REHABILITATION OF THE EDINGER & A STREET PUMP STATIONS AND REPLACEMENT OF THE BITTER POINT PUMP STATION

Initial Study / Mitigated Negative Declaration

January 23, 2003

Prepared for

Orange County Sanitation District

ESA Environmental Science Associates

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225 Bush Street Suite 1700
San Francisco, California 94104
(415) 896-5900

436 14th Street, Suite 600
Oakland, California 94612
(510) 839-5066

8950 Cal Center Drive Building 3, Suite 300
Sacramento, California 95826
(916) 564-4500

4221 Wilshire Boulevard Suite 480
Los Angeles, California 90010
(323) 933-6111

2685 Ulmerton Road Suite 102
Clearwater, Florida 33762
(727) 572-5226

700 Fifth Avenue Suite 4120
Seattle, Washington 98104
(206) 442-0900

1751 Old Pecos Trail Suite O
Santa Fe, New Mexico 87505
(505) 992-8860

ESA Environmental Science Associates

201168

ORANGE COUNTY SANITATION DISTRICT

REHABILITATION OF THE EDINGER PUMP STATION, REHABILITATION OF THE A STREET PUMP STATION, AND REPLACEMENT OF THE BITTER POINT PUMP STATION

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

TABLE OF CONTENTS

ORANGE COUNTY SANITATION DISTRICT

REHABILITATION OF THE EDINGER PUMP STATION,
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AND
REPLACEMENT OF THE BITTER POINT PUMP STATION

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

TABLE OF CONTENTS - (Continued)

LIST OF FIGURES

LIST OF TABLES

SECTION 1.0
INTRODUCTION

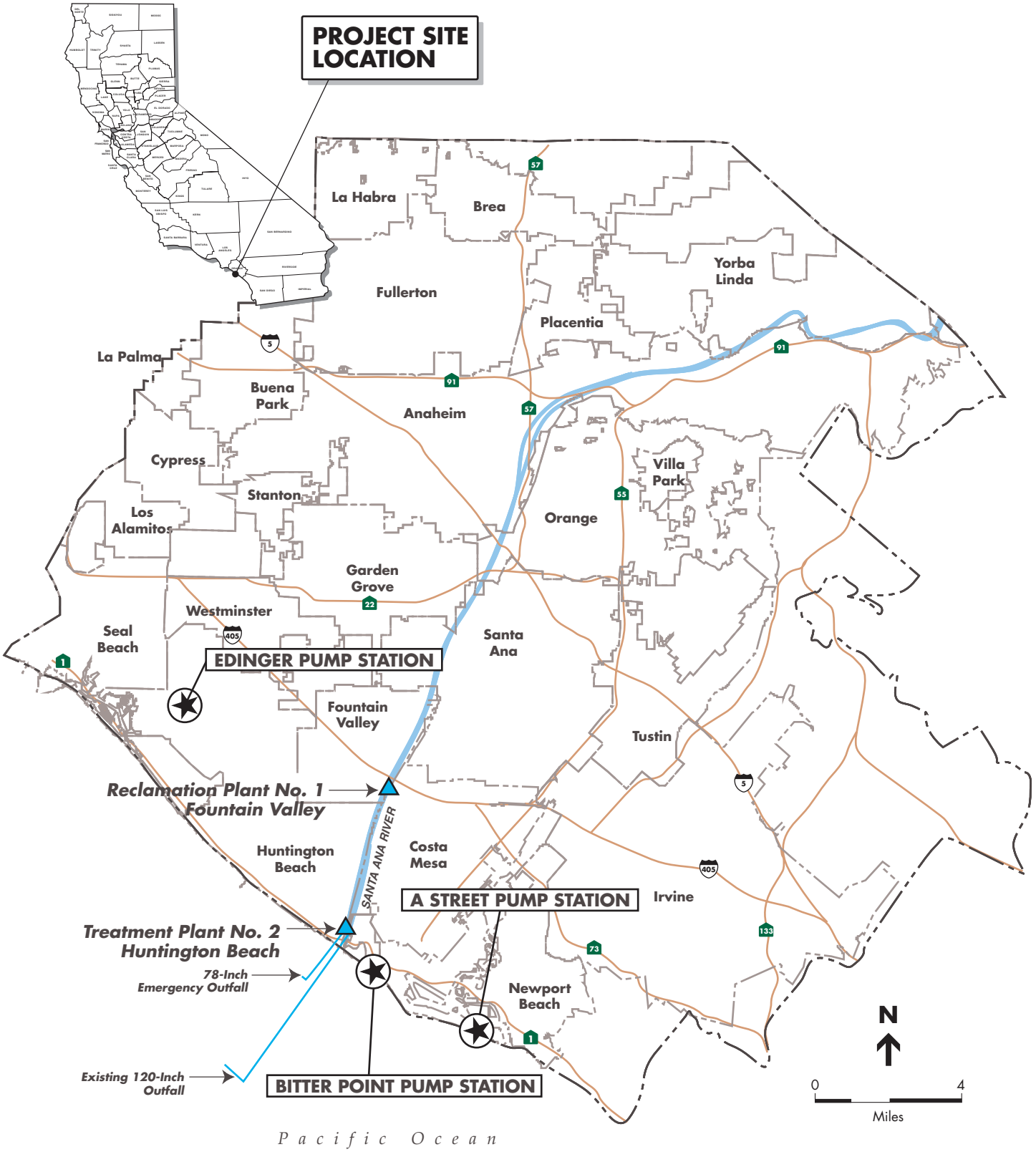
This document presents the results of an Initial Study to determine if any significant environmental effects could occur from the proposed projects. The Initial Study was prepared pursuant to the requirements of Section 15063 of the California Environmental Quality Act (CEQA) Guidelines.

PROJECT BACKGROUND

The Orange County Sanitation District (OCSD or District) maintains a collection system of gravity sewers and pump stations. The collection system conveys wastewater from OCSD's member cities and other local agencies to treatment facilities located in the cities of Fountain Valley and Huntington Beach. A general assessment of the pump stations found several that are in need of substantial refurbishing and/or replacement. OCSD is proposing to rehabilitate its Edinger Pump Station and replace its A Street and Bitter Point pump stations. Note that although the legal title of the project reflects rehabilitation, the project actually replaces the existing station with a new station. Figure 1 shows OCSD's service area and the location of these pump stations.

OCSD prepared and certified a Program Environmental Impact Report (PEIR) in 1999, which assessed its 20-year strategic plan. The 1999 Strategic Plan identified capital improvement projects needed to accommodate projected wastewater flows within OCSD's service area through the year 2020. The 1999 Strategic Plan identified the need for rehabilitating the Bitter Point and Edinger pump stations and increasing their pumping capacities. Neither document identified the A Street Pump Station as requiring upgrading. Thus, the PEIR only addressed the Bitter Point and Edinger pump stations. However, subsequent preliminary design reports for the Edinger and Bitter Point pump stations found more extensive work than previously identified.[1] The Edinger Pump Station requires an underground vault be installed for new electrical equipment. The Bitter Point Pump Station needs to be replaced with a new station of increased capacity with a continuous feed chemical dosing facility. The chemical dosing facility is part of the District's ongoing effort to reduce odors from the collection system. One of a number of subsequent assessments of other OCSD pump stations also determined that the A Street Pump Station needed

[1] RW Beck, Preliminary Design Report, Design Submittal No. 2, Edinger Pump Station Rehabilitation Project, September 2002, and Lee & Ro, Inc., Preliminary Design Report, Replacement of the Bitter Point Pump Station, April 2002.



SOURCE: Environmental Science Associates

OCSD Pump Station Neg Dec / 201168 ■

Figure 1

OCSD Service Area

to be replaced.[2] Stations to be replaced will be decommissioned and abandoned from under the street; the new stations constructed on adjacent lots. Due to the significant changes in the scope of work at the Edinger and Bitter Point pump stations and the addition of work at the A Street pump station, this initial study has been prepared to provide environmental review of the pump station projects as currently proposed in compliance with CEQA.

PROJECT LOCATION AND DESCRIPTION

Rehabilitation of the Edinger Pump Station

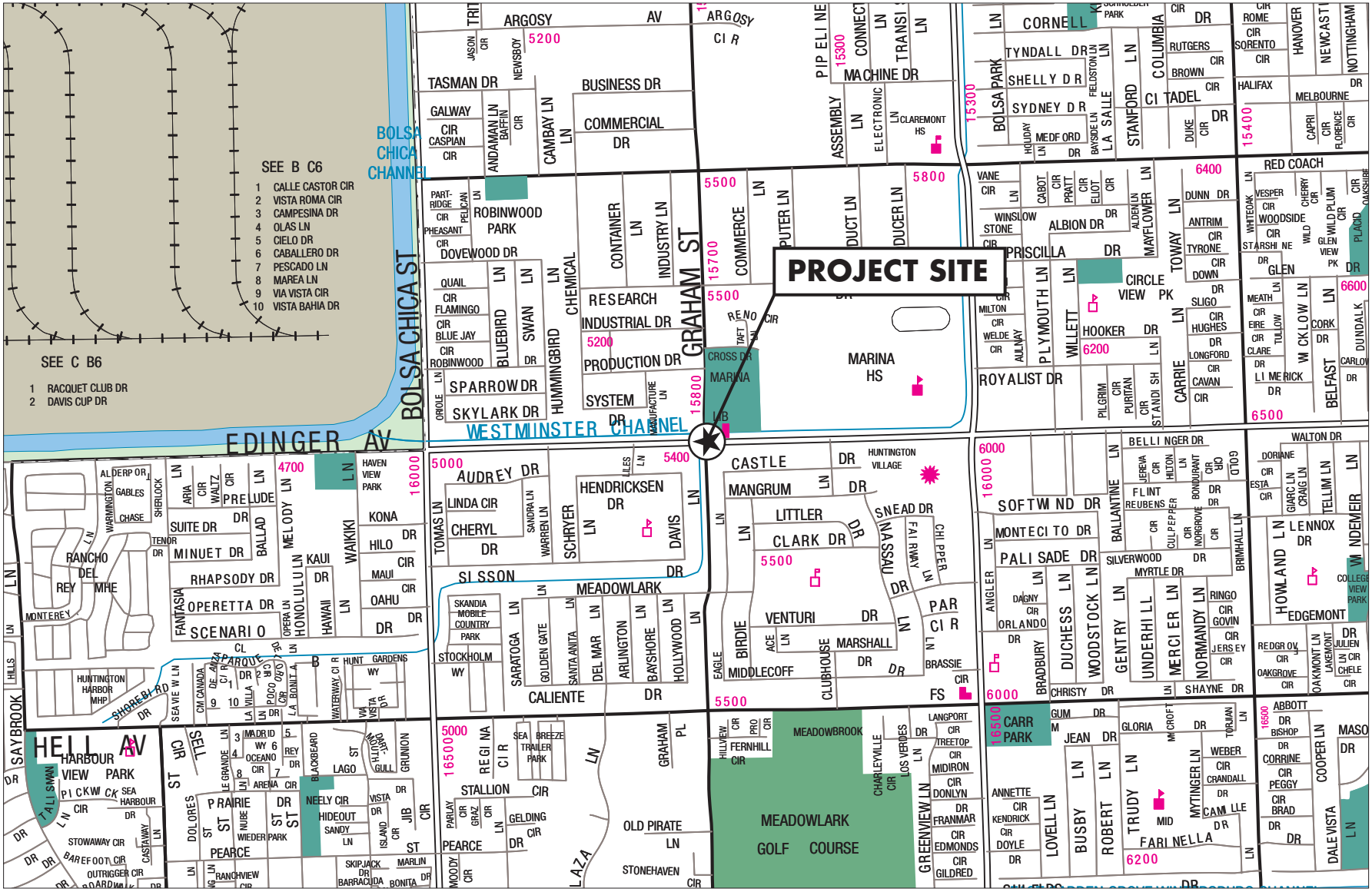
The existing Edinger Pump Station was constructed in 1965 beneath the westbound lanes of Edinger Avenue, just east of the intersection of Edinger Avenue and Graham Avenue in the City of Huntington Beach. The area to the south of the station is principally residential and the Westminster Flood Control Channel is located immediately north. A public high school and park (Marina High School and Marina Park) are opposite the channel. The area to the north and west of Graham consists of industrial properties. **Figure 2** shows the pump station location. **Figure 3** shows the existing pump station and flood control channel.

The proposed project would replace two of three existing pumps, modify the third pump, and install a fourth pump. The change in pumps would increase the station from its current capacity of two and three-quarter million gallons per day (2.75 mgd), to its 1989 master planned capacity of five (5.0) mgd. Piping within the existing station would be replaced to accommodate the additional capacity. No changes to outside piping would be required. The existing equipment and piping within the station would be salvaged.

The project would also construct a second below grade structure adjacent to the existing pump station to house new electrical and control equipment. The new below grade structure would require excavation of an area approximately 40 feet by 18 feet, down to a depth of 20 feet. Shoring for the excavation would consist of soil-concrete mix walls (drilled overlapping columns) with solder beams and cross bracing. Based on the results of a geotechnical report prepared for the site, groundwater is not expected to be encountered during excavation.[3] In the event groundwater is encountered, the bottom of the excavation would be sealed with a tremie slab. The entrapped water would then be pumped and discharged into a nearby sanitary sewer, tributary to the District's collection system to create a dry excavation. The entrance to the new structure

[2] Lee & Ro, Inc., Preliminary Design Report, Rehabilitation (Replacement) of the A Street Pump Station, November 2001.

[3] Leighton and Associates, *Geotechnical Report for the Proposed Edinger and Westside Pump Station Improvements, City of Huntington Beach and County of California*, May 14, 2002.



SOURCE: Environmental Science Associates

OCSD Pump Station Neg Dec / 201168 ■

Figure 2

Edinger Pump Station Location

SOURCE: Orange County Sanitation District

Figure 3

View of existing Edinger Pump Station

would be an access hatch in the sidewalk, similar to that of the existing station. The existing manhole entrance to the station's wet well, which is located in the street, would be enlarged from 24 to 36 inches.

The pump station would remain in operation during construction of the new below grade facilities. Installation of the new pumps, electrical, and control equipment would be sequenced such that service to the surrounding residences and businesses is not interrupted. Prior to the completion of the project, the street and sidewalk on Edinger would be repaired to new conditions.

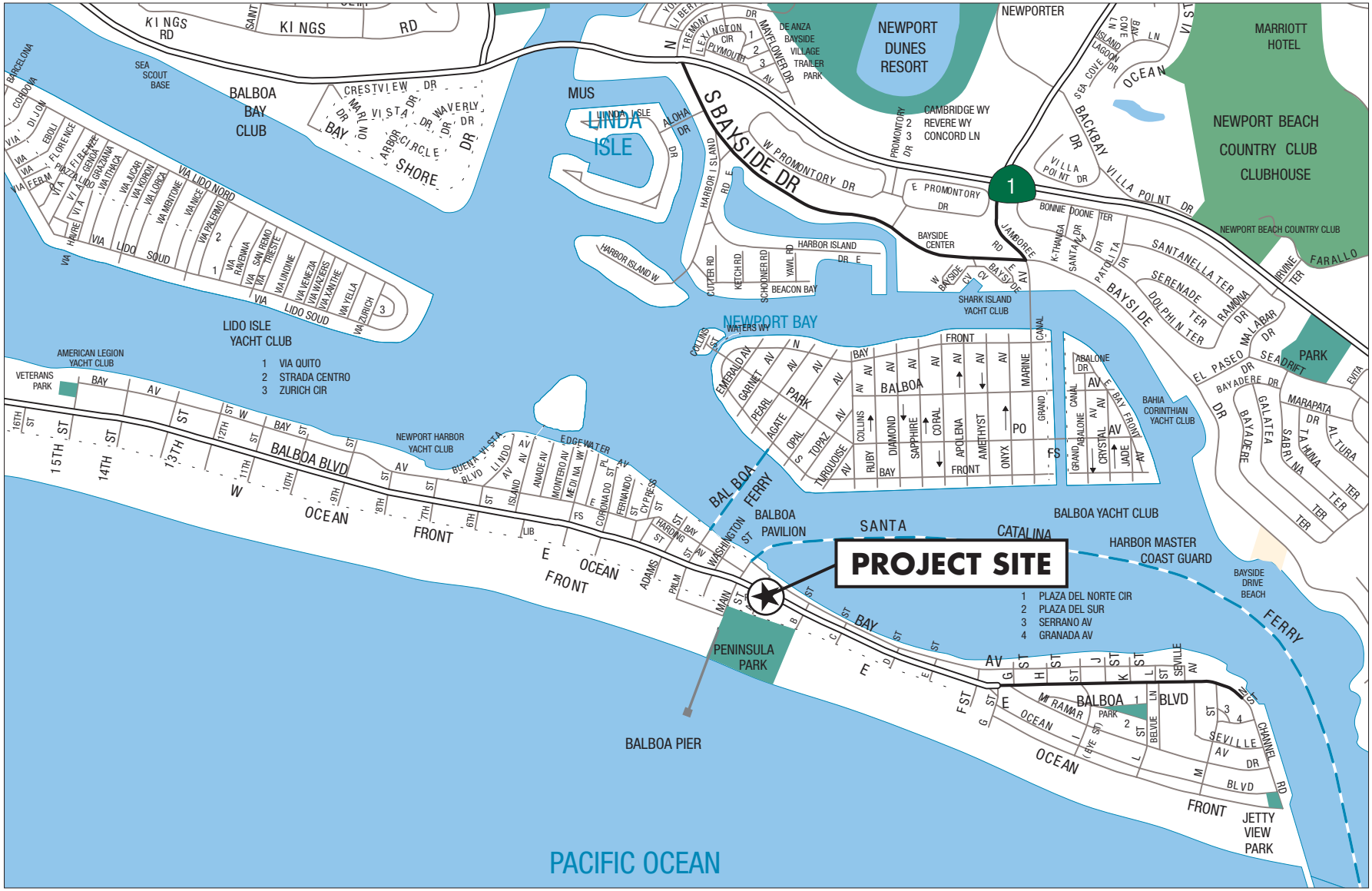
Replacement of the A Street Pump Station

The existing A Street Pump Station was constructed in 1948 beneath Balboa Boulevard at A Street, on the Balboa Peninsula in the City of Newport Beach. The area surrounding the station consists of residential properties and small retail establishments. The City's Peninsula Park and Balboa Pier are located one block away. The peninsula is surround by Newport Bay and the Pacific Ocean on either side.

