# Proposed Mitigated Negative Declaration

# MacArthur Pump Station Rehabilitation Project

Newport Beach, California

**Prepared for** 



**Orange County Sanitation District** 

Prepared by



November 2014

## **Proposed Mitigated Negative Declaration**

**Project Proponent:** Orange County Sanitation District (Sanitation District)

10844 Ellis Avenue, Fountain Valley, California 92708

Project Description: The proposed MacArthur Pump Station Rehabilitation Project (Project) would

design and construct mechanical, electrical, instrumentation and controls, structural, and architectural improvements to bring the existing facility into compliance with current Sanitation District standards, and local, state, and national laws. A Negative Declaration for this project was adopted in 2006. However, it was not constructed and additional construction elements have since been added. Specifically, the new project elements include replacing 2,130 feet of existing force main with high-density polyethylene pipe, modifying an existing manhole located at the intersection of Birch Street and MacArthur Boulevard, and reconstructing 2,000 feet of upstream sewers and

manholes.

**Project Location:** 4219 MacArthur Boulevard

Newport Beach, California 92660

Finding: Pursuant to the provisions of the California Environmental Quality Act

(CEQA), the Sanitation District has determined that the proposed Project will not have a significant effect on the environment. Following an Initial Study and assessment of possible adverse impacts, the proposed Project was determined not to have a significant impact on the environment. Therefore, the Sanitation District has prepared a Mitigated Negative Declaration in

accordance with the provisions of CEQA.

The Initial Study is available at www.ocsd.com. Copies are also available for viewing at:

- Orange County Sanitation District, Administrative Office Bldg., Engineering Department, 10844 Ellis Avenue, Fountain Valley, CA 92708
- Orange County Public Library-Costa Mesa, 1855 Park Ave., Costa Mesa, CA 92627
- Newport Beach Public Library, 1000 Avocado Avenue, Newport Beach, CA 92660

•	Newport Beach Public Library - Mariners Branch, 2005	Dover Drive, Newport Beach, CA
	Newport Beach Public Library – Mariners Branch, 2005 92660	1/4/-1/1

Date:	11/18/2014	Signature:	Ke the
Staff:			

# **Initial Study**

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**Orange County Sanitation District** 

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# **Table of Contents**

Table	of Contents	i
1.0	Introduction	1
1.1	Background	1
1.2	Purpose	1
1.3	Statutory Requirements and Authority	1
1.4	Permits and Approvals	2
1.5	Agency Consultation and Coordination	2
2.0	Project Description	4
2.1	Project Background and Location	4
2.2	Project Elements	4
2.3	Project Construction	7
2.4	Project Operation	11
3.0	Environmental Checklist Form	12
3.1	Project Description and Background	12
3.2	Determination	14
3.3	Evaluation of Environmental Impacts	15
3.4	CEQA Checklist	17
4.0	Environmental Evaluation	29
4.1	Aesthetics	29
4.2	Agricultural Resources	30
4.3	Air Quality	30
4.4	Biological Resources	34
4.5	Cultural Resources	35
4.6	Geology and Soils	37
4.7	Greenhouse Gas Emissions	39
4.8	Hazards and Hazardous Materials	43
4.9	Hydrology and Water Quality	46
4.10	Land Use and Planning	49

4.11	Mineral Resources50	0
4.12	Noise50	0
4.13	Population and Housing53	3
4.14	Public Services	3
4.15	Recreation54	4
4.16	Transportation/Traffic	4
4.17	Utilities and Service Systems5	
4.18	Mandatory Findings of Significance	8
5.0 F	reparers and Contributors6	0
6.0 F	deferences	1
Anne	ndix A: Construction Emission Calculations	
Appe	Huix A. Construction Emission Calculations	
List o	of Figures	
	of Figures 2-1: Project Vicinity Map	5
Figure 2		
Figure 2	2-1: Project Vicinity Map	
Figure 2	2-1: Project Vicinity Map	
Figure 2 Figure 2	2-1: Project Vicinity Map	6
Figure 2 Figure 2 List C	e-1: Project Vicinity Map	6 2
Figure 2 Figure 2 List C Table 1- Table 2-	2-1: Project Vicinity Map	6 2 9
Figure 2 Figure 2 List C Table 1 Table 2 Table 2	2-1: Project Vicinity Map	6 2 9
Figure 2 Figure 2  List C  Table 1  Table 2  Table 2  Table 2  Table 2	2-1: Project Vicinity Map	6 2 9
Figure 2 Figure 2  List C Table 1 Table 2 Table 2 Table 2 Table 2 Table 2	P-1: Project Vicinity Map	6 2 9 0 0
Figure 2 Figure 2 Figure 2 Table 1 Table 2 Table 2 Table 2 Table 2 Table 4	2-1: Project Vicinity Map	6 2 9 0 0 2
Figure 2 Figure 2 Figure 2  List C Table 1 Table 2 Table 2 Table 2 Table 4 Table 4 Table 4	P-1: Project Vicinity Map	6 2 9 0 0 2

## **Acronyms and Abbreviations**

AC Air Conditioning

BMP best management practice

CEQA California Environmental Quality Act

CO carbon monoxide

EIR Environmental Impact Report

gpm gallons per minute

HVAC Heating, Ventilation, and Air Conditioning

lb/day pounds per day

MGD million gallons per day

ND Negative Declaration

NOx nitrogen oxides

NPDES National Pollutant Discharge Elimination System

PM<sub>10</sub> particulate matter less than 10-microns

Project MacArthur Pump Station Rehabilitation Project

ROC reactive organic compounds

Sanitation District Orange County Sanitation District

SCAB South Coast Air Basin

SCAQMD South Coast Air Quality Management District

SO<sub>x</sub> sulfur oxides

UBC Uniform Building Code

# 1.0 Introduction

## 1.1 Background

This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) and the Guidelines for CEQA. The Initial Study examines the direct, indirect, growth-inducing, irreversible, short- and long-term and cumulative environmental effects associated with the construction and operation of the proposed MacArthur Pump Station Rehabilitation Project (Project). On May 24, 2006 a Negative Declaration was approved for the rehabilitation of the MacArthur Pump Station. However, because an extended period of time has elapsed since its adoption, and new elements have been added to the project, a new Initial Study document is required. The intent of this document is to re-evaluate the pump station rehabilitation, including the additional project elements under the current CEQA guidelines.

## 1.2 Purpose

Pursuant to Section 15063(a) of CEQA Guidelines, the Orange County Sanitation District (Sanitation District), acting in the capacity of Lead Agency, is required to undertake the preparation of an Initial Study to determine if the proposed action will have a significant effect on the environment. The purposes of this Initial Study are to: (1) identify potential environmental impacts, (2) provide the Lead Agency with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration (ND), (3) enable the Lead Agency to modify the proposed Project (through mitigation of adverse impacts), (4) facilitate assessment of potential environmental impacts early in the design of the proposed Project, and (5) provide documentation for the potential finding that the proposed Project will not have a significant effect on the environment or can be mitigated to a level of insignificance. This Initial Study is an informational document providing an environmental basis for subsequent discretionary actions that could be required from other Responsible Agencies.

#### 1.3 Statutory Requirements and Authority

In the State of California CEQA Guidelines, Section 15063 identifies specific disclosure requirements for inclusion in an Initial Study. Pursuant to those requirements, an Initial Study shall include: (1) a description of the proposed Project, including the location of the Project site; (2) an identification of the environmental setting; (3) an identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that some evidence exists to support the entries; (4) a discussion of ways to mitigate significant effects identified, if any; (5) an examination of whether the proposed Project is compatible with existing zoning, plans, and other applicable land-use controls; and (6) the name(s) of the person or persons who prepared or participated in the preparation of the Initial Study.

The Sanitation District will host a public meeting on December 11, 2014, located at the Orange County Sanitation District Administration Offices Board Room (10844 Ellis Avenue, Fountain Valley, CA 92708) at 6:00 p.m. to solicit comments on the proposed Project and this Initial Study. You may provide comments during the hearing or in writing. Comments will be considered before action is taken to approve, approve with amendments, or deny the proposed Project. **All comments must be received by December 20, 2014.** 

Submit comments via postal mail or email to:

Daisy Covarrubias, Senior Staff Analyst Orange County Sanitation District, Planning Division 10844 Ellis Ave, Fountain Valley, CA 92708-7018 Email: dcovarrubias@ocsd.com

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- Newport Beach Public Library Mariners Branch, 2005 Dover Drive, Newport Beach, CA 92660

# 1.4 Permits and Approvals

Public agencies may use this Initial Study as the basis for their decisions to issue approvals and/or permits that could be applicable to the proposed Project. Table 1-1 provides a list of those entitlements and permits that could be required for the proposed Project.

**Table 1-1: Project Permits and Approvals** 

Agency Name	Permit or Approval
South Coast Air Quality Management District	Permit to Construct
City of Newport Beach	Fire Permit/Approval of Traffic Control Plan

# 1.5 Agency Consultation and Coordination

The agencies listed in Table 1-1 could require the Sanitation District to obtain approval for the proposed Project. Coordination with other agencies would be required to determine the specific nature of any

future permits or approvals that could be required. Agencies would be notified pursuant to CEQA, and any subsequent comments would be considered accordingly. In addition, this document is intended to provide agencies and the general public with an environmental basis under CEQA to facilitate the dissemination of information deemed necessary to the discretionary approvals process and the approval, or conditional approval, of any aspect of the proposed Project within the jurisdiction of the agency.

# 2.0 Project Description

# 2.1 Project Background and Location

The Orange County Sanitation District (Sanitation District) is proposing to upgrade the existing MacArthur Pump Station in the City of Newport Beach (Figure 2-1). The Sanitation District maintains a collection system composed of sewers and pump stations. The collection system conveys wastewater from the Sanitation District member cities and other local agencies to treatment facilities located in the cities of Fountain Valley and Huntington Beach. The proposed Project would design and construct mechanical, electrical, instrumentation and controls, structural, and architectural improvements to bring the existing facility into compliance with current Sanitation District standards and local, state, and national laws.

The existing facility is located at 4219 MacArthur Boulevard in the City of Newport Beach (Figure 2-2). The pump station has two vertical, no clog sewage pumps (one duty and one standby). The proposed Project would replace the existing pumps with new pumps to accommodate existing and projected flows and add emergency standby capacity. The pump station receives flows from the local tributary sewage system and has a 12-inch-diameter force main that discharges into the Von Karman Trunk Sewer. The proposed Project would be located in an area comprising primarily commercial and professional businesses. Figure 2-2 shows the existing conditions at the proposed Project site.

