure 5-12, Outfall Siting	X				
Measure 5-13, Pathogen Reduction	X	X			
<b>6 – TREATMENT SYSTEM</b>					
<b>6.1 – Land Use</b>					
Measure 6.1-1a, Construction Hours			X		
Measure 6.1-b, Construction Notification			X		
Measure 6.1-3a, Implement Landscaping Master Plan			X		
Measure 6.1-3b, Exterior Lighting			X		
<b>6.2 – Traffic</b>					
Measure 6.2-1, Contractor Coordination			X		
Measure 6.2-2a, Ride Sharing Program			X		
Measure 6.2-2b, Traffic Management			X		
Measure 6.2-3, Biosolids Transport			X		
<b>6.3 – Biology</b>					
Measure 6.3-1, Nesting Birds			X		
<b>6.4 – Noise</b>					
Measure 6.4-1a, Construction Hours			X		
Measure 6.4-1b, Muffled Equipment			X		
Measure 6.4-1c, Pile-Driving Noise Reduction			X		
Measure 6.4-1d, Alternatives for Foundations			X		
Measure 6.4-1e, Construction Notification			X		
Measure 6.4-1f, Pile Driving Noise Reduction			X		
Measure 6.4-1g, Noise Reduction			X		
Measure 6.4-1h, Exterior Lighting			X		

**TABLE 1 (CONTINUED)  
MITIGATION MEASURE BY PROJECT COMPONENT**

Mitigation Measure	Project Facility / Action				Biosolids Management Program
	Preferred Alternative, Treatment Scenario 2	Ocean Discharge	Treatment System	Collection System	
<b>6.4 – Noise (continued)</b>					
Measure 6.4-2a, Noise Performance Standard			X		
Measure 6.4-2b, Community Liaison			X		
Measure 6.4-3, Noise Control			X		
<b>6.5 – Air Quality</b>					
Measure 6.5-1a, Equipment Emissions			X		
Measure 6.5-1b, Truck Emissions			X		
Measure 6.5-1c, Dust Control			X		
Measure 6.5-1d, Soil Binders			X		
Measure 6.5-1e, Ground Cover			X		
Measure 6.5-2a, Non-Combustion Air Emissions			X		
Measure 6.5-2b, Future Air Emission Reductions			X		
Measure 6.5-3a, Ride-Sharing Program			X		
Measure 6.5-3b, Use of CNG			X		
Measure 6.5-3c, Alternative Fuels for Trucks			X		
Measure 6.5-3d, Transportation Alternatives			X		
Measure 6.5-4a, Energy Purchases			X		
Measure 6.5-4b, Clean-Burning Engines			X		
Measure 6.5-4c, Install BACT			X		
Measure 6.5-5a, Odor Control			X		
Measure 6.5-5b, Dewatering Odor Control			X		
Measure 6.5-5c, Community Liaison			X		
Measure 6.5-5d, Odor Complaint Follow-up			X		
Measure 6.5-5e, Pre-Design Coordination			X		
Measure 6.5-5f, Community Outreach			X		
<b>6.6 – Geology</b>					
Measure 6.6-1a, Geotechnical Evaluations			X		
Measure 6.6-1b, Seismic Safety			X		
Measure 6.6-2a, Spill Prevention			X		
Measure 6.6-2b, Spill Containment			X		

**TABLE 1 (CONTINUED)  
MITIGATION MEASURE BY PROJECT COMPONENT**

Mitigation Measure	Project Facility / Action				
	Preferred Alternative, Treatment Scenario 2	Ocean Discharge	Treatment System	Collection System	Biosolids Management Program
<b>6.7 – Hydrology</b>					
Measure 6.7-1a, Best Management Practices			X		
Measure 6.7-1b, Storm Water Management			X		
Measure 6.7-1c, Storm Drain Inspection			X		
Measure 6.7-1d, Regional Board			X		
Measure 6.7-1e, Construction Site Storm Water			X		
Measure 6.7-2a, Groundwater Dewatering			X		
Measure 6.7-2b, Dewatering Discharge			X		
Measure 6.7-3a, Chemical Spills During Floods			X		
Measure 6.7-3b, Coordination with COE			X		
Measure 6.7-3c, Hazard Awareness			X		
Measure 6.7-3d, Flood Protection			X		
<b>6.9 – Hazardous Materials</b>					
Measure 6.9-1a, Worker Safety Training			X		
Measure 6.9-1b, Oxygen Facility Safety			X		
Measure 6.9-1c, Risk Management			X		
<b>6.11 – Cumulative</b>					
Measure 6.11-1a, Construction Coordination with OCWD			X		
<b>11-1 – Growth Inducement</b>					
Measure 11-1a, Phased Construction			X		
Measure 11-1b, Lower Flow Projections			X		
Measure 11-2, Growth Mitigation Measures	X	X	X	X	X
<b>7 – COLLECTION SYSTEM</b>					
<b>7.1 – Land Use</b>					
Measure 7.1-1a, Construction Hours				X	
Measure 7.1-1b, Construction Notification				X	
Measure 7.1-1c, Emergency Services Access				X	
Measure 7.1-1d, Covered Trenches				X	
Measure 7.1-1e, Signage				X	
<b>7.2 – Traffic</b>					
Measure 7.2-1a, Traffic Control Plans				X	
Measure 7.2-1b, Alternative Routes				X	

**TABLE 1 (CONTINUED)  
MITIGATION MEASURE BY PROJECT COMPONENT**

Mitigation Measure	Preferred Alternative, Treatment Scenario 2	Ocean Discharge	Treatment System	Collection System	Biosolids Management Program
<b>7.2 – Traffic (continued)</b>					
Measure 7.2-1c, Encroachment Permits				X	
Measure 7.2-1d, Traffic Control Plans				X	
Measure 7.2-1e, Traffic Disruption Avoidance				X	
Measure 7.2-1f, Street Closures				X	
Measure 7.2-1g, Roadway Restoration				X	
Measure 7.2-1h, Sewer Construction Coordination				X	
Measure 7.2-1i, Emergency Services				X	
Measure 7.2-1j, OCTA Coordination				X	
Measure 7.2-1k, Railroad Encroachment Procedures				X	
Measure 7.2-1l, Trails and Bikeways				X	
Measure 7.2-1m, County of Orange Coordination				X	
Measure 7.2-1n, Trails Restoration				X	
<b>7.3 – Biology</b>					
Measure 7.3-1, Additional CEQA Review			X		
<b>7.4 – Noise</b>					
Measure 7.4-1a, Hours of Construction				X	
Measure 7.4-1b, Noise Control				X	
Measure 7.4-1c, Pile-Driving Noise Reduction				X	
Measure 7.4-1d, Construction Notification				X	
<b>7.5 – Air Quality</b>					
Measure 7.5-1a, Dust Control				X	
Measure 7.5-1b, Exhaust Emissions				X	
Measure 7.5-1c, Truck Emissions Reductions				X	
<b>7.6 – Geology</b>					
Measure 7.6-1a, Seismic Safety				X	
Measure 7.6-1b, Soils Survey				X	
<b>7.7 – Hydrology</b>					
Measure 7.7-1a, Contractor BMPs				X	

**TABLE 1 (CONTINUED)  
MITIGATION MEASURE BY PROJECT COMPONENT**

Mitigation Measure	Preferred Alternative, Treatment Scenario 2	Ocean Discharge	Treatment System	Collection System	Biosolids Management Program
<b>7.7 – Hydrology (continued)</b>					
Measure 7.7-1b, Storm Season Restrictions				X	
Measure 7.7-1c, County of Orange Coordination				X	
Measure 7.7-1d, Waterway Protection				X	
Measure 7.7-1e, Spill Prevention				X	
Measure 7.7-1f, Spill Containment				X	
Measure 7.7-1g, Flood Control Facilities				X	
<b>7.8 – Public Services</b>					
Measure 7.8-1a, Traffic Control Plan Notifications				X	
Measure 7.8-1b, Emergency Facility Access				X	
Measure 7.8-1c, Trench Openings				X	
Measure 7.8-2a, Pedestrian Safety				X	
Measure 7.8-2b, Equipment Security				X	
Measure 7.8-2c, Construction Refuse				X	
Measure 7.8-3a, Utility Search				X	
Measure 7.8-3b, Utility Conflicts				X	
Measure 7.8-3c, Protect Utilities				X	
Measure 7.8-3d, Agency Coordination				X	
Measure 7.8-3e, Identify Abandoned Oil Wells				X	
Measure 7.8-3f, Abandon Wells				X	
<b>7.9 – Aesthetics</b>					
Measure 7.9-1a, Construction Site Restoration				X	
Measure 7.9-1b, Construction Housekeeping				X	