The proposed project would replace the existing station. The new station would be constructed on a 3700 square foot lot owned by OCSD located at 810 East Balboa Boulevard (**Figure 4**), on the northwest corner of Balboa Boulevard and A Street. The lot is currently occupied by a vacant restaurant that was constructed in 1934. The restaurant would be demolished to make room for the new station. The new station, including a service area for OCSD vehicles, would occupy approximately half the lot. The remaining area would be landscaped and provide space for public parking. **Figure 5** shows the existing pump station and **Figure 6** shows the planned design.

The new station would consist of a below grade wet well and pump room and above grade electrical control building. The project would also include extending the local upstream gravity sewers from the existing station to the new station and installing new force mains. The existing station would be decommissioned upon startup of the new station.

The wet well/pump room would house three (3) pumps matching the existing station's pumping capacity. The wet well/pump room would have a footprint of approximately 23 feet by 45 feet and require excavation to a depth of approximately 31 feet. Shoring for the excavation would consist of soil-concrete mix walls (drilled overlapping columns) with solder beams and cross bracing. The floor of the excavation would be sealed with a tremie slab due to expected

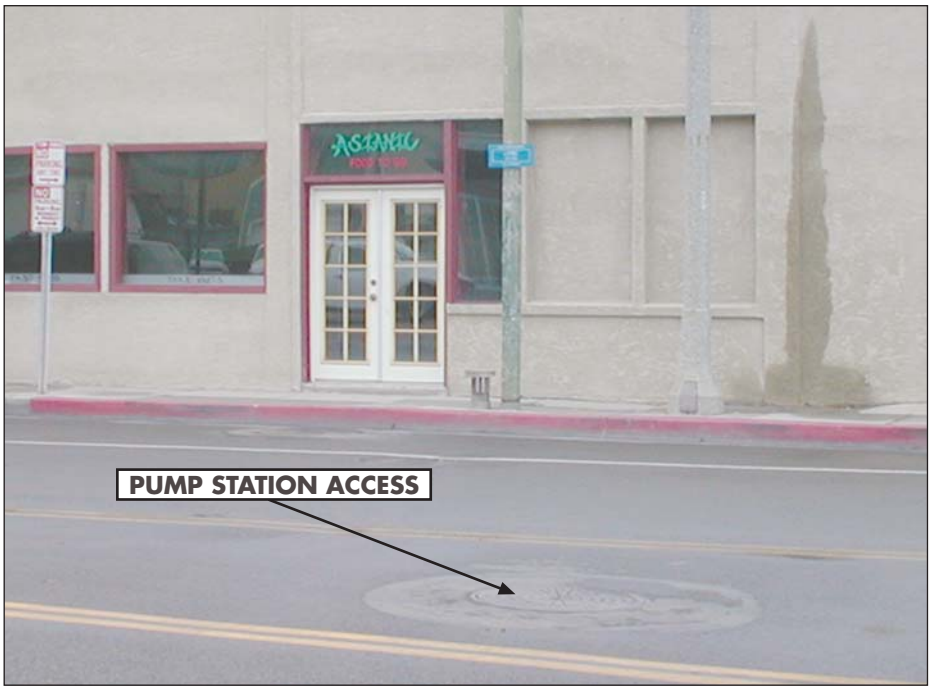


SOURCE: Environmental Science Associates

OCSD Pump Station Neg Dec / 201168 ■

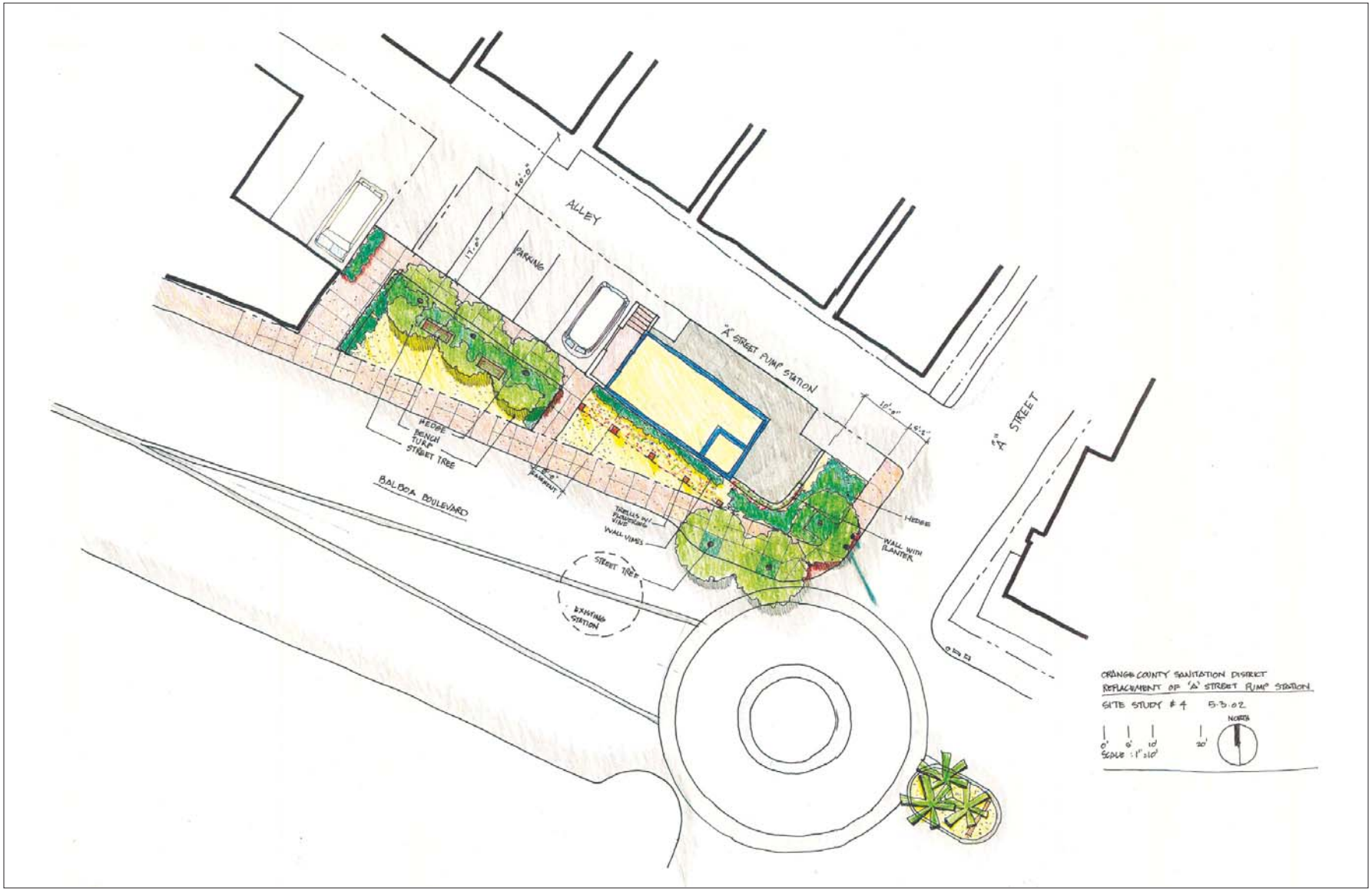
Figure 4

A Street Pump Station Location



SOURCE: Orange County Sanitation District

Figure 5
View of existing A Street Pump Station



SOURCE: Lee & Ro, Inc.

Figure 6
Proposed A Street Pump Station Site Plan

groundwater. The entrapped water would then be pumped and discharged into a nearby sanitary sewer, tributary to the District's collection system to create a dry excavation.

The electrical control building would house the electrical and control panels, ventilation equipment, lavatory, and stairs down to the pump room. The building, measuring approximately 15 feet by 33 feet and 20 feet tall, would be located above the new below grade pump room. The architectural design would integrate with the surrounding urban setting, incorporating an 8-foot tower atop the building similar to that of adjacent buildings. The entrance to new station and public parking would be from the alley along the north edge of the property, opposite and parallel to Balboa Boulevard.

Currently, three (3) gravity sewers feed the existing A Street Pump Station. The principal sewer line would be extended approximately 160 feet to the new station. The second and third gravity lines would be extended approximately six and 50 feet respectively, tying into the principal line prior to the new wet well. Two new forcemains, approximately 60 feet long, would also be constructed to tie the new station to the existing downstream gravity system. The new lines would require trenching in Balboa Boulevard, the alley, and within the boundaries of the lot. The trenches would be approximately 2.5 to 5 feet wide and up to 13 feet deep.

The existing station would be abandoned upon startup of the new pump station; its equipment and piping would be salvaged. The upper five (5) feet of the below grade structure would be removed. The hole created by the removal and remaining portion of the structure would then be filled with cement slurry and the pavement repaired to match existing conditions.

Replacement of Bitter Point Pump Station

The Bitter Point Pump Station was constructed during the late 1930s. The 5-million gallon per day (mgd) station is part of a network of gravity sewers, pump stations, and force mains serving Newport Beach and surrounding communities. The station is located beneath the entrance from Pacific Coast Highway to the Armstrong Petroleum Oilfield. Only the station's electrical panel is above grade, adjacent to the entrance's pavement. The station is within the boundaries of an OCSD facility/pipeline easement that begins at Pacific Coast Highway and runs through the oilfield and open space to the eastern edge of the Santa Ana River levee, perpendicular to OCSD's Treatment Plant No.2.

The oilfield and open space are located in an unincorporated portion of Orange County adjacent to the City of Newport Beach. The oilfield is bound by a storm drain and canal to the west, open

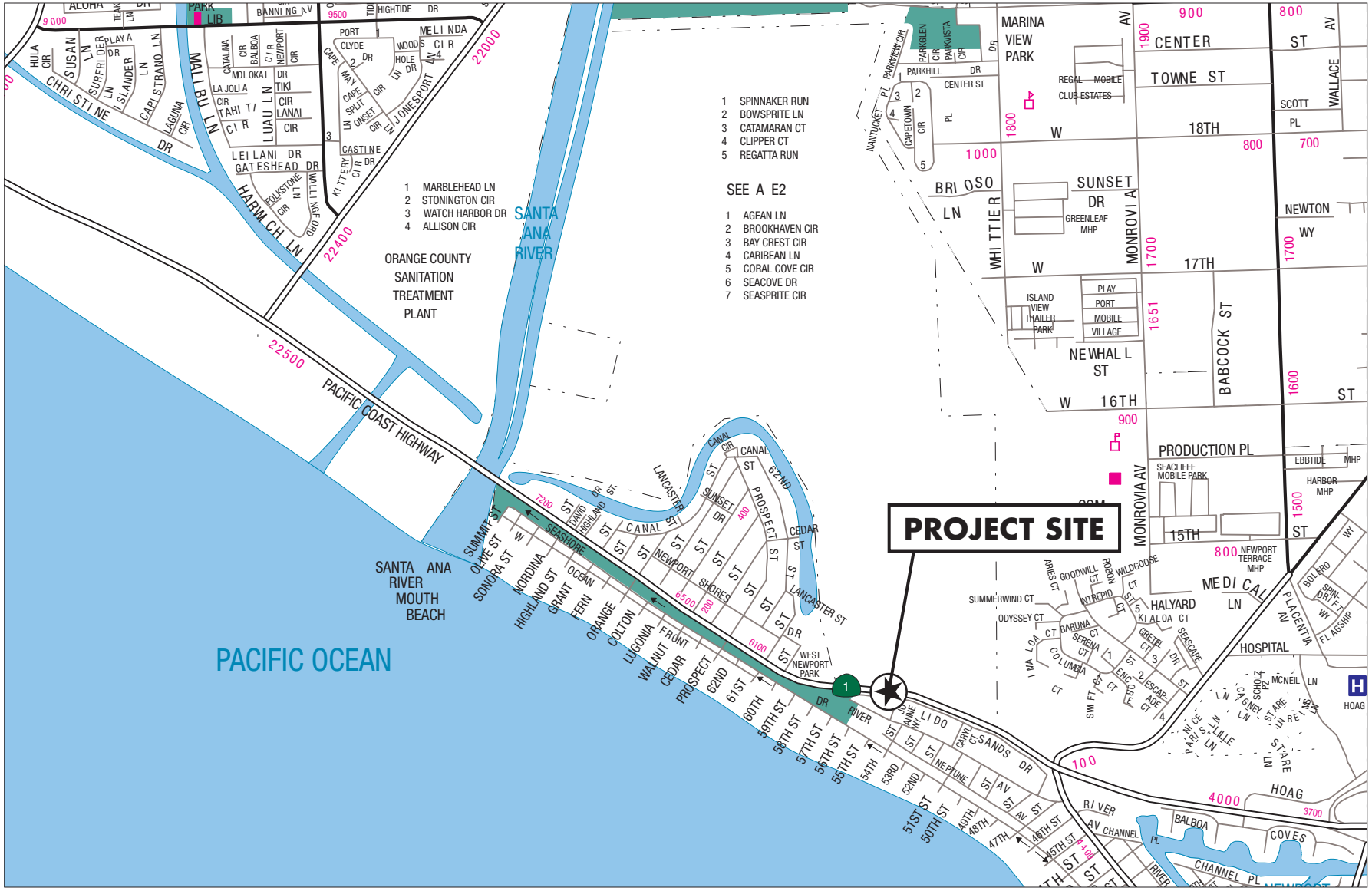
space to the north and east, and the Pacific Coast Highway to the south. Small retail establishments and residential properties lay west of the storm drain. Residential properties lay south of Pacific Coast Highway.

OCSD proposes to purchase property from Armstrong Petroleum Corporation, et al, for a new 40-mgd pump station to replace the existing station. The lot would be approximately 40 feet by 240 feet along Pacific Coast Highway, immediately west of the existing station. All existing easements within the lot would be maintained. **Figure 7** shows the location of the proposed pump station. **Figures 8 and 9** show views of the existing pump station. The layout of the proposed pump station and easements is shown in **Figure 10.**

The new station would consist of a below grade wet well and pump room, above grade electrical control building and chemical dosing facility. Existing overhead transformers and power lines would be upgraded. The new transformers would be place at grade and the power lines placed underground. The project would also include extending the upstream gravity sewers and downstream force mains to and from the existing station's current site. The entrance to the new station would be off the entrance to the oilfield. The exit would be at the west end of the new station's site and traverse directly onto Pacific Coast Highway. The existing station would be decommissioned upon startup of the new station.

The wet well/pump room will house five (5) pumps. The wet well/pump room would have a footprint of approximately 80 feet by 36 feet and require excavation to a depth of approximately 32 feet. Shoring for the excavation would consist of soil-concrete mix walls (drilled overlapping columns) with solder beams. The floor of the excavation will be sealed with a tremie slab due to expected groundwater. The entrapped water would then be pumped and discharged to OCSD's nearby sanitary sewer collection system to create a dry excavation.

The electrical control building would house the electrical and control panels, ventilation equipment, lavatory, standby generator, and stairs down to the pump room. The building, measuring approximately 80 feet by 16 feet and 20 feet tall, would be located above the new below grade pump room. A new screening wall to replace the existing 6-foot wall would be integrated into the architectural design of the building. The wall would consist of several overlapping shorter walls varying in height, length, and depth. The overall wall height would be approximate 20 feet. Landscaping would include native vegetation appropriate to the coastal area. The new wall will occupy the same area as the existing wall, situated within Caltrans' 10-foot easement bordering Pacific Coast Highway.

