CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000 SAN FRANCISCO, CA 94105-2219 VOICE AND TDD (415) 904-5200 FAX (415) 904-5400



RECORD PACKET COPY

W 16a

STAFF RECOMMENDATION

ON CONSISTENCY DETERMINATION

Consistency Determination No. CD-092-05
Staff: LJS-SF
File Date: 8/26/2005
60th Day: 10/25/2005
75th Day: 11/9/2005
Commission Meeting: 10/12/2005

FEDERAL AGENCY:

U.S. Navy

PROJECT

LOCATION:

Nearshore waters of Wilson Cove off the northeastern shore of

San Clemente Island (Exhibits 1 and 2)

PROJECT

DESCRIPTION:

Replace and extend the ocean outfall from the existing Wilson

Cove Wastewater Treatment Plant

EXECUTIVE SUMMARY

The U.S. Navy has submitted a consistency determination for replacing and extending the ocean outfall for the wastewater treatment plant serving the Naval Auxiliary Landing Field facilities at Wilson Cove on San Clemente Island. The project is needed to repair the deteriorated outfall structure and to provide initial dilution that would enable the WWTP discharges to meet National Pollution Discharge Elimination System (NPDES) permit requirements. The proposed action would move the existing discharge point from the surf zone to a submerged location 450 feet offshore and at a water depth of 70 feet.

Attachment of the marine outfall pipe to the bottom would be conducted using two general methods by scuba divers. In hard bottom areas, the pipe would be attached using a stainless steel bracket that would overarch the pipe and be bolted to the bottom using drills, bolts, and epoxy. In soft bottom areas, the pipe would be attached using a stainless steel saddle that would overarch the pipe and be pinned to the bottom using helix screw anchors. During installation, divers would carefully route the pipe through kelp beds and other habitat areas to avoid or minimize disturbance.

The area between the WWTP and the shoreline through which the existing and replacement outfall pipeline would run is a mix of developed upland and undisturbed native and non-native plants. No significant impacts to vegetation or soils are expected to arise from installation of concrete piers and the replacement pipeline along the 70-foot-long corridor. The Navy will develop and implement a Storm Water Pollution Prevention Plan, including appropriate best management practices, in accordance with the Industrial NPDES Stormwater permit currently inplace on San Clemente Island. These measures will minimize potential impacts on surface water quality from construction of the replacement outfall segment between the WWTP and the shoreline.

The existing Wilson Cove WWTP (including the ocean outfall in the intertidal zone) is a coastaldependent industrial facility, as there is no feasible alternative at this time to the continued operation of the WWTP. The Commission has historically construed ocean outfall extensions to be coastal dependent, and the proposed outfall extension is also an allowable use under the Coastal Act as a coastal-dependent industrial facility. There is no feasible less environmentally damaging alternative to resolving the NPDES permit requirements related to WWTP discharges into the intertidal zone in Wilson Cove. The proposed project will discharge the secondary treated effluent in deeper water seaward of kelp beds and will bring the WWTP into compliance with California Ocean Plan standards. The outfall extension will not create significant adverse effects on marine habitat, resources, or water quality. The project includes adequate avoidance and minimization measures during outfall installation. While no additional mitigation measures are necessary, the Commission acknowledges that by removing the outfall discharge point from shallow intertidal waters, there will be significant improvements in water quality and marine resources at this location. The proposed outfall extension is consistent with the marine resource, water quality, and environmentally sensitive habitat policies of the California Coastal Management Program (Coastal Act Sections 30230, 30231, 30233, and 30240).

The existing military restrictions at San Clemente Island are necessary and consistent with Coastal Act policies. The proposed outfall extension will occur in a nearshore area currently closed to public access and recreation due to military security and public safety. The proposed outfall extension is consistent with the public access, recreation, and fishing policies of the CCMP (Coastal Act Sections 30210, 30212, 30220, 30234, and 30234.5).