**TABLE 2  
TIMING OF VERIFICATION FOR MITIGATION MEASURES**

Timing of Verification	Mitigation Measures
On-going	5-3a, 5-3b, 5-5, 5-9a, 5-13, 6.1-3a, 6.2-2a, 6.4-2a, 6.4-2b, 6.4-3, 6.5-2a, 6.5-2b, 6.5-3a, 6.5-3b, 6.5-3c, 6.5-3d, 6.5-4a, 6.5-4b, 6.5-4c, 6.5-5a, 6.5-5b, 6.5-5c, 6.5-5d, 6.5-5e, 6.5-5f, 6.6-2a, 6.6-2b, 6.7-1a, 6.7-1b, 6.7-1c, 6.7-1d, 6.7-1e, 6.7-3a, 6.7-3b, 6.7-3c, 6.7-3d, 6.9-1a, 6.9-1b, 6.9-1c, 11-1a, 11-1b, 11-2, 7.7-1a, 7.7-1b, 7.7-1c, 7.7-1d, 7.7-1e, 7.7-1f, 8-2, 8-3a, 8-3b, 8-5a, 8-5b
During project/engineering design	7.8-3a, 7.8-3b, 7.8-3d, 7.10-10
Prior to approval of final design plans and specifications	5-11, 6.4-1d, 6.4-1e, 7.4-1c
Prior to approval of construction contract	6.2-2b, 6.2-3
Prior to start of construction	5-12, 6.1-1a, 6.1-1b, 6.1-3b, 6.2-1, 6.3-1, 6.4-1a, 6.4-1b, 6.4-1c, 6.4-1f, 6.4-1g, 6.4-1h, 6.5-1a, 6.5-1b, 6.5-1c, 6.5-1d, 6.5-1e, 6.6-1a, 6.6-1b, 6.11-1a, 7.1-1a, 7.1-1b, 7.1-1c, 7.1-1d, 7.1-1e, 7.2-1a, 7.2-1b, 7.2-1c, 7.2-1d, 7.2-1e, 7.2-1f, 7.2-1g, 7.2-1h, 7.2-1i, 7.2-1j, 7.2-1k, 7.2-1l, 7.2-1m, 7.2-1n, 7.3-1, 7.4-1a, 7.4-1b, 7.4-1d, 7.5-1a, 7.5-1b, 7.5-1c, 7.6-1a, 7.6-1b, 7.7-1g, 7.8-2a, 7.8-2b, 7.8-2c, 7.8-3a, 7.8-3b, 7.8-3c, 7.8-3d, 7.8-3e, 7.8-3f, 7.9-1a, 7.9-1b, 7.10-1, 7.10-2a, 7.10-2b, 7.10-2c, 7.11-1a, 7.11-1b
During construction	6.4-1a, 6.4-1b, 6.4-1c, 6.4-1f, 6.4-1g, 6.4-1h, 6.5-1a, 6.5-1b, 6.5-1c, 6.5-1d, 6.5-1e, 6.7-2a, 6.7-2b, 6.11-1a, 7.1-1a, 7.1-1b, 7.1-1c, 7.1-1d, 7.1-1e, 7.2-1a, 7.2-1b, 7.2-1c, 7.2-1d, 7.2-1e, 7.2-1f, 7.2-1g, 7.2-1h, 7.2-1i, 7.2-1j, 7.2-1k, 7.2-1l, 7.2-1m, 7.2-1n, 7.3-1, 7.4-1a, 7.4-1b, 7.5-1a, 7.8-1a, 7.8-1b, 7.8-1c, 7.8-2a, 7.8-2b, 7.8-2c, 7.8-3a, 7.8-3b, 7.8-3c, 7.8-3d, 7.8-3e, 7.8-3f, 7.9-1a, 7.9-1b, 7.10-1, 7.10-2a, 7.10-2b, 7.10-2c

SOURCE: Environmental Science Associates

The MMRP is organized in a table format, keyed to each significant impact and each adopted EIR mitigation measure. The significant impacts and mitigation measures are summarized in the tables and are coded by number to the appropriate EIR section. The column headings in the tables are defined as follows:

- **Implementation Procedure:** Where needed, this column provides additional information on how the mitigation measures will be implemented. The column is blank if no elaboration on the mitigation is necessary.
- **Monitoring and Reporting Actions:** This column contains an outline of the appropriate steps to verify compliance with the mitigation measure.

- **Monitoring Responsibility:** This column contains an assignment of responsibility for the monitoring and reporting tasks.
- **Monitoring Schedule:** The general schedule for conducting each monitoring and reporting task, identifying where appropriate both the timing and the frequency of the action. The schedule milestones utilized for this column include:
  - During project/engineering design
  - Prior to approval of final design plans and specifications
  - Prior to approval of construction contract
  - During construction
  - After construction

**MITIGATION MONITORING / REPORTING PROGRAM**

**Marine Environment / Ocean Discharge**

**Impact 5-3.** Oil and Grease effluent levels would comply with numerical permit limits under Scenarios 1, 2, and 5 but would potentially create observable floating particles which would be a permit violation. This impact would be mitigated through monitoring and treatment to achieve and maintain compliance.

**Measure 5-3a: Oil and Grease.** The District shall monitor receiving water in accordance with its current NPDES permit monitoring requirement and, if floating particulates from the discharge are observed in surface receiving water, the District shall modify its treatment process to reduce oil and grease in the effluent. Treatment modifications that may be implemented to address this issue include: increasing the level of secondary effluent in the discharge blend, and employing new and/or additional chemical processes (new polymer) to increase oil and grease removal.

**IMPLEMENTATION PROCEDURE**

1. Incorporate surface water observations in monthly marine monitoring program focused above ZID as well as down-current.
2. Establish methods of increasing treatment in order to be prepared to eliminate floatables if necessary.

**MONITORING AND REPORTING ACTIONS**

Publish results with annual monitoring program report submitted to the RWQCB.

**MONITORING RESPONSIBILITY**

OCSD

**MONITORING SCHEDULE**

Monthly, beginning when treatment level is changed.

**Measure 5-3b: Local Grease Ordinance.** The District shall work with its member agencies to encourage adoption of local ordinances for improved source control of oil and grease.

**IMPLEMENTATION PROCEDURE**

1. Board of Directors to pursue source control policy actions.

**MONITORING AND REPORTING ACTIONS**

Board to adopt source control policies.

**MONITORING RESPONSIBILITY**

OCSD

**MONITORING SCHEDULE**

On-going

**Impact 5-5.** Increased discharge of brine under any scenario but particularly under Scenarios 2, 4, and 6 with the GWR System would reduce initial dilution and increase metals concentrations. This could result in potentially significant toxicity impacts. Potentially significant.

**Measure 5-5: Brine Effect Studies.** Study and monitor the effect of brine and adjust treatment and/or brine addition as needed to maintain NPDES permit effluent quality compliance.

- a) Conduct a pilot study of the effect of increased brine discharge to OCSD effluent on effluent quality to demonstrate NPDES permit compliance. Prior to start-up of full operation of the GWR System Project, OCSD will test effluent quality with the addition of the GWR System project brine concentrate in accordance with the acute and chronic toxicity testing procedures required in the District’s NPDES permit. This will allow the District to confirm the potential compliance with the NPDES permit.
- b) During GWR System operation, OCSD will continue its effluent quality testing and ocean monitoring in compliance with its NPDES permit. If this testing or monitoring indicates the occurrence of or potential for non-compliance with effluent toxicity standards, the District will implement measures to achieve and maintain NPDES compliance, including:
  - brine dilution
  - brine treatment
  - toxicity identification evaluation and appropriate source control measures

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
1. Initiate contract to study brine toxicity.	Include status of contract and study		At adoption of findings.
2. Based on study results, identify further actions.	results in Annual Operations And Maintenance Report.	OCSD and OCWD	

**Impact 5-9:** Effluent discharge to the 78-inch outfall at a rate of once every three years would result in significant impacts to levels of pathogens in the nearshore waters used for water-contact activities or where shellfish are harvested.

**Measure 5-9a: Pathogen Reduction.** Pathogen reduction in the wet weather discharge would partially mitigate the impact of wet weather discharge to the nearshore area by reducing the pathogen levels and thereby reducing the health risk. Disinfection could reduce pathogen levels but it is not recommended by the RWQCB based on cost and the potential for residual chlorine in the discharge to have an adverse impact to marine organisms. Alternative methods of pathogen removal appropriate for wet weather flow treatment are under development and include filtration processes. The District will continue to evaluate new technologies for pathogen reduction and will implement those that prove to be feasible, effective, and cost-effective. Even with some level of pathogen reduction, beach closure would still probably be required, thus the impact to beach use would remain significant and unavoidable during these infrequent events.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
1. Continue research of pathogen reduction technologies, in particular, micro-filtration.	Include status and results of research in Annual Operations And Maintenance Report.	OCSD	On-going.

**Impact 5-11:** Removal of accumulated sediments in the existing 120-inch outfall, if needed, would move sediments into the marine environment, which could result in short-term water quality and sediment impacts affecting marine organisms.

**Measure 5-11: Outfall Cleaning.** If necessary, the District will develop plans to clean out the outfall using appropriate methods approved by the RWQCB to protect water quality in accordance with regulations. The plan will include methods to contain floatables and disperse the sediments so that impacts to benthic communities and water quality are minimized.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
1. Submit clean-out methods to RWQCB prior to implementation.	Include status and results of methods in Annual Operations And Maintenance Report.	OCSD	Prior to clean-out

**Impact 5-12.** Laying pipeline for any new outfall would result in the permanent loss of hundreds of thousands of square feet of soft-bottom, benthic habitat. Adjacent communities would be temporarily disrupted by increased sedimentation. Disturbance of bottom sediment may result in the short-term release of contaminants into the water column. Potentially significant but can be mitigated.

**Measure 5-12: Outfall Siting.** The District would conduct additional detailed, site-specific studies for the siting of a new second 120-inch ocean outfall. These studies would clarify the extent of marine resources that would be affected by construction and identified appropriate mitigation measures to minimize the area of disturbance.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Initiate feasibility and design studies prior to construction.</li> <li>2. Prepare appropriate CEQA documentation of proposed project.</li> <li>3. Implement mitigation measures identified in subsequent CEQA documentation.</li> </ol>	<p>Include status and methods in Annual Operations And Maintenance Report.</p>	<p>OCSD</p>	<p>Prior to construction</p>

**Impact 5-13:** Use of the 78-inch outfall for peak wet weather discharges would contribute to significant cumulative pollutant loads (particularly pathogens) to the nearshore environment during wet weather events in combination with non-point source pollution. Significant.