This project was previously approved on May 24, 2006 for the pump station rehabilitation only. However, the pump station was not rehabilitated and additional construction elements have been added to the proposed design since that time. Specifically, the new project elements include replacing 2,130 feet of existing force main with high-density polyethylene pipe, modifying an existing manhole located at the intersection of Birch Street and MacArthur Boulevard, and reconstructing 2,000 feet of upstream sewers and manholes.

## 2.2 Project Elements

The proposed Project would consist of a new vault partially above ground to house new electrical equipment and controls and would replace the equipment in the existing pump station vault. The proposed Project consists of the following elements:

- mechanical improvements
- electrical modifications
- structural modifications
- architectural improvements

Figure 2-1: Project Vicinity Map

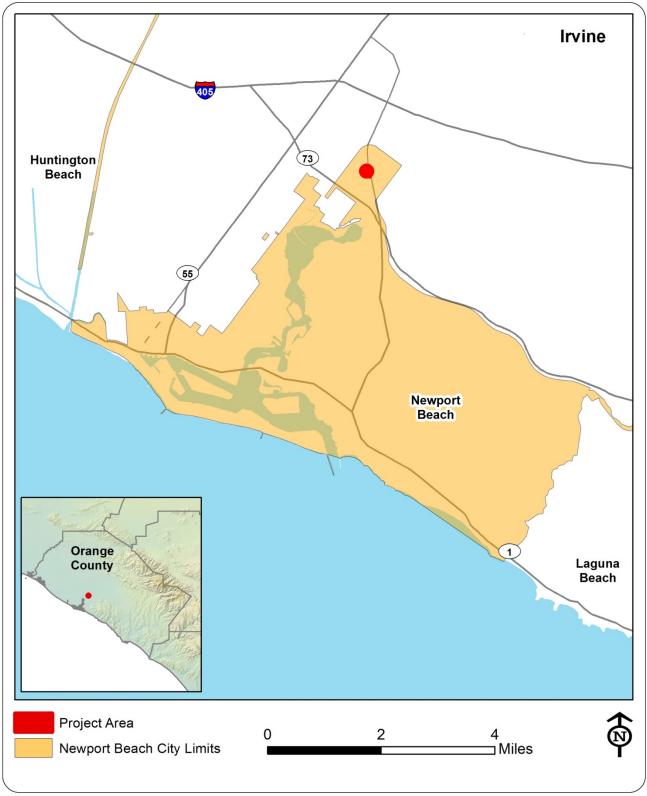
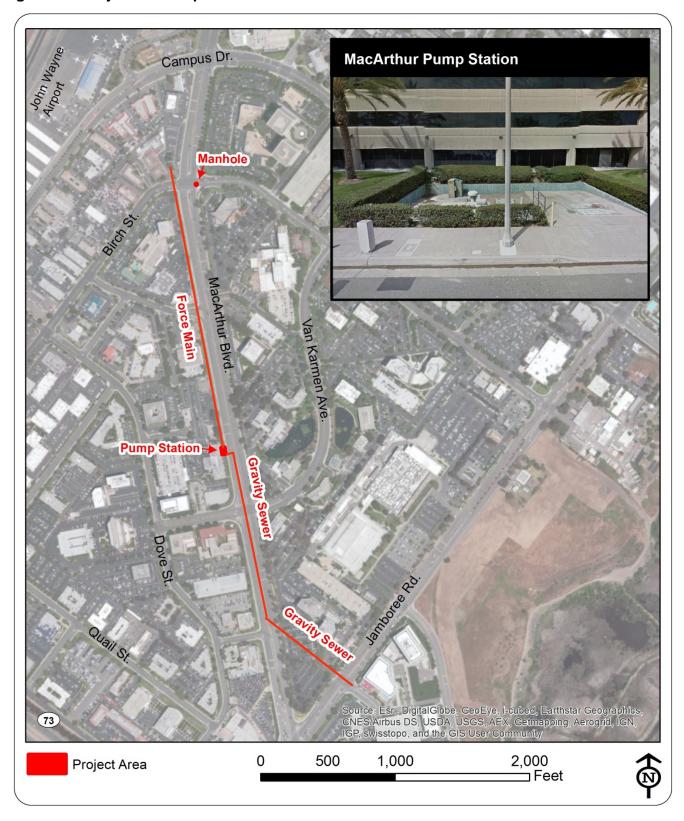


Figure 2-2: Project Area Map



Mechanical improvements for the proposed Project would include the replacement of existing pumps with new pumps, to accommodate the existing (2.4 MGD, 1650 gpm) and projected flows (2.8 MGD, 1945 gpm). The proposed Project would install the new pumps and include piping modifications within the existing structure. A flowmeter also would be added to the pump station.

Electrical modifications would include replacement of all existing electrical equipment. New electrical equipment would be placed in a new below-grade electrical vault (approximately 10 feet by 32 feet) to comply with existing electrical codes. The new electrical vault would be constructed within the western part of the existing Sanitation District easement.

Structural modifications would include a retrofit of the existing structure to comply with building standards for seismic stability, replacement of the existing precast concrete access equipment hatch with a new metal hatch, and replacement of the sidewalk hatch with a new sidewalk aluminum valve hatch. Additional project elements, not included in the 2006 Negative Declaration would include the following (see Figure 2-2 for locations of the pump station and new construction elements):

- Replacement of 2,130 feet of existing 12-inch asbestos cement force main with 2,150 feet of 12-inch high-density polyethylene pipe,
- Modification to a 72-inch manhole located at the intersection of Birch Street and MacArthur Boulevard, and
- Reconstruction of upstream gravity sewer lines and manholes along 2,000 feet of gravity sewer lines. New sewer lines will be installed parallel with an estimated 10 foot offset to the existing sewer lines. After installation of the new lines, the existing sewer lines will be abandoned in place using injected grout.

Architectural improvements would include the replacement of the existing sidewalk and landscape improvements to minimize potential visual impacts.

#### 2.3 Project Construction

All proposed Project construction would take place within the proposed Project area, which includes public right-of-way (i.e., MacArthur Blvd.) and private property (see Figure 2-2). Access to the proposed Project area would be along MacArthur Boulevard. Construction staging would occur on the Project site, or on approved, adjacent privately held parcels. Additionally, construction vehicle may temporarily park on adjacent roads.

#### **Construction Schedule**

Under the current schedule, construction is anticipated to occur between July 2017 and July 2018. Construction would occur during permitted hours identified in the City of Newport Beach Building Code, and construction activities would comply with the City of Newport Beach Noise Ordinance. No construction activities would occur outside these hours or on Sundays or federal holidays unless a temporary waiver is granted by an authorized agency representative.

#### **Traffic Control**

The proposed Project would require the delivery of materials and equipment during construction. Deliveries and vehicle parking would be coordinated to minimize impacts to local traffic. Vehicles entering and exiting the proposed Project site during construction would use MacArthur Boulevard. Use of construction equipment would encroach on one lane of traffic along MacArthur Boulevard from the pump station to the Birch Street intersection, located approximately 2,000 feet to the north. Construction activities associated with the repair or replacement of the gravity sewer lines will likely require the closure of one to two lanes of traffic along MacArthur Boulevard and Jamboree Road. And construction activities associated with the modification of the existing manhole at the MacArthur Boulevard/Birch Street intersection will require the temporary closure on one lane of traffic. A traffic management plan, approved by the City of Newport Beach, would be implemented during construction of the proposed Project. Traffic control will allow vehicle traffic to continue along MacArthur Boulevard at all times during construction and could include flagmen and/or signs to direct traffic. During hours when construction does not occur, all lanes of traffic would be open along MacArthur Boulevard. Nighttime construction may be proposed to limit temporary impacts to traffic along MacArthur Boulevard. Any nighttime construction would be coordinated with the City of Newport Beach in accordance with applicable noise and traffic ordinances.

#### **Excavation**

Excavation will be required for the new improvements to the existing pump station, which include the construction of a below-grade vault (approximately 10 feet wide by 32 feet long by 6 feet deep), the removal and replacement of the force main adjacent to MacArthur Blvd, modification of the manhole at the Birch Street/MacArthur Boulevard intersection, and the reconstruction of two gravity sewer lines (see Figure 2-2 for locations of the project elements). Excavation would be limited to the proposed Project site. Excavation spoils and all solid waste produced during construction activities would be disposed at a properly permitted facility in accordance with federal and state laws.

#### **Construction Equipment**

The types of equipment anticipated for use during construction activities are listed in Table 2–1 through Table 2–4.

**Table 2-1: Construction Equipment for Pump Station Rehabilitation** 

Activity	Equipment	Hours of Operation/ Day	Number of Working Days	Number of Workers (Total)
	Excavator	6	2	2
Excavation	Front-end loader	6	2	1
	Dump truck	6	2	1
Facility	Concrete truck	6	5	3
Installation	Crane	6	2	3
Material Delivery	Delivery truck	6	15	1
Management	Contractor pick-up truck (1)	8	180	1
Activities	Sanitation District pick-up truck (1)	3	180	1
Contractor Staff	Pick-up trucks (3)	8	180	3

**Table 2-2: Construction Equipment for Force Main Replacement** 

Activity	Equipment	Hours of Operation/	Number of Working Days	Number of Workers (Total)
	Excavator	6	60	4
Excavation	Front-end loader	8	80	1
	Dump truck (3)	8	80	1
Material Delivery	Delivery truck	4	30	2
Material Delivery	Fork lift	4	30	2
Management	Contractor pick-up truck (1)	6	80	1
Activities	Sanitation District pick-up truck (1)	6	80	1
Contractor Staff	Pick-up trucks (3)	6	80	3

**Table 2-3: Construction Equipment for Manhole Modification** 

Activity	Equipment	Hours of Operation/ Day	Number of Working Days	Number of Workers (Total)
	Excavator	6	10	2
Excavation	Front-end loader	6	15	2
	Dump truck (3)	6	10	1
Installation	Concrete truck	6	2	2
installation	Crane	6	5	2
Material Delivery	Delivery truck	6	1	1
Management	Contractor pick-up truck (1)	6	15	1
Activities	Sanitation District pick-up truck (1)	6	15	1
Contractor Staff	Pick-up trucks (3)	6	15	3

Assume precast materials

**Table 2-4: Construction Equipment for Gravity Sewer Lines Reconstruction** 

Activity	Equipment	Hours of Operation/ Day	Number of Working Days	Number of Workers (Total)
	Excavator	6	100	2
Excavation	Front-end loader	6	100	2
	Dump truck (3)	8	100	2
Installation	Concrete truck	2	16	2
Installation	Crane	4	32	2
Material Delivery	Delivery truck	4	32	2
Management	Contractor pick-up truck (1)	6	100	1
Activities	Sanitation District pick-up truck (1)	6	100	1
Contractor Staff	Pick-up trucks (3)	6	100	3

Assume precast materials

# 2.4 Project Operation

Project operation would include routine facility inspection and maintenance. Vehicles entering and exiting the proposed Project site during operation would use MacArthur Boulevard. During routine facility inspection and maintenance, a maintenance truck would park on site. Routine facility inspection and maintenance would include the following types of activities:

- Weekly inspection of mechanical and electronic components would be performed to ensure proper functioning.
- System features that are found to be not functioning properly during inspection would be maintained, repaired, and/or replaced.
- Scheduled preventative maintenance would be completed on a quarterly and annual basis in conformance with Sanitation District Preventative Maintenance Standard Procedure.
- Landscape and hardscape maintenance, litter control, and graffiti removal would be conducted.