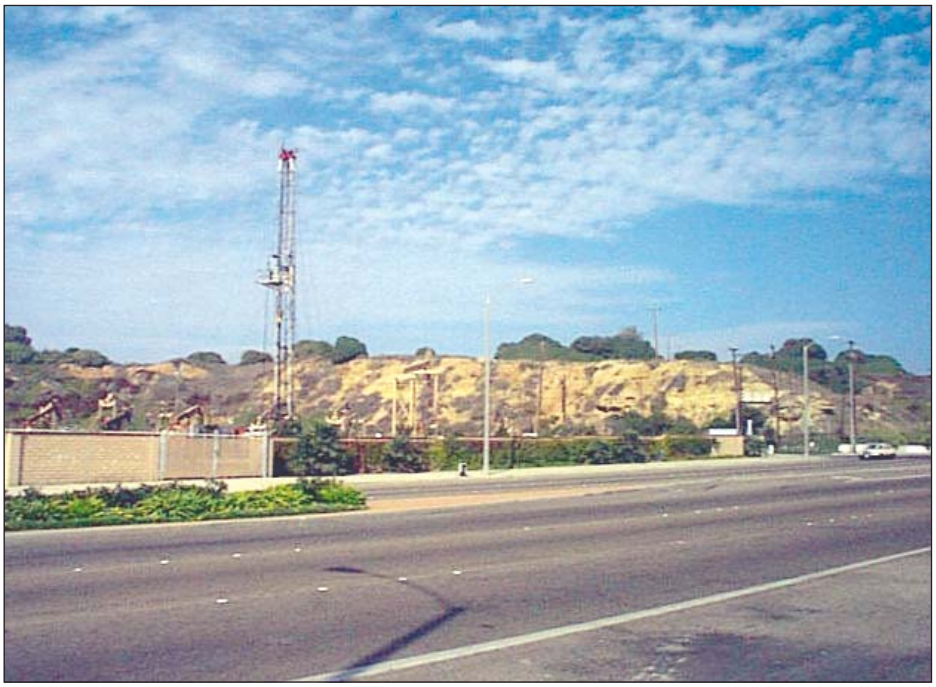


SOURCE: Environmental Science Associates

OCSD Pump Station Neg Dec / 201168

Figure 7

Bitter Point Pump Station Location



SOURCE: Orange County Sanitation District

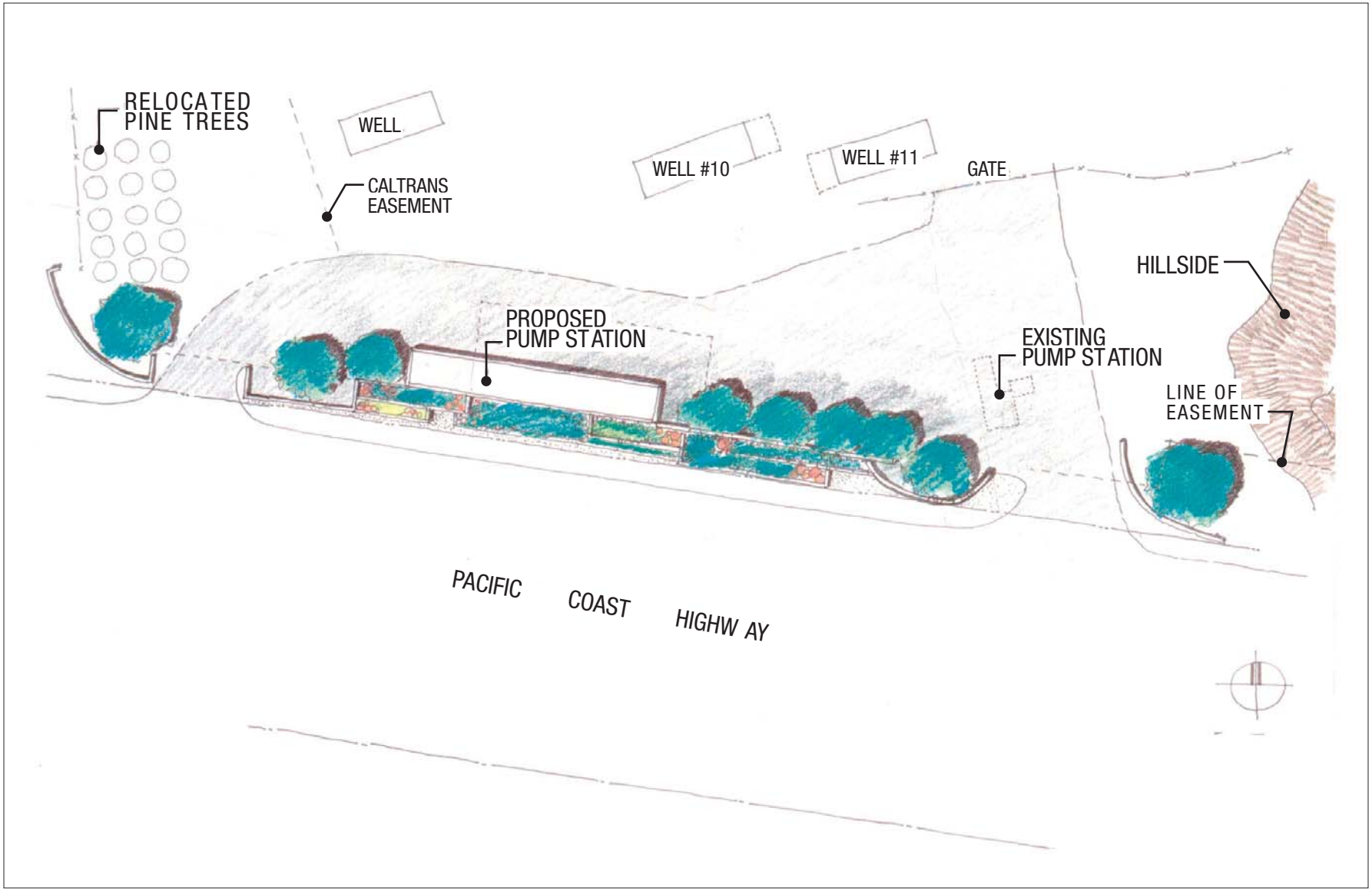
Figure 8

View of existing Bitter Point wall looking east

SOURCE: Orange County Sanitation District

Figure 9

View of existing Bitter Point Pump Station looking west



SOURCE: Lee & Ro, Inc.

Figure 10
Proposed Bitter Point Pump Station Site Plan

The chemical dosing facilities would consist of a 4,000-gallon storage tank, two small metering pumps, and an unloading station, all enclosed within a containment area. The tank would store hydrogen peroxide or mangnesium hydroxide, which when injected into the sewage collection system, would prevent pipe corrosion and sewer odors. The tank would be approximately eight feet in diameter by 16-feet tall. The containment area would be approximately 13-feet square by 5-feet tall, capable of holding the tank's capacity. The District certified a Supplemental Environmental Impact Report (SEIR) in December 2002[4] for the collection system odor control program. The SEIR compiled mitigation measures to reduce potential impacts of installing chemical storage tanks. Mitigation measures identified in the SEIR that are applicable to the project would be implemented as part of the project.

The upstream gravity sewers would be extended approximately 100 feet to the new station. A new force main, also approximately 100 feet long, would also be constructed to connect the new station to the existing downstream force mains. The points of connection of the new lines to the old would be near the existing pump station and may extend into Pacific Coast Highway. Trenches approximately 3 to 5 feet wide and up to 12 feet deep would be dug to install the new lines.

The existing station would be abandoned upon startup of the new pump station; its equipment and piping would be salvaged. The upper five (5) feet of the below grade structure would be removed. The hole created by the removal and remaining portion of the structure would then be filled with cement slurry and the pavement repaired to match existing conditions.

Sanitary services to surrounding residences and businesses would be maintained throughout construction of the new pump station. It is anticipated that the existing pump station, oilfield operations and property owners' development offices may experience brief power interruptions during Southern California Edison's transfer of power from existing overhead lines and transformers to the newly installed lines and transformers. The interruptions are anticipated to be no more than one half to two hours long. The storage capacity of the upstream sewage collection system can handle such interruptions of power to the existing pump station. The oilfield operations would also witness brief interruptions to their potable water supply and gas production lines during their rerouting around the new pump station's location. Arrangements with these entities would be made regarding coordinating such interruptions. Once services are transferred

[4] Orange County Sanitation District, *Final Supplemental Environmental Impact Report for the Effluent Pump Station Annex and Collection System Odor and Corrosion Control Program*, November 2002

to the new lines, the existing lines would be removed without interruption of service to the pump station, oilfield operation, or the development offices.

PROJECT SCHEDULE

The construction schedule, from "Notice to Proceed" to the acceptance of the finished product would be approximately one year and two months for Edinger Pump Station and one year and five months for the A Street and Bitter Point Pump Stations. Construction-related activities for each project would be conducted eight hours per day, five days per week. Mobilization would occupy the first eight (8) weeks of the schedule. Demolition of the existing vacant restaurant at A Street and the wall at Bitter Point would take another two (2) weeks. Shoring and excavation for the below grade structures would follow, taking approximately eight (8) weeks to complete. Forming and pouring the concrete floors, walls, and roofs of the below grade structures would occur over the next eight (8) weeks. The construction of the electrical control buildings for A Street and Bitter Point are expected to take approximately six (6) weeks. The 32 weeks following completion of the structures would consist of installation of the equipment, testing, and startup. The remaining four (4) weeks would consist of decommissioning the existing facilities, street repairs, and landscaping.

CEQA ISSUES AND PROCEDURES

In accordance with the CEQA Guidelines, an Initial Study has been conducted to assess the proposed projects' effects on the environment. The Initial Study concludes that a Mitigated Negative Declaration provides the appropriate level of analysis to comply with CEQA requirements and ensure that no significant impacts would result. Recommended mitigation measures are listed in Section 4.0 of this document. These mitigation measures augment those identified in the PEIR, which are required for all District projects. The Initial Study/Mitigated Negative Declaration will be available for public review for 30 days. Following the review period, the OCSD Board of Directors will review any public comments received and determine whether to adopt the Mitigated Negative Declaration.

INCORPORATION BY REFERENCE

The following references were utilized during preparation of this Initial Study. These documents are available for review at the Orange County Sanitation District's Engineering Office, located at 10844 Ellis Avenue, Fountain Valley 92708.

- Final Program EIR for the 1999 Strategic Plan, October 1999
- Final Supplemental EIR for Effluent Pump Station Annex (EPSA) and Collection System Odor and Corrosion Control Program (OCP), November 2002

SECTION 2.0
INITIAL STUDY CHECKLIST

The following Environmental Checklist and discussion of potential environmental effects were completed in accordance with Section 15063(d)(3) of the CEQA Guidelines to determine if the projects may have any significant effects on the environment. A brief explanation is provided for all determinations. A "No Impact" or "Less than Significant Impact" determination is made when the projects will not have any impact or will not have a significant effect on the environment for that issue area based on a project-specific analysis.

CEQA ENVIRONMENTAL CHECKLIST FORM AND INITIAL STUDY

1. Project Title:	Rehabilitation of the Edinger Pump Station; Rehabilitation of the A Street Pump Station**; Replacement of the Bitter Point Pump Station ****Note:** Although the legal title of the project reflects rehabilitation, the project actually replaces the existing station with a new station.
2. Lead Agency Name and Address:	Orange County Sanitation District (OCSD or District) 10844 Ellis Avenue Fountain Valley, CA 92708
3. Contact Person and Phone Number:	Angie Anderson: 714-593-7305
4. Project Location:	Edinger Pump Station 5500 block of Edinger Avenue Huntington Beach, CA 92649 A Street Pump Station 810 East Balboa Blvd Newport Beach, CA 92661 Bitter Point Pump Station 5000 block of Pacific Coast Highway Newport, Beach, CA 92663
5. Project Sponsor's Name and Address:	Orange County Sanitation District 10844 Ellis Avenue Fountain Valley, CA 92708

6. General Plan Designation:

Commercial, public utility, open space, and residential

7. Zoning:

Edinger Pump Station
Community Facilities (recreational) (CF-R), Community Facilities (educational) (CF-E), Low Density Residential (R-1)

A Street Pump Station
Special Plan District 8 (SP-8), Commercial (C-1), Residential (R-2)

Bitter Point Pump Station
Residential (R4), Agricultural (A1), Light Industrial (M1O), Commercial (C1) with an oil production and flood plain overlay

8. Description of Project:

Edinger Pump Station
Rehabilitate the station including the addition of a below grade electrical control structure.

A Street Pump Station
Construction of a new pump station to replace the existing underground station. The site for the new station that includes an above grade electrical building is adjacent to the current station.

Bitter Point Pump Station
Construction of a new pump station to replace the existing station. The site for the new station that includes an above grade electrical building is adjacent to the current station.

9. Surrounding Land Uses and Setting:

Surrounding land uses include low density residential, community facilities recreational, community facilities (educational) district, and oil production.

10. Other agencies / entities whose approval may be required:

City of Huntington Beach	Encroachment Permit, Temporary Street Closure/Sidewalk Closure Permit, (Edinger Pump Station)
City of Newport Beach	Encroachment Permit, Temporary Street Closure/Sidewalk Closure Permit, Zone change (A Street and Bitter Point Pump Stations)
Caltrans	Encroachment Permit (Bitter Point Pump Station) for Pacific Coast Highway
California Coastal Commission	Coastal Development Permit (A Street and Bitter Point Pump Stations)
County of Orange	Zone change (Bitter Point Pump Station)
Orange County Flood Control District	Encroachment Permit (Edinger and Bitter Point Pump Stations)
Armstrong Petroleum Oilfield (West Newport Oil Co. - Operator)	Property and/or easement acquisition
Southern California Edison	Applicant Design Option for Distribution and/or Service Extensions Letter of Authorization

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by these projects, involving at least one impact that is a "Potentially Significant Impact" as Indicated by the checklist on the following pages:

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology / Soils
☐ Hazards & 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	

DETERMINATION: (To be completed by lead agency)

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.

☒ 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.

Signature	Date
Printed Name	For

EVALUATION OF ENVIRONMENTAL IMPACTS

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*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?	☐	☒	☐	☐
II. AGRICULTURAL RESOURCES – 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 non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒
III. AIR QUALITY – Would the project:				
a) Conflict with or obstruct implementation of the applicable Air Quality Attainment Plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐

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

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

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*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?	☐	☐	☐	☒
VII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including				

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒
VIII. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there should be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of 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?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems?	☐	☐	☐	☒
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?	☐	☐	☒	☐

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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 of seiche, tsunami, or mudflow?	☐	☐	☒	☐
IX. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural communities' conservation plan?	☐	☐	☐	☒
X. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☒	☐	☐
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☒	☐	☐
XI. 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?	☐	☒	☐	☐
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?	☐	☐	☐	☒

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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 two miles of a public airport of 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?	☐	☐	☐	☒
XII. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIII. PUBLIC SERVICES –				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐ .
Parks?	☐	☐	☒	☐

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Other public facilities?	☐	☐	☒	☐

XIV. 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?	☐	☐	☒	☐

XV. TRANSPORTATION / TRAFFIC – Would the project:

a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☒	☐	☐
g) Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☒	☐

XVI. UTILITIES AND SERVICE SYSTEMS – Would the project:

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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?	☐	☒	☐	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☒	☐	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☒	☐	☐
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?	☐	☒	☐	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☒	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☒	☐	☐

XVII. 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?	☐	☐	☐	☒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulative considerable" means that the incremental effects of a				

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

SECTION 3.0
ENVIRONMENTAL ANALYSIS

I. AESTHETICS

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?

No Impact

None of the pump stations are within a scenic vista as designated by the California Department of Transportation (Caltrans) under the California Scenic Highways Program or located within a state designated scenic highway.[5]

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?

Less than Significant Impact with Mitigation Incorporated

Edinger Pump Station
The new structure for the Edinger Pump Station will be installed beneath Edinger Avenue adjacent to the existing station, hidden from sight. No lighting or glare impacts would be created from the construction of the new facilities. The project would not involve construction of any above ground structures, therefore no impacts on the visual character of the site are anticipated.

A Street Pump Station
The A Street Pump Station project would demolish the vacant restaurant currently occupying the 3,700 square foot site to make room for a new pump station. The new pump station would consist of a below grade wet well and pump room, and above grade electrical control building. The roof of the below grade structure would be flush with finish grade. The 500 square foot electrical control building would sit atop of the 1,100 square foot below grade structure. The remaining 2,600 square feet of lot space would be landscaped and used for District and pubic parking. **Figure 11** shows a sketch of the proposed site after completion. The landscaping would include trees, low water use bushes, plants, flowers, and public benches. The scale and architectural design of the structure would be similar to the commercial buildings next

[5] California Department of Transportation (Caltrans), California Scenic Highway Program. *Officially Designated State Scenic Highways,* December 2000.

SOURCE: Lee & Ro, Inc.

Figure 11
Proposed A Street Pump Station
Electrical Control Building and Landscaping

door. The new building and landscaping will integrate with the surrounding settings and City of Newport Beach's redevelopment plans. The entrance to the station would be from the public alley, north of the property.

The exterior lights will be removed when the existing building is demolished. The new building will also have exterior lighting. The new exterior lights will be directed downward and away from neighboring residential areas as much as possible to minimize visible light sources. Motion sensors will control the lights when the station is unmanned. Emergency floodlights may be used at night as is currently done for the existing pump station. The new station would be in an urban area where streetlights are ubiquitous. The new lights would not conflict with surrounding land uses nor would it add substantial light or glare to the area. The proposed mitigation measure would ensure that impacts to aesthetics and lighting would be less than significant.

Bitter Point Pump Station

The new station will include both below and above grade facilities. The above grade facilities will consist of a new 1,300 square foot electrical control building, chemical dosing facilities, new screening wall, and landscaping situated on a Caltrans easement bordering the Pacific Coast Highway. The new wall replaces an existing six foot wall **(seen in Figures 8 and 9)** that partially screens the oilfield's pumping units from the street. The new wall, depicted in **Figure 12**, would consist of several overlapping shorter walls varying in height and depth to give it a three-dimensional look. The wall's design will provide for landscaping at various heights along the wall. The overall wall height will be 20 feet, shielding the pump station and oilfield pumps from the street. Strawberry and Grape Myrtle trees that grow greater than 20 feet will be place behind the wall to further shield the oilfield from sight. Overhead power lines in the area will also be rerouted below ground.

The new building and chemical dosing facilities will be lit by existing streetlights along Pacific Coast Highway. The building and chemical dosing facilities will also have their own exterior lighting. The new exterior lights will be hidden by the wall, and directed downward and away from neighboring residential areas as much as possible to minimize visible light sources. Motion sensors will control the lights when the station is unmanned. Emergency floodlights may be used at night as is currently done for the existing pump station. The new lights would not conflict with surrounding land uses, add substantial light, or glare to the area. The proposed mitigation measure would ensure that impacts to aesthetics and lighting would be less than significant.