**Measure 5-13: Pathogen Reduction.** To mitigate the cumulative contribution from use of the 78-inch outfall, the District will implement Mitigation Measure 5-9, above to provide additional pathogen reduction as allowed and/or required by the RWQCB.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Continue research of pathogen reduction technologies, in particular, micro-filtration.</li> </ol>	<p>Include status and results of methods in Annual Operations And Maintenance Report.</p>	<p>OCSD</p>	<p>On going</p>

**Treatment Plant**

**Land Use**

**Impact 6.1-1.** Expansion of the OCSD treatment facilities, as proposed under Scenarios 2 and 4, would require the construction of additional facilities at Reclamation Plant No. 1 and at Treatment Plant No. 2. Project construction would result in short-term disturbance of adjacent land uses. Less than Significant with Mitigation Measures.

**Measure 6.1-1a: Construction Hours.** The District’s standard specifications provide construction hours of work between 7:00 AM and 5:30 PM, except for emergency or special circumstances requiring that work be done during low-flow periods.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Include compliance with local noise and construction ordinances in construction specifications.</li> <li>2. Provide construction oversight to ensure scope of work is carried out.</li> </ol>	<p>Maintain record of construction oversight for administrative record.</p>	<p>OCSD</p>	<p>Prior to and during construction</p>

**Measure 6.1-1b: Construction Notification.** The District shall post informational signs outside plant when major projects are being constructed.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Post notices near job site outside plant property.</li> </ol>	<p>Maintain record of distribution for administrative record.</p>	<p>OCSD</p>	<p>Prior to construction</p>

**Impact 6.1-3.** Expansion and operation of the proposed facilities for both Scenarios 2 and 4 could adversely alter existing visual character of the site with installation of tall structures and the removal of trees. In additional project implementation could introduce new sources of light and glare. Less than Significant with Mitigation Measures.

**Measure 6.1-3a: Implement Landscaping Master Plan.** The District will implement the Urban Design Element of the Strategic Plan in order to improve the visual appearance of the site. Recommendations from the Landscape Master Plans (of the Urban Design Element) include the development of buffer zones, planting of trees at the perimeter of the plants along sensitive visual corridors (e.g. Santa Ana bikeway), and maintaining and enhancing the appearance of existing buffer zones.



<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
1. Comply with Urban Design Plan.	Maintain Urban Design plan for administrative record.	OCSD	On going

**Measure 6.1-3b: Exterior Lighting.** The District will install permanent exterior lighting on new facilities to point away from neighboring residential areas as possible to minimize visible light sources.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
1. Comply with Urban Design Plan.	Maintain Urban Design Plan and record of nighttime survey after new construction to confirm less than significant impact.	OCSD	Prior to and after construction

**Traffic**

**Impact 6.2-1:** Periods of peak construction will increase traffic along local access streets. Less than Significant with Mitigation Measures.

**Measure 6.2-1: Contractor Coordination.** For each major project or construction period, the District would complete a detailed construction schedule and notify the Cities of Fountain Valley and Huntington Beach of construction. Construction vehicles shall be run on a schedule to minimize truck traffic on arterial highways.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
1. Require traffic control plan for construction projects.	Ensure that construction vehicle traffic complies with traffic control plan.	OCSD	Prior to and during construction
2. Notify affected cities of construction schedule.	Provide record of construction oversight.		
3. Provide construction oversight.			

**Impact 6.2-2:** Additional traffic would be generated from the ongoing operations of the facilities at Reclamation Plant No. 1 and Treatment Plant No. 2. Sources of new traffic include chemical truck deliveries, trips by new District’s employees, and increased biosolids hauling truck trips. Less than Significant with Mitigation Measures.

**Measure 6.2-2a: Ride-Sharing Program.** The Districts will continue the existing ride-sharing program to encourage employees to join a carpool and use transit.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
	Include status of rideshare program in Operation and Maintenance Annual Report.	OCSD	Annually

**Measure 6.2-2b: Traffic Management** Chemical delivery trucks and screenings and grit and biosolids disposal trucks will avoid operating during peak traffic hours when possible.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
1. The District will develop a preferred truck-hauling schedule avoiding peak traffic hours.	Prepare a record of hauling schedule.	OCSD	At hauler’s contract renewal

2. Thereafter the District will attempt to comply with the schedule whenever possible.
3. The District will incorporate this preferred schedule when renewing contracts with haulers and chemical deliverers.

**Impact 6.2-3:** Increased biosolids and chemical truck trips would impact regional transportation systems including freeways, especially I-405 and I-5. Less than Significant with Mitigation Measures.

**Measure 6.2-3: Biosolids Transport.** The District shall arrange for the transport of biosolids by trucks during off-peak travel hours when possible to reduce truck travel times and minimize impacts to the regional transportation system.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. The District will develop a preferred truck-hauling schedule avoiding peak traffic hours.</li> <li>2. Thereafter the District will attempt to comply with the schedule whenever possible.</li> <li>3. The District will incorporate this preferred schedule when renewing contracts with haulers.</li> </ol>	<p>Prepare a record of hauling schedule.</p>	<p>OCSD</p>	<p>At hauler's contract renewal</p>

**Impact 6.3-1: Removal of trees on the treatment plant sites during construction could impact nesting birds.** This impact is considered less than significant with mitigation.

**Measure 6.3-1: Nesting Birds.** Prior to the removal of healthy trees on site, a biologist knowledgeable of birds will survey the trees to determine if active nests are present. If nests of sensitive species are present, tree removal will be scheduled to avoid the nesting season.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Include tree surveys in construction specifications for on-site construction projects.</li> </ol>	<p>Maintain record of biologist survey recommendations and record of District adherence with recommendations.</p>	<p>OCSD</p>	<p>Prior to and during construction</p>

**Noise**

**Impact 6.4-1:** Construction activities related to the proposed treatment plant improvements at Reclamation Plant No. 1 and Treatment Plant No. 2 would intermittently and temporarily generate noise levels above existing ambient levels in the project vicinity. Significant and Unavoidable.

**Measure 6.4-1a: Construction Hours.** The District’s standard specifications provide construction hours of work between 7:00 AM and 5:30 PM, except for emergency or special circumstances requiring that work be done during low-flow periods.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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| <ol style="list-style-type: none"> <li>2. Include compliance with local noise and construction ordinances in construction specifications.</li> <li>3. Provide construction oversight to ensure scope of work is carried out.</li> </ol> | <p>Maintain record of construction oversight for administrative record.</p> <p>OCSD</p> | <p>Prior to and during construction</p> |  |
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**Measure 6.4-1b: Muffled Equipment.** All equipment used during construction shall be muffled and maintained in good operating condition. All internal combustion engine driven equipment shall be fitted with intake and exhaust mufflers that are in good condition.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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| <ol style="list-style-type: none"> <li>1. Include compliance with local noise and construction ordinances in construction specifications.</li> <li>2. Include noise reduction procedures in construction specifications</li> <li>3. Provide construction oversight to ensure scope of work is carried out.</li> </ol> | <p>Maintain record of construction oversight for administrative record.</p> <p>OCSD</p> | <p>Prior to and during construction</p> |  |
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**Measure 6.4-1c: Pile-Driving Noise Reduction.** OCSD shall consult with an acoustical engineer to evaluate other alternatives for mitigating impacts from extensive pile driving activities when necessary.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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| <ol style="list-style-type: none"> <li>1. Initiate contract with qualified engineer to reduce noise impacts.</li> <li>2. Incorporate noise reduction solutions.</li> <li>3. Provide construction oversight to ensure scope of work is carried out.</li> </ol> | <p>Maintain record of construction oversight for administrative record.</p> | <p>OCSD</p> | <p>Prior to and during construction</p> |
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**Measure 6.4-1d: Alternatives for Foundations.** OCSD will evaluate the use of alternative foundation designs to avoid a need for pilings where cost-effective and technically feasible.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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| <ol style="list-style-type: none"> <li>1. Include preference to avoid pilings where possible in project design specifications.</li> </ol> | <p>Maintain record of design specifications.</p> | <p>OCSD</p> | <p>Prior to project design</p> |
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**Measure 6.4-1e: Construction Notification.** Nearby sensitive receptors affected by construction shall be notified concerning the project timing and construction schedule, and shall be provided with a phone number to call with questions or complaints.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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| <ol style="list-style-type: none"> <li>1. Prepare and distribute notifications.</li> </ol> | <p>Maintain record of notification distribution list.</p> | <p>OCSD</p> | <p>Prior to construction</p> |
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**Measure 6.4-1f: Pile Driving Noise Reduction.** Noise-reduction measures will be implemented such as acoustic insulation or by other means during the construction period at Reclamation Plant No. 1 to reduce a nuisance condition to the closest residences when pile driving is taking place.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Include noise reduction procedures in construction specifications</li> <li>2. Provide construction oversight to ensure scope of work is carried out.</li> </ol>	<p>Maintain record of construction oversight for administrative record.</p>	<p>OCSD</p>	<p>Prior to and during construction</p>

**Measure 6.4-1g: Noise Reduction.** The District will require construction contractors to include methods to reduce noise and elevated activity impacts to nearby wildlife when working on the southern and southeastern border of Treatment Plant No. 2.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Include noise reduction procedures in construction specifications</li> <li>2. Conduct wildlife sensitivity training during morning tail-gate meetings.</li> <li>3. Provide construction oversight to ensure scope of work is carried out.</li> </ol>	<p>Maintain record of construction oversight for administrative record.</p>	<p>OCSD</p>	<p>Prior to and during construction</p>

**Measure 6.4-1h: Exterior Lighting.** The District will install permanent exterior lighting on new facilities to point away from the wetland areas adjacent to Plant No. 2 as possible to minimize light sources permanently shining on the adjacent habitats.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Include lighting design in construction specifications.</li> </ol>	<p>Conduct periodic evening surveys to observe lights.</p>	<p>OCSD</p>	<p>Prior to and during construction</p>

**Impact 6.4-2:** Operation of proposed new equipment at Reclamation Plant No. 1 and Treatment Plant No. 2 would generate noise levels above existing ambient levels in the project vicinity. Less than Significant with Mitigation Measures.