# 3.0 Environmental Checklist Form

# 3.1 Project Description and Background

#### 1. Project Title

MacArthur Pump Station Rehabilitation Project

#### 2. Lead Agency Name and Address:

Orange County Sanitation District, 10844 Ellis Avenue, Fountain Valley, CA 92708

#### 3. Contact Person and Phone Number:

Daisy Covarrubias (714) 593-7119

#### 4. Project Location:

4219 MacArthur Boulevard, Newport Beach, CA 92660

#### 5. Project Sponsor's Name and Address:

Orange County Sanitation District, 10844 Ellis Avenue, Fountain Valley, CA 92708

#### 6. General Plan Designation:

The proposed Project site is designated as Mixed Use Horizontal (i.e., commercial, office, multifamily residential) under the City of Newport Beach General Plan Land Use Element (2014a).

#### 7. Zoning:

The proposed Project site is zoned as Planned Community (City of Newport Beach 2014b).

#### 8. Description of Project:

The proposed Project would design and construct mechanical, electrical, instrumentation and controls, structural, and architectural improvements to bring the facility into compliance with Sanitation District standards and local and state codes.

#### 9. Surrounding Land Uses and Setting:

Land use surrounding the proposed Project site is mainly commercial and professional businesses.

#### 10. Other public agencies whose approval is required:

The Sanitation District would be required to obtain approvals from the City of Newport Beach.

#### 11. Environmental Factors Potentially Affected:

The environmental factors checked below potentially would be affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

The environmental factors checked below would be potentially affected by this project. Please see the Environmental Checklist for additional information.

Aesthetics	Agriculture and Forestry	Air Quality
Biological Resources	Cultural Resources	Geology/Soils
Greenhouse Gas Emissions	Hazards and Hazardous Materials	Hydrology/Water Quality
Land Use/Planning	Mineral Resources	Noise
Population/Housing	Public Services	Recreation
Transportation/Traffic	Utilities/Service Systems	Mandatory Findings of Significance

# 3.2 Determination

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.						
$\boxtimes$	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.						
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.						
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.						
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required						
Sig	nature:						
Pri	Printed name: Kathleen Milee For: OCSD						

#### 3.3 Evaluation of Environmental Impacts

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the Lead Agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporation" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The Lead Agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
  - a. Earlier Analysis Used. Identify and state where they are available for review.
  - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Incorporation," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared

- or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
  - a. The significance criteria or threshold, if any, used to evaluate each question; and
  - b. The mitigation measure identified, if any, to reduce the impact to less than significance.

# 3.4 CEQA Checklist

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	
I.	AESTHETICS: Would the project:					
a)	Have a substantial adverse effect on a scenic vista					
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway					
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?					
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			$\boxtimes$		
II.	AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:					
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?				$\boxtimes$	
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?					

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	
с)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?					
d)	Result in the loss of forest land or conversion of forest land to non-forest use?				$\boxtimes$	
е)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?					
III.	AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
а)	Conflict with or obstruct implementation of the applicable air quality plan?					
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			$\boxtimes$		
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?					
d)	Expose sensitive receptors to substantial pollutant concentrations?					
е)	Create objectionable odors affecting a substantial number of people?			$\boxtimes$		

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV.	BIOLOGICAL RESOURCES: Would the pr	roject:			
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				
с)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				$\boxtimes$
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
е)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				
f)	Conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state habitat conservation plan?				
V.	CULTURAL RESOURCES: Would the proj	ect:			
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				
d)	Disturb any human remains, including those interred outside formal cemeteries?				
VI.	GEOLOGY AND SOILS: Would the project	t:			
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				
ii)	Strong seismic ground shaking?				
iii)	Seismic-related ground failure, including liquefaction?			$\boxtimes$	
iv)	Landslides?				$\boxtimes$
b)	Result in substantial soil erosion or the loss of topsoil?				
с)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?				
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				$\boxtimes$
VII.	GREENHOUSE GAS EMISSIONS: Would	the project:			
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				
b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				
VIII.	HAZARDS AND HAZARDOUS MATERIAL	L <b>S:</b> Would the բ	oroject:		
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?				
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				
е)	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2.0 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				$\boxtimes$
IX.	HYDROLOGY AND WATER QUALITY: W	ould the project	t:		
a)	Violate any water quality standards or waste discharge requirements?				
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				
с)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?				
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?				

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
е)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				
f)	Otherwise substantially degrade water quality?				
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				$\boxtimes$
i)	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?				
j)	Inundation by seiche, tsunami, or mudflow?				$\boxtimes$
X.	LAND USE AND PLANNING: Would the p	roject:			
a)	Physically divide an established community?				
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?				
XI.	MINERAL RESOURCES: Would the project	ot:			
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				
XII.	NOISE: Would the project result in:	l	l		
а)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?				
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			$\boxtimes$	
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2.0 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				
XIII.	POPULATION AND HOUSING: Would the	project:			
а)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				
XIV.	PUBLIC SERVICES:				
a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
	Fire protection?				$\boxtimes$
	Police protection?				$\boxtimes$
	Schools?				$\boxtimes$
	Parks?				$\boxtimes$
	Other public facilities?				$\boxtimes$
XV.	RECREATION:				
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVI.	TRANSPORTATION/TRAFFIC: Would the	project:			
a)	Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				
b)	Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?				$\boxtimes$
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				
e)	Result in inadequate emergency access?		$\boxtimes$		
f)	Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities?		$\boxtimes$		
XVII.	UTILITIES AND SERVICE SYSTEMS: Wo	uld the project:			
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
с)	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				$\boxtimes$
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				
е)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				$\boxtimes$
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				$\boxtimes$
g)	Comply with federal, state, and local statutes and regulations related to solid waste?				
XVIII.	MANDATORY FINDINGS OF SIGNIFICANCE				
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?				
b)	Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				

		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				

# 4.0 Environmental Evaluation

The following evaluation provides responses to the questions in the Environmental Checklist. A brief explanation for each question in the Environmental Checklist is provided to adequately support each impact determination. All responses consider the whole of the action involved, including construction and operational impacts as well as direct and indirect impacts. Environmental factors potentially affected by the proposed Project are presented below and organized according to the format of the Checklist.

#### 4.1 Aesthetics

Would the project:

a) Have a substantial adverse effect on a scenic vista?

**No Impact** - No scenic vista is related to the proposed Project.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant Impact – Although the proposed Project is located within a landscaped area that includes trees, no substantial impacts to scenic resources will occur as a result of this project. There are landscaped trees that may need to be removed, but the number of trees would be small and would not degrade the overall scenic resources of the area. And the disturbed areas will be returned to preconstruction conditions to the maximum extent possible. Additionally, the proposed Project will include landscaping around the pump station, which will serve as a visual screen. Furthermore, the project site is not located within or adjacent to a state scenic highway.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact – Construction of the proposed Project would result in a temporary visual impact at the Project site; however, the level of construction activity is small in scope and would be limited to the proposed Project site. Thus, construction activity related to the proposed Project would not substantially degrade the existing visual character or quality of the site and its surroundings. No long-term impacts to the visual character would occur because the area immediately adjacent to the pump station would be landscaped following rehabilitation of the pump station.

This limited modification of the existing conditions at the proposed Project site would not degrade the existing visual character or quality of the site and its surroundings.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact – Temporary construction activities would generally occur during daylight, but may also occur during the nighttime, which would require additional lighting. Operation of the proposed Project would require inside nighttime lighting and would not affect views of the area. The proposed Project could temporarily create a new source of light and glare from the nighttime construction activities but it would be short in duration and not substantial.

#### **Mitigation Measures**

The proposed Project would not result in a significant adverse impact to Aesthetics. No mitigation measures are proposed.

# 4.2 Agricultural Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

a-e) **No Impact** – The project site does not contain any farmlands, parcels encumbered under the Williamson Act, forested, or timberland production zones. Thus, no impacts to these resources would occur as a result of this Project.

#### **Mitigation Measures**

The proposed Project would not result in a significant adverse impact to Agricultural Resources. No mitigation measures are proposed.

# 4.3 Air Quality

Criteria for determining the significance of air quality impacts are based on federal, state, and local air pollution standards and regulations. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make significance determinations.

#### Significance Criteria

The proposed Project is located within the South Coast Air Basin (SCAB). Construction and operation activities associated with the proposed Project must be consistent with the Air Quality Management Plan that is managed by the South Coast Air Quality Management District (SCAQMD).

Thresholds of significance for allowable construction and operational air emissions have been established by the SCAQMD and are provided below.

#### Thresholds of Significance for Construction Emissions:

- 75 pounds per day of reactive organic compounds (ROC)
- 100 pounds per day of nitrogen oxides (NOx)
- 550 pounds per day of carbon monoxide (CO)
- 150 pounds per day of particulate matter less than 10 microns in diameter (PM<sub>10</sub>)
- 150 pounds per day of sulfur oxides (SOx)

Projects in the SCAB with construction-related emissions that exceed any of the emissions thresholds may be considered to have significant air quality impacts.