STAFF SUMMARY AND RECOMMENDATION

I. <u>Project Description</u>. The U.S. Navy proposes to replace and extend the existing outfall for the wastewater treatment plant (WWTP) serving the Naval Auxiliary Landing Field facilities on

the northeast side of San Clemente Island at Wilson Cove (Exhibits 1 and 2). The proposed action is needed to repair the deteriorated outfall structure and to provide initial dilution that would enable WWTP discharges to meet National Pollution Discharge Elimination System (NPDES) permit requirements. The proposed action would extend the existing discharge point from the surf zone to a submerged location 450 feet offshore and at a water depth of approximately 70 feet; the submerged outfall would terminate in a 90-degree, upward-directed elbow.

San Clemente Island, located 75 miles west of San Diego, is owned by the U.S. government and has been under the jurisdiction of the U.S. Navy since 1934. Wilson Cove is the administrative and logistic support center of the island; access to the island is restricted to military personnel and contractors due to military security. The waters directly offshore of Wilson Cove are a designated Exclusive Use Zone for Navy ship anchorage and port facilities. The nearshore areas around the island are controlled by the Navy and access is restricted for military security and public safety.

Prior to 1979 no sewage treatment facilities existed in the island and the outfall discharged raw sewage into the ocean. The Navy constructed the Wilson Cove WWTP in 1979 and the facility currently discharges an average of 25,000 gallons per day of secondary treated wastewater under NPDES Permit No. CA0110175. The WWTP consists of concrete and steel frame structures including an inlet structure, chlorination and dechlorination facilities, sludge drying facilities, and a control building. The outfall pipe extends 70 feet from the WWTP, descends to the shoreline, and discharges at approximately sea level into the rocky intertidal zone. Four deteriorating concrete piers support the heavily-corroded 8-inch outside diameter cast-iron outfall pipe.

The Navy submitted an NPDES permit renewal application to the Los Angeles Regional Water Quality Control Board (RWQCB) in December 2004, and requested a dilution factor of 136:1 with construction of a 3-inch (inside diameter) by 450-ft-long submerged extension pipe from the existing outfall terminus. The August 2005 *Environmental Assessment* for the proposed project reviews in further detail the need for the outfall extension:

The need for the proposed action is related to the present physical condition of the outfall structure and the need to provide initial dilution that would enable future discharges to meet NPDES permit requirements. The RWQCB issued a Notice of Violation (NOV) in a letter dated 16 January 2002, for effluent limit and reporting violations at the SCI WWTP. These violations stemmed from RWQCB concerns over some results from DON monitoring reports for the period of July 2000 through October 2001. The DON submitted a letter report to the RWQCB on 6 February 2002 that detailed corrective actions taken or proposed, and the results thereof.

The DON also conducted modeling of the effluent plume from the proposed discharge location 450 ft from shore (Appendix A). Modeling results showed a predicted initial dilution factor of 136:1, under worst-case (stratified, no current flow) conditions, which was the basis for the dilution factor requested in the NPDES permit application. The RWQCB

staff has reviewed and concurred with the submitted model results and the dilution factor requested

Appendix B of the *Environmental Assessment* provides additional details on the proposed project:

LANDWARD OUTFALL PIPELINE:

The proposed action would replace the existing, deteriorated landward outfall discharge pipe with a new, same-size and type (8-inch outside diameter cast-iron) pipe. The new landward pipe and associated concrete piers would be installed in an adjacent alignment to the existing outfall, instead of demolishing the existing pipe and building in the same location, so that the WWTP outfall could still function during construction of the new pipeline. New pre-cast concrete piers would be installed in a similar configuration to the existing piers. The existing outfall pipe would either be capped and abandoned in place or demolished and removed in its entirety. Expected construction equipment and associated daily usage is provided below. It is expected that existing barge traffic would be used to bring construction supplies to the island and to remove contractors' construction debris for proper disposal on the mainland; no extra barge trips would be necessary. Materials would be recycled wherever possible. Total duration of the landward outfall construction is expected to last 15 days and would involve about 8 to 10 construction personnel.