**Measure 6.4-2a: Noise Performance Standard.** OCSD shall establish a performance noise standard for operational noise at Reclamation Plant No. 1 and Treatment Plant No. 2. The performance standard shall apply to the property line of each plant and shall prohibit hourly average noise levels in excess of 55 dBA between the hours of 7:00 a.m. to 10:00 p.m. and 50 dBA between the hours of 10:00 p.m. and 7:00 a.m., as required by the Fountain Valley and Huntington Beach Noise Ordinances. Available mitigation to achieve the performance standard consists of locating noise sources away from sensitive receptors, installation of acoustical enclosures around noise sources, installation of critical application silencers and sequential mufflers for exhaust noise, installation of louvered vents, directing vent systems away from nearby residences, and constructing soundwalls at the property lines.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Include compliance with local noise and construction ordinances in standard operational procedures.</li> <li>2. Implement noise reduction procedures when possible.</li> <li>3. Consider operational noise when locating new equipment.</li> </ol>	<p>Maintain record of noise complaints for administrative record.</p>	<p>OCSD</p>	<p>On-going</p>

**Measure 6.4-2b: Community Liaison.** The District will assign a community liaison for odor and noise complaints.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Meet with community groups.</li> <li>2. Develop tasks and assignments for liaison.</li> <li>3. Periodically review effectiveness of community liaison program.</li> </ol>	<p>Maintain record of meetings with community groups.</p>	<p>OCSD</p>	<p>On-going</p>

**Impact 6.4-3:** Workers at Reclamation Plant No. 1 and Treatment Plant No. 2 may be exposed to excess noise levels from the operation of new facilities. Less than Significant with Mitigation Measures.

**Measure 6.4-3: Noise Control.** Noise control measures shall be incorporated into the design of the facility. Once the facility is operational, a certified industrial hygienist or other qualified individual shall measure the noise levels to which workers are exposed. If the OSHA 8-hour time weighted average exposure for any worker exceed the 85 dBA threshold, a hearing conservation program must be initiated and appropriate administrative and engineering controls must be put in place to protect workers.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Include noise control measures in design of new equipment.</li> <li>2. Conduct noise assessments on site and on the perimeter to quantify impacts to workers and neighborhood to respond to complaints.</li> </ol>	<p>Include noise assessment results in annual Operations and Maintenance Report.</p>	<p>OCSD</p>	<p>Annually</p>

**Air Quality**

**Impact 6.5-1:** Project development under any of the six project scenarios would generate short-term emissions of air pollutants, including dust and criteria pollutants, from demolition, construction and/or restoration activities. Significant and Unavoidable.

**Measure 6.5-1a: Equipment Emissions.** General contractors shall maintain equipment engines in proper tune and operate construction equipment so as to minimize exhaust emissions. Such equipment shall not be operated during second stage smog alerts.

**Measure 6.5-1b: Truck Emissions.** During construction, trucks and vehicles in loading or unloading queues shall be kept with their engines off, when not in use, to reduce vehicle emissions. Construction activities shall be phased and scheduled to avoid emissions peaks, and discontinued during second-stage smog alerts.

**Measure 6.5-1c: Dust Control.** General contractors should use reasonable and typical watering techniques to reduce fugitive dust emissions. All unpaved demolition and construction areas shall be wetted as necessary during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD District Rule 403.

**Measure 6.5-1d: Soil Binders.** Soil binders shall be spread on site, unpaved roads, and parking areas when needed.

**Measure 6.5-1e: Ground Cover.** Ground cover shall be re-established following completion of construction activities through seeding and watering if needed.





**Impact 6.5-3:** Emissions at both treatment plants under any of the project scenarios would continue to result from mobile sources. Mobile sources are projected to exceed the SCAQMD nitrous oxides significance threshold of 55 lbs/day. This would result in a significant impact to air quality.

**Measure 6.5-3a: Ride-Sharing Program.** The District will maintain its ride-share programs to reduce commuter traffic and air quality impacts.

**Measure 6.5-3b: Use of CNG.** The District will complete the implementation of compressed natural gas (CNG) stations and encourage contractors to employ CNG-powered engines on residual solids haul trucks through contract incentives where possible.

**Measure 6.5-3c: Alternative Fuels for Trucks.** Alternative fuels shall be considered for biosolids haul trucks including low NO<sub>x</sub> emitters.

**Measure 6.5-3d: Transportation Alternatives.** The District shall initiate research on alternative methods of transporting biosolids to land application sites including electric vehicles and rail.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
1. Initiate research on innovative control technology, alternative fuels, and biosolids hauling methods.	Include status of rideshare program in Operation and Maintenance Annual Report.	OCSD	On going
2. Provide SCAQMD with mandated emissions reports to verify compliance.	Include status of research in alternative fuels and biosolids haul methods in Operation and Maintenance Annual Report.		
3. Include in contracts and requests for qualifications from haulers that CNG is available and encouraged.			

**Impact 6.5-4:** Modifying the current CGS or adding new power-generating equipment would require SCAQMD permit modifications. Energy requirements greater than the permitted CGS capacity of 18 MW would require permit modifications. Less Than Significant impact with Mitigation.

**Measure 6.5-4a: Energy Purchases.** The District will purchase energy from off-site sources if air emissions permit modifications are denied.

**Measure 6.5-4b: Clean-Burning Engines.** The District will continue to research clean-burning engines for the CGS, in an effort to increase power output while reducing criteria and toxic pollutants.

**Measure 6.5-4c: Install BACT.** The District will install Best Available Control Technology if necessary to comply with SCAQMD Rules.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
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| 1. | Initiate research on innovative control technology.                  | OCSD | Annually. |
| 2. | Provide SCAQMD with mandated emissions reports to verify compliance. | OCSD | Annually. |

**Impact 6.5-5:** The project under each of the treatment scenarios could generate objectionable odors in the project vicinity and in other areas located downwind from the treatment facilities. Less Than Significant after Mitigation Measures.

**Measure 6.5-5a: Odor Control.** The District will evaluate the need for odor control equipment for future facilities to reduce fugitive foul odors and include odor control when necessary. The District will also periodically review air emissions from existing solids handling to determine if odor control is necessary.

**Measure 6.5-5b: Dewatering Odor Control.** When dewatering is required during excavation, the District shall provide odor control systems to reduce construction odor impacts when necessary.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
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| 1. | Maintain odor control technology.                 | OCSD | Annually. |
| 2. | Provide odor control on new facilities as needed. | OCSD | Annually. |

**Measure 6.5-5c: Community Liaison.** The District will assign a community liaison for odor and noise complaints.

**Measure 6.5-5d: Odor Complaint Follow-Up.** The District will follow-up with copies of odor complaint analysis to complainant and/or neighborhood groups including the Southeast Huntington Beach Neighborhood Association representative.

**Measure 6.5-5e: Pre-Design Coordination.** The District will maintain pre-design coordination on future projects at its treatment plants with interested parties including cities and neighborhood associations.

**Measure 6.5-5f: Community Outreach.** The District will establish regular community outreach meetings with neighbors.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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| <ol style="list-style-type: none"> <li>1. Meet with community groups to choose community liaison and periodic meeting schedule.</li> <li>2. Develop tasks and assignments for liaison.</li> <li>3. Periodically review effectiveness of community liaison program.</li> <li>4. Provide odor and noise complaint information to community groups.</li> </ol> | <p>Maintain record of meetings with community groups.</p> <p>OCSD</p> |  | <p>On-going</p> |
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**Geology**

**Impact 6.6-1:** Project facilities, under any of the treatment scenarios, would be located in areas susceptible to primary and secondary seismic hazards (groundshaking, liquefaction, settlement). Damage to facilities could result in the event of a major earthquake. Less than Significant with Mitigation Measures.

**Measure 6.6-1a: Geotechnical Evaluations.** During the project design phase for all facilities, the District will perform design-level geotechnical evaluations. The geotechnical evaluations will include subsurface exploration and review of seismic design criteria to ensure that design of the facilities meet seismic safety requirements of the Uniform Building Code.

Site-specific testing for soils susceptible to liquefaction would be conducted. If testing results indicates that conditions are present that could result in significant liquefaction and damage to project facilities, appropriate feasible measures will be developed and incorporated into the project design. The performance standard to be used in the geotechnical evaluations for mitigation liquefaction hazards will be minimization of the hazards. Measures to minimize significant liquefaction hazards could include the following:

- Densification or dewatering of surface or subsurface soils.
- Construction of pile or pier foundations to support pipelines and/or buildings.
- Removal of material that could undergo liquefaction in the event of an earthquake and replacement with stable material.

Recommendations of the geotechnical report will be incorporated into the design and construction of proposed facilities.

**Measure 6.6-1b: Seismic Safety.** The District will design and construct new facilities in accordance with District seismic standards and/or meet or exceed seismic, design standards in the most recent edition of the California Building Code.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
1. Include design-level geotechnical evaluations in specifications prior to construction.	Maintain record of specifications for administrative record.	OCSD	Prior to construction
2. Include in specifications compliance with California Building Code			

**Impact 6.6-2:** Groundshaking could cause spills of raw sewage, causing a significant impact to public health. Less than Significant impact with Mitigation Measures.