#### Thresholds of Significance for Operational Emissions:

- 55 pounds per day of ROC
- 55 pounds per day of NOx
- 550 pounds per day of CO
- 150 pounds per day of PM<sub>10</sub>
- 150 pounds per day of SOx

Projects in the SCAB with operation-related emissions that exceed any of the emissions thresholds may be considered to have significant air quality impacts.

#### Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

**No Impact** – Construction-related emissions would be primarily dust generated from excavation and grading, exhaust emissions from construction equipment, and motor vehicle emissions associated with construction activities. Construction of the proposed Project would not result in a significant air quality impact. Project construction activities would not conflict with or obstruct implementation of the SCAQMD Air Quality Plan.

To evaluate potential construction-related air quality impacts, anticipated construction emissions were determined and compared to the thresholds of significance for construction emissions listed above. Construction emissions were evaluated based on 2007 data from SCAQMD (see Appendix A). Table 4-1 below summarizes the construction emissions of criteria pollutants (NO<sub>x</sub>, CO, PM<sub>10</sub>, ROC, and SOx) that would occur from the operation of construction vehicles for all elements of construction (pump station rehabilitation, force main replacement, manhole

modification, and gravity sewer line reconstruction). Emissions associated with construction of the proposed Project would be below thresholds of significance for construction. Therefore, the construction emissions impacts would be less than significant. Operation of the pump station would have no impact on air quality.

**Table 4-1: Projected Construction Emissions** 

Attribute			Emissions					
Criteria Pollutant	NO <sub>x</sub>	СО	PM <sub>10</sub>	ROC	SO <sub>x</sub>			
	Pump Sta	ation Rehabilita	tion					
Max Project, pounds per day (lb/day)	31.51	20.95	77.53	5.48	5.31			
SCAQMD Significance Threshold (lb/day)	100	550	150	75	150			
Project Significance	No	No	No	No	No			
	Force M	lain Replaceme	ent					
Max Project, pounds per day (lb/day)	15.15	9.28	1.56	1.46	0.02			
SCAQMD Significance Threshold (lb/day)	100	550	150	75	150			
Project Significance	No	No	No	No	No			
	Manh	ole Modification						
Max Project, pounds per day (lb/day)	1.55	0.96	0.75	0.13	0.003			
SCAQMD Significance Threshold (lb/day)	100	550	150	75	150			
Project Significance	No	No	No	No	No			
Gravity Sewer Line Reconstruction								
Max Project, pounds per day (lb/day)	12.02	7.75	1.38	1.16	0.02			
SCAQMD Significance Threshold (lb/day)	100	550	150	75	150			
Project Significance	No	No	No	No	No			

Source: Orange County Sanitation District 2006

Operational emissions would be limited to emissions associated with scheduled maintenance of the proposed facility and would not increase from existing levels as a result of the proposed Project. Operations of the proposed Project would not result in a significant impact. Operational activities would not conflict with or obstruct implementation of the SCAQMD Air Quality Plan.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

**Less Than Significant Impact** – The proposed Project site is located within the SCAB. The SCAQMD regulates stationary mobile air emission sources within the SCAB. Potential air quality impacts associated with the proposed Project could result from temporary construction activities. As described in 4.3.a above, emissions associated with construction of the proposed Project would be below thresholds of significance for construction. Therefore, the construction emissions impacts would be less than significant. Operation of the pump station would have no impact on air quality.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact – New emissions associated with the proposed Project would be limited to temporary construction activities and vehicle emissions from scheduled maintenance during operation of the pump station. As described in Response 4.3.b, above, the proposed Project would not result in the exceedance of SCAQMD-established air quality standards during construction or operation. For this reason, construction and operation of the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is in nonattainment.

d) Expose sensitive receptors to substantial pollutant concentrations?

No Impact – Sensitive receptors include schools, hospitals, and convalescent homes. Children, elderly people, and the infirm are considered to be more sensitive than others to criteria air pollutants. Criteria air pollutants are those that are associated with numerous effects on human health. The proposed Project site is in the City of Newport Beach, and the surrounding area consists mainly of commercial and professional businesses. The nearest sensitive receptor (i.e., Newport Urgent Care) is located 0.5 mile southwest of the Project site. As described in Response 4.3.b, above, a temporary increase in emissions of criteria air pollutants during construction would not exceed SCAQMD-established air quality standards. Additionally, operational emissions would not exceed SCAQMD-established air quality standards. Because the proposed Project is not within a residential area and because of its low-level of emissions, the proposed Project is not anticipated to have any impacts on sensitive receptors during construction or operation.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact – Project activities would create a small amount of objectionable odors during construction when the subgrade facilities are open to the atmosphere. During operation, manholes and equipment access covers would be closed and sealed at all times, thus limiting the potential for odor impacts. Additionally, an odor assessment and odor control plan would be implemented during construction and operation. The odor assessment and odor control plan would include the use of a portable carbon system during all tie-in and pump

commissioning activities (Sanitation District 2006b). Also, all activities would minimize manhole exposure and duration to limit potential odor impacts during construction and operation. Therefore, the proposed Project would have a less than significant impact associated with the creation of objectionable odors affecting a substantial number of people.

## **Mitigation Measures**

The proposed Project would not result in a significant adverse impact related to Air Quality. No mitigation measures are proposed.

# 4.4 Biological Resources

#### Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
  - **No Impact** The proposed Project site is located in an area zoned for Mixed Use Horizontal (i.e., commercial, office, and multi-family residential) under the City of Newport Beach General Plan Land Use Element (2014a) and is located within a developed urban area that does not support native habitat of any identified species. No impacts to any species are anticipated.
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
  - **No Impact** The proposed Project site is located within a developed urban area, zoned and in use as Mixed Use Horizontal and does not support any riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. No impact to these resources is anticipated.
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
  - **No Impact** The proposed Project site is located within a developed urban area, zoned and in use as Mixed Use Horizontal and does not contain any federally protected wetlands nor is it located near any federally protected wetlands. No federally protected wetlands would be affected.

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
  - **No Impact** The proposed Project site is located within a developed urban area, zoned and in use as Mixed Use Horizontal and does not support native habitat or any migratory fish or wildlife species. Furthermore, the proposed Project site is not located within a migratory wildlife corridor or native wildlife nursery site. No impacts to these resources are anticipated as a result of the proposed Project.
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
  - **No Impact** No local policies or ordinances have been enacted to protect biological resources for the area surrounding the proposed Project site. No impact with any local policies or ordinances protecting biological resources would occur.
- f) Conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state habitat conservation plan?
  - **No Impact** The proposed Project is outside the County of Orange Central and Coastal Natural Community Conservation Plan, which is a special area management plan established to protect prime habitat and state-listed species in Orange County. The proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state habitat conservation plan.

## **Mitigation Measures**

The proposed Project would not result in a significant adverse impact to Biological Resources. No mitigation measures are proposed.

## 4.5 Cultural Resources

Would the project:

- a) Cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5?
  - **No Impact** The proposed Project would rehabilitate and upgrade an existing pump station that was constructed in 1960/1961. Results from a 2014 record search conducted at the California Historical Resources Information System (CHRIS), South Central Coastal Information Center (SCCIC) at California State University, Fullerton, indicated that the proposed Project site does not contain any cultural resources with the direct Area of Potential Effects (APE). Construction

and operation of the proposed Project would have no impacts on historic resources as defined in Section 15064.5.

Two cultural resources have been identified within the ½ mile search radius of the proposed Project site (indirect APE). Neither of these resources would be affected by the proposed Project. The sites are identified as Site P-30-000115A and P-30-000115B. Both are prehistoric shell midden sites that were recorded during surface surveys conducted in 1963, 1966, 1976, and 1985. The 1985 survey identified Site P-30-000115A as having been destroyed. The condition of Site P-30-000115B was noted in the 1985 survey as still having an intact midden component. However, neither site is located within the direct APE nor would neither site be affected by the proposed Project.

In addition, 16 cultural resource studies have been conducted within the ½ mile search radius. These are reports OR-246, OR-252, OR-574, OR-774, OR-933, OR-939, OR-1016, OR-1708, OR-2225, OR-2256, OR-2301, OR-2471, OR-2494, OR-2534, OR-3705, and OR-4103. None of these studies have any direct application to the proposed Project site.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?

**No Impact** – The proposed Project site is located in an area that has been heavily disturbed and the depth of excavation is not anticipated to exceed six feet. Additionally, all excavation work would occur within a previously disturbed area where no archaeological resources would be anticipated to occur. Therefore, the proposed Project would not affect archaeological resources and would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

c) Directly or indirectly destroy a unique paleontological resource on site or unique geologic feature?

**No Impact** – The proposed Project site is located in an area that has been heavily disturbed and the depth of excavation is not anticipated to exceed six feet. As such, the proposed Project would affect areas that already have been disturbed and would not involve any excavation into undeveloped lands. Therefore, the proposed Project would not directly or indirectly destroy a unique paleontological resource on site or a unique geologic feature.

d) Disturb any human remains, including those interred outside of formal cemeteries?

**No Impact** – The proposed Project site is located in an area that has been heavily disturbed and the depth of excavation is not anticipated to exceed six feet. As such, the proposed Project would not involve any excavation into undeveloped lands. Therefore, the proposed Project is not anticipated to result in a significant adverse impact related to the disturbance of human remains.

#### **Mitigation Measures**

The proposed Project would not result in a significant adverse impact to Cultural Resources. No mitigation measures are proposed.

# 4.6 Geology and Soils

Would the project:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?
    - Less Than Significant Impact Surface fault rupture is the offset or rupture of the ground surface by relative displacement across a fault during a seismic event or earthquake. The 2007 edition of Special Publication 42 (California Department of Conservation, Division of Mines and Geology), shows that the proposed Project is not located in an Alquist-Priolo Special Study Zone. Exposure of people or structures to potential substantial adverse effects, including risk of loss, injury, or death, from the rupture of a known earthquake fault is considered to be a less than significant impact.
  - ii. Strong seismic ground shaking?
    - Less Than Significant Impact The proposed Project site is located in a seismically active area, as is the majority of southern California; and the potential exists for strong ground motion. Twelve regional faults are within 50 miles of the proposed Project site. The closest fault is the Newport-Inglewood fault, which is located approximately 4 miles west of the Project site. The other 11 faults are the Newport-Inglewood (Offshore) fault, the Palos Verdes fault, the Elsinore-Whittier fault, the Chino-Central Avenue (Elsinore) fault, the Elsinore-Glen Ivy fault, the San Jose fault, the Sierra Madre (Central) fault, the Cucamonga fault, the Raymond fault, the San Andreas-Southern fault, and the San Andreas-1857 rupture fault. The proposed Project would be designed and constructed in conformance with the Uniform Building Code (UBC) 1997 seismic engineering standards and other applicable jurisdiction and building codes. Exposure of people or structures to potential adverse effects, including risk of loss, injury, or death, from strong seismic ground shaking is considered to be a less than significant impact.
  - iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact – The potential for seismic-related ground failure is associated with the probability of severe ground shaking as a result of an earthquake or a nearby active fault. Liquefaction is the phenomenon that occurs when saturated granular soils develop high pore water pressures during seismic shaking and behave like a heavy fluid. This phenomenon generally occurs in areas of high seismicity where groundwater is shallow and loose granular soils or hydraulic fill soils subject to liquefaction are present. For liquefaction to develop loose granular sediments below the groundwater table must be present; and shaking of sufficient magnitude and duration must occur.