SOURCE: Lee & Ro, Inc.

Figure 12
Proposed Bitter Point Wall and Landscaping

Mitigation Measure

- The architectural design and landscaping of the new A Street above grade facilities (electrical control building, landscaping, etc.) shall integrate with the surrounding area and comply with the City of Newport Beach's redevelopment plans. The design and landscape of the new Bitter Point above grade facilities (electrical control building, wall, landscaping, etc.) shall meet the City's goal of shielding the oilfield pumping units from sight while enhancing the visual character of the site. The landscaping shall incorporate low water-use plants.

- Exteriors lights for A Street and Bitter Point pump stations will be directed downward and oriented to ensure that no light source will be directly visible from any neighboring residential areas. Motion sensors will control the lights when the station is unmanned. The new lights would not conflict with surrounding land uses, nor add substantial light or glare to the area.

II. AGRICULTURAL RESOURCES

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 non-agricultural use?
B. Conflict with existing zoning for agricultural use, or a Williamson Act contract?
C. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

No Impact

No agricultural resources or operations exist within the vicinity of the pump station projects and no lands enrolled under the Williamson Act that would be impacted.[6] No mitigation measures are required.

III. AIR QUALITY

A. Conflict with or obstruct implementation of the applicable Air Quality Attainment Plan?

No Impact

Each proposed project is located within the Orange County sub-area of the South Coast Air Basin (SCAB). Each project would be consistent with the Air Quality Management Plan (AQMP), last updated by the South Coast Air Quality Management District (SCAQMD) in 1997. The SCAQMD is the regional agency empowered to regulate air emissions within the SCAB. The proposed projects would involve brief construction activities that would result in a temporary increase in air emissions allowable under the Air Quality Attainment Plan. No long-term operational impacts are anticipated, and no mitigation measures are required.

[6] County of Orange General Plan, Resources Element, revised February 2000.

B. Violate any air quality standard or contribute to an existing or projected air quality violation?

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

Less Than Significant Impact

The SCAB is designated as a non-attainment area for ozone (O_3), carbon monoxide (CO), and particulates (PM_{10}). The SCAB is an attainment area for NO_X, SO_X, and lead.

The proposed projects would generate minimal additional operational emissions over those currently generated by the existing pump stations. Additional mobile sources of emissions include emissions associated with delivery truck operations to the chemical dosing facilities at Bitter Point Pump Station. At one to three trucks per week, these emissions would not be significant. No additional mobile source emissions would be anticipated due to project operations.

Construction exhaust emissions (NO_x, CO, ROC, and PM_{10}) would be generated from the use of heavy construction equipment, small vehicles, construction workers' commutes and construction haul truck trips. These emissions would increase local concentrations temporarily but would not be expected to result in a violation of air quality standards.

The SCAQMD regulates stationary and mobile air emission sources within the SCAB. The agency's CEQA Air Quality Handbook provides methodology for estimating construction exhaust emissions based upon the number and type of equipment being used and duration of the construction period. This methodology was used to prepare construction emission worksheets used for this analysis. The emission worksheets utilize emission factors from the California Air Resources Board Emission Factor Model (EMFAC) 2000 and Urban Emissions Model (URBEMIS) 2001 emission models along with emissions factors found in the U.S. Environmental Protection Agencies (EPA) AP-42 Compilation of Emissions Factors. The SCAQMD's CEQA Air Quality Handbook presents emissions significance thresholds for construction and operations activities as shown in **Table 1**.

Edinger Pump Station

Delivery trucks would deliver materials and equipment throughout construction of the project, though not on a daily basis. Heavy equipment will be used during construction. Emissions estimates were calculated for the project based on assumptions for typical construction activity.

TABLE 1: SCAQMD AIR QUALITY IMPACT SIGNIFICANCE THRESHOLDS

	Project Construction	Project Operation
Carbon Monoxide (CO)	550 lbs./day	550 lbs./day
Reactive Organic Compounds (ROC)	75 lbs./day	55 lbs./day
Nitrogen Oxides (NO_x)	100 lbs./day	55 lbs./day
Sulfur Dioxide (SO_2)	150 lbs./day	150 lbs./day
Particulates (PM_{10})	150 lbs./day	150 lbs./day

lbs./day - pounds per day.
Source: South Coast Air Quality Management District, *CEQA Air Quality Handbook*, April 1993.

The calculations assume the project would be completed consecutively within the 60-week time period. Construction air emission calculations are based on the 16-week excavation and construction period. During this period, it is estimated that two backhoes and two large trucks would operate for an average of eight hours per day; five material trucks would travel 60 miles round trip per day; and ten employees would travel 60 miles round trip per day. Trenching and excavation would extract approximately 550 cubic yards of soil. The soil would be hauled to a local municipal landfill. The District will coordinate with the City of Huntington Beach to obtain Material Removal and Off-Site Hauling Permit if necessary to ensure compliance with the city's soil truck routing requirements. As shown in **Table 2**, air emissions from Edinger pump station would not exceed SCAQMD threshold of significance and therefore would be considered a less than significant impact.

TABLE 2: ESTIMATED CONSTRUCTION AIR EMISSIONS FROM PUMP STATIONS

Air Pollutant	Estimated Emissions Edinger (lbs/day)	Estimated Emissions A Street (lbs/day)	Estimated Emissions Bitter Point (lbs/day)	SCAQMD Threshold (lbs/day)
Carbon Monoxide (CO)	15	15	15	550.00
Reactive Organic Compounds (ROC)	3	3	3	75.00
Nitrogen Oxides (NO_x)	17	18	14	100.00
Particulates (PM10)	12	57	12	150.00

Source: SCAQMD, CEQA Air Quality Handbook, 1993; Urbemis7G.
Assumes 2 backhoes operating 8 hours per day; 5 daily truck trips; and 10 employees commuting 60 miles per day for each project. A Street emissions assume demolition of the restaurant building utilizing one heavy dozer for a period of two weeks. Bitter Point emissions assume demolition of the existing wall utilizing one heavy dozer for a period of two weeks.

A Street Pump Station

Delivery trucks would deliver materials and equipment throughout construction of the project, though not on a daily basis. Heavy equipment will be used during construction. Emissions estimates were calculated for the project based on assumptions for typical construction activity. The calculations assume the project would be completed consecutively within the 60-week time period. Construction air emission calculations are based on the the 28-week excavation and construction period. During this period, it is estimated that two backhoes and two large trucks would operate for an average of eight hours per day; five material trucks would travel 60 miles round trip per day; and ten employees would travel 60 miles round trip per day. Trenching and excavation would extract approximately 1,450 cubic yards of soil. The soil would be hauled to a local municipal landfill or OCSD's Treatment Plant No. 2 in the City of Huntington Beach if space is available. The District will coordinate with the City of Newport Beach to ensure compliance with soil truck routing requirements. As described in the Hazards Section of this analysis, lead based paint and asbestos would be removed prior to demolition activities and disposed of at a permitted hazardous waste disposal facility. Demolition of the restaurant building would utilize one heavy dozer for a period of two weeks. As shown in Table 2, air emissions from A Street pump station would not exceed SCAQMD threshold of significance and therefore would be considered a less than significant impact.

Bitter Point Pump Station

Delivery trucks would deliver materials and equipment throughout construction of the project, though not on a daily basis. Heavy equipment will be used during construction. Emissions estimates were calculated for the project based on assumptions for typical construction activity. The calculations assume the project would be completed consecutively within the 52-week time period. Construction air emission calculations are based on the 16-week excavation and construction period. During this period, it is estimated that two backhoes and two large trucks would operate for an average of eight hours per day; five material trucks would travel 60 miles round trip per day; and ten employees would travel 60 miles round trip per day. Trenching and excavation would extract approximately 3,800 cubic yards of soil. The soil would be hauled to a local municipal landfill or OCSD's Treatment Plant No. 2 in the City of Huntington Beach if space is available. Demolition of the wall would utilize one heavy dozer for a period of two weeks. As shown in Table 2, air emissions from Bitter Point Pump Station would not exceed SCAQMD threshold of significance and therefore would be considered a less than significant impact.

D. Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact with Mitigation Incorporated

The SCAQMD defines sensitive receptors as residential areas, schools, playgrounds, health care facilities, day care facilities, and athletic fields. Residential areas exist within 50 feet of the construction site for the A Street Pump Station, and 100 feet for the Bitter Point Pump Station and the Edinger Pump Station. In addition, the Marina High School and Marina Park are across the Westminster Flood Control Channel from the Edinger Pump Station. The projects would not violate SCAQMD thresholds of significance for air emissions. The areas would be exposed to construction activities for a short period of time. The following mitigation measures would minimize the potential exposure to sensitive receptors.

Mitigation Measures

- Construction equipment will be shut off to reduce idling when not in direct use. Diesel engines, motors, or equipment shall be located as far away as possible from existing residential areas.

- Stationary and mobile equipment shall be placed as far from residential areas as possible within the temporary construction easement and new station sites.

- The contractor shall notify residences within 300 feet of each construction site by posting notices along those streets of planned construction activities at least one week before the start of construction. Marina High School (Edinger) and West Newport Oil and Armstrong Petroleum Oilfield (Bitter Point) shall also be notified by letter at least two weeks prior to the start of construction. The notifications shall include a planned schedule and contact information.

E. Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact

Each project either rehabilitates or replaces an existing pump station. Edinger and A Street pump stations would continue to operate in the same manner as the existing stations with respect to OCSD's odor control program and would not create objectionable odors. The District recently approved and is in the process of implementing a new Collection System Odor and Corrosion Control Program. This program was assessed in the Effluent Pump Station Annex and Collection System Odor & Corrosion Control Program Supplemental Environmental Impact Report approved by the District in December 2002. The program involves installing continuous-feed chemical injection systems to supply odor and corrosion reducing chemicals at various points in the collection system. As part of this district-wide program to further reduce objectionable odors, Bitter Point Pump Station would add one of these chemical dosing facilities.

However, the construction of the A Street and Bitter Point pump stations include installation of new sewers to direct flow to the station. During this construction phase, temporary odors could be released when making connections to the existing sewers. These impacts would be short term occuring over a period of several hours and would be less than significant.

IV. BIOLOGICAL RESOURCES

A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

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

C. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

D. Interfere substantially with the movement of any native resident or migratory fish or wildlife corridors, or impede the use of native wildlife nursery sites?

E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

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

No Impact

Edinger Pump Station

The Edinger Pump Station project site is outside of the NCCP planning area and entirely within a developed urban area that does not support native habitat. No Impact is anticipated.

A Street and Bitter Point Pump Stations

The A Street and Bitter Point Pump Station project sites lie within the Orange County Coastal/Central Natural Community Conservation Plan (NCCP) Subregional Planning Area.[7] The A Street Pump Station project would be conducted entirely within a developed urban area that does not support native habitat.

The new Bitter Point Pump Station would be located adjacent to the existing driveway to the oil field on previously disturbed land that is part of an oil production facility. Small patches of native

[7] California Department of Fish and Game website, http://www.dfg.ca.gov/nccp/cssreg.htm, accessed August 1, 2002.

habitat exist on the steep hillsides of the oil field property adjacent to Pacific Coast Highway. Further inland, the oil field becomes a wetland area. The proposed project site would not affect these natural habitat areas. **Figures 7 through 10** show the proposed location and design for the Bitter Point Pump Station.

The Orange County Friends of Harbors, Beaches & Parks has plans to develop the Orange Coast River Park and nature preserve in the vicinity of the mouth of the Santa Ana River. The park would cover portions of the Cities of Costa Mesa, Newport Beach, and Huntington Beach, and be under the jurisdiction of the County, State and Federal Governments. The park is proposed as a cooperative venture of Costa Mesa, Newport Beach, and Huntington Beach, the County and private landowners. The Bitter Point Pump Station lies within the southeast corner of the area that is designed for the proposed park. The pump station site is situated between the Armstrong Petroleum oilfield and a wall along PCH. The property is already developed and construction of the proposed pump station would not disturb any undeveloped habitat. Any possible future development of the area for recreational purposes or conservation would not be prohibited by construction of the proposed pump station.

Therefore, none of the projects would conflict with the NCCP or would impact sensitive habitats or species or interfere with the migration or movement of wildlife. No biological resources would be impacted from construction activities. The proposed projects would not conflict with any other local conservation plan or preservation policy; therefore, no impacts are anticipated and no mitigation measures are required.

The Bitter Point Pump Station lies within the southeast corner of the area that is designed for a proposed park. The pump station site is situated between the Armstrong Petroleum oilfield and a wall along PCH. The property is already developed and construction of the proposed pump station would not disturb any undeveloped habitat. Any possible future development of the area for recreational purposes or conservation would not be prohibited by construction of the proposed pump station. As seen in **Figure 10**, the pump station would be constructed between existing oil production wells and PCH. Therefore, no impacts to recreation are anticipated.

V. CULTURAL RESOURCES

A. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Less Than Significant Impact

Edinger and Bitter Point Pump Stations

The rehabilitation of Edinger Pump Station and the replacement of the Bitter Point Pump Station would not disturb any known historic resources. No significant historic structures would be removed as a result of the proposed projects. Therefore, this is a less than significant impact.

A Street Pump Station

The construction of the A Street Pump Station will have a less than significant impact to historic resources. The building that currently exists on the proposed project area was constructed in 1934, but does not retain any qualities that would qualify it as an historic resource under Section 15064.5 of the CEQA Guidelines. The site is not listed in, or determined to be eligible for, the California Register of Historical Resources. A records search was conducted at the California Office of Historic Preservation to determine the status of the building proposed for demolition**.** The building was not listed in the Historic Property Data File. Therefore, although the structure is over 50 years in age, no significant impact to historic resources would be anticipated.

B. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?

Less Than Significant Impact with Mitigation Incorporation

It is not anticipated that the proposed projects (Edinger, Bitter Point, or A Street) would disturb any known archaeological resources at any of the proposed pump station locations. A record search was conducted at the South Central Coastal Information Center in March 2002. This record search identified no known archaeological sites in the vicinity of the proposed A Street, Bitter Point, and Edinger Pump Station project areas. However, unknown archaeological sites could be encountered during excavation. In order to reduce potential impacts to archaeological resources during excavation activities, the following mitigation measures are recommended.

Mitigation Measure

- In the event historical or pre-historical cultural resources are discovered during excavation activities, all work in that area shall cease until a qualified archaeologist examines the resources and provides recommendations for further assessment of the site including collection and curation tasks.

C. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact with Mitigation Incorporation

It is not anticipated that the proposed projects will disturb any known paleontological localities or resources at any of the proposed pump station locations. A paleontological record search was conducted for ESA by Dr. John Cooper, Department of Geological Sciences at California State

University Fullerton on April 10, 2002.[8] This record search identified fossil localities in the vicinity of the proposed Bitter Point project location. The Bitter Point Pump Station site is located in an area that exposes Pleistocene sediments of the San Pedro Sand. The immediate area contains six invertebrate paleontological localities. The proposed A Street Pump Station project site will not impact paleontologically sensitive sediments. The Edinger Pump Station project site will impact sediments of a low paleontological sensitivity. In order to reduce impacts to paleontological resources, the following mitigation measure is recommended.

Mitigation Measure

- In the event paleontological resources are discovered during excavation activities, all work in that area shall cease until a qualified paleontologist examines the resources and provides recommendations for further assessment of the site including collection and curation tasks.

D. Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact with Mitigation Incorporation

There are no known historic cemeteries in or around the proposed project locations. There are no known sacred Native American areas in or around the proposed project sites. In the event human remains are encountered during excavation activities, the following mitigation measure is recommended.

Mitigation Measure

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

VI. GEOLOGY AND SOILS

A. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

[8] John C. Cooper, Department of Geological Sciences, California State University Fullerton and Paleontological Collections Manager, County of Orange Curation Facility. Personal communication, April 10, 2002.

Less Than Significant Impact with Mitigation

The proposed project locations are not located within an Alquist-Priolo Earthquake Fault Zone.[9] The nearest active faults to the project areas are the Newport-Inglewood Fault, Pelican Hill Fault, Reservoir Hill-Seal Beach Fault, and offshore faults. Offshore traces of the Newport-Inglewood Fault are mapped within five (5) miles of the A Street project site to the south. Other major faults in the region include the Whittier Fault Zone and Palos Verdes Fault. Seismic activity on any of these known faults within the region could cause considerable ground shaking in the project areas.

Since earthquake related hazards cannot be avoided in the Southern California region, the project site may be subjected to ground motion which could affect structures. Unconsolidated soil types and shallow groundwater in the area create a high liquefaction potential, which could increase the potential for ground motion impacts.

The projects would not construct habitable structures or place housing within a seismic hazard area. The projects would upgrade or replace existing facilities, providing more protection from seismic impacts than currently exists. Furthermore, new structures would be designed to comply with the California Building Code (CBC) in order to reduce the potential effects of seismic shaking that may occur in the vicinity of the project area. Geotechnical analyses have been performed at each site to determine construction requirements.[10] The construction recommendations included in these studies will be incorporated into the District design and construction specifications.

The Bitter Point pump station includes the construction of a chemical dosing facility. The facility would include a polyethylene chemical storage tank. The tank would be equipped with secondary containment to accommodate the entire tank's volume during a 25-year rain event. Secondary spill containment would consist of corrugated steel wall with a polyethylene liner surrounding the storage tank. In addition, the pre-fabricated tank would be double walled, providing additional spill protection. The tank would be secured to a foundation to minimize potential damage from seismic events. Implementation of the following mitigation measure would provide additional protection.

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[9] California Division of Mines and Geology, Special Publication 42, 1997.