**Measure 6.6-2a: Spill Prevention.** The District will implement the Spill Prevention Containment and Countermeasures Plan (SPCC).

**Measure 6.6-2b: Spill Containment.** OCSD chemical facilities will be designed with secondary containment, such as berms, to contain and divert toxic chemicals from wastewater flows and isolate damaged facilities to reduce contamination risks.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
1. Implement and update SPCC plan.	Maintain record of SPCC for administrative record.	OCSD	As needed.

**Hydrology**

**Impact 6.7-1:** Construction of any of the treatment system scenarios could result in an increase in erosion and siltation into surface waters. Construction could also result in chemical spills (e.g., fuels, oils, or grease) to stormwater, and increase turbidity and decrease water quality in waters of the U.S. Less than Significant with Mitigation Measures.

**Measure 6.7-1a: Best Management Practices.** The District will implement Best Management Practices (BMPs) as outlined in the SWMP.

**Measure 6.7-1b: Storm Water Management.** The District will train construction and operation employees in storm water pollution prevention practices. Individual contractors performing construction at each treatment facility shall be required to comply with provisions of the SWMP.

**Measure 6.7-1c: Storm Drain Inspection.** The District will inspect and maintain all on-site storm water drains and catch basins on plant property regularly.

**Measure 6.7-1d: Regional Board.** The District will apply the SARWQCB's recommended BMPs during construction and operation as specified in the SWMP.

**Measure 6.7-1e: Construction Site Storm Water.** For construction involving disturbance greater than five acres of land, the District will incorporate into contract specifications the following requirements:

The District will comply with the RWQCB requirements of the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. The District will require that the contractor implement control measures that are consistent with the General Permit and with the recommendations and policies of the RWQCB. This would include submitting a Notice of Intent and site map to the RWQCB, developing a Storm Water Pollution Prevention Plan, and implementing site-specific best management practices to prevent sedimentation to surface waters.

**IMPLEMENTATION PROCEDURE**

1. Implement BMPs.
2. Implement SWMP.
3. Periodically update SWMP.
4. Implement mitigation measures listed above.
5. Periodically inspect construction sites.

**MONITORING AND REPORTING ACTIONS**

- Maintain compliance with SWMP for administrative record.
- Maintain record of site inspections.

**MONITORING RESPONSIBILITY**

OCSD  
As needed.

**MONITORING SCHEDULE**

**Impact 6.7-2:** Pile driving and excavation activities at Reclamation Plant No. 1 and Treatment Plant No. 2 may encounter groundwater, and local dewatering may be required. Less than Significant with Mitigation Measures.

**Measure 6.7-2a: Groundwater Dewatering.** Construction contractors will comply with the District's Dewatering Specifications.

**Measure 6.7-2b: Dewatering Discharge.** Water from dewatering operations will be disposed of in a suitable manner in conformance with the NPDES permit, as approved by the RWQCB.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Update dewatering procedures periodically.</li> <li>2. Periodically inspect construction sites.</li> </ol>	<p>Maintain record of dewatering procedures for administrative record</p> <p>Maintain record of site inspections.</p>	OCSD	During construction.

**Impact 6.7-3:** Reclamation Plant No 1. and Treatment Plant No. 2 are located in the 100-year floodplain of the Santa Ana River. New facilities proposed under any of the scenarios considered would expose structures and people to a 100-year flood event and/or effects of a tsunami. Less than Significant With Mitigation Measures.

**Measure 6.7-3a: Chemical Spills During Floods.** The District shall construct and maintain secondary containment berms to protect against release of toxic chemicals in an event of a spill from flooding.

**Measure 6.7-3b: Coordination with COE.** The District shall coordinate with the Army Corp of Engineers to ensure levees located adjacent to Reclamation Plant No. 1 and Treatment Plant No. 2 continue to provide adequate protection for a 100-year flood event.

**Measure 6.7-3c: Hazard Awareness Notification.** The District shall adhere to the Emergency Contingency Plan and the Flood Protection Plan to minimize the affects of flooding and tsunamis to Reclamation Plant No.1 and Treatment Plant No. 2. These measures shall include hazard awareness notifications to neighborhoods downstream from Reclamation Plant No. 1.

**Measure 6.7-3d: Flood Protection.** The District shall adhere to Orange County’s flood protection program as implemented by the Orange County Flood Control District.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Comply with programs listed in mitigation measures.</li> </ol>	<p>Maintain record of communication with U.S. Army Corps of Engineers and County Flood Control District for administrative record.</p>	OCSD	On going.

**Hazardous Materials**

**Impact 6.9-1:** Increasing quantities of hazardous materials stored on site could impact public health in the event of a catastrophic spill or explosion. Increasing liquid oxygen storage could increase the hazard. Less than Significant with Mitigation Measures.

**Measure 6.9-1a: Worker Safety Training.** Worker safety training shall emphasize hazards of liquid oxygen and stored methane. Routine safety measures including hazard communication shall be adopted and strictly enforced in hazardous areas. Hazard training and communication shall include laboratory operations and routine process chemical use.

**Measure 6.9-1b: Oxygen Facility Safety.** If additional liquid oxygen storage facilities are installed, the District shall research explosion and fire potential to determine explosion arc perimeters. If neighboring land uses are not adequately distant, the District shall reconfigure the oxygen storage facility to remove explosion hazards on neighboring land uses.

**Measure 6.9-1c: Risk Management Program.** Liquid oxygen operations shall be included in the District’s Risk Management Program.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Maintain and periodically update Risk Management Program.</li> <li>2. Maintain and periodically update worker safety program.</li> <li>3. Implement mitigation measures listed above.</li> <li>4. Conduct monthly and annual safety inspections.</li> </ol>	<p>Maintain training records, medical records, notification records, and safety record for administrative record.</p>	<p>OCSD</p>	<p>On going.</p>

**Cumulative**

**Impact 6.11-1:** Cumulative impacts to air quality and noise could occur as a result of treatment facility construction activities coupled with the construction of the GWR System treatment facilities. Significant unavoidable.

**Measure 6.11-1a: Construction Coordination with OCWD.** Coordinate construction activities with OCWD to minimize PM<sub>10</sub> emissions, construction vehicle exhaust, and cumulative noise impacts during excavation and pile driving activities.



<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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1. Include air emissions restrictions and standard operating procedures for construction work in contract specifications.
2. Conduct oversight of construction activities to ensure scope of work is carried out.

Maintain record of construction oversight for administrative record.

OCSD

Prior to and during construction.

**Growth-Inducement**

**Impact 11-1:** By removing wastewater treatment capacity as one barrier to growth, the District would have indirect, growth-inducement potential to support planned development within the Service Area that is consistent with and within the levels of development approved in the adopted General Plans. Less the Significant with Mitigation Measures.

**Measure 11-1a: Phased Construction.** The project’s phased design helps minimize growth inducement potential. The Strategic Plan allows for the incremental expansion of treatment capacity, allowing Service Area cities to re-evaluate and revise long-term needs before completing full “build out.”

**Measure 11-1b: Lower Flow Projections.** The District revises its Strategic Plan periodically allowing the treatment facilities to best meet the actual needs of the Service Area. The implementation of this Strategic Plan was based on a projected decrease influent flow and serves to decrease anticipated capacity requirements. Future revisions every five years will assist the District in maintaining service for reasonably foreseeable planned growth levels.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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1. Phase construction of new facilities as outlined in the Strategic Plan.
2. Review and incorporate growth predictions every five years.
3. Update Strategic Plan periodically.

Begin update Strategic Plan in 2004.

OCSD

Begin in 2004.

**Impact 11-2:** The OCSD Strategic Plan would accommodate planned growth in the Service Area. Implementation of planned growth would result in secondary environmental effects. The effects of planned growth have been identified and addressed in the EIRs on Regional Plans, General Plans for Service Area cities, and associated Specific Plans. Some of the secondary effects of growth which have been identified as significant and unavoidable include air quality and traffic congestion.

**Measure 11-2: Growth Mitigation Measures.** OCSD does not have the authority to make land use and development decisions, nor does it have the authority or jurisdiction to address many of the identified significant, secondary effects of planned growth. Authority to implement such measures lies with the County and cities which enforce local, state, and federal regulations through the permit process. Other agencies with authority to require mitigation or with responsibility to implement measures to mitigate the effects of planned growth include regional and state agencies such as the South Coast Air Quality Management District (SCAQMD), Regional Water Quality Control Board (RWQCB), California Department of Fish and Game (CDFG), California Department of Health Services (DHS), California Department of Transportation (Caltrans), and federal agencies including U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (EPA), and the U.S. Corps of Engineers (USACE).

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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| <ol style="list-style-type: none"> <li>1. Phase construction of new facilities as outlined in the Strategic Plan.</li> <li>2. Review and incorporate growth predictions every five years.</li> <li>3. Update Strategic Plan periodically.</li> </ol> | <p>Begin update Strategic Plan in 2004.</p> <p>OCSD</p> | <p>OCSD</p> | <p>Begin in 2004.</p> |
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**Collection System**

**Land Use**

**Impact 7.1-1:** Construction activities associated with the trunk sewer systems would involve the rehabilitation and replacement of existing pipelines. Construction activities would result in short-term disturbance of adjacent land uses. Less than Significant with Mitigation Measures.

**Measure 7.1-1a: Construction Hours.** The District will comply with local ordinances and restrict construction activities to daylight hours or as specified in encroachment permits.