The proposed Project is not mapped as a liquefaction zone according to the maps of seismic hazard zones prepared by the California Department of Conservation, Division of Mines and Geology (2007) (Sanitation District 2006b). Additionally, the proposed Project would rehabilitate and upgrade an existing pump station and would be designed and constructed in conformance with the UBC 1997 seismic engineering standards. Because construction would be temporary and operation would require minimal onsite operations and maintenance staff, exposure of people or structures to potential substantial adverse effects, including risk or loss, injury, or death, from seismic-related ground failure, including liquefaction, is considered to be a less than significant impact.

#### iv. Landslides?

**No Impact** – The proposed Project is not located in an area of probable landslides. The proposed Project would not result in an impact related to landslides.

b) Result in substantial soil erosion or the loss of topsoil?

**No Impact** – The proposed Project is a paved pump station, and excavation would occur within a contained area. Construction of the proposed Project would include approximately 50 cubic yards of excavation. Excavation would occur within a contained area and would limit the loss of topsoil due to wind erosion. Excavation soil not replaced as fill would be disposed at a properly permitted facility in accordance with federal and state laws. Because the proposed Project site is contained and the amount of excavation is relatively small, the proposed Project is not anticipated to result in impacts related to substantial soil erosion or loss of topsoil.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

**Less Than Significant Impact** – Evaluation of liquefaction and landslides is provided in Responses 4.6a.iii and iv, above. The proposed Project would rehabilitate and upgrade an existing pump station and would be designed and constructed in conformance with the UBC 1997 seismic engineering standards. Potential impacts due to an unstable geologic unit or soil,

- including onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse, would be less than significant.
- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
  - Less Than Significant Impact Subsurface soils encountered during geotechnical investigation generally consisted of sandy clays and clayey sands with some cleaner sands and were classified as soils with low expansive potential (Sanitation District 2006b). Additionally, the proposed facility would rehabilitate and upgrade an existing pump station and would be designed in compliance with requirements of governing jurisdictions and applicable building codes. Therefore, the proposed Project would not result in a significant adverse impact from expansive soil creating substantial risks to life or property.
- e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?
  - **No Impact** No septic tanks or alternative wastewater disposal systems would serve the proposed Project. The proposed Project would not result in impacts related to septic tanks or alternative wastewater disposal systems.

## **Mitigation Measures**

The proposed Project would not result in a significant adverse impact to Geology and Soils. No mitigation measures are proposed.

## 4.7 Greenhouse Gas Emissions

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant – Construction emissions would be short-term and within the SCAQMD's thresholds (10,000 metric tons per year for CO<sub>2</sub> equivalent). GHG emissions were evaluated based on projected 2007 data from SCAQMD. Table 4-2 summarizes the on-road GHG emissions based on the total number of trips, the distance traveled, and the emission factors. Table 4-3 summarizes the off-road GHG emissions based on the construction equipment used, the hours of operation, and the emission factors. Operation of the proposed Project would not create an increase in GHG emissions. Therefore, the proposed Project's impacts on greenhouse-gas emissions would be less than significant.

Table 4-2: On-Road Greenhouse Gas Emissions

			Parameters	CO2	CO2	
Source	Emission Factors	Number of Vehicles	Total Number of Trips	Distance Traveled per Trip	Emissions (lbs/day)	Emissions (metric tons/year)
Construction Workers Commuting	1.1067	16	32	20	708.288	117.3421
Light-duty Trucks Onsite	2.7225	5	5	5	68.0625	11.27591
Daily Delivery Trucks	2.7225	1	3	20	253.308	41.96554
Dump Trucks	4.2218	1	7	10	295.526	48.95979
Total					1325.19	219.54

Emission calculations assume that all construction phases overlap.

Worker commute is assumed to be 20 miles per trip.

Daily Delivery Truck trip distance is assumed to be 20 miles per trip.

Source: SCAQMD. On-Road Mobile Source Emission Factors Scenario Year 2007.

Table 4-3: Off-Road Greenhouse Gas Emissions

Equipment Type	Number	Hour/Day Operation	Horsepower	CO2 Emission Factors (lbs/hr)	CO2 Emissions (lbs/day)	CO2 Emissions (metric tons/year)					
Pump Station Rehabilitation											
Concrete Saw	1	4	120	74.1	296.4	49.10459					
Concrete Breaker	1	4	120	74.1	296.4	49.10459					
Dump Truck	1	8	25	7.6	60.8	10.07274					
Dump Truck	1	6	25	7.6	45.6	7.554552					
Excavator	1	6	175	112	672	111.3302					
Forklift	1	4	120	31.2	124.8	20.67562					
Off-Highway Trucks (pick-up trucks)	12	6	500	272	1632	270.3734					
Off-Highway Trucks (water truck)	1	4	500	272	1088	180.249					
Paver	1	6	120	69.2	415.2	68.78618					
Roller	1	6	120	59.0	354	58.64718					
Front End Loader	1	8	120	51.7	413.6	68.52111					
Front End Loader	1	6	120	51.7	310.2	51.39083					
Total					5709.00	945.81					

Equipment Type	Number	Hour/Day Operation	Horsepower	CO2 Emission Factors (lbs/hr)	CO2 Emissions (lbs/day)	CO2 Emissions (metric tons/year)					
	Force Main Replacement										
Concrete Saw	1	4	120	74.1	296.4	49.10459					
Concrete Breaker	1	4	120	74.1	296.4	49.10459					
Dump Truck	1	8	25	7.6	60.8	10.07274					
Dump Truck	1	6	25	7.6	45.6	7.554552					
Excavator	1	6	175	112	672.0	111.3302					
Forklift	1	4	120	31.2	124.8	20.67562					
Off-Highway Trucks (pick-up trucks)	12	6	500	272	1632.0	270.3734					
Off-Highway Trucks (water truck)	1	4	500	272	1088.0	180.249					
Paver	1	6	120	69.2	415.2	68.78618					
Roller	1	6	120	59	354.0	58.64718					
Front End Loader	1	8	120	51.7	413.6	68.52111					
Front End Loader	1	6	120	51.7	310.2	51.39083					
Total					5709.00	945.81					
		Ма	nhole Modification	n							
Concrete Truck	1	6	500	272	1632	270.3734					
Crane	1	6	250	112	672	111.3302					
Dump Truck	1	6	25	7.6	45.6	7.554552					
Excavator	1	6	175	112	672	111.3302					
Off-Highway Trucks (pick-up trucks)	8	6	500	272	1632	270.3734					
Off-Highway Trucks (pick-up trucks)	4	4	500	272	1088	180.249					
Off-Highway Trucks (water trucks)	1	4	500	272	1088	180.249					
Paver	1	3	120	69.2	207.6	34.39309					
Roller	1	3	120	59.0	177	29.32359					
Front End Loader	1	6	120	51.7	310.2	51.39083					
Total					7524.40	1246.57					

Equipment Type	Number	Hour/Day Operation	Horsepower	CO2 Emission Factors (lbs/hr)	CO2 Emissions (lbs/day)	CO2 Emissions (metric tons/year)
		Gravity Se	ewer Line Recons	truction		
Dump Truck	1	6	25	7.6	45.6	7.554552
Excavator	1	6	175	112	672	111.3302
Forklifts	1	4	120	31.2	124.8	20.67562
Off-Highway Trucks (concrete pumper trucks)	1	6	500	272	1632	270.3734
Off-Highway Trucks (pick-up trucks)	12	6	500	272	1632	270.3734
Off-Highway Trucks (water truck)	1	4	500	272	1088	180.249
Paver	1	6	120	69.2	415.2	68.78618
Roller	1	6	120	59	354	58.64718
Tractors/Loaders/ Backhoes	1	6	120	51.7	310.2	51.39083
Total					6273.80	1039.38

Source: SCAQMD. Off-Road Mobile Source Emission Factors Scenario Year 2007.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

**No Impact** – The Orange County Sanitation District (Sanitation District) does not have any specific plans, policies, nor regulations adopted for reducing the emissions of GHGs. SCAQMD has several programs available for reducing GHG emissions, including the Climate Change Policy, approved in 2008 and the Green Policy, approved in 2009. The Climate Change Policy was enacted for the purpose of assisting businesses and local government agencies with reducing carbon emissions, while the Green Policy guides SCAQMD decisions relative to reducing its own carbon emissions. The SCAQMD has adopted interim GHG significance thresholds of 10,000 metric tons per year for CO<sub>2</sub> equivalent. As shown in Tables 4-2 and 4-3 above, construction GHG emissions would not exceed this threshold. Therefore, the proposed project would not conflict with any applicable plan, policy, or regulation adopted for reducing the emissions of greenhouse gases.

As mentioned in Section 4.3, operational emissions would be limited to emissions associated with scheduled maintenance of the proposed facility and would not increase from existing levels as a result of the proposed Project. Operations of the proposed Project would not result in a significant impact. Operational activities would not conflict with or obstruct implementation of the SCAQMD Air Quality Plan.

#### 4.8 Hazards and Hazardous Materials

#### Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
  - Less Than Significant with Mitigation The proposed Project would use construction materials consistent with existing local, state, and federal regulations. The proposed Project is anticipated to generate hazardous materials through the removal of asbestos-containing concrete by replacing an existing 12-inch, asbestos cement force main pipe with a 12-inch, high-density polyethylene pipe. Therefore, the proposed Project would require the implementation of mitigation measures (see HAZ 1–9) to ensure that any potential impacts from the asbestos removal are less than significant.
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
  - Less Than Significant with Mitigation The proposed Project would remove existing asbestos associated with the pump station, and could generate hazardous materials. Therefore, the proposed Project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment by the removal of the asbestos cement force main pipe and other asbestos-containing material, lead, or polychlorinated biphenyls that may be present in the pump station. Therefore, the proposed Project would require the implementation of mitigation measures (see below) to ensure that any potential impacts from the removal of asbestos-containing material and potential lead and polychlorinated biphenyls are less than significant.