[10] Diaz Yourman & Associates, *Letter Report Boring Logs of Bitter Point Pump Station, Orange County Sanitation District Newport Beach, California,* February, 2001;

Diaz Yourman & Associates, *Geotechnical Investigation Replacement of A Street Pump Station, Orange County Sanitation District, Newport Beach, California,* September, 2001;

Leighton and Associates, *Geotechnical Report for the Proposed Edinger and Westside Pump Station Improvements, City of Huntington Beach and County of Orange,* May 14, 2002.

Mitigation Measure

- Chemical storage tanks and appurtenant piping and connections will be designed to withstand ground shaking to avoid potential spills during a seismic event.

B. Result in substantial soil erosion or the loss of topsoil?

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

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

Less Than Significant Impact

Geologic formations underlying the project sites consist of Holocene, Quaternary alluvium, and terrace deposits. Soils consist of native sand and silty sands. The proposed project sites are relatively flat, and no substantial erosion or landslide impact is expected as a result of the project. The projects are each located in liquefaction hazards zones as designated by the California Geological Survey.[11] The hillsides adjacent to the Bitter Point Pump Station are designated as seismic landslide hazard zones. A survey of the Bitter Point construction site, including the adjacent hillsides, was completed in February 2001.[12] During the survey it was noted that the hills are greater than two times farther from the proposed construction site than they are in height. Thus, a landslide, subsidence, or collapse from the hills would not pose an impact to the site.

As discussed above, the potential for soil liquefaction in the project areas is considered high due to the sandy soils and high water table. Subsidence, however, is not expected to occur in the project areas.[13] According to the geotechnical investigation that was completed for A Street, the site is suitable for the proposed project.[14] A geotechnical analysis of the area would be included in the design of any new structure. The design would comply with the California Building Code (CBC) minimizing any potential impact. No mitigation is required.

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?

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[11] California Division of Mines and Geology, Seismic Hazards Zones Map, Newport Beach Quadrangle and Seal Beach Quadrangle, April 1997, www.conserv.ca.gov.

[12] Diaz Yourman & Associates, *Letter Report Boring Logs of Bitter Point Pump Station, Orange County Sanitation District Newport Beach, California*, February 2001.

[13] Southern California Association of Governments, Regional Transportation Plan Update Program EIR, February 2001.

[14] Diaz Yourman & Associates, *Geotechnical Investigation Replacement of A Street Pump Station, Orange County Sanitation District, Newport Beach, California,* September, 2001.

No Impact

The nature of the proposed projects does not necessitate the need for septic tanks. The proposed projects would not involve the use of septic tanks at any of the proposed project locations. Therefore, no impacts are anticipated and no mitigation measures are required.

VII. HAZARDS AND HAZARDOUS MATERIALS

A. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
B. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
C. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
D. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant Impact with Mitigation Incorporation

Operation of the proposed A street and Edinger projects would not require the use or storage of significant quantities of hazardous materials (such as fuel and oil). Therefore, no accidental explosion or major release of hazardous materials is likely to occur.

The new Bitter Point pump station would include a chemical dosing facility as part of the District's Collection System Odor and Corrosion Control Program (OCP). Operation of this facility would require the transport, storage, and use of hydrogen peroxide and/or magnesium hydroxide. These chemicals would be routinely delivered 1 to 3 times per week and stored on-site in a 4,000-gallon above ground tank. The possibility exists that an accidental release of these chemicals could occur at some point. Concentrations of hydrogen peroxide greater than or equal to 20% are considered hazardous due to corrosivity. The concentration used at the pump station would be 50% by weight and therefore considered hazardous. However, with incorporation of the mitigation measures below, the chemicals would not pose a significant health risk when properly handled.

The Marina High School is located approximately one-quarter mile east of the Edinger Pump Station site. There are no schools located within one-quarter mile of the A Street or Bitter Point pump station sites. An asbestos and lead paint survey of the building to be demolished as part of

the construction of the new A Street Pump Station was completed in December 2001.[15] The survey found traces of both. Asbestos levels were such that abatement would be required. Lead levels were such that regulations would allow the debris to be disposed of as non-hazardous. Prior to demolition, all reported asbestos-containing building materials (ACBM) and lead-based paint (LBP) must be removed and disposed of. The proposed mitigation measure is recommended to minimize potential impacts to local residences.

Each of the projects would require some excavation that could expose contaminated soils. No known subsurface contamination exists in any of the project sites. The Bitter Point Pump Station would be located on land that has been used for oil production for many years. Excavation could encounter soils requiring disposal at a hazardous waste facility. The proposed mitigation measure is recommended to minimize potential impacts to local residences.

Mitigation Measures

- The District will follow procedures to ensure proper handling and storage of hazardous materials and reduce the potential for spills at the OCP chemical storage sites. At a minimum, the procedures will include the following:
  - obtain a permit to store hazardous materials from the local fire department;
  - provide notification of the chemical storage site location to the Orange County Health Care Agency;
  - equip chemical delivery trucks with spill cleanup equipment adequate to contain and clean up any solid or liquid spill;
  - equip chemical storage tanks with adequate secondary containment;
  - chemical transport contractors will have adequate Spill Prevention Containment and Countermeasure (SPCC) plans in place covering the chemical storage site. The SPCC Plan will cover chemical transfer activities (including DOT requirements), public notification and placarding requirements, secondary containment, emergency spill response actions, routine site access control, and site management and maintenance procedures. The contractor's SPCC Plan would require approval by the District's Safety Division.
- The District shall require that all personnel working with hazardous chemicals have health and safety training. This is a legal OSHA requirement under the Worker Right to Know regulations in the Federal Code of Regulations, Title 29. The training shall include, at minimum, the proper use of safety equipment, hazard identifications, and proper handling and disposal of spilled hazardous materials.

[15] Ceres Technologies, *Pre-Demolition Asbestos Survey and Lead-Based Paint Survey, Vacant Restaurant Building, 810 East Balboa Boulevard,* Newport Beach, California, 2002.

- Access to OCP chemical storage sites will be controlled to allow access only to authorized personnel.

- All asbestos-containing building materials and lead-based paint will be removed and disposed of by a licensed abatement contractor in the manner required by law prior to demolition of the building. A California Certified Asbestos Consultant (CAC) will perform abatement air monitoring during the removal process and certify that all materials have been removed. The demolition of the existing structure at A Street would be done in accordance to Newport Beach's Waste Management Plan.

- If contaminated soils are encountered during excavation, construction activities will stop. The Regional Water Quality Control Board will be immediately notified. Excavation, disposal of excavated soils, dewatering, and backfilling will occur in compliance with hazardous waste management regulations, under the supervision of the Regional Water Quality Control Board, Department of Toxic Substance Control, and County Health Care Agency as appropriate.

E. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

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

G. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

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

No Impacts

The project sites are not located within the immediate vicinity of any airport or private airstrip. The sites are also absent of any wildland or substantial amount of dry brush that could expose people to wildfire risks. The proposed projects would not result in a safety hazard for the people working in the area or visiting the project site.

In the event of an emergency, all emergency procedures would be implemented within local, state and federal guidelines during construction and operation of the proposed projects. OCSD will contact emergency service providers and law enforcement of planned lane closures, as stipulated in its 1999 Strategic Plan PEIR. No full street closures are anticipated to occur. No impacts to emergency services are anticipated.

VIII. HYDROLOGY AND WATER QUALITY

A. Violate any water quality standards or waste discharge requirements?

Less than Significant Impact

The proposed projects will upgrade OCSD's infrastructure. Upgrades are considered beneficial to long term water quality by reducing the potential for sewer leaks and spills. Each project involves excavation up to 31 feet deep for underground structures, sewer lines, and force mains.

It is expected that groundwater will be encountered at the A Street and Bitter Point sites. The method of excavation consists of installing diaphragm soil-concrete mix shoring walls (drilled overlapping columns). The soil will then be removed and bracing installed. Any water removed as the soil is excavated would be captured and drained/pumped into a nearby sanitary sewer, tributary to the District's collection system. The bottom of the excavation will be sealed with a concrete tremie slab and the entrapped water pumped into the sanitary sewer to create a dry excavation. According to sampling performed as part of the geotechnical investigations, no water quality impacts are expected during the installation of the walls, tremie slab, or the dewatering of the open excavation.[16]

Storm drains in the vicinity of the A Street Pump Station empty into Newport Bay approximately 150 feet east of the site. From the Bitter Point Pump Station, storm drains lead to the Pacific Ocean located approximately 500 feet south of the site. From the Edinger Pump Station, storm drains empty into the Westminster Flood Control Channel, immediately north of the project site. Construction staging areas will be confined such that oil, grease, and other fuel products from equipment will not drain to storm drains. If heavy-duty construction equipment is stored overnight, drip pans will be placed beneath the machinery engine block and hydraulic systems, to be removed the next day. Construction activities greater than one acre planned to take place after March of 2003 will be required to prepare Storm Water Pollution Prevention Plans (SWPPPs) for compliance with the Phase II State-Wide General Storm Water Construction Activities permit. Construction activities would be conducted in conformance with the District's standard specifications and mitigation measures identified in the SEIR/PEIR, which requires contractors to implement best management practices to avoid discharging construction runoff water to the storm

[16] Diaz Yourman & Associates, *Letter Report Boring Logs of Bitter Point Pump Station, Orange County Sanitation District Newport Beach, California,* February, 2001;

Diaz Yourman & Associates, *Geotechnical Investigation Replacement of A Street Pump Station, Orange County Sanitation District, Newport Beach, California,* September, 2001;

Williams, Ken, Santa Ana Regional Water Quality Control Board, personal communication, March 6, 2001.

drains to prevent adverse impacts to surface water quality. No impacts to receiving water quality are anticipated.

The Bitter Point pump station includes the construction of a chemical dosing facility as part of the District's OCP. A 4,000-gallon capacity above ground storage tank would be installed as part of the project. Chemicals stored in the tank could impact water quality if a spill were to occur. With implementation of BMPs and spill prevention and control measures (see Section VII. Hazards and Hazardous Materials above) no significant impact is anticipated and no further mitigation is necessary.

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

C. Substantially alter the existing drainage pattern of 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?

E. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems?

F. Otherwise substantially degrade water quality?

No Impact

The projects would not alter the drainage patterns of the area. The project locations are relatively flat. Storm water runoff from the sites will enter the storm drains and discharge into Newport Bay, the Pacific Ocean, and the Westminster Flood Control Channel. Each property to be developed has been previously developed with impermeable surfaces. No substantial increases in runoff are anticipated. The projected runoff from the sites would not exceed capacity of the existing storm drains.

The excavations are up to 31 feet deep. Soil borings indicated groundwater would not be encountered at the Edinger Pump Station site. Borings at the A Street and Bitter Point pump station sites indicated groundwater but not of a potable quality (the sites are within 1,000 feet of the Pacific Ocean). Thus, the proposed projects would not deplete or interfere with potable water sources. No impacts to ground water are anticipated

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?

Less than Significant Impact

Edinger Pump Station

The Edinger Pump Station is located in the 100-year flood plain (Zone A).[17] The Edinger Pump Station is subject to flood from overflows of the Westminster Flood Control Channel north of the station. No new above-grade structures would be added to the Edinger Pump Station that would impede flood flows. The subgrade portion of the pump station would be sealed and protected from flooding. No impact to the flood plain would be anticipated at the Edinger Pump Station.

A Street Pump Station

A Street pump station is located in an area designated as Zone X, which is defined as areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or within drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.[18] The project would involve demolition of an existing building and the construction of a new above grade electrical control building on the site. The wet well and pump room would be below grade. Therefore, no impacts to the flood plain are anticipated.

Bitter Point Pump Station

The site for the new Bitter Point Pump Station is located in an area designated as Zone X, which is defined as areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or within drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.[19] The pump station would be located in the same area that is currently occupied by a six foot tall block wall shielding oil field operations from the Pacific Coast Highway. The new pump station would replace the existing wall with a 1,200 square-foot above-grade structure, new 20-foot tall wall, and landscaping. The structures would be designed to maintain the visual shield of the oilfield production units. These new structures would not alter the flood plain or impede flood flows because the length & location of the new wall will be the same as the existing wall. Nonetheless, the new structures would be designed to accommodate flood flows without increasing base flood elevations in the Pacific Coast Highway. No impact to the flood plain would be anticipated at the Bitter Point Pump Station.

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[17] U.S. Federal Emergency Management Agency, *Federal Emergency Management Agency National Flood Insurance Program Map No. 06059C0027F,* Revised January 3, 1997.

[18] U.S. Federal Emergency Management Agency, *Federal Emergency Management Agency National Flood Insurance Program Map No. 06059C0055E,* Revised September 15, 1989.

[19] U.S. Federal Emergency Management Agency, *Federal Emergency Management Agency National Flood Insurance Program Map No. 06059C0054F,* Revised February 13, 2002.

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 of seiche, tsunami, or mudflow?

Less than Significant Impact

There is no potential impact resulting from seiche or mudflow at any of the project sites. There are no levees or dams immediately upstream of any of the stations such that a failure in the levee or dam would subject the pump station to flooding. The A Street and Bitter Point project sites are near coastal waters and would be subject to inundation during a tsunami event.

OCSD's pump stations are unmanned, but periodically are serviced by District personnel. Edinger, A Street and Bitter Point pump stations would continue to be serviced and operated as such. Thus, the risk of injury to personnel from a flood or catastrophic event would not increase. Additionally, the entrance to the below grade facilities would be either sealed (Edinger) or placed at least one foot above the 100 year flood plain (A Street & Bitter Point) as an extra measure of security against flooding. The odor and corrosion control chemical storage tank at the Bitter Point pump station site would be enclosed with secondary containment that is at least one foot above the 100 year flood plain. In the event of an unforeseen disaster, OCSD would adhere to the Federal Emergency Contingency Plan and the Flood Protection Plan. This impact would be less than significant and no mitigation measures are required.

IX. LAND USE AND PLANNING

A. Physically divide an established community?

No Impact

The proposed projects would conduct construction activities within the vicinity of the existing OCSD trunk sewers. The Edinger Pump Station is entirely within the public right-of-way. The District owns the property to be used for the new A Street Pump Station (810 East Balboa Boulevard). The District is proposing to purchase the property necessary for the Bitter Point Pump Station. The proposed projects would not result in any division of the community or significantly impact low income or minority resources. Therefore, no mitigation measures are required.

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?

Less than Significant Impact

The projects are located in the cities of Huntington Beach, Newport Beach, and an unincorporated area in the County of Orange. The Edinger Pump Station will remain within the public right-of-way beneath Edinger Avenue. The property to be used for the A Street pump station is zoned for commercial uses. The Bitter Point property is zoned for residential, agricultural, light industrial, and commercial uses with an oil production and flood plain overlay.[20] As part of the project, the District would apply for a zone change to allow public utilities for the A Street and Bitter Point pump station locations. The zoning change would not conflict with surrounding land uses. Therefore, a less than significant impact is anticipated and no mitigation measures are required.

The A Street and Bitter Point Pump Stations would be located near the coastal zone and may require coastal development permits. The City of Newport Beach has developed a Local Coastal Development Program pursuant to the requirements of the California Coastal Commission. As a result, the District would coordinate with the City of Newport Beach and County of Orange to ensure compliance with the coastal development programs. The new stations replace existing stations, thus no impact to the coast is anticipated.

C. Conflict with any applicable habitat conservation plan or natural communities' conservation plan?

No Impact

The proposed A Street and Bitter Point pump stations are located within the Orange County Coastal/Central Orange County Natural Community Conservation Plan (NCCP) Subregional Planning Area.[21] However, the proposed projects would be conducted entirely within areas that are already developed and would not remove any native habitat. Therefore, the proposed projects would not conflict with any habitat conservation plan or NCCP. No impacts are anticipated and no mitigation measures are required.

X. MINERAL RESOURCES

A. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

B. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

[20] Trudy Teshima, County of Orange Planning Department, telephone communication, January 9, 2003.

[21] California Department of Fish and Game website, http://www.dfg.ca.gov/nccp/cssreg.htm, accessed August 1, 2002.

Less than Significant with Mitigation Incorporation

The proposed projects would not result in the loss of availability of any mineral resource that would be of future value. The Bitter Point Pump Station would encompass approximate 8000 square feet of an existing oilfield's surface facility site. The station would be located just south of operating oil well pumping units (rocking horses). The relocation of the overhead electrical power lines will briefly interrupt power to the pumping units. The interruptions are anticipated to be no more than one half to two hours long. The units operate intermittently, and a brief interruption would not impede overall oil production activities. The oilfield operations would also witness brief interruptions to their gas production lines during their rerouting around the new pump station's location. The following mitigation measure would minimize impacts to the oilfield facility.

Mitigation Measure

- The District will coordinate electrical service interruptions with Armstrong Petroleum Corporation and West Newport Oil Company to minimize oil and gas production impacts.

XI. 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 noise ordinance, or applicable standards of other agencies?

B. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant With Mitigation Incorporation

Edinger and A Street pump stations are located within the cities of Huntington Beach and Newport Beach, respectively. Each is bordered by residential, commercial, and recreational properties. Edinger is also border by educational properties. Bitter Point Pump Station is located in an unincorporated area of Orange County adjacent to the City of Newport Beach. It is bordered by residential, commercial, and undeveloped properties. The distance from the boundary of the proposed construction activities to the closest residences is less than 50 feet for the A Street and 100 feet for the Edinger and Bitter Point Pump Stations. The residences, which are considered noise-sensitive land uses, would potentially be exposed to noise generated from on-site construction activities.