**Measure 7.1-1b: Construction Notification.** The District shall post notices or provide notification of construction activities to adjacent property owners (including homeowners and adjacent businesses) at least 72 hours in advance of construction and provide a contact and phone number of a District staff person to be contacted regarding questions or concerns about construction activity.

**Measure 7.1-1c: Emergency Services Access.** The District shall coordinate with officials of adjacent fire station, the Fountain Valley Regional Hospital as well as other hospital to ensure that 24-hour emergency access is available.

**Measure 7.1-1d: Covered Trenches.** To minimize disruption of access to driveways to adjacent land uses, the District or its contractor(s) shall maintain steel-trench plates at the construction sites to restore access across open trenches. Construction trenches in streets will not be left open after work hours.

**Measure 7.1-1e: Signage.** The District shall provide temporary signage indicating that businesses are open.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Include compliance with local construction ordinances in construction specifications including site safety during non construction hours.</li> <li>2. Include the preparation and distribution of notifications prior to construction activities in contract specifications.</li> <li>3. Include 24-hour emergency access in contract specifications.</li> <li>4. Maintain record of communication with local authorities.</li> <li>5. Include signage for impacted businesses in contract specifications.</li> <li>6. Conduct periodic construction site inspections.</li> </ol>	<p>Maintain record of signage, business and fire department notifications, inspections, and construction schedule.</p>	<p>OCSD</p>	<p>Prior to and during construction</p>

**Traffic**

**Impact 7.2-1:** Construction activities during trenching in city streets will impact traffic circulation during construction period. Less than Significant with Mitigation Measures.

**Measure 7.2-1a: Traffic Control Plans.** Traffic control plans will be prepared by a qualified professional engineer, prior to the construction phase of each sewer line project as implementation proceeds.

**Measure 7.2-1b: Alternative Routes.** Traffic control plans will consider the ability of alternative routes to carry additional traffic and identify the least disruptive hours of construction site truck access routes, and the type and location of warning signs, lights and other traffic control devices. Consideration will be given to maintaining access to commercial parking lots, private driveways and sidewalks, bikeways and equestrian trails, to the greatest extent feasible.

**Measure 7.2-1c: Encroachment Permits.** Encroachment permits for all work within public rights-of-way will be obtained from each involved agency prior to commencement of any construction. Agencies involved include Caltrans, the Orange County Planning and Development Services (PDS) (Development Services Section) and the various cities where work will occur. The District will comply with traffic control requirements, as identified by Caltrans and the affected local jurisdictions.

**Measure 7.2-1d: Traffic Control Plans.** Traffic control plans will comply with the Work Area Traffic Control Handbook and/or the Manual of Traffic Controls as determined by each affected local agency, to minimize any traffic and pedestrian hazards that exist during project construction.

**IMPLEMENTATION PROCEDURE**

1. Contract with qualified traffic control engineer to prepare Control Plan for each construction project.
2. Ensure that issues highlighted in mitigation measures are included in Control Plan.
3. Include within contract specifications the acquisition of all necessary encroachment permits.
4. Review list of required permits and verify adequacy prior to construction.
5. Conduct periodic site inspections including post-completion inspection.

**MONITORING AND REPORTING ACTIONS**

- Maintain traffic control plan, permits, and construction schedule and methods for administrative record.
- Maintain record of site inspections including post-construction inspections.

**MONITORING RESPONSIBILITY**

OCSD

Prior to and during construction

**MONITORING SCHEDULE**

**Measure 7.2-1e: Traffic Disruption Avoidance.** The construction technique for the implementation of the proposed sewer lines, such as tunneling, cut and cover with partial street closure, or cut and cover with full street closure, shall include consideration of the ability of the roadway system, both the street in question and alternate routes, to carry existing traffic volumes during project construction. If necessary, adjacent parallel streets will be selected as alternate alignments for the proposed sewer improvements. As required by local jurisdictions, trunk sewers will be jacked under select major intersections, to avoid traffic disruption and congestion.

**Measure 7.2-1f: Street Closure.** Public streets will generally be kept operational during construction, particularly in the morning and evening peak hours of traffic. Lane closures will be minimized during peak traffic hours.

**Measure 7.2-1g: Roadway Restoration.** Public roadways will be restored to a condition mutually agreed to between the District and local jurisdictions prior to construction.

**Measure 7.2-1h: Sewer Construction Coordination.** The Districts will attempt to schedule construction of relief facilities to occur jointly with other public works projects already planned in the affected locations, through careful coordination with all local agencies involved.

**Measure 7.2-1i: Emergency Services.** Emergency service purveyors will be contacted and consulted to preclude the creation of unnecessary traffic bottlenecks that will seriously impede response times. Additionally, measures to provide an adequate level of access to private properties shall be maintained to allow delivery of emergency services.

**Measure 7.2-1j: OCTA Coordination.** OCTA will be contacted when construction affects roadways that are part of the OCTA bus network.

**IMPLEMENTATION PROCEDURE**

1. Include adherence to the Traffic Control Plan in contract specifications
2. Contact local authorities listed in mitigation measures and maintain record of communication.
3. Conduct periodic site inspections including post-completion inspection.

**MONITORING AND REPORTING ACTIONS**

- Maintain traffic control plan, permits, and construction schedule and methods for administrative record.
- Maintain record of site inspections including post-construction inspections.

**MONITORING RESPONSIBILITY**

OCS D

Prior to and during construction

**MONITORING SCHEDULE**

**Measure 7.2-1k: Railroad Encroachment Procedures.** This measure is applicable to the following collection systems improvements: Lower Santa Ana River Interceptor Improvements, Newhope-Placentia Trunk Replacement, and Gisler-Redhill System Improvements – B. To reduce impacts to railroad rights-of-way, the District is required to follow the Right-of-Way Encroachment Approval Procedures – SCRRRA Form No. 36. The procedures for temporary encroachment calls for 1) the submittal of a written statement on the reason and location of the encroachment; 2) a completed and executed SCRRRA Form No. 6, Right-of-Entry Agreement; 3) plan check, inspection, and flagging fees; and 4) insurance certificates as described in the Right-of-Entry Agreement. Per SCRRRA Form No. 6, the District must comply with the rules and regulations of this agreement at all times when working on SCRRRA property, including those outlined in the “Rules and Requirements for Construction at Railway Property, SCRRRA Form No. 37” and General Safety Regulations for Construction / Maintenance Activity on Railway Property”.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Include application for SCRRRA encroachment permit in contract specifications</li> <li>2. Contact SCRRRA prior to project design.</li> </ol>	<p>Maintain encroachment permit application and permit for administrative record.</p>	<p>OCSD and SCRRRA</p>	<p>Prior to and during construction</p>

**Measure 7.2-1l: Trails and Bikeways.** Short term construction impacts and closures to locally designated trails and bikeways, as found in the County’s Master Plan of Regional Riding and Hiking Trails (RRHT) and Commuter Bikeways Strategic Plan (CBSP), shall be mitigated with detours, signage, flagmen and reconstruction as appropriate. Long term impacts such as permanent trail link closures should be mitigated with provisions for new rights-of-way for trails and/or bikeways and reconstruction.

**Measure 7.2-1m: County of Orange Coordination.** Any construction plans that could potentially impact regional riding and hiking trails or Class I bikeways shall be submitted to the County’s Division of Harbors, Beaches and Parks/Trails Planning and Implementation for review and approval prior to project construction activities.

**Measure 7.2-1n: Trails Restoration.** Regional Riding and Hiking Trails and Class I Bikeways impacted by construction activities shall be restored to their original condition after project construction.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Include adherence with County of Orange RRHT and CBSP in contract specifications.</li> <li>2. Contact County of Orange prior to designing detours.</li> </ol>	<p>Maintain construction design for administrative record.</p>	<p>OCSD and SCRRRA</p>	<p>Prior to and during construction</p>

**Biology**

**Impact 7.3-1:** Based on conceptual alignment information for OCSD’s proposed collection system projects, construction of the collection pipeline system improvements would occur in previously disturbed, developed areas, primarily public streets. No impact to biological resources would occur if projects occur within paved areas. However, if final project alignments are revised to include an undeveloped area or open space, potential impacts to biological resource could occur; in these cases OCSD would conduct additional CEQA as needed to clarify and address impacts to biological resources.

**Measure 7.3-1: Additional CEQA Review.** If in the future, as OCSD develops the design of each specific collection system project for implementation, a project alignment includes unpaved, undeveloped park or open space area, OCSD will conduct additional CEQA review as needed to clarify and address potential impacts to biological resources.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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| 1. Biological surveys will be conducted for construction activities in previously undisturbed locations. | Maintain record of previous condition for each construction site for administrative record. | OCSD | Prior to and during construction |
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**Noise**

**Impact 7.4-1:** Construction activities related to the proposed collection system improvements would intermittently and temporarily generate noise levels above existing ambient levels in the project vicinity. Less than Significant with Mitigation Measures.