In addition, there are two listed sites that pose a risk to the public:

- **Rockwell Industries**, 4311 Jamboree Road This industrial facility treats and/or disposes of liquid or semisolid wastes. This facility is also registered as having a leaking underground storage tank (LUST). On-going monitoring and remediation is being conducted on site. This facility is located less than 1/8 mile from the project. Due to the distance this site is located from the project and with on-going monitoring and remediation; this site poses a risk to the project and would require implementation of mitigation measures (see below) to ensure that any potential impacts are less than significant.
- San Joaquin Landfill, SE corner of MacArthur and Fairchild Road According to EPA,
   Prior to 1954 the site was a burn site that was expanded to 129 acres and converted to a
   municipal solid waste disposal facility in 1959. Most waste materials disposed at the site
   have been identified as residential, commercial, demolition and agricultural wastes. No liquid

or hazardous wastes are known to have been disposed. Refuse from the western portion of the site was excavated during the construction of Highway 73. On-going remediation is being conducted on site. Therefore, this site poses a risk to the project and would require implementation of mitigation measures (see below) to ensure that any potential impacts are less than significant.

Remedial activities may be required to ensure any potential impacts are less than significant.

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?
  - **No Impact** No schools are located within 0.25 mile of the proposed Project. The closest school is the California Pacific Charter School, located approximately 0.30 mile southwest of the proposed Project site. Therefore, the proposed Project would not result in a hazards-related impact on an existing or proposed school within 0.25 mile of the proposed Project site.
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
  - **No Impact** The Project site is not included on the Department of Toxic Substances Control's Hazardous Waste and Substances List (Cortese List).
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2.0 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
  - **No Impact** The proposed Project would be located approximately 1.3 miles southeast of John Wayne Airport and would rehabilitate and upgrade an existing pump station. Although the Project would result in the removal of asbestos-containing concrete, the construction and operation activities are relatively limited in scope and would not result in a safety hazard associated with an airport for people residing or working in the Project area.
- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
  - **No Impact** The proposed Project would not be located within the vicinity of a private airport. The proposed Project would not result in a safety hazard related to a private airstrip to people residing or working in the Project area.
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
  - **Less Than Significant with Mitigation** During construction of the proposed Project, traffic delays within the project area may occur due to the structural modifications associated with this

project; however, implementation the Transportation/Traffic mitigation measures TT-1 through TT-7 (see Transportation/Traffic 4.16) would ensure that the project would not interfere with any emergency response or evacuation plans.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

**No Impact** – The proposed Project is not located near wildland areas or areas where wildlands are adjacent to urbanized areas. The construction and operation of the proposed Project is not anticipated to have an adverse impact related to the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires.

## **Mitigation Measures**

The proposed Project would require the implementation of the following mitigation measures:

The following avoidance and minimization measures will reduce potential impacts related to hazardous wastes and materials during construction of the project.

- HAZ-1 Asbestos, lead-based paint, and polychlorinated biphenyl surveys for any structures that would be renovated or demolished as part of the project shall be conducted during the Plans, Specifications, and Estimates phase of the project by a certified consultant.
- HAZ-2 If analytical results indicate building materials contain asbestos, the contractor shall prepare an Asbestos Operations and Maintenance Plan in accordance with applicable regulations. The plan will address worker training and safety measures to be taken when disturbing asbestos-containing materials during abatement activities.
- HAZ-3 The contractor shall ensure that proper removal and disposal of asbestos-containing material is conducted by a licensed contractor registered with the California Occupational Safety and Health Administration for asbestos-related work, or by a licensed and certified asbestos abatement contractor
- HAZ-4 If the analytical results indicate that lead-based paint is present, the contractor shall ensure that demolition materials are handled and disposed of in accordance with applicable regulations.
- HAZ-5 Prior to construction, the contractor shall prepare a Materials Management Plan that identifies potential recognized environmental conditions, locations, extent of impact, proposed remediation work, waste management procedures, and avoidance measures, investigation measures, and a contingency plan for addressing unforeseen conditions.

Documentation of completed waste profiles, manifest forms, and bill-of-lading forms for proper transportation and disposal of materials off-site will be maintained by the contractor. The plan shall include the following provisions:

- Characterization and handling of contaminated soils requiring off-site disposal,
- Soils to be stockpiled for further characterization,
- Process for identifying soils with waste concentrations below regulatory thresholds that can be reused without restriction.
- Process for identifying and handling wastewater requiring off-site disposal and/or treatment, and
- Procedures for handling asbestos-containing material potentially discovered during construction activities.
- HAZ-6 Prior to initiating construction activities, the contractor shall prepare a site-specific Health and Safety Plan that identifies key personnel and provides a summary risk assessment for workers, the community, and the environment. The Health and Safety Plan shall include an Air Monitoring Plan and Emergency Response Plan.
- HAZ-7 Prior to construction, the contractor shall prepare a Spill Prevention Control and Counter Measures Plan to ensure that construction best management practices are adequate for site conditions and to prevent discharge of any sediment or pollutants into any storm drains, and receiving waters.
- HAZ-8 Before construction, the contractor shall notify all utility companies to ensure that the locations of underground transmission lines and facilities are marked. In addition, Underground Service Alert shall be contacted at least two working days before subsurface excavation.
- HAZ-9 The contractor shall adhere to the requirements of SCAQMD during all construction activities.

# 4.9 Hydrology and Water Quality

Would the project:

a) Violate any water quality standards or waste discharge requirements?

**Less Than Significant Impact** – Minor excavation would occur during construction of the proposed Project. Excavation would occur within the proposed Project site, public right-of-way and private property. The majority of these areas are paved. Groundwater in the Project area

occurs approximately 50 feet below mean sea level (OCWD 2012) and is not anticipated to be encountered during construction of the proposed Project. In the event that groundwater is encountered during excavation, dewatering would occur; and the extracted water would be discharged to the sanitary sewer, which is part of the Sanitation District collection system, and would not affect water quality.

Construction staging would occur on the Project site, with the exception of temporary parking of vehicles on the adjacent roads. Any residual oil, grease, and other fuel products from equipment would be maintained and would not affect surface waters. Equipment would be inspected to prevent leaks and would be maintained as part of customary construction practices. Therefore, any residual oil, grease, and other fuel products from equipment would be negligible and would not affect surface or groundwater.

Because the proposed Project would disturb less than 1 acre of soil disturbance (0.77 acre) a General Construction Stormwater National Pollutant Discharge Elimination System (NPDES) Permit and Stormwater Pollution Prevention Plan would not be required; however, the Sanitation District requires that a Stormwater Pollution Control Plan be developed for any construction site not covered by the General Construction Stormwater NPDES Permit. The Stormwater Pollution Control Plan addresses the implementation of best management practices (BMPs) for construction sites when a formal Stormwater Pollution Prevention Plan is not required. Additionally, construction activities would comply with the requirements of the applicable County of Orange Drainage Area Management Plan (DAMP) for public works construction projects, which includes details for management of stormwater throughout Orange County and compliance with the individual NPDES permit that regulates the municipal separate storm sewer system. All public works construction contracts are governed by "Standard Specifications for Public Works Construction". Section 7 of these standard specifications imposes specific construction practices, which are included within DAMP Appendix H as structural and nonstructural BMPs for public works construction. In general, the standard specifications require the Contractor to keep informed of, observe, and comply with state and federal laws and county and municipal ordinances and regulations.

Operation of the proposed Project would not affect surface or groundwater. Therefore, the proposed Project is anticipated to result in a less than significant impact related to a violation of any water quality standards or waste discharge requirements.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

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<sup>&</sup>lt;sup>1</sup> The total area of disturbance was determined by calculating the area of disturbance for each project component.

<sup>1)</sup> Pump station [35 feet X 85 feet = 2,400 square feet (0.06 acre)].

<sup>2)</sup> Force main [2,150 feet X 5 feet = 10,750 square feet (0.25 acre)]

<sup>3)</sup> Gravity sewer lines [4,000\* feet X 5 feet = 20,000 square feet (0.46 acre)] (\*includes both existing and replacement lines at 2,000 feet each)

<sup>4)</sup> Manhole [5 feet x 5 feet = 25 square feet (<0.001 acre)

- **No Impact** Construction of the proposed Project would not result in a depletion of groundwater supplies, and operation of the proposed Project would not interfere with groundwater recharge. The proposed Project would not result in a significant adverse impact related to groundwater supply or recharge.
- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?
  - **No Impact** No natural surface bodies of water, including streams or other bodies of water, are present on the proposed Project site. Furthermore, the proposed Project would not substantially alter the existing drainage pattern of the site or area. Construction activities would be limited to the Project site and would not affect the course of a stream or river. Therefore, the proposed Project is not anticipated to alter the existing drainage pattern of the site and would not result in substantial erosion or siltation on site or off site.
- d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on site or off site?
  - **No Impact** The proposed Project would not substantially alter the existing drainage pattern of the site or area. Construction activities would be limited to the Project site and would not affect the course of a stream or river. Therefore, the proposed Project would not alter the course of a stream or river and would not cause a substantial increase in the volume of runoff that would result in flooding on site or off site.
- e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
  - **No Impact** The proposed Project would not create or contribute to runoff water that would exceed the capacity of existing or planned stormwater drainage systems. Construction activities would be limited to the Project site, and BMPs would be implemented to control erosion and sedimentation of excavated soil from stormwater runoff. This would prevent erosion and sedimentation associated with stormwater from affecting surface waters. The proposed Project is not anticipated to result in a significant adverse impact related to polluted runoff or on the capacity of stormwater drainage systems.
- f) Otherwise substantially degrade water quality?
  - **No Impact** Refer to Response 4.9.a, above, which addresses impacts to water quality. The proposed Project is not anticipated to substantially degrade water quality.
- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact – No housing development is associated with the proposed Project.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

**No Impact** – The proposed Project would rehabilitate and upgrade an existing pump station. Additionally, it would not include structures that would impede or redirect flood flows. Therefore, no impacts would be associated with the placement of structures that would impede or redirect flood flows within a 100-year flood hazard area.