Construction noise levels near the project sites would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. Table 3 shows noise

levels associated with various types of construction related machinery. According to Table 3, noise levels as high as 83 dBA, could be experienced by adjacent sensitive receptors.

TABLE 3: DEMOLITION AND CONSTRUCTION EQUIPMENT SOURCE NOISE LEVELS

Equipment Type	Typical Equipment at 50 feet (in dBA)	Quieted Equipment [a] at 50feet (in dBA)
Air Compressor	81	71
Backhoe	85	80
Concrete Pump	82	80
Concrete Vibrator	76	70
Concrete Breaker	82	75
Truck Crane	88	80
Generator	78	71
Paver	88	80
Pneumatic Tools	85	75
Water Pump	76	71
Power Hand Saw	78	70
Shovel	82	80
Trucks	88	83

a. Quieted equipment can be designed with enclosures, mufflers, or other noise-reducing features.
Source: Bolt, Beranek, and Newman, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, U.S. Environmental Protection Agency*, 1971.

Edinger Pump Station

Construction of the Edinger Pump Station would be temporary, and would be in compliance with the City of Huntington Beach Municipal Code Chapter 8 Section 8.40.090(d) (Noise Control), which limits construction activities to the hours of 7:00 a.m. to 8:00 p.m. on weekdays and Saturdays.

A Street Pump Stations

Construction of the A Street Pump Station would be temporary and would be in compliance with the City of Newport Beach construction guidance which limits construction activities to 7:00 a.m. to 6:30 p.m. on weekdays, 8:00 a.m. to 6:00 p.m. on Saturdays and prohibits construction on Sundays and holidays.

Bitter Point Pump Stations

Construction of the Bitter Point Pump Station would be temporary and would be in compliance with the County of Orange construction guidance, which limits construction activities to 7:00 a.m.

to 8:00 p.m. on weekdays and Saturdays, and prohibits construction on Sundays and Federal holidays.

Adherence to the ordinance and policies is considered by the Cities and County to be adequate mitigation for construction noise. Additional mitigation measures provided below would further reduce the potential for noise impacts.

Mitigation Measures

- Construction activities shall be performed in accordance with District and applicable City of Huntington Beach and Newport Beach and County of Orange noise standards.

- All construction equipment, stationary and mobile, shall be equipped with properly operating and maintained muffling devices.

- Communication with the local residents shall be maintained during construction including keeping them informed of the schedule, duration, and progress of the construction to minimize public concerns regarding noise levels.

C. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact

The proposed projects entail the rehabilitation or replacement of existing pump stations. The projects would not subject people to substantial permanent increases in ambient noise levels in the project vicinity above levels existing without the projects. The pump stations would be insulated to comply with ambient noise standards set by the cities of Huntington Beach, Newport Beach, and County of Orange. No impact is anticipated.

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

Less than Significant With Mitigation Incorporation

Construction activities associated with the projects would generate short-term noise as stated above. Mitigation measures as above will be taken to minimize the noise.

E. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project 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?

No Impact

None of the pump station operations are within two miles of an airport or affected by aircraft overflight. Construction of the proposed projects would be temporary and would not expose workers to an unreasonable level of noise from airport operations. No impacts are anticipated and no mitigation measures are required.

XII. POPULATION AND HOUSING

A. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

B. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

C. Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?

No Impact

The 1999 Strategic Plan PEIR assessed growth impacts of increasing wastewater collections and treatment capacity. Hydraulic modeling of the collection system based on the master plans of the cities and agencies served by OCSD was used to determine the effects on OCSD's facilities. The secondary effects of growth accommodation were addressed in the 1999 PEIR. The Edinger Pump Station and Bitter Point projects were identified in the PEIR as requiring increased capacity. A Street Pump Station was not addressed by the PEIR, but evaluated in a subsequent engineering study that recommended the pump station be replaced.[22] The final capacities of the pump stations would ensure that the stations are of sufficient size for future peak flow events.

The proposed projects would rehabilitate or relocate existing pump stations and extend local sanitary sewers and force mains. No housing would be constructed, destroyed, or replaced as a result of the projects. No impact is anticipated and no mitigation measures are required.

XIII. PUBLIC SERVICES

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

[22] Lee & Ro, Inc. Preliminary Design Report, Rehabilitation (Replacement) of the A Street Pump Station, November 2001

Fire protection?
Police protection?
Schools?
Parks?
Other public facilities?

Less than Significant Impact

The projects would rehabilitate or relocate existing facilities and extend nearby sanitary sewers. No impacts to fire or police services are anticipated. Emergency access on city streets will be maintained at all times during construction (see Transportation Section). Construction would take place adjacent to residences and commercial business but would be temporary and would not impact any public services used. Nearby parks (Peninsula Park, Balboa Pier, and Marina Park) and schools (Marina High School) would not be affected. No significant impacts are anticipated and no mitigation measures are required.

XIV. 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?

Less than Significant

The proposed projects are pump station rehabilitation and replacement projects and would not increase the demand for or use of neighborhood or regional parks.

Edinger Pump Station

Marina Park is located north of the Edinger Pump Station site and is separated from the site by the Westminster Flood Control Channel. However, construction activities would not significantly impede access to these areas, and no full street closures are anticipated. At least one lane of traffic in each direction will be kept open through the duration of construction activities on Edinger Avenue and Graham Street. (See Figures 2 and 3.)

A Street Pump Station

Peninsula Park and Balboa Pier are located one block south of the A Street Pump Station site. Since A Street is a one-way street, north of Balboa Boulevard, delivery trucks and soil haul trucks entering the construction area will head south on Balboa Avenue to Main Street, turn left on Main Street, turn right on Bay Avenue, right on A Street, and right again on Balboa Avenue (See

Figure 13). This truck traffic could impact traffic accessing the marina at Bay Avenue. The traffic control plan, subject to the City of Newport Beach approval (See Section XV Transportation/Traffic mitigation measure), will incorporate truck parking restrictions on these side streets to minimize the impact. Due to the temporary nature of the truck delivery trips, this is considered a less than significant impact.

Bitter Point Pump Station

The proposed pump station would be constructed on property that is part of the Armstrong Petroleum Corporation's operations. There are no recreational areas located on or adjacent to the site. The Orange County Friends of Harbors, Beaches & Parks has plans to develop the Orange Coast River Park and nature preserve in the vicinity of the mouth of the Santa a River. The park would cover portions of the Cities of Costa Mesa, Newport Beach, and Huntington Beach, and be under the jurisdiction of the County, State and Federal Governments. The park is proposed as a cooperative venture of Costa Mesa, Newport Beach, and Huntington Beach, the County and private landowners. The Bitter Point Pump Station lies within the southeast corner of the area that is designed for the proposed park. The pump station site is situated between the Armstrong Petroleum oilfield and a wall along PCH. The property is already developed and construction of the proposed pump station would not disturb any undeveloped habitat. Any possible future development of the area for recreational purposes or conservation would not be prohibited by construction of the proposed pump station. As seen in **Figure 10**, the pump station would be constructed between existing oil production wells and PCH. Therefore, no impacts to recreation are anticipated.

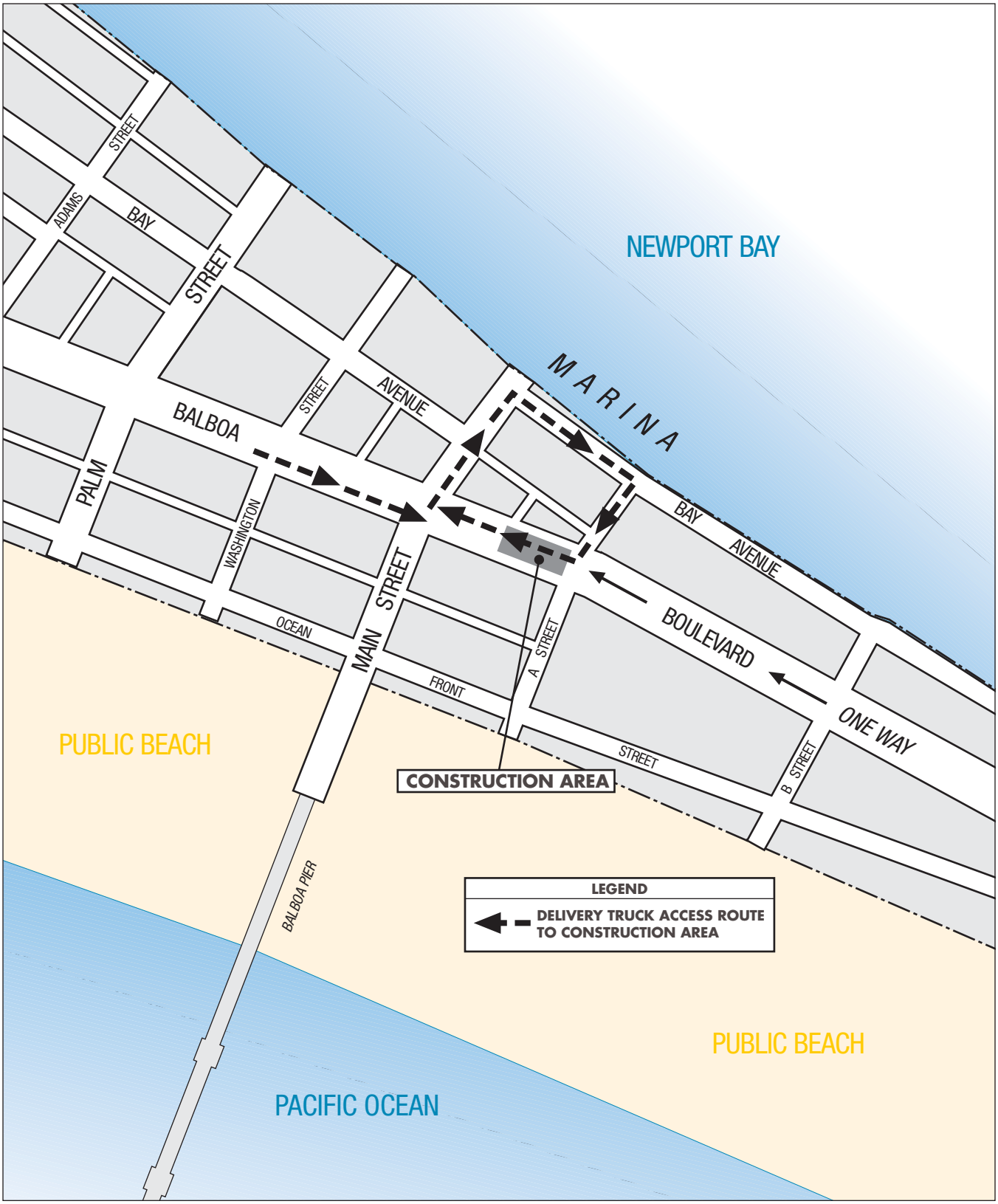
XV. TRANSPORTATION / TRAFFIC

A. Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?

B. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Less than Significant Impact with Mitigation Incorporation

Implementation of the projects would not result in a long-term increase in traffic trips. However, construction activities would temporarily add to local traffic, including worker commute, equipment deliveries, and soil removal, and to the need for parking. For each pump station project, it is anticipated that approximately 10 employees would arrive at the site in the morning and leave in the evening. In addition, approximately five deliveries per day would be anticipated over the duration of the construction period. Worker parking would be provided on local streets



SOURCE: Environmental Science Associates

Figure 13

Delivery Truck Route to A Street Construction Area

for Edinger and A Street pump stations. Worker parking would be provided on the construction site for Bitter Point Pump Station. Approximately 550, 1,500, and 3,400 cubic yards of soil will be removed at Edinger, A Street, and Bitter Point pump station sites respectively. The soil removal activities would require a total of approximately 30 to 170 haul truck trips for each project site.

No full street closures are anticipated for the projects. Nonetheless, traffic on East and West Balboa Boulevard, A Street, Edinger Avenue, and Pacific Coast Highway may experience delays due to construction traffic and partial lane closures associated with the planned pump station projects.

Edinger Pump Station

Encroachment permits from the City of Huntington Beach would be required to construct within the street and sidewalk. The encroachment permit would include traffic control plans to be implemented during construction activities in the street. The traffic control plans would require notification of any lane closures to emergency service providers and the Orange County Transportation Authority (OCTA). At least one lane of traffic in each direction would be kept open at all times.

A Street Pump Station

The A Street location has several one-way streets in the immediate vicinity: Main Street runs one-way toward Newport Bay from East Balboa Boulevard to Bay Avenue; Bay Avenue runs one-way toward the southeast from Main Street to A Street; and A Street runs one-way toward the ocean from Bay Avenue to East Balboa Boulevard. Traffic along these streets may experience delays due to construction related traffic.

Encroachment permits from the City of Newport Beach would be required to construct within the streets. The encroachment permit would include traffic control plans to be implemented during construction activities in the street. The traffic control plans would also require notification of any lane closures to emergency service providers and the Orange County Transportation Authority (OCTA).

The A Street Pump Station project would also require a Temporary Street Closure/Sidewalk Closure Permit from the City of Newport Beach. Since Balboa Boulevard is sometimes used as a parade route, timing of construction activities would be coordinated to avoid traffic impacts and maintain public access during these periods. The following mitigation measure would reduce this short-term impact to a less than significant level.

Bitter Point Pump Station

The Bitter Point Pump Station project could require an encroachment permit from Caltrans, since one lane of Pacific Coast Highway could be temporarily blocked. Work to replace the existing wall and/or trenching to reroute sewer trunk or force mains could require a lane closure. The encroachment permit would include traffic control plans to be implemented during construction activities in the street.

Mitigation Measure

- A traffic control plan will be prepared for each project. The plan will assign delivery truck routes, incorporate truck parking restrictions, and develop notification requirements to local businesses, emergency service providers, and public transportation (i.e. bus, bicycle, etc.) providers. Furthermore, dirt haul trucks and construction deliveries shall avoid peak traffic periods (7:00 – 9:00 am) and (4:00 – 6:00 pm) to the extent feasible.

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 to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact

The projects are more than two miles from John Wayne airport and would not alter air traffic patterns. The projects are adjacent to the new and/or existing pump stations. They include excavation and/or trenching in streets adjacent to the existing stations, however, the projects would not alter the current roadway designs. Therefore, no impact is expected. No mitigation measures are required.

E. Result in inadequate emergency access?

Less than Significant Impact

Edinger Pump Station

Traffic would be disrupted along Edinger Avenue, near Graham Avenue as a result of the Edinger Pump Station project. Edinger is a four-lane street traversing east to west and consisting of two lanes in each direction. At least one lane in each direction would be open at all times during project activities and through intersections. As part of the project, the contractor would obtain an encroachment permit from the city of Huntington Beach. The encroachment permit would include a traffic control plan to be implemented during the work conducted within the street. No full street closures are anticipated. No significant impacts to traffic would be anticipated.

A Street Pump Station

Traffic would be disrupted along East Balboa Boulevard from Main Street through B-Street as a result of the A Street Pump Station project. East Balboa Boulevard transfigures from a four-lane street to a two-lane street between Main and A streets. At least one lane in each direction would be open at all times during the majority of project activities and through intersections. During the two week period that the existing station is removed, only one lane with flag men may be available. Traffic in the alley adjacent to the site would also be disrupted. The garages of several residences are located along the alley, which could potentially interfere with emergency access. However, access to the homes would be available from Bay Avenue. As part of the project, the contractor would obtain an encroachment permit from the city of Newport Beach. The encroachment permit would include a traffic control plan to be implemented during the work conducted within the street and alley. No full street closures are anticipated.

Bitter Point Pump Station

Traffic could be disrupted along Pacific Coast Highway at the entrance to the Armstrong Petroleum Oilfield during the construction of the Bitter Point Pump Station. Rerouting of the gravity sewers and force mains to and from the new pump station may require trenching in Pacific Coast Highway. The work shall be done in accordance with City of Newport Beach, County of Orange, and Caltrans' requirements. Such work is usually done between 8:00 p.m. and 5:00 a.m. to have a minimum effect on traffic. Prior to construction, the Districts will obtain an encroachment permit from Caltrans. The permit will specify measures to minimize impacting traffic on the heavily used highway.

F. Result in inadequate parking capacity?

Less than Significant with Mitigation Incorporation

Edinger and Bitter Point Pump Stations

Neither construction easement (site) contains public parking spaces. Parking would not be impacted by the proposed Edinger or Bitter Point Pump Station projects.

A Street Pump Station

The proposed construction for the A Street Pump Station would temporarily impact approximately five metered parking spaces. Limited metered parking is provided along East Balboa Boulevard. Since activities would take place along the outside lane of the westbound side of the road, access to these spaces would be impeded intermittently by construction activities during the week. The spaces would be available during the weekends. The reduced parking could impact nearby commercial businesses, the public beach, and residences. In order to reduce this impact to a less than significant level, the following mitigation measures are required.

Mitigation Measure

- The District shall notify the City of Newport Beach, local residences, and businesses that parking may be impacted at least one week prior to trenching along East Balboa Boulevard.

- After construction hours end each day, trenching, and excavation would be covered with steel plates and construction vehicles removed from the street to restore parking.

G. Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Less than Significant Impact

The projects would impose a minor impact on bus routes, bus stops, and bicycle lanes during construction. The District's master specifications include measures to minimize the effects of construction on bus routes, but stops, trails, and bikeways. The traffic control plan prepared for each project will contain measures, coordinated with the appropriate cities and agencies, to reduce impacts.

Edinger Pump Station

The Edinger Pump Station project is located directly adjacent to an OCTA bus stop for Route 70 and bicycle lane. Bus traffic and bike traffic would be detoured around the construction area within Edinger Avenue in accordance with the traffic control plan, approved by the City of Huntington Beach, the County of Orange's Division of Harbors, Beaches and Parks/Trails Planning and Implementation, and OCTA.