**Measure 7.4-1a: Hours of Construction.** Construction activities shall be limited to between the hours of 7:30 a.m. and 5:30 p.m. and as necessary to comply with local ordinances. Any nighttime or weekend construction activities would be subject to local permitting.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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| 1. Include compliance with local noise and construction ordinances in construction specifications. | Maintain record of construction oversight for administrative record. | OCSD | Prior to and during construction |
| 2. Provide construction oversight to ensure scope of work is carried out.                          |  |      |                                  |

**Measure 7.4-1b: Noise Control.** All equipment used during construction shall be muffled and maintained in good operating condition. All internal combustion engine driven equipment shall be fitted with intake and exhaust mufflers that are in good condition.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Include compliance with local noise and construction ordinances in construction specifications.</li> <li>2. Include noise reduction procedures in construction specifications</li> <li>3. Provide construction oversight to ensure scope of work is carried out.</li> </ol>	<p>Maintain record of construction oversight for administrative record.</p>	<p>OCSD</p>	<p>Prior to and during construction</p>

**Measure 7.4-1c: Pile-Driving Noise Reduction.** Contractors shall use vibratory pile drivers instead of conventional pile drivers where feasible and effective in reducing impact noise from shoring of jack-pit locations in close proximity to residential areas, where applicable.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Include preference to avoid pilings where possible in project design specifications.</li> </ol>	<p>Maintain record of design specifications.</p>	<p>OCSD</p>	<p>Prior to project design</p>

**Measure 7.4-1d: Construction Notification.** Sensitive receptors affected by pipeline replacement projects, and manhole rehabilitation activities shall be notified concerning the project timing and construction schedule, and shall be provided with a phone number to call with questions or complaints.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Prepare and distribute notifications.</li> </ol>	<p>Maintain record of notification distribution list.</p>	<p>OCSD</p>	<p>Prior to construction</p>



**Air Quality**

**Impact 7.5-1:** The proposed improvements to OCSD’s collection systems would generate short-term emissions of air pollutants, including dust and criteria pollutants, from excavation, installation and/or replacement activities. This is considered a short-term significant impact that would cease at the completion of construction activities. Construction emission impacts are estimated to occur for an average of three to four weeks within one block of any given property. Less than Significant with Mitigation Measures.

**Measure 7.5-1a: Dust Control.** The District shall require the contractors to implement a dust abatement program that would reduce fugitive dust generation to lessen impacts to nearby sensitive receptors. The dust abatement program could include the following measures:

- Water all active construction sites at least twice daily.
- Cover all trucks having soil, sand, or other loose material or require all trucks to maintain at least two feet of freeboard.
- Apply water as necessary, or apply non-toxic soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) if visible soil material is carried into adjacent streets.
- Water twice daily or apply non-toxic soil binders to exposed soil stockpiles.
- Limit traffic speeds on unpaved roads to 15 mph.

**IMPLEMENTATION PROCEDURE**

1. Conduct mitigation measures to reduce construction air emissions.
2. Conduct periodic construction site inspections.

**MONITORING AND REPORTING ACTIONS**

- Maintain record of construction methods for administrative record.
- Maintain record of site inspections for administrative record.

**MONITORING RESPONSIBILITY**

OCSD

**MONITORING SCHEDULE**

Prior to and during construction

**Measure 7.5-1b: Exhaust Emissions.** Contractors shall maintain equipment engines in proper working order and operate construction equipment so as to minimize exhaust emissions. Such equipment shall not be operated during first or second stage smog alerts.

**Measure 7.5-1c: Truck Emissions Reductions.** During construction, trucks and vehicles in loading or unloading queues shall be kept with their engines off, when not in use, to reduce vehicle emissions. Construction activities shall be discontinued during second-stage smog alerts.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Include air emission reduction mitigation measures in construction specifications.</li> <li>2. Conduct periodic site inspections to verify adherence to mitigation measures.</li> </ol>	<p>Maintain record of construction specifications and site inspections for administrative record.</p>	<p>OCSD</p>	<p>Prior to construction</p>
<p><b><u>Geology</u></b></p>			
<p><b>Impact 7.6-1:</b> Project facilities would be located in areas susceptible to primary and secondary seismic hazards (groundshaking, liquefaction, settlement). Damage to facilities could result in the event of a major earthquake. Less than Significant with Mitigation Measures.</p>			
<p><b>Measure 7.6-1a: Seismic Safety.</b> The District will design and construct new facilities in accordance with District seismic standards and/or meet or exceed seismic, design standards in the most recent edition of the California Building Code.</p>			
<p><b>Measure 7.6-1b: Soils Survey.</b> Soils surveys shall be conducted to determine the liquefaction potential along the collection system improvements route.</p>			
IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Use design criteria to reduce seismic hazards.</li> <li>2. Contract with qualified geologist to conduct geotechnical evaluations prior to construction.</li> </ol>	<p>Maintain record of construction specifications and geotechnical information.</p>	<p>OCSD</p>	<p>Prior to construction</p>
<p><b><u>Hydrology</u></b></p>			
<p><b>Impact 7.7-1:</b> Construction activities could result in erosion and siltation into nearby surface waters, leading to degradation of water quality or flooding hazards. Construction could also result in chemical spills (e.g., fuels, oils, or grease) to stormwater, and increase turbidity and decrease water quality in waters of the U.S. Less than Significant with Mitigation Measures.</p>			

**Measure 7.7-1a: Contractor BMPs.** Construction contractors will implement Best Management Practices to prevent erosion and sedimentation to avoid significant adverse impacts to surface water quality.

**Measure 7.7-1b: Storm Season Restrictions.** In addition, open-trench installation of pipelines across open drainage channels and the interplant connector shall be limited to the dry season.

**Measure 7.7-1c: County of Orange Coordination.** The District shall coordinate with the Orange County Public Facilities and Resources Department (Orange County Flood Control District) Planning Section to ensure compatibility and joint use feasibility with existing and future projects.

**Measure 7.7-1d: Waterway Protection.** The District shall incorporate into contract specifications the requirement that the contractor(s) enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters. The rules will include measures to:

- Store all reserve fuel supplies only within the confines of a designated construction staging area.
- Refuel equipment only within designated construction staging area.
- Regularly inspect all construction vehicles for leaks.

**Measure 7.7-1e: Spill Prevention.** The District shall incorporate into contract specifications the requirement that the contractor(s) prepare a Spill Prevention, Control, and Countermeasure Plan. The plan would include measures to be taken in the event of an accidental spill.

**Measure 7.7-1f: Spill Containment.** The District shall incorporate into contract specifications the requirement that the construction staging areas be designed to contain contaminants such as oil, grease, and fuel products so that they do not drain towards receiving waters or storm drain inlets. If heavy-duty construction equipment is stored overnight adjacent to a potential receiving water, drip pans will be placed beneath the machinery engine block and hydraulic systems.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
1. Implement BMPs of State-wide SWPPP.	Maintain compliance with SWMP and SPCC for administrative record.	OCSD	On going
2. Prepare construction SWPPP for sites greater than 5 acres.	Including annual reports to the SWRCB.		
3. Implement existing SWMP and SPCC.	Maintain record of site inspections and sample analysis results.		
4. Periodically update SWMP and SPCC. 5. Provide adequate spill prevention and surface water management SOPs in contract specifications.			
6. Periodically inspect construction sites.			

**Measure 7.7-1g: Flood Control Facilities.** The District will contact the Orange County Flood Control District prior to excavation activities involved with the construction of the interplant connector to ensure the integrity of the flood control system along the Santa Ana River.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Contract with qualified engineer to assess structural impacts to SAR levee prior to construction of interplant connector.</li> <li>2. Periodically inspect construction site.</li> </ol>	<p>Maintain reports for administrative record.</p> <p>Maintain record of site inspections.</p>	<p>OCSD</p>	<p>Prior to construction of interplant connector.</p>

**Public Services**

**Impact 7.8-1:** Construction of the collection pipeline system could result in short-term disruption of emergency services in the vicinity of the project area. Less than significant with Mitigation Measures.

**Measure 7.8-1a: Traffic Control Plan Notifications.** The contractor shall provide a copy of the Traffic Control Plan to the Sheriff's Department local police departments and fire departments prior to construction. The District shall provide 72-hour notice of construction to the local service providers of individual pipeline segments.

**Measure 7.8-1b: Emergency Facility Access.** Access to fire stations and emergency medical facilities must be maintained on a 24-hour basis and at least one access to medical facilities shall be available at any one time during construction. The District shall notify appropriate officials at the impacted medical facility regarding construction schedule.

**Measure 7.8-1c: Trench Openings.** Trenches shall be promptly backfilled after pipeline installation. If installation is incomplete, steel trench plates shall be used to cover open trenches.



**Impact 7.8-3:** Construction of the collection pipeline system could result in short-term disruption of utility service and may require utilities relocation. Less than Significant with Mitigation Measures.

**Measure 7.8-3a: Utility Search.** A detailed study identifying utilities along the pipeline routes shall be conducted during the design stages of the project. For segments with adverse impacts the following mitigations shall be implemented.

- Utility excavation or encroachment permits shall be required from the appropriate agencies. These permits include measures to minimize utility disruption. The District and its contractors shall comply with permit conditions and such conditions shall be included in construction contract specifications.
- Utility locations shall be verified through field survey.
- Detailed specifications shall be prepared as part of the design plans to include procedures for the excavation, support, and fill of areas around utility cables and pipes. All affected utility services would be notified of the District's construction plans and schedule. Arrangements shall be made with these entities regarding protection, relocation, or temporary disconnection of services.

**Measure 7.8-3b: Utility Conflicts.** In order to reduce potential impacts associated with utility conflicts, the following measures should be implemented in conjunction with 7.8-3a.

- Disconnected cables and lines would be promptly reconnected.
- The District shall observe Department of Health Services (DHS) standards which require a 10-foot horizontal separation between parallel sewer and water mains; (2) one foot vertical separation between perpendicular water and sewer line crossings. In the event that the separation requirements cannot be maintained, the District shall obtain DHS variance through provisions of water encasement, or other means deemed suitable by DHS; and (3) encasing water mains in protective sleeves where a new sewer force main crosses under or over an existing sewer main.