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

**No Impact** – No levee or dam is within the vicinity of the proposed Project. Therefore, no impacts would be associated with risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam.

j) Inundation by seiche, tsunami, or mudflow?

**No Impact** – Based on the location of the proposed Project site, the site is not likely to be inundated by a seiche, tsunami, or mudflow.

## Mitigation Measures

The proposed Project would not result in significant adverse impacts to Hydrology and Water Quality. No mitigation measures are proposed.

# 4.10 Land Use and Planning

Would the project:

a) Physically divide an established community?

**No Impact** – The proposed Project would rehabilitate and upgrade an existing pump station, and project implementation would take place on existing sites that are located on easements granted to the Sanitation District by various property owners. Therefore, the proposed Project would not physically divide an established community.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

**No Impact** – The proposed Project would occur on easements granted to the Sanitation District by various property owners. The proposed Project would not change existing land uses and would not conflict with existing general plan designations or zoning ordinances. Therefore, the proposed Project would not conflict with any applicable land use plan, policy, or regulation.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

**No Impact** – The proposed Project is not within an adopted habitat conservation plan or natural community conservation plan area. The proposed Project would not conflict with any applicable habitat conservation plan or natural community conservation plan.

## Mitigation Measures

The proposed Project would not result in a significant adverse impact related to Land Use and Planning. No mitigation measures are proposed.

#### 4.11 Mineral Resources

Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
  - **No Impact** The proposed Project would not use mineral resources and would not affect the availability of any known mineral resources. The proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

**No Impact** – The proposed Project site is not located in a delineated mineral resource area. The proposed Project would not result in the loss of availability of a locally important mineral resource recovery site.

## **Mitigation Measures**

The proposed Project would not result in a significant adverse impact related to Mineral Resources. No mitigation measures are proposed.

## 4.12 Noise

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?

Less Than Significant Impact – Construction noise generated from equipment use would be the primary source of noise associated with the proposed Project. Construction would occur during permitted hours identified in the City of Newport Beach Building Code, and construction activities would comply with the City of Newport Beach Noise Ordinance. No construction activities would occur outside these hours or on federal holidays unless a temporary waiver is granted by an authorized representative. These same limitations would be extended to the trucks, vehicles, and equipment that are involved with material deliveries, loading, or transfer of materials, equipment service, and maintenance. Operation of the facility would result in noise from the following pump station sources: pumps, AC blowers, and HVAC building exhaust. Operation of the pumps would have a less than significant impact on noise levels because they will be installed in a below-grade dry well, which will adequately attenuate any noise from their operation. Both the AC and HVAC building exhaust blowers will be installed outside of the dry well. The new blowers are anticipated to operate more quietly than the existing blowers. Thus, the noise from operation of the pumps and blowers would be at or below the existing condition and have a less than significant impact on noise levels.

A noise study was conducted to assess the noise impacts from the operation of the pump station. The following conclusions were made: ambient noise levels are higher than the noise ordinances for Newport Beach primarily due to heavy traffic along MacArthur Boulevard; existing operational noise sources have no impact on outdoor ambient noise levels; and the design criteria is lower (more stringent) than existing ambient noise levels (Sanitation District 2006b).

The proposed Project would not result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, and impacts would be less than significant.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

**No Impact** – Construction of the proposed Project would not require the substantial duration or amount of activities commonly known to produce excessive groundborne vibration or noise (e.g., pile driving). Additionally, the existing gravity sewer lines are located approximately six feet below the ground surface, which is not anticipated to result in the exposure of persons to or generation of excessive groundborne vibrations or groundborne noise levels, and impacts would be less than significant.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact – Refer to Response 4.12.a, above, which evaluates potential construction and operational noise impacts of the proposed Project. The proposed Project would rehabilitate and upgrade an existing pump station and would not result in a permanent increase in ambient noise from operation of the proposed Project. Therefore, a substantial permanent increase in ambient noise levels is not anticipated for the proposed Project site, and impacts would be less than significant.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

**Less Than Significant Impact** – Refer to Response 4.12.a above.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2.0 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
  - **No Impact** The proposed Project would be located approximately 1.3 miles southeast of John Wayne Airport; however, the proposed Project would rehabilitate and upgrade an existing pump station and would not have any effect associated with an airport or people residing or working in the Project area. Therefore, the proposed Project would not result in the exposure of people residing or working in the Project area to excessive noise levels.
- f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

**No Impact** – The proposed Project would not be located within the vicinity of a private airstrip. Therefore, the proposed Project would not expose people residing or working in the Project area to excessive noise levels.

## Mitigation Measures

The proposed Project would not result in a significant adverse impact related to Noise. No mitigation measures are proposed.

# 4.13 Population and Housing

#### Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
  - **No Impact** The proposed Project would rehabilitate and upgrade an existing pump station, which includes the installation of larger pumps to accommodate current and future flows, but would not directly or indirectly induce substantial population growth in the area. Therefore, the proposed Project would not result in an impact related to inducing population growth.
- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
  - **No Impact** The proposed Project would have no impact associated with displacing existing housing or necessitating the construction of replacement housing.
- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?
  - **No Impact** The proposed Project would have no impact associated with displacing people or necessitating the construction of replacement housing.

## **Mitigation Measures**

The proposed Project would not result in a significant adverse impact related to Population and Housing. No mitigation measures are proposed.

## 4.14 Public Services

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

- Fire protection?
- Police protection?
- Schools?

- Parks?
- Other public facilities?

**No Impact** – The proposed Project would rehabilitate and upgrade an existing pump station and would not result in an adverse impact or additional need for fire protection, police protection, schools, parks, or other public facilities. Also, refer to Response 4.16.e).

## Mitigation Measures

The proposed Project would not result in a significant adverse impact related to Public Services. No mitigation measures are proposed.

#### 4.15 Recreation

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
  - **No Impact** The proposed Project would not increase the use of parks of other recreational facilities such that substantial physical deterioration of the facility would occur or would be accelerated. The proposed Project would have no impact on the use of existing neighborhood and regional parks or other recreational facilities.
- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?
  - **No Impact** The proposed Project does not include recreational facilities and would not require the construction or expansion of recreational facilities. The proposed Project would not have an adverse physical effect on the environment related to recreational facilities.

## **Mitigation Measures**

The proposed Project would not result in a significant adverse impact related to Recreation. Therefore, no mitigation measures are proposed.

# 4.16 Transportation/Traffic

#### Would the project:

a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less Than Significant Impact – The proposed Project site is located on MacArthur Boulevard in the City of Newport Beach. Access to the pump station, force main, gravity sewer line along MacArthur Boulevard, and modification of the manhole located at the intersection of Birch Street and MacArthur Boulevard, would occur using MacArthur Boulevard. Access to the other gravity sewer line between MacArthur Boulevard and Jamboree Road would occur using MacArthur Boulevard and Jamboree Road, as well as the parking lot in between them.

One lane of traffic along MacArthur Boulevard would be closed during the rehabilitation of the pump station and removal and replacement of the force main. One to two lanes of traffic along MacArthur Boulevard and Jamboree Road would be closed during the reconstruction of the gravity sewer line. And the modification of the manhole would require the closure of one lane of traffic along Birch Street. However, all of the roadways would remain open at all times. Traffic control could include flagmen and/or signs to direct traffic. During hours when construction does not occur, all lanes of traffic would be open. Nighttime construction may occur, when needed, to reduce any impacts to traffic along MacArthur Boulevard, Jamboree Road, and Birch Street. Deliveries and vehicle parking would be coordinated to minimize impacts to local traffic. Although a small increase in traffic at the proposed Project sites could result during construction from the transport of workers or materials to the site, the proposed Project is not anticipated to result in an adverse impact related to traffic. No increase in traffic would be related to operation at the proposed facility.

- b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?
  - **No Impact** The minimal increase in traffic at the proposed Project area that could result from the transport of workers and materials to the site during construction is not expected to result in change to the existing level of service. The proposed Project would not conflict with applicable congestion management programs, plans and policies.
- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
  - **No Impact** The proposed Project would have no impact on air traffic patterns.
- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
  - **No Impact** The proposed Project would not increase hazards due to design features or incompatible uses.

e) Result in inadequate emergency access?

Less Than Significant with Mitigation – Adequate emergency access will be maintained throughout the duration of the project construction. Although construction of the proposed Project could cause traffic delays in the project area which could delay emergency services, the implementation of Transportation/Traffic mitigation measures (TT-1 through TT-5) would ensure that any potential impacts to emergency access would be less than significant. Therefore, the proposed Project is not anticipated to result in a significant adverse impact related to emergency access.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities?

Less Than Significant with Mitigation —The proposed Project may impact the Orange County Transportation Authority bus route along MacArthur Boulevard, but access to the transit system will be maintained at all times. Impacts may include the temporary re-location of the MacArthur Boulevard/Jamboree Road stop and delays due to traffic. However, the implementation of Transportation/Traffic mitigation measures (TT-1 through TT-5) would ensure that any potential impacts to the transit system would be less than significant.

#### **Mitigation Measures**

Implementation of the following mitigation measures will reduce potential impacts related to transportation and traffic during construction of the project to less than significant:

- TT-1 A traffic control plan will be prepared by a qualified professional engineer as required prior to the construction phase of the Project.
- TT-2 The traffic control plan will consider the ability of alternative routes to carry additional traffic and will 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 and sidewalks to the greatest extent feasible.
- TT-3 The traffic control plan will comply with the City of Newport Beach's Municipal Code Title 12 (vehicles and traffic) to minimize any traffic and pedestrian hazards that exist during project construction.
- TT-4 Public roadways will be restored to their existing condition after Project construction is completed.

TT-5 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 will be maintained to allow delivery of emergency services.