A Street Station

The OCTA operates a bus route (Route 71) along East Balboa Boulevard. Bus stops would not be impacted along East Balboa Boulevard. Bus traffic and bike traffic would be detoured around the construction area within Balboa Avenue in accordance with the traffic control plan, approved by the City of Newport Beach, the County of Orange's Division of Harbors, Beaches and Parks/Trails Planning and Implementation, and OCTA.

Bitter Point Pump Station

The Bitter Point Pump Station project is located adjacent to the bike lane located in the west/north bound lanes of Pacific Coast Highway. Bike traffic could be impacted. The traffic would then be detoured around the construction area within Pacific Coast Highway in accordance with traffic control plans, approved by Caltrans, the City of Newport Beach, the County of Orange's Division of Harbors, Beaches and Parks/Trails Planning and Implementation, and OCTA. The following mitigation measure reflects the requirements of the 1999 Strategic Plan Program EIR and mitigates the potential impact to bike traffic to less than significant levels.

Mitigation Measure

- Short-term construction impacts and closures to locally designated trails and bikeways shall be mitigated with detours, signage, flagmen and reconstruction as appropriate. Regional riding and hiking trails and Bikeways impacted by construction shall be restored to their original condition after project construction.

XVI. UTILITIES AND SERVICE SYSTEMS

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?
C. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
D. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
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?
F. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
G. Comply with federal, state, and local statutes and regulations related to solid waste?

Less than Significant with Mitigation Incorporation

The projects either rehabilitate or replace existing OCSD wastewater pump stations. The 1999 Strategic Plan identified Edinger and Bitter Point pump stations for capacity upgrades. Thus, the 1999 PEIR addressed those stations. The A Street Pump Station was not addressed by either the Strategic Plan or PEIR. The existing A Street Pump Station will be replaced with a new station of the same capacity.

Construction of the new A Street Pump Station will require demolition of an existing restaurant building. The demolition shall be done in accordance with the City of Newport Beach Waste Management Plan. Equipment from within the vacant restaurant would be salvaged prior to demolition. As described in the Hazards Section of this analysis, the lead based paint and asbestos containing materials to be removed prior to demolition will be disposed of at a permitted hazardous waste disposal facility. Pump station equipment, piping, etc. to be replaced will be salvaged by OCSD. Therefore, no significant impact is anticipated and no mitigation measures are required. Landscaping with low water plants will be added with the new station. Irrigation water would be supplied to the site from existing water facilities by the City of Newport Beach. No additional impacts are anticipated.

Each project will require excavation for a new below grade structure. A Street and Bitter Point pump stations will also require trenching to extend existing pipelines to and from the new stations. The soil, totaling approximately 5,800 cubic yards, would be hauled to OCSD's Treatment Plant No. 2 in the City of Huntington Beach if space is available, recycled for reuse, or hauled to a local municipal landfill. In accordance with the District's standard construction specifications, contractors shall make all practicable efforts to recycle soils. The one-time volume of soil to be removed (5,800 cubic yards) would not tax regional landfill capacity. Thus, no mitigation measures are required.

It is expected that groundwater will be encountered during the excavation for the A Street and Bitter Point projects (reference Hydrology and Water Quality section). The floor of the excavation will be sealed with a tremie slab due to the expected groundwater. The entrapped water would then be pumped and discharged into a nearby sanitary sewer tributary to the District's collection system and treated at OCSD's Treatment Plant No. 2. The flow rate, less than one tenth of one percent of the plant's daily average flow, would have no measurable impact on the quality of wastewater treatment. Sanitary services to surrounding residences and businesses would be maintained throughout construction of the new pump station. None of the stations will require new storm water drainage facilities. Thus, no mitigation measures are required.

The projects would not affect water supplies or solid waste disposal capacity needs. Landscaping would utilize low water use plants. Piping and equipment from the decommissioned pump stations and restaurant that is to be demolished would be salvaged. Therefore, no mitigation is necessary.

Excavation and trenching would uncover underground utilities. Underground utility location surveys would be conducted as part of the projects. At Bitter Point, it is anticipated that the existing pump station, oilfield operations, and property owners' development offices may experience brief power interruptions during Southern California Edison's transfer of power from the overhead lines to the newly installed underground power lines. The interruptions are anticipated to be no more than one half to two hours long. The storage capacity of the upstream sewage collection system can handle such interruptions of power to the station. The oilfield operations would also witness brief interruptions to their potable water supply lines during their rerouting around the new pump station's location. The following mitigation measures are similar to requirements of the 1999 Strategic Plan Program EIR that also apply to the project.

Mitigation Measure

- Utility locations shall be verified through field surveys.

- Utility excavation or encroachment permits shall be obtained from the appropriate agencies, which will include measures to minimize utility disruption.

- Detailed specifications shall be prepared as part of the design plans to include procedures for the excavation, support, and fill or areas around utility cables and pipes. All affected utility services would be notified of the District's construction plans and schedule. Arrangements shall be made with these entities regarding protection, relocation, or temporary disconnection of services.

XVII. 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?

B. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulative considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

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

No Impact

The proposed projects rehabilitate or replace existing pump stations. The additional or new structures would be adjacent to the existing facilities. The locations do not support wildlife. No significant cultural resources are known to exist at the locations. The projects would not contribute significantly to cumulative adverse impacts in the region. The projects enhance the reliability of OCSD's existing infrastructure. The mitigation measures identified in this document would ensure that no significant adverse impacts to human beings would be associated with operation or construction.

SECTION 4.0
SUMMARY OF MITIGATION MEASURES

This section provides a summary of mitigation measures identified in the Initial Study. These mitigation measures will be added to the construction contractor's job specifications.

AESTHETICS

- The architectural design and landscaping of the new A Street above grade facilities (electrical control building, landscaping, etc.) shall integrate with the surrounding area and comply with the City of Newport Beach's redevelopment plans. The design and landscape of the new Bitter Point above grade facilities (electrical control building, wall, landscaping, etc.) shall meet the City's goal of shielding the oilfield pumping units from sight while enhancing the visual character of the site. The landscaping shall incorporate low water-use plants.

- Exteriors lights at A Street and Bitter Point pump station will be directed downward and oriented to ensure that no light source will be directly visible from any neighboring residential areas. Motion sensors will control the lights when the station is unmanned. The new lights will not conflict with surrounding land uses, add substantial light

AIR QUALITY

- Construction equipment will be shut off to reduce idling when not in direct use. Diesel engines, motors, or equipment shall be located as far away as possible from existing residential areas.

- Stationary and mobile equipment shall be placed as far from residential areas as possible within the temporary construction easement and new station's site.

- The contractor shall notify residences within 300 feet of each construction site by posting notices along those streets of planned construction activities at least one week before the start of construction. Marina High School (Edinger) and West Newport Oil and Armstrong Petroleum Oilfield (Bitter Point) shall also be notified by letter at least two weeks prior to the start of construction. The notifications shall include a planned schedule and contact information.

CULTURAL RESOURCES

- In the event historical or pre-historical cultural resources are discovered during excavation activities, all work in that area shall cease until a qualified archaeologist examines the resources and provides recommendations for further assessment of the site including collection and curation tasks.

- In the event paleontological resources are discovered during excavation activities, all work in that area shall cease until a qualified paleontologist examines the resources and provides recommendations for further assessment of the site including collection and curation tasks**.**

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

GEOLOGY AND SOILS

- Chemical storage tanks and appurtenant piping and connections will be designed to withstand ground shaking to avoid potential spills during a seismic event.

HAZARDS AND HAZARDOUS MATERIALS

- The District will follow procedures to ensure proper handling and storage of hazardous materials and reduce the potential for spills at the OCP chemical storage sites. At a minimum, the procedures will include the following:

  - obtain a permit to store hazardous materials from the local fire department;

  - provide notification of the chemical storage site location to the Orange County Health Care Agency;

  - equip chemical delivery trucks with spill cleanup equipment adequate to contain and clean up any solid or liquid spill;

  - equip chemical storage tanks with adequate secondary containment;

  - chemical transport contractors will have adequate Spill Prevention Containment and Countermeasure (SPCC) plans in place covering the chemical storage site. The SPCC Plan will cover chemical transfer activities (including DOT requirements), public notification and placarding requirements, secondary containment, emergency spill response actions, routine site access control, and site management and maintenance procedures. The contractor's SPCC Plan would require approval by the District's Safety Division.

- The District shall require that all personnel working with hazardous chemicals have health and safety training. This is a legal OSHA requirement under the Worker Right to Know regulations in the Federal Code of Regulations, Title 29. The training shall include, at minimum, the proper use of safety equipment, hazard identifications, and proper handling and disposal of spilled hazardous materials.

- Access to OCP chemical storage sites will be controlled to allow access only to authorized personnel.

- All asbestos-containing building materials and lead-based paint will be removed and disposed of by a licensed abatement contractor in the manner required by law prior to demolition of the building. A California Certified Asbestos Consultant (CAC) will perform abatement air

monitoring during the removal process and certify that all materials have been removed. The demolition of the existing structure at A Street would be done in accordance with Newport Beach's Waste Management Plan.

- If contaminated soils are encountered during excavation, construction activities will stop. The Regional Water Quality Control Board will be immediately notified. Excavation, disposal of excavated soils, dewatering, and backfilling will occur in compliance with hazardous waste management regulations, under the supervision of the Regional Water Quality Control Board.

MINERAL RESOURCES

- The District will coordinate electrical service interruptions with Armstrong Petroleum Corporation and West Newport Oil Company to minimize oil and gas production impacts.

NOISE

- Construction activities shall be performed in accordance with District and applicable City of Huntington Beach and Newport Beach and County of Orange noise standards.

- All construction equipment, stationary and mobile, shall be equipped with properly operating and maintained muffling devices.

- Communication with the local residents shall be maintained during construction including keeping them informed of the schedule, duration, and progress of the construction to minimize public concerns regarding noise levels.

TRANSPORTATION/TRAFFIC

- A traffic control plan will be prepared for each project. The plan will assign delivery truck routes, incorporate truck parking restrictions, and develop notification requirements to local businesses, emergency service providers, and public transportation (i.e. bus, bicycle, etc.) providers. Furthermore, dirt haul trucks and construction deliveries shall avoid peak traffic periods (7:00 – 9:00 am) and (4:00 – 6:00 pm) to the extent feasible.

- The District shall notify local residences and businesses that parking may be impacted at least one week prior to trenching along East Balboa Boulevard.

- After construction hours end each day, trenching and excavation would be covered with steel plates and construction vehicles removed from the street to restore parking.

- Short-term construction impacts and closures to locally designated trails and bikeways shall be mitigated with detours, signage, flagmen and reconstruction as appropriate. Regional riding and hiking trails and Bikeways impacted by construction shall be restored to their original condition after project construction.

UTILITIES AND SERVICE SYSTEMS

- Utility locations shall be verified through field surveys.

- Utility excavation or encroachment permits shall be obtained from the appropriate agencies, which will include measures to minimize utility disruption.

- Detailed specifications shall be prepared as part of the design plans to include procedures for the excavation, support, and fill or areas around utility cables and pipes. All affected utility services would be notified of the District's construction plans and schedule. Arrangements shall be made with these entities regarding protection, relocation, or temporary disconnection of services.

SECTION 5.0
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APPENDIX A

MATERIAL SAFETY DATA SHEETS

Material Safety Data Sheet

Revision Issued: 8/21/97 Supercedes: 8/21/97 First Issued: 8/21/97

Section I - Chemical Product And Company Identification

Product Name: Thioguard

CAS Number: 1309-42-8 HBCC MSDS No. CM04450

HILL BROTHERS Chemical Co.

1675 NORTH MAIN STREET • ORANGE, CALIFORNIA 92867-3408
(714) 998-8800 • FAX: (714) 998-0310
http://hillbrothers.com

1675 No. Main Street, Orange, California 92867
Telephone No: 714-998-8800 | Outside Calif: 800-821-7234 | Chemtrec: 800-424-9300

Section II - Composition/Information On Ingredients

			Exposure Limits (TWAs) in Air		
Chemical Name	CAS Number	%	ACGIH TLV	OSHA PEL	STEL
Magnesium Hydroxide	1309-42-8	51-55	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)	15 mg/m³ (total dust)	N/A

Section III - Hazard Identification

Routes of Exposure: N/A

Summary of Acute Health Hazards: The product presents a very low health risk. Magnesium hydroxide is a general purpose food additive. Dust generated from the dried product is classified as a nuisance dust.

Ingestion: Ingestion is unlikely. If ingested in sufficient quantity, may cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting, abdominal pain and diarrhea.

Inhalation: May irritate the respiratory tract on prolonged or repeated contact. May aggravate pre-existing respiratory conditions.

Skin: Repeated or prolonged contact may cause irritation.

Eyes: May irritate or injure eyes.

Summary of Chronic Health Hazards: The excessive inhalation above (TLV) of mineral dust, over long periods of time, may cause industrial bronchitis, reduce breathing capacity, and lead to increased susceptibility to other lung disease.

Signs and Symptoms of Exposure: N/A

Effects of Overexposure: N/A

Medical Conditions Generally Aggravated by Exposure: Dust from the dried product may aggravate pre-existing chronic lung conditions such as, but not limited to, bronchitis,

emphysema, and asthma.
Note to Physicians: N/A

Section IV - First Aid Measures

Ingestion: Low toxicity. Give 1 - 2 glasses of water and seek immediate medical attention. Never give anything by mouth to an unconscious person. Leave decision to induce vomiting for medical personnel, since some particles may be aspirated into the lungs.
Inhalation: Move to fresh air; if discomfort persists, get medical attention.
Skin: Wash with soap and water.
Eyes: Irrigate immediately with plenty or water. Obtain medical attention if necessary.

Section V - Fire Fighting Measures

Flash Point: N/A
Autoignition Temperature: N/A
Lower Explosive Limit: N/A
Upper Explosive Limit: N/A
Unusual Fire and Explosion Hazards: N/A
Extinguishing Media: N/A
Special Firefighting Procedures: N/A

Section VI - Accidental Release Measures

Dike the spilled liquid, and either pump back into original container or cover with clay-type substance for absorption.

Section VII - Handling and Storage

Store at ambient temperature. Prevent possible eye and skin contact by wearing protective clothing and equipment.

Section VIII - Exposure Controls/Personal Protection

Respiratory Protection: Respirator approved by NOISH/ MSHA are adequate for contaminate concentrations encountered.
Ventilation: N/A
Protective Clothing: Gloves are recommended, rubber gloves are recommended when repeated or prolonged contact is likely.
Eye Protection: Safety glasses are recommended.
Other Protective Clothing or Equipment: N/A
Work/Hygienic Practices: Avoid contact with the eyes and skin.

Section IX - Physical and Chemical Properties

Physical State: Milky liquid
pH: 10-11
Melting Point/Range: N/A
Boiling Point/Range: 212°F, 100°C
Appearance/Colur/Odor: White-off white, no odor
Solubility in Water: Nil
Vapor Pressure(mmHg): 24 by volume
Specific Gravity (Water=1): 1.4@60°F
Molecular Weight: 58.34

Vapor Density(Air=1): N/A **% Volatiles:** 51-55

How to detect this compound : N/A

Section X - Stability and Reactivity

Stability: Stable **Hazardous Polymerization:** Will not occur

Conditions to Avoid: N/A

Materials to Avoid: Acids and maleic anhydride. Magnesium hydroxide is soluble in aqueous acids generating heat.

Hazardous Decomposition Products: None

Section XI - Toxicological Information

N/A

Section XII - Ecological Information

N/A

Section XIII - Disposal Considerations

May be disposed of in a secured sanitary landfill. Disposal must be done in accordance with Local, State, and Federal regulations.

Section XIV - Transport Information

DOT Proper Shipping Name: N/A
DOT Hazard Class/ I.D. No.: N/A

Section XV - Regulatory Information

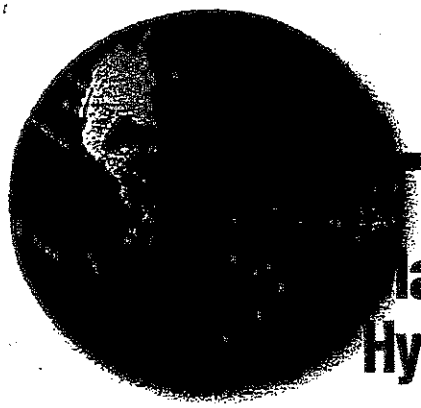
Reportable Quantity: N/A
NFPA Rating: Health - 1; Fire - 0; Reactivity - 0
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme
Carcinogenicity Lists: No NTP: No IARC Monograph: No OSHA Regulated: No

Section XVI - Other Information

Synonyms/Common Names: Brucite
Chemical Family/Type: Magnesium Hydroxide

IMPORTANT! Read this MSDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This MSDS has been prepared according to the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The MSDS information is based on sources believed to be reliable. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, **Hill Brothers Chemical Company** makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Also, additional information may be necessary or helpful for specific conditions and circumstances of use. It is the user's responsibility to determine the suitability of this product and to evaluate risks prior to use, and then to

exercise appropriate precautions for protection of employees and others.