MARINE OUTFALL EXTENSION:

The WWTP marine outfall extension, beginning at the terminus of the 8-inch, cast iron, landside outfall pipe, would consist of 3-inch (inside diameter) polyethylene (PE) pipe that would extend approximately 450 feet (ft) (136 meters [m]) offshore for the preferred alternative and 175 ft (53 m) offshore for the 175-ft Submerged Outfall Alternative. The starting elevation for both of these alternatives is approximately mean sea level, with the 450-ft and 175-ft pipes terminating at approximately 70-ft (21-m) and 22-ft (7-m) bottom depths, respectively.

Based on evaluation of diver transect data (video and diver observations) collected by Merkel & Associates (M&A; 2004) there is no meaningful difference in the habitat types over approximately 180 ft (54.5 m) alongshore the study area, so the alignment of the marine outfall would be perpendicular to the shoreline. There are, however, onshore to offshore differences. The bottom habitat from the shoreline to 10 ft (3 m) depth consists of hard bottom, mostly bedrock with mixed cobble and boulders. From 10 to 50 foot (3-15 m) bottom depths, the bottom habitat generally consists of boulder and cobble fields with attached kelp, and at water depths greater than approximately 50 feet, the bottom habitat is generally sandy bottom. Attachment of the marine outfall pipe to the bottom would be conducted using two general methods. In hard bottom/cobble/boulder areas, the pipe would be attached using a stainless steel bracket that would overarch the pipe and be bolted to the bottom using drills, bolts, and epoxy. Each bracket would be approximately 4-inches wide with about a 4-inch by 4-inch attachment base on each side of the pipe. In soft bottom/sandy areas, the pipe would be attached using a stainless steel saddle that would overarch the pipe and be pinned to the bottom using helix screw anchors. The saddles would be similar in size to the brackets, and the screw anchors would be emplaced so that the top is below the substrate surface.

Based on potential turbulence in the study region, the potential for drift kelp to provide a source of fouling and drag on the outfall, and physical characteristics of the PE pipe (small and flexible), bottom attachments should occur approximately every 5 ft (1.5 m) along the outfall (Jonathon French, CDM, personal communication, 2005), as modified based on suitable habitat for attachment. This would equate to 90 and 35 attachment points for the 450-ft and 175-ft outfalls, respectively. Based on the marine habitat types along the outfall alignment, the 450-ft outfall would utilize approximately 65 brackets over hard substrate and 25 saddles over soft substrate. The 175-ft outfall would require approximately 35 brackets over hard substrate. An estimated 4 to 6 scuba divers using pneumatic tools would perform the attachments to the bottom, with the pipe and installation equipment staged from shore and a support vessel (see table below). Installation of the pipeline would take approximately 21-days and 8-days for the respective alternatives, assuming four hours of diving time per day. During installation, the divers would carefully route the pipe through kelp bed and other habitat areas to avoid or minimize disturbance.

The Navy plans to construct the outfall extension in 2006.

II. <u>Federal Agency's Consistency Determination</u>. The U.S. Navy has determined the project consistent to the maximum extent practicable with the California Coastal Management Program.

III. Staff Recommendation.

The staff recommends that the Commission adopt the following motion:

MOTION:

I move that the Commission <u>concur</u> with consistency determination CD-092-05 that the project described therein is fully consistent, and thus is consistent to the maximum extent practicable, with the enforceable policies of the California Coastal Management Program (CCMP).

Staff Recommendation:

The staff recommends a <u>YES</u> vote on the motion. Passage of this motion will result in a concurrence with the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution to Concur with Consistency Determination:

The Commission hereby <u>concurs</u> with the consistency determination by the U.S. Navy, on the grounds that the project described therein is fully consistent, and thus is consistent to the maximum extent practicable, with the enforceable policies of the CCMP.