# 4.17 Utilities and Service Systems

#### Would the project:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
  - **No Impact** The proposed Project would replace the existing pumps with new pumps and repair or replace existing sewer lines to accommodate existing and projected flow. The proposed Project would not exceed the existing wastewater treatment requirements of the Regional Water Quality Control Board.
- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
  - **No Impact** The proposed Project would replace the existing pumps with new pumps to accommodate existing and projected flows. The proposed Project would not require or result in the construction of new water or wastewater treatment facilities or in the expansion of existing facilities.
- c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
  - **No Impact** No new stormwater drainage facilities or expansion of existing facilities would result or be required as part of the proposed Project.
- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
  - **No Impact** Construction and operation of the proposed Project would not require the provision of new water supplies. Water entitlements and resources would not be impacted by the proposed Project.
- e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
  - **No Impact** The proposed Project would replace the existing pumps with new pumps to accommodate existing and projected flows and would add emergency standby capacity. The

- proposed Project is not anticipated to have a significant effect on the wastewater treatment capacity of the Sanitation District.
- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
  - No Impact Small amounts of debris or solid waste could be generated during construction of the proposed Project and would be transported to an approved solid waste disposal facility. Based on the small quantity of material, the proposed Project is not expected to affect the capacity of existing landfills. Solid waste generated by the removal of the force main, which includes asbestos-containing concrete, will be disposed of properly to ensure that any potential impacts from the removal of asbestos-containing material are less than significant. Refer to Section 0 mitigation measure HAZ-3, which requires the proper disposal of hazardous materials by a licensed contractor registered with the California Occupational Safety and Health Administration for asbestos-related work, or by a licensed and certified asbestos abatement contractor. The proposed Project would not generate solid waste following completion of construction.
- g) Comply with federal, state, and local statutes and regulations related to solid waste?

**No Impact** – Solid waste produced by the proposed Project would be disposed at a properly permitted facility in accordance with federal and state laws.

#### **Mitigation Measures**

The proposed Project would not result in a significant adverse impact related to Utilities and Service Systems. No mitigation measures are necessary.

# 4.18 Mandatory Findings of Significance

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

**No Impact** – The proposed Project would rehabilitate and upgrade an existing pump station and replace existing sewer lines located in a developed area. The proposed Project would not result in a significant adverse impact on the environment, including biological and cultural resources, nor would the proposed Project eliminate important examples of major periods of California history or prehistory.

- b) Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?
  - **No Impact** The proposed Project would rehabilitate and upgrade an existing pump station and replace existing sewer lines. The proposed Project would not result in any significant adverse cumulative impacts.
- c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?
  - **Less Than Significant with Mitigation** The proposed Project could have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. However, these impacts would be reduced to a less than significant level with the implementation of mitigation measures.

# 5.0 Preparers and Contributors

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# 6.0 References

- California Department of Conservation, Division of Mines and Geology. 2007. Special Publication 42, Fault-Rupture Hazard Zones in California.
  - http://www.conservation.ca.gov/cgs/rghm/ap/Pages/Index.aspx. Accessed September 22, 2014.
- California Department of Toxic Substances Control. 2014. Hazardous Water and Substances List (Cortese List).
  - http://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site\_type =CSITES,OPEN,FUDS,CLOSE&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST. Accessed September 9, 2014.
- California Office of Historic Preservation. 2014. California Historical Resources Information System. South Central Coast Information Center. Records Search File No.: 14396.538
- City of Newport Beach, Planning Department. 2014a, as amended. City of Newport Beach General Plan, Land Use Element.
  - http://www.newportbeachca.gov/PLN/General\_Plan/LUE\_Amendment/Figure%20LU11%20-%20Statistical%20Areas%20J6,%20L4%20[PDF].pdf. Accessed October 2, 2014.
- City of Newport Beach, Planning Department. 2014b. http://www.newportbeachca.gov/index.aspx?page=62. Accessed October 2, 2014
- Environmental Data Resources (EDR). 2014. The EDR Radius Map Report with GeoCheck for the MacArthur Pump Station Project. Inquiry Number: 4077626.2s, September 24, 2014
- Orange County Sanitation District. 2006a. MacArthur Pump Station Rehabilitation Project Negative Declaration (State Clearinghouse Number: 2006031042).
- Orange County Sanitation District. 2006b. Preliminary Design Report MacArthur Pump Station.
- Orange County Water District. 2012. Orange County Groundwater Contour Maps. http://www.ocwd.com/Portals/0/ProgramsProjects/Hydrogeology/GroundwaterContourMaps/June\_WL2012L2.pdf. Accessed September 9, 2014.
- South Coast Air Quality Management District (SCAQMD). 2014. CEQA Air Quality Handbook. http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook. Accessed September 9, 2014.

# **Appendix A**Construction Emission Calculations

#### EMISSIONS FROM THE MACARTHUR PUMP STATION REHABILITATION PROJECT

**Table Sum A: Maximum Daily Construction Emissions by Phase (premitigation)** 

Table Gam 74 maximum Bany General action Elimetric by 1 mass (promitigation)							
Attribute		Emissions					
Phase	CO (lb/day)	ROG* (lb/day)	NO <sub>x</sub> (lb/day)	SO <sub>x</sub> (lb/day)	Combustion PM <sub>10</sub> (lb/day)	Fugitive PM <sub>10</sub> (lb/day)	Total PM <sub>10</sub> (lb/day)
Excavation and Installation	20.95	5.48	31.51	5.31	1.56	75.97	77.53
SCAQMD Threshold (lb/day)	550	75	100	150			150
Significant	No	No	No	No			No

<sup>\*</sup>ROG=Reactive Organic Gasses

**Table Sum B: Maximum Daily Operational Emissions** 

	o cam or maximum out of cranonal emissions							
Attribute		Emissions						
Activity	CO (lb/day)	ROG (lb/day)	NO <sub>x</sub> (lb/day)	SO <sub>x</sub> (lb/day)	Combustion PM <sub>10</sub> (lb/day)	Fugitive PM <sub>10</sub> (lb/day)	Total PM <sub>10</sub> (lb/day)	
Maximum Daily Emissions	Operation	al emissions v	vill not increase	e from existing	levels due to t	he rehabilitati	on project.	
SCAQMD Threshold (lb/day)	550	55	55	150			150	
Significant	No	No	No	No			No	

**Table 1-1: Heavy Construction Equipment Exhaust Emission Factors** 

Equipment Type	Fuel	CO (lb/day)	ROG (lb/day)	NOx (lb/day)	SOx (lb/day)	PM <sub>10</sub> (lb/hr)
Front End Loader	Diesel	0.425	0.099	1.111	0.221	0.063
Excavator	Diesel	0.472	0.097	1.138	0.243	0.060
Crane	Diesel	0.355	0.086	1.023	0.196	0.052
Concrete Truck (other Const. Equip.)	Diesel	0.561	0.118	1.380	0.223	0.065

Source: SCAQMD. Off-Road Mobile Source Emission Factors Scenario Year 2007.

Table 1-2: On-Road Mobile Emission Factors from California ARB EMFAC2002 Scenario

Year: 2007 -- Model Years: 1965 to 2007

Vehicle Type	CO Emissions Factor (lb/mile)	ROG Emission Factor (lb/mile)	NOx Emissions (lb/mile)	SOx Emissions (lb/mile)	PM <sub>10</sub> Emissions (lb/mile)
Construction Workers Commuting	0.01282	0.001361	0.001383	0.000009	0.00008
Light-duty Trucks	0.017455	0.024978	0.002608	0.000033	0.000440
Heavy Diesel Trucks	0.005520326	0.001226518	0.035634629	0.0000457	0.000644071

**Table 1-3: Fugitive Emission Factors for Construction Activities** 

Activity	PM <sub>10</sub> Emissions (lbs/ton)
Storage Pile Filling/Truck Dumping	0.009075

Source: SCAQMD CEQA Air Quality Handbook, November 1993. Table 9-9

**Table 1-4: Fugitive Emission Factors for On-Road Trucks and Employee Vehicles** 

Source Type	Emission Factor (lb/vmt)				
Passenger Vehicle/On Paved Roadways	0.018				
Trucks on Paved Roadways	0.214				
Light Duty Trucks on Unpaved Roads*	1.45				

Source: SCAQMD CEQA Air Quality Handbook, November 1993. Table A9-9 & Table A9-9C

<sup>\*</sup> Emissions calculated from SCAQMD CEQA Air Quality Handbook, November 1993. Table A9-9-D. G=14. H=15, J=4 tons, I=4 and K=10. VMT=vehicle miles traveled

#### HEAVY CONSTRUCTION EQUIPMENT COMBUSTION CALCULATIONS BY PHASE

**Table 2-1: Excavation and Installation** 

Equipment Type	Number	Fuel	Hour/day Operation	CO (lb/day)	ROG (lb/day)	NOx (lb/day)	SOx (lb/day)	Combustion PM <sub>10</sub> (lb/hr)
Front End Loader	1	Diesel	6	2.6	0.6	6.7	1.3	0.4
Excavator	1	Diesel	6	2.8	0.6	6.8	1.5	0.4
Crane	1	Diesel	6	2.13	0.52	6.14	1.18	0.31
Concrete Truck	1	Diesel	6	3.37	0.71	8.28	1.34	0.39
Totals				10.90	2.40	27.90	5.30	1.40

Source: SCAQMD. Off-Road Mobile Source Emission Factors Scenario Year 2007.

#### **VEHICLE EMISSIONS**

**Table 3-1: Excavation and Installation** 

Parameters			Peak Day Emissions, Ibs/day						
Source	Number of Vehicles	Total Number of Trips	Distance Traveled per Trip	CO Emissions	ROG Emissions	NOx Emissions	SOx Emissions	Combustion PM <sub>10</sub> Emissions	Fugitive PM <sub>10</sub> Emissions
Construction Workers Commuting	16	32	20	8.20	0.87	0.89	0.01	0.05	11.52
Light-duty Trucks Onsite	5	5	5	0.44	0.62	0.07	0.00	0.01	36.25
Daily Delivery Trucks	1	3	20	1.05	1.50	0.16	0.00	0.03	12.84
Dump Trucks	1	7	10	0.39	0.09	2.49	0.00	0.03	14.98
Totals				10.07	3.08	3.60	0.01	0.12	75.59

Emission calculations assume that all construction phases overlap.

Worker commute is assumed to be 20 miles per trip.

Daily Delivery Truck trip distance is assumed to be 20 miles per trip.

Fugitive PM10 is from paved roads for commuters, dump trucks, and delivery trucks and unpaved road for onsite trucks.

Table 4-1: Soil Hauling and Pile Filling by Phase

Phase	Cubic Yards Exported	Tons Exported	Average Tons Exported per Day
Excavation and Installation	50.0	42.3	42.3

Calculation assumes a soil density of 1.45 g/cubic cm

Calculation assumes that all soil hauling occurs during a single day (worst case)

Table 4-2: Soil Hauling and Pile Filling Daily PM<sub>10</sub> Emissions by Phase

Phase	Emissions (lb/day)
Excavation	0.4