Material Safety Data Sheet
Hydrogen Peroxide 20% - 60%

1. Chemical Product and Supplier Identification

Product Name: Hydrogen Peroxide, 20%-60%

Chemical Name: Hydrogen peroxide, aqueous solution

Synonyms: Hydrogen dioxide, hydroperoxide, peroxide

Grades/Trade Names: 27.5% - Technical
31% - Electronic , Electronic Low Carbon, UltraPure, UltraHigh Purity, UltraPure Plus, Pico-Pure™
35% - Technical, Technical 35/D Cosmetic, Food, PFP™, Chemical, High Purity Food
40% - Technical
50% - Technical, Technical 50/D Dilution, Cosmetic, Electronic, Food, PFP™, UltraPure,
Chemical, Chemical LP, SVP-HP®(1)

Manufacturer: Solvay Interox, Inc.
3333 Richmond Avenue
Houston, Texas 77098

Office: 713/525-6500
(7:30 am-5:00 pm CST M-F)

Emergency: 281/479-2826
(24 hours every day)

CANUTEC: 613/996-6666
(24 hours every day)

CHEMTREC: 800/424-9300
(24 hours every day)

Product Uses: Used in bleaching textiles, food, hair, paper and other materials; used in the manufacture of a wide range of chemicals, plastics, pharmaceuticals; used in photography, electroplating, water treatment and wastewater treatment.

MSDS Number: ZIH20/60-001-04 **Effective Date:** September 1, 2001

Not valid two years after effective date or after issuance of superseding MSDS, whichever is earlier. French or Spanish translations of this MSDS are available. Check www.solvayinterox.com or call Solvay Interox, Inc. to verify the latest version or translation availability.

Material Safety Data Sheets contain country specific regulatory information; therefore, the MSDS's provided are for use only by customers of Solvay Interox, Inc. in the United States of America and, if specifically indicated, Canada and Mexico. If you are located in a country other than the United States, please contact the Solvay Interox Group company in your country for MSDS information applicable to your location.

Solvay Interox

SOLVAY

2. Composition/Information on Ingredients

Components	Formula	CAS No.	Percent
Hydrogen peroxide	H_2O_2	7722-84-1	20-60
Water	H_2O	7732-18-5	Balance

3. Hazards Identification

Emergency Overview:

- Toxicity effects principally related to its corrosive properties.
- Non-combustible, but may contribute to the combustion of other substances and causes violent and sometimes explosive reactions.
- May be fatal if swallowed.

Potential Health Effects

General:

- Corrosive to mucous membranes, eyes and skin.
- The seriousness of the lesions and the prognosis of intoxication depend directly on the concentration and duration of exposure.

Inhalation:

- Nose and throat irritation.
- Cough.
- In case of repeated or prolonged exposure: risk of sore throat, nose bleeds, chronic bronchitis.

Eye contact:

- Severe eye irritation, watering, redness and swelling of the eyelids.
- Risk of serious or permanent eye lesions.

Skin contact:

- Irritation and temporary whitening at contact area.
- Risk of burns.

Ingestion:

- Paleness and cyanosis of the face.
- Severe irritation, risk of burns and perforation of the gastrointestinal tract accompanied by shock.
- Excessive fluid in the mouth and nose, with risk of suffocation.
- Risk of throat edema and suffocation.
- Bloating of stomach, belching.
- Nausea and vomiting (bloody).
- Cough.
- Risk of chemical pneumonitis from product inhalation.

Carcinogen Designation:

- IARC (International Agency for Research on Cancer): 3 - Not Classifiable as to Carcinogenicity to Humans.
- TLV A3 - Animal carcinogen: Agent is carcinogenic in experimental animals at relatively high dose, by route(s) of administration, at site(s), of histologic types(s), or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

4. First-Aid Measures

General recommendations:

- In case of product splashing into the eyes and face, treat eyes first.
- Do not dry soiled clothing near an open flame or incandescent heat source.
- Submerge soiled clothing in water prior to drying.

Inhalation:

- Remove the subject from the contaminated area.
- Consult with a physician in case of respiratory symptoms.

Eye contact:

- Flush eyes as soon as possible with running water for 15 minutes, while keeping the eyelids open.
- In the case of difficulty of opening the lids, administer an analgesic eye wash (oxybuprocaine).
- Consult with an ophthalmologist in all cases.

Skin contact:

- Remove contaminated shoes, socks and clothing, under a shower if necessary; wash the affected skin with running water.
- Keep warm (blanket) and provide clean clothing.
- Consult with a physician in all cases.

Ingestion:

- Consult with a physician immediately in all cases.
- Take to hospital.

If the subject is completely conscious:

- Rinse mouth and administer fresh water.
- Do not induce vomiting.

If the subject is unconscious:

- Loosen collar and tight clothing, lay the victim on his/her left side.
- Oxygen or pulmonary resuscitation if necessary.
- Keep warm (blanket).
- NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOS PERSON.

Medical Treatment

Inhalation:

- Negligible.

Eye contact:

- On the advice of the ophthalmologist.

Skin contact:

- Usual treatment for burns.

Ingestion:

- Oxygen therapy via intra-tracheal intubation.
- If necessary, tracheotomy.
- Placement of gastric catheter to release stomach gases.
- Avoid gastric lavage risk of perforation.
- In case of intense pain: inject an I.M. morphomimetic drug (piritramide) before taking to hospital.
- Prevention or treatment for shock and pulmonary edema.
- Urgent digestive endoscopy with aspiration of the product.
- Treatment of gastrointestinal tract burns and resulting effects.

5. Fire-Fighting Measures

Flash point: Non-flammable.

Flammability: Non-flammable.

Auto-flammability: Non-flammable.

Danger of explosion:
- With flammable liquids.
- With certain materials (see section 10).
- In case of heating.

Oxidizing properties: Oxidizer.

Common extinguishing methods: Large quantities of water, water spray.

Inappropriate extinguishing methods: No restriction.

Specific hazards:
- Oxygen released on exothermic decomposition may support combustion in case of surrounding fire.
- Oxidizing agent, may cause spontaneous ignition with combustible materials.
- Contact with flammables may cause fire or explosions.
- Pressure burst may occur due to decomposition in confined spaces/ containers.

Protective measures in case of intervention:
- Evacuate all non-essential personnel.
- Intervention only by capable personnel who are trained and aware of the hazards of the product.
- Wear self contained breathing apparatus when in close proximity or in confined spaces.
- When intervention in close proximity, wear acid resistant oversuit.
- After intervention, proceed to clean the equipment.
- Take a shower, remove clothing carefully, clean and check.

Other precautions:
- If safe to do so, remove the exposed containers, or cool with largequantities of water.
- Stay upwind.
- Keep at a safe distance in a protected location.
- Never approach containers which have been exposed to fire, without cooling them sufficiently.

6. Accidental Release Measures

Precautions

- Observe the protection measures given in sections 5 and 8.
- Isolate the area.
- Avoid materials and products which are incompatible with the product (see section 10).
- If safe to do so, without exposing personnel, try to stop the spillage.
- In case of contact with combustible materials, avoid product drying out by dilution with water.

Cleanup methods:

- If possible, dike large quantities of liquid with sand or earth.
- Dilute with large quantities of water.
- Do not add chemical products.
- For disposal methods, refer to section 13.
- In order to avoid the risk of contamination, the recovered product must not be returned to the original tank/container.

Precautions for protection of the environment:

- Immediately notify the appropriate authorities in case of reportable spill.

The National Transportation Safety Board (NTSB) and Federal Aviation Administration (FAA) have requested the following information be provided:

Combustible materials exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood or other combustibles can cause the material to ignite and result in a fire.

7. Handling and Storage

Handling:

- Operate in a well-ventilated area.
- Keep away from heat sources.
- Keep away from incompatible products.
- Prevent all contact with organics.
- Use equipment and containers which are compatible with the substance.
- Before all operations, passivate the piping circuits and vessels.
- Never return unused product to storage container.
- Ensure an adequate supply of water is available in the event of an accident.
- Containers and equipment used to handle hydrogen peroxide should be used exclusively for hydrogen peroxide.

Storage:

- Store in a ventilated, cool area.
- Store away from heat sources.
- Keep away from incompatible products (see section 10).
- Keep away from combustible substances.
- Keep in container fitted with safety valve or vent.
- Keep in original packaging, closed.
- Provide containment diking for storage of the packages and transfer installation.
- Regularly check the condition and temperature of the containers.
- For bulk storage recommendations, consult Solvay Interox, Inc.

Other precautions:

- Warn personnel of the dangers of the product.
- Follow the protective measures given in section 8.
- Do not confine the product in the circuit, between closed valves, or in a container without a vent.

Packaging:

Consult Solvay Interox for the proper packaging material for specific grades of hydrogen peroxide.

- Aluminum 99.5%.
- Stainless steel 304 L and 316 L.
- Approved grades of HDPE.

8. Exposure Controls/Personal Protection

Engineering controls:

- Provide local ventilation.
- Follow the protective measures given in section 7.
- Provide ventilation in work areas to keep exposure below the following applicable limits:

ACGIH® TLV® (1996)	OSHA PEL	NIOSH REL (1994)
1 ppm TWA	1 ppm TWA	1 ppm TWA
1.4 mg/m³ TWA	1.4 mg/m³ TWA	1.4 mg/m³ TWA

ACGIH® and TLV® are registered trademarks of the American Conference of Governmental Industrial Hygienists.

Respiratory protection:

NIOSH approved full-face supplied air respirator for excessive concentrations.

Hand protection:

Chemical resistant protective gloves made of PVC or rubber.

Eye protection:

Wear protective goggles for all industrial operations. If a risk of splashing exists, wear goggles and face shield.

Skin protection:

Wear coveralls. If a risk of splashing exists, wear chemical resistant slicker suit and boots of PVC or rubber.

Other precautions:

- Provide shower and eyewash stations.
- Consult your industrial hygienist or safety manager for the selection of personal protective equipment suitable for the working conditions.

The National Transportation Safety Board (NTSB) and Federal Aviation Administration (FAA) have requested the following information be provided:

Completely submerge hydrogen peroxide contaminated clothing or other materials in water prior to drying. Residual hydrogen peroxide, if allowed to dry on materials such as paper, fabrics, cotton, leather, wood, or other combustibles can cause the material to ignite and result in a fire.

9. Physical and Chemical Properties

Appearance: Colorless liquid.

Odor: Slightly pungent.

pH: 1 - 4

Vapor pressure:

Total ($H_2O_2 + H_2O$)
12 mbar (9.0 mmHg) @ 20° C (68° F) for 50% hydrogen peroxide.
72 mbar (54 mmHg) @ 50° C (122° F) for 50% hydrogen peroxide.

Partial (H_2O_2)
1 mbar (0.75 mmHg) @ 30° C (86° F) for 50% hydrogen peroxide.

Vapor density: 1.0 for 50% hydrogen peroxide.

Boiling point: 108° C (226° F) @ 1.013 bar (760 mmHg) for 35% hydrogen peroxide.
115° C (239° F) @ 1.013 bar (760 mmHg) for 50% hydrogen peroxide.

Freezing point: -33° C (-27° F) for 35% hydrogen peroxide.
-52° C (-62° F) for 50% hydrogen peroxide.

Solubility in water: Complete.

Specific gravity: 1.1 @ 20° C (68° F) for 27.5% hydrogen peroxide.
1.2 @ 20° C (68° F) for 50% hydrogen peroxide.

Molecular weight: 34.01

Viscosity: 1.07 mPa·s @ 20° C (68° F) for 27.5% hydrogen peroxide.
1.17 mPa·s @ 20° C (68° F) for 50% hydrogen peroxide.

Decomposition temperature: ≥ 60° C (140° F) Self-accelerated decomposition temperature (SADT) with oxygen release.

Surface tension: 74 mN/m @ 20° C (68° F) for 27.5% hydrogen peroxide.
75.6 mN/m @ 20° C (68° F) for 50% hydrogen peroxide.

10. Stability and Reactivity

Chemical stability: Stable under normal conditions of use with slow gas release.

Conditions to avoid:

- Heat/Sources of heat.
- Contamination.

Materials to avoid:

- Acids.
- Bases.
- Metals.
- Salts of metals.
- Reducing agents.
- Organic materials.
- Flammable substances.

Hazardous decomposition products: Oxygen.

Hazardous polymerization: Will not occur.

Other information: Decomposition releases steam and heat.

11. Toxicological Information

Acute toxicity:
- Oral route, LD_{50}, rat, 1232 mg/kg for 35% hydrogen peroxide.
- Oral route, LD_{50}, rat, 841 mg/kg for 60% hydrogen peroxide.
- Dermal route, LD_{50}, rabbit, > 2000 mg/kg for 35% hydrogen peroxide.
- Inhalation, LC_{50}, 4 hours, rat, 2000 mg/m³.
- Inhalation, LC_{0}, 1 hour, mouse, 2170 mg/m³.

Irritation:
- Rabbit, Serious damage (eyes) for 70% hydrogen peroxide.
- Rabbit, Irritant (skin) for < 50% hydrogen peroxide.
- Rabbit, Corrosive (skin) 1 hour, for ≥ 50% hydrogen peroxide.
- Mouse, Respiratory irritation (RD_{50}), 665 mg/m³.

Sensitization: Guinea Pig, Nonsensitizing (skin).

Chronic toxicity:
- In vitro, without metabolic activation, mutagenic effect.
- In vivo, no mutagenic effect.
- Oral route, after prolonged exposure, mouse.
  Target organ: duodenum, carcinogenic effect.
- Dermal route, after prolonged exposure, mouse, no carcinogenic effect.
- Oral route, after prolonged exposure, rat, no carcinogenic effect.
- Oral route, after prolonged exposure, rat/mouse.
  Target organ: gastro-intestinal system, observed effect.
- Inhalation, after repeated exposure, dog, 7 ppm, irritating effect.

Comments:
- Toxic effect linked with corrosive properties.
- The carcinogenic effect found in animals is not demonstrated in humans.

12. Ecological Information

Acute ecotoxicity:

Fish, Pimephales promelas
LC_{50}, 96 hours, 16.4 mg/L
NOEC, 96 hours, 5 mg/L
Crustaceans, Daphnia pulex
EC_{50}, 48 hours, 2.4 mg/L
NOEC, 48 hours, 1 mg/L
Algae, various species
EC_{50}, 72 to 96 hours, 3.7 to 160 mg/L in fresh water.
Algae, Nitzchia closterium
EC_{50}, 72 to 96 hours, 0.85 mg/L in salt water.

Mobility:

Air, Henry's law constant (H) = 1 mPa.m³/mol @ 20° C (68° F)
Result: non-significant volatility.
Air, condensation on contact with water droplets.
Result: rain washout.
Water - Non-significant evaporation.
Soil/sediments - Non-significant evaporation and adsorption.

Abiotic degradation:

Air, indirect photo-oxidation, $t_{½}$ 10 to 20 hours.
Conditions: sensitizer: OH radical.
Water, redox reaction, $t_{½}$ 2.5 days, 10,000 ppm.
Conditions: mineral and enzymatic catalysis/fresh water.
Water, redox reaction, $t_{½}$ 20 days, 100 ppm.
Conditions: mineral and enzymatic catalysis/fresh water.
Water, redox reaction, $t_{½}$ 60 hours.
Conditions: mineral and enzymatic catalysis/salt water.
Soil, redox reaction, $t_{½}$ 15 hour(s).
Conditions: mineral catalysis.

Biotic degradation:

Aerobic, $t_{½}$ < 1 minutes in biological treatment sludge.
Result: rapid and considerable biodegradation.
Aerobic, $t_{½}$ between 0.3 to 2 days in fresh water.
Result: rapid and considerable biodegradation.
Effects on biological treatment plants, > 200 mg/l.
Result: inhibitory action.

Potential for bioaccumulation:

Result: non-bioaccumulable (enzymatic metabolism).

Comments:

- Toxic for aquatic organisms.
- Nevertheless, hazard for the environment is limited due to product properties:
  - No bioaccumulation.
  - Considerable abiotic and biotic degradability.
  - No toxicity of degradation products (H_2O and O_2).

13. Disposal Considerations

Waste Disposal Method:

Consult current federal, state and local regulations regarding the proper disposal of this material and its emptied containers.

14. Transport Information

D.O.T. Proper Shipping Name: Hydrogen peroxide, aqueous solution

UN Number: 2014

Primary Hazard: 5.1

Subsidiary Hazard: 8

Label(s): Oxidizer, Corrosive

Packing Group: II

15. Regulatory Information

TSCA Inventory List: Yes.

CERCLA Hazardous Substance (40 CFR Part 302)
Listed substance: No.

Unlisted substance: Yes.

Characteristic: Ignitability, corrosivity.

RCRA Waste Number: D001, D002.

Reportable Quantity: 100 pounds.

SARA, Title III, Sections 302/303
(40 CFR Part 355 - Emergency Planning and Notification)
Extremelyhazardous substance: Yes, > 52% hydrogen peroxide.

Reportable Quantity: 1000 pounds.

Threshold planning quantity: 1000 pounds.

SARA, Title III, Sections 311/312
(40 CFR Part 370 - Hazardous Chemical Reporting: Community Right-To-Know)

Hazard category: Immediate (acute) health hazard.
Fire hazard.

Threshold planning quantity: 10,000 pounds for < 52% hydrogen peroxide.
500 pounds for > 52% hydrogen peroxide.

SARA, Title III, Section 313
(40 CFR Part 372 - Toxic Chemical Release Reporting: Community Right-To-Know)
Toxic chemical: No.

WHMIS Classification: C Oxidizing material
E Corrosive
F Dangerously reactive material

Canadian Domestic Substances List: DSL / Non confidential #6754.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Occupational Safety and Health Administration (OSHA) requirements for **process safety management** must be followed anytime at least 7,500 lbs. of hydrogen peroxide at concentrations of at least 52% are used or stored. Refer to **29CFR1910.119** for specific details.