IV. Findings and Declarations:

The Commission finds and declares as follows:

A. <u>Marine Resources/Water Quality/Environmentally Sensitive Habitat</u>. The Coastal Act provides the following:

Section 30230. Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30233(a). The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities

Section 30240.

- (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
- (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

The *Environmental Assessment* for the proposed project reports that the area between the WWTP and the shoreline through which the existing and replacement outfall pipeline would run is a mix of developed upland and undisturbed native and non-native plants. No significant impacts to vegetation or soils are expected to arise from installation of concrete piers and the replacement pipeline along the 70-foot-long corridor. No federally listed plant species (e.g., San Clemente Island broom) are present in this area. No current or historic San Clemente loggerhead shrike

nest sites, proposed/evaluated release sites, or potential shrike territory are known to exist in the vicinity of the project site. The sage sparrow is not known to nest on the eastern side of the island. The Navy also reports that San Clemente Island night lizards may occur in the project area, given their nearly ubiquitous occurrence in rocky habitats on the island. However, the 15-day construction period and the short and narrow work area are expected to create only minimal, localized, and less than significant impacts to the night lizard. The Navy will develop and implement a Storm Water Pollution Prevention Plan, including appropriate best management practices, in accordance with the Industrial NPDES Stormwater permit currently in-place on San Clemente Island. These measures would minimize potential impacts on surface water quality from construction of the replacement outfall segment between the WWTP and the shoreline.

The consistency determination describes the nearshore area of Wilson Cove where the submerged portion of the WWTP outfall extension will be placed:

The shoreline and nearshore region in the Wilson Cove project area, extending from the intertidal to shallow subtidal depths of approximately 10 ft (3m) deep, consists of reef habitat and large boulders. From 10 ft (3m) to approximately 45 ft (14m) water depths, the bottom is a mixture of sand and boulder-cobble substrate. Bottom habitat from 45 to 70 ft (14-18m) is comprised mostly of sand, with few boulders-cobbles.

Subtidal surveys conducted near the Wilson Cove outfall indicated 81 taxa of which 30 were macrophytes and 25 were macroinvertebrates (CRM 1998) . . . In comparison, the 40-ft (12-m) isobath is characterized by a dense giant kelp (Macrocystis pyrifera) forest . . . During a May 2005 survey, kelp beds comprised of Macrocystis appeared to extend about 300 ft (91m) offshore directly seaward form the discharge pipeline and at least 200 to 300 ft (61-91m) upcoast and downcoast. No eelgrass exists in the study area since the majority of intertidal and shallow subtidal habitat in the project area is comprised of rocky substrate that is not preferred habitat for this species [Exhibit 3].

The *Environmental Assessment* reports that no marine mammal haulouts or rookeries are known to occur along the eastern shore of the island, no endangered white abalone are present in the project area, and that only a few Essential Fish Habitat (EFH) groundfish species and no coastal pelagic species occur in the project area.

The Environmental Assessment also provides information on marine water quality at the project site:

Results from receiving water quality monitoring during 2004, conducted offshore from the SCI WWTP outfall, indicated low levels (less than 10 most probable number [MPN]/100 mL) of total and fecal coliforms and Enterococcus. Additionally, no visual evidence of the wastewater plume in the receiving waters has been detected during monitoring. Consequently, the general water quality conditions near the existing SCI WWTP outfall are comparable to the water quality of the other background areas of the SCB [Southern California Bight].