**Measure 7.8-3c: Protect Utilities.** The construction contractor shall comply with District requirements and specification to protect existing utility lines.

**Measure 7.8-3d: Agency Coordination.** The District should coordinate with the Orange County Public Facilities Resources Department, Orange County Flood Control District, Planning Section, Metropolitan Water District of Southern California, Municipal Water District of Orange County, Coastal Municipal Water District, and Orange County Water District, and affected jurisdictions to ensure compatibility and joint use feasibility with existing future projects.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Implement mitigation measures listed above.</li> <li>2. Include underground utility surveys in construction specifications.</li> <li>3. Coordinate with local authorities to minimize utility disruption.</li> <li>4. Periodically inspect construction sites.</li> </ol>	<p>Maintain specifications for administrative record.</p> <p>Maintain record of site inspections.</p>	OCSD	Prior to and during construction.

**Measure 7.8-3e: Identify Abandoned Oil Wells.** Prior to construction, the District shall identify existing and abandoned oil production wells within the project area using the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), District 1 well location maps. Access to identified non-abandoned oil wells will be maintained. Previously abandoned wells identified beneath proposed structures or utility corridors may need to be plugged to current DOGGR specifications including adequate gas venting systems.

**Measure 7.8-3f: Abandon Wells.** Should construction activities uncover previously unidentified oil production wells, the DOGGR will be notified, and the well will be abandoned following DOGGR specifications for well abandonment.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
<ol style="list-style-type: none"> <li>1. Include existing and abandoned oil well surveys in construction specifications.</li> <li>2. Coordinate with Department of Conservation to expedite search.</li> </ol>	<p>Maintain specifications for administrative record.</p> <p>Maintain record of oil well discoveries and searches for the administrative record.</p>	OCSD	Prior to and during construction.

**Aesthetics**

**Impact 7.9-1:** Project implementation could result in short-term visual impacts resulting from construction activities. Less than Significant after Mitigation Measures.

**Measure 7.9-1a: Construction Site Restoration.** The District shall ensure that its contractors restore disturbed areas along the pipe line alignment to a condition mutually agreed to between the District and local jurisdictions prior to construction such that short-term construction disturbance does not result in long-term visual impacts.

**Measure 7.9-1b: Construction Housekeeping.** Construction contractors shall be required to keep construction and staging areas orderly, free of trash and debris.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
1. Include construction site house-keeping measures in contract specifications.	Maintain specifications for administrative record.	OCSD	Prior to and during construction.
2. Conduct post-construction site inspections.	Maintain record of site inspections.		

**Cultural Resources**

**Impact 7.10-1:** Implementation of the proposed collection system improvements may affect known, significant archaeological resources. Less than Significant with Mitigation Measures.

**Measure 7.10-1: Archaeological Surveys.** During project design, within the area of the 6 recorded archaeological sites within proposed project alignments, a qualified archaeologist shall conduct a subsurface testing program to determine whether intact significant deposits exist in the excavation area. Shall testing indicate that areas of significant deposits do exist, the deposits would be preserved in place, if feasible. If preservation in place is not feasible, a Data Recovery Plan would be prepared to address the removal of those deposits and would be implemented before the beginning of construction. The Plan would define how and when mechanical and manual excavation would be conducted, the anticipated volume of recovered soils, artifact analysis, cataloging and curation, and monitoring and reporting requirements. For the three sites where human remains have been recorded (CA-ORA-85, CA-ORA-87, and CA-ORA-300), the District would enter into a written agreement between an archaeological consultant, to be retained by the District, and a Native American representative prior to construction in the vicinity of these sites. This agreement would specify terms as to the treatment and disposition of the human remains, and shall define “associated burial goods” with reference to Public Resources Code Sections 5097.94, 5097.98, and 5097.99 and Health and Safety Code Section 7050.5.



IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>1. Contract with a qualified archaeologist to conduct pre-construction site surveys in areas with a high probability of cultural resources.</li> <li>2. Include necessary actions in specifications shall archaeological artifacts be discovered during construction activities.</li> <li>3. Conduct post-construction site inspections.</li> </ol>	<p>Maintain construction specifications for administrative record.</p> <p>Maintain record of site inspections.</p>	<p>OCSD</p>	<p>Prior to and during construction.</p>

**Impact 7.10-2:** Implementation of the proposed collection system improvements may affect unknown, potentially significant archeological resources. Less than Significant with Mitigation Measures.

**Measure 7.10-2a: Archaeological Resources.** Subsurface construction has a low to very high potential for exposing significant subsurface cultural resources. Due to the likelihood of encountering cultural resources, the District shall implement the following prior to project construction:

- Language shall be included in the General Specifications section of any subsurface construction contracts alerting the contractor to the potential for subsurface cultural resources and trespassing on known or potential resources adjacent to the project.
- Prior to construction, contractors and District staff will receive an archaeological orientation from a professional archaeologist regarding the types of resources which may be uncovered and how to identify these resources during construction activities. The orientation shall also cover procedures to follow in the case of any archaeological discovery.

**Measure 7.10-2b: Cultural Resources.** If cultural resources are encountered at any time during project excavation, construction personnel would avoid altering these materials and their context until a qualified archaeologist has evaluated the situation. Project personnel would not collect or retain cultural resources. Prehistoric resources include, but are not limited to, chert or obsidian flakes, projectile points, mortars, and pestles; and dark, friable soil containing shell and bone, dietary debris, heat-affected rock, or human burials. Historic resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits (glass, metal, wood, ceramics), often found in old wells and privies.

**Measure 7.10-2c: Human Remains Alert.** In the event of accidental discovery or recognition of any human remains, the County Coroner would be notified immediately and construction activities shall be halted. If the remains are found to be Native American, the Native American Heritage Commission would be notified within 24 hours. Guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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| <ol style="list-style-type: none"> <li>1. Implement the mitigation measures listed above.</li> <li>2. Contract with a qualified archaeologist to conduct pre-construction site surveys for areas with a high probability of cultural resources.</li> <li>3. Include necessary actions in specifications shall archaeological artifacts be discovered during construction activities.</li> </ol> | <p>Maintain construction specifications for administrative record.</p> <p>Maintain record of site inspections.</p> | <p>OCSD</p> | <p>Prior to and during construction.</p> |
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**Cumulative**

**Impact 7.11-1:** Construction activities of the collection system projects in conjunction with other projects would result in short-term cumulative impacts. Less than Significant with Mitigation Measures.

**Measure 7.11-1a: Coordinate Construction.** The District will continue to coordinate construction activities with the county and city public works and planning departments and other local agencies to identify overlapping pipeline routes, project areas, and construction schedules. To the extent feasible, construction activities shall be coordinated to consolidate the occurrence of short-term construction-related impacts.

<b>IMPLEMENTATION PROCEDURE</b>	<b>MONITORING AND REPORTING ACTIONS</b>	<b>MONITORING RESPONSIBILITY</b>	<b>MONITORING SCHEDULE</b>
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|---|--|-------------|-------------------------------|
| <ol style="list-style-type: none"> <li>1. Coordinate with local authorities prior to final design.</li> <li>2. Conduct coordination incentives with local jurisdictions.</li> </ol> | <p>Maintain record of communication and outreach with local authorities for administrative record.</p> | <p>OCSD</p> | <p>Prior to construction.</p> |
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**Measure 7.11-1b: Recycling.** To reduce cumulative impacts related to solid waste, the District shall make all practicable efforts to recycle where feasible.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>Where feasible, include recycling measures in construction contracts.</li> <li>Conduct site surveys to ensure scope of work is followed.</li> </ol>	<p>Maintain record of soils hauling.</p> <p>Maintain record site surveys for administrative record.</p>	OCSD	Prior to construction.

**Biosolids**

**Impact 8-2:** The projected increase in residual solids volumes would increase truck traffic on local roadways. Less than Significant with Mitigation.

**Measure 8-2: Trucking Impact Reduction.** The District shall limit truck trips associated with the transport of residual solids to off-peak hours when possible as a means of reducing truck travel times and minimizing congestion impacts to the regional transportation system.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
<ol style="list-style-type: none"> <li>Include preferred schedule in contracts with haulers.</li> </ol>	<p>Maintain record of contract for administrative record.</p>	OCSD	On going

**Impact 8-3:** The projected increase in residual solids volumes and related truck traffic would increase ambient noise levels at nearby sensitive receptor locations. Less than Significant with Mitigation Measures.

**Measure 8-3a: Truck Noise Reduction.** The District shall limit truck trips associated with the transport of residual solids at Treatment Plant No. 2 to non-noise sensitive (daytime) and non-peak hour periods as a means of reducing exposure of residences to truck-related noise whenever possible.

**Measure 8-3b: Biosolids Transport.** The District shall investigate options for reducing the number of biosolids truck trips at Treatment Plant No. 2. The study could focus on evaluating such practices as using underground pipelines to pump biosolids from Plant 2 up to Plant 1.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
1. Include preferred schedule in contract with haulers.	Maintain record of contract for administrative record.	OCSD	On going

**Impact 8-5:** The projected increase in biosolids production from POTWs in the Southern California region could present a cumulative impact on the availability of land application sites. Less than Significant with Mitigation.

**Measure 8-5a: Biosolids Application Sites.** The District will continue to research land application sites in the region and consider the management options including the acquisition of dedicated application sites.

**Measure 8-5b: Biosolids Land Application.** The District will continue to coordinate with other POTWs in the region to cooperatively research innovative ways to solve land availability issues.

IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
1. Continue research and efforts to increase land application. 2. Coordinate with POTWs in the region.	Maintain record of research and efforts for administrative record.	OCSD	On going