The consistency determination examines the potential impacts from the outfall extension on marine habitat, resources, and water quality:

Total project-related infrastructure would represent a total impact area of 206.7 sq.ft. over hard substrate and 79.7 sq.ft. over soft substrate . . . The use of scuba divers to install the pipe would minimize impacts to the biological community by avoiding kelp plants and attached/sedentary species to the extent feasible during routing and attachment. Avoidance is enabled since the attachment points can be adjusted in the onshore-offshore direction (i.e. up and down pipe) and to a lesser extent laterally (by slight angling of the pipe). As an example, some surfaces of many boulders are not fully colonized by macro-organisms and it would be feasible to target some of the exposed areas for attachment points, thereby further minimizing biological impacts. The very small surface area represented by the pipe and attachments, combined with the ability of the divers to adjust the pipe and attachment locations, would result in less than significant impacts to marine habitats, kelp, and invertebrates from the proposed action. Additionally, the pipe would undergo long-term (e.g., six months to a year) natural colonization by marine organisms to replace any temporarily impacts resources.

Although no significant impacts on marine biological resources would occur, to further ensure protection of the marine environment, pre- and post-installation surveys would be conducted to evaluate potential effects of the outfall and wastewater discharge on the distribution and abundance of macroinvertebrates and algae in the adjacent kelp bed, as described in M&A (2004). This monitoring program would be in addition to NPDES permit monitoring requirements.

. .

Operation of the proposed outfall extension would not change the volume or composition of the wastewater discharge. However, the site of the WWTP effluent discharge would change from the present location at the shoreline to a new location 450 ft (137m) from shore. Consequently, initial dilution and dispersion patterns would be different from present conditions. Wastewater discharged from a submerged ocean outfall forms a "plume" that disperses in the receiving water environment and becomes progressively diluted with time and distance from the outfall. Primary factors affecting dispersion of the plume are density stratification, local current fields, and turbulence levels. As initial plume momentum dissipates, effluent particles with densities greater than seawater sink at varying speeds and distances from the outfall, depending on their size, density, and depth-dependent velocities of horizontal and vertical currents.

Based on present final effluent concentrations and mass emissions, the dilution factor provided by the submerged outfall location would reduce concentrations of wastewater-derived pollutants (California Ocean Plan Table B constituents) to levels below the corresponding receiving water limits in the discharge permit and the California Ocean Plan. This would be an improvement from present conditions in which wastewater discharge occasionally exceeds the receiving water limits. Results from routine monitoring

of the receiving waters have not indicated any measurable changes in water quality parameters (temperature, dissolved oxygen, pH, fecal indicator bacteria, visual discolorization or indicators of sewage) at monitoring sites 1,000 ft (300m) from the outfall. By comparison, given the relatively higher initial dilution, even smaller changes to these water quality parameters would be expected from discharging wastewater from a submerged outfall 450 ft (137m) from shore. Thus impacts on water quality or beneficial uses from operation of the 450-ft outfall extension would be less than significant.

The proposed extension of the WWTP outfall involves fill of coastal waters and must therefore pass the allowable use, alternatives, and mitigation tests of Section 30233(a) of the Coastal Act. The existing Wilson Cove WWTP (including the ocean outfall in the intertidal zone) is a coastal-dependent industrial facility, as there is no feasible alternative at this time to the continued operation of the WWTP. (It does not follow, however, that all wastewater treatment plants can be classified as coastal dependent industrial facilities. There are alternative wastewater treatment, disposal, and management methods available today that did not exist when the Wilson Cove facility was constructed.) The Commission has historically construed ocean outfall extensions to be coastal dependent, and the Commission therefore finds that the proposed outfall extension is also an allowable use under the Coastal Act as a coastal-dependent industrial facility.

The Navy examined in the *Environmental Assessment* a number of alternatives to the proposed outfall extension:

Various design alternatives for the project components have been considered and rejected due to engineering, funding, and/or environmental constraints. For example, the possibility was evaluated of upgrading the treatment level at the WWTP from secondary to tertiary. The upgrading alternative was eliminated as a consideration due to engineering and funding constraints. However, the proposed action would not preclude future upgrades of the WWTP that could provide higher treatment levels, with potential for additional recycled water. Regardless, an ocean outfall would still be required for discharge of the effluent volume that exceeds the demand for recycled water and to divert flow that does not meet the recycled water health and safety criteria.

The possibility of pumping seawater into the outfall pipe below the WWTP to dilute the effluent prior to discharge was considered but eliminated from further consideration because this alternative would require a separate seawater intake structure and would exacerbate the current average daily flow permit restriction of the WWTP.

The possibility of barging some of the treated waste off island was evaluated but also eliminated from further consideration because this option would not resolve the current dilution problem, even though the alternative might help the WWTP stay within its permitted capacity level. This alternative would also be impractical due to potential cross contamination that could occur if a barge conducted hauling of both potable water and wastewater; logistics and cost associated with construction of new storage facilities or enlarging existing facilities; and the inability to hold excess wastewater volumes that could accumulate prior to offloading onto barges.

Horizontal directional drilling (HDD) was considered as an alternative outfall construction method, but this method was determined to be infeasible and it did not provide significant environmental benefits.

The Commission agrees with the Navy that there is no feasible less environmentally damaging alternative to resolving the NPDES permit requirements related to WWTP discharges into the intertidal zone in Wilson Cove. The proposed project will discharge the secondary treated effluent in deeper water seaward of kelp beds and will bring the WWTP into compliance with California Ocean Plan standards. The outfall extension will not create significant adverse effects on marine habitat, resources, or water quality. The outfall will be installed by scuba divers who will attach the 3-inch (inside diameter) pipeline to the ocean floor in a manner that will minimize impacts to hard-bottom habitat and kelp hold-fasts. The project includes adequate avoidance and minimization measures during outfall installation. While no additional mitigation measures are necessary, the Commission acknowledges that by removing the outfall discharge point from shallow intertidal waters, there will be significant improvements in water quality and marine resources at this location. The Commission concludes that the proposed outfall extension meets the allowable use, alternatives, and mitigation tests of Section 30233(a) of the Coastal Act, and is also consistent with the marine resource, water quality, and environmentally sensitive habitat policies of the CCMP (Coastal Act Sections 30230, 30231, 30233, and 30240).

B. <u>Public Access/Fishing</u>. The Coastal Act provides the following:

Section 30210. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with safety needs and the need to protect public rights, rights of private property public owners, and natural resource areas from overuse.

Section 30212(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:

(1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources....

Section 30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30234. Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

Section 30234.5. The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.

The Navy maintains that the project is consistent with the public access, recreation, and fishing policies of the Coastal Act, stating that access on the island has historically been restricted due to military security needs, and that the offshore area where the outfall would be placed is also restricted for military security and public safety. The Navy states in the project *Environmental Assessment* that:

The proposed project area is located in Wilson Cove, which houses the main support facilities for the island, including the WWTP. Access is restricted to military personnel and contractors. Offshore, the project area is located within the Wilson Cove Exclusive Use Zone, which is used exclusively by Navy ships for anchorage and port facilities, and the broader Wilson Cove Security Zone. Access by non-participating vessels may be restricted at certain times due to military training/operations or security concerns.

The proposed action would not impose new restrictions on the public's right of access to the sea in the coastal zone. The nearshore areas around SCI are U.S. Territorial Waters and access is restricted only for reasons of public safety or military security.

As it has found in reviewing previous onshore and offshore Navy projects at San Clemente Island, the Commission finds that the existing military restrictions are necessary and consistent with Coastal Act policies. The proposed outfall extension will occur in a nearshore area currently closed to public access and recreation due to military security and public safety. The Commission therefore agrees with the Navy and concludes that the proposed outfall extension is consistent with the public access, recreation, and fishing policies of the CCMP (Coastal Act Sections 30210, 30212, 30220, 30234, and 30234.5).

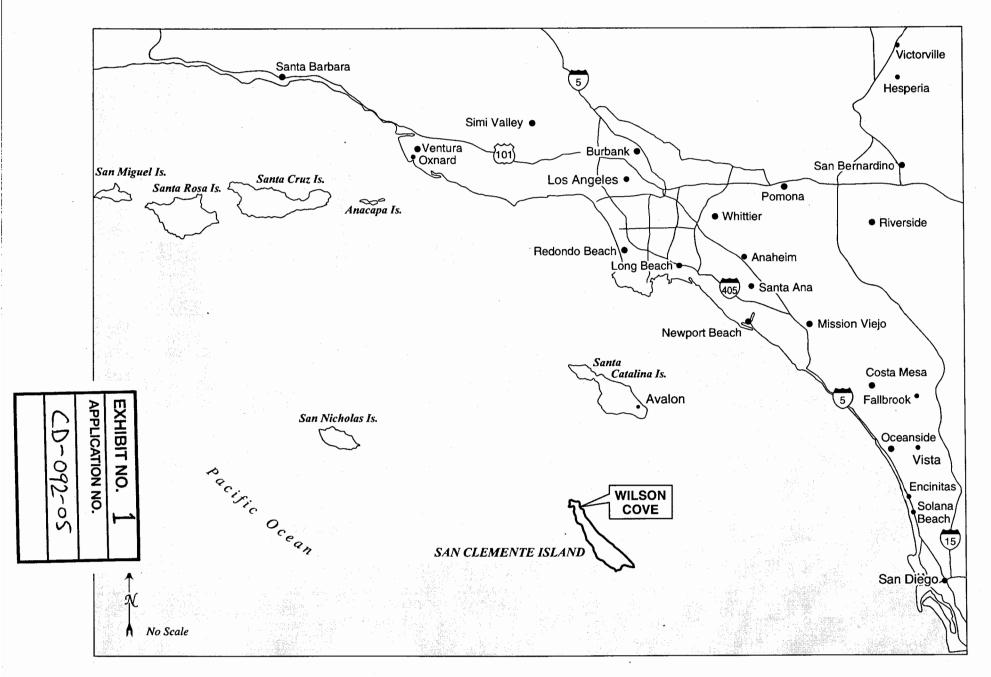


Figure 1-1. Regional Location of San Clemente Island

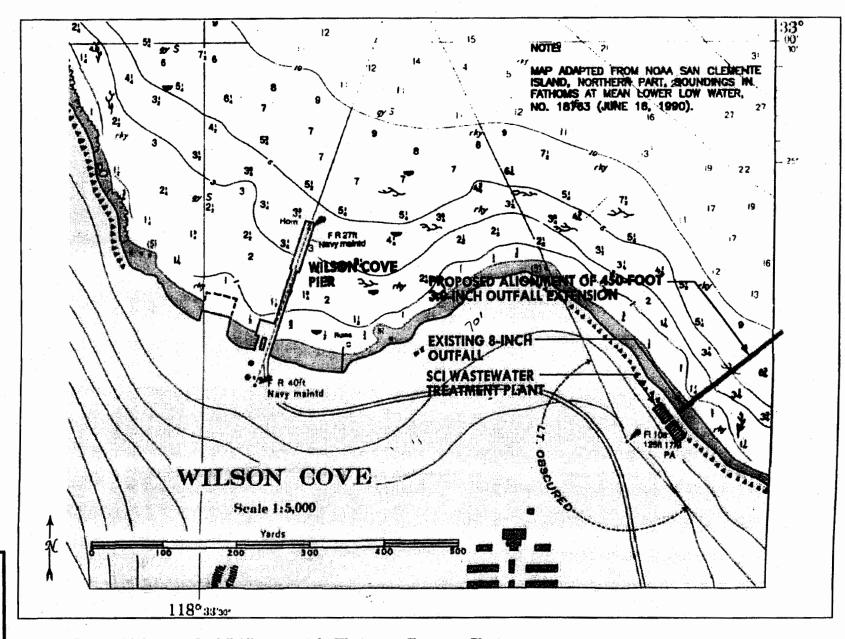


Figure 1. Proposed Submarine Outfall Alignment at the Wastewater Treatment Plant

EXHIBIT NO.

APPLICATION NO.

92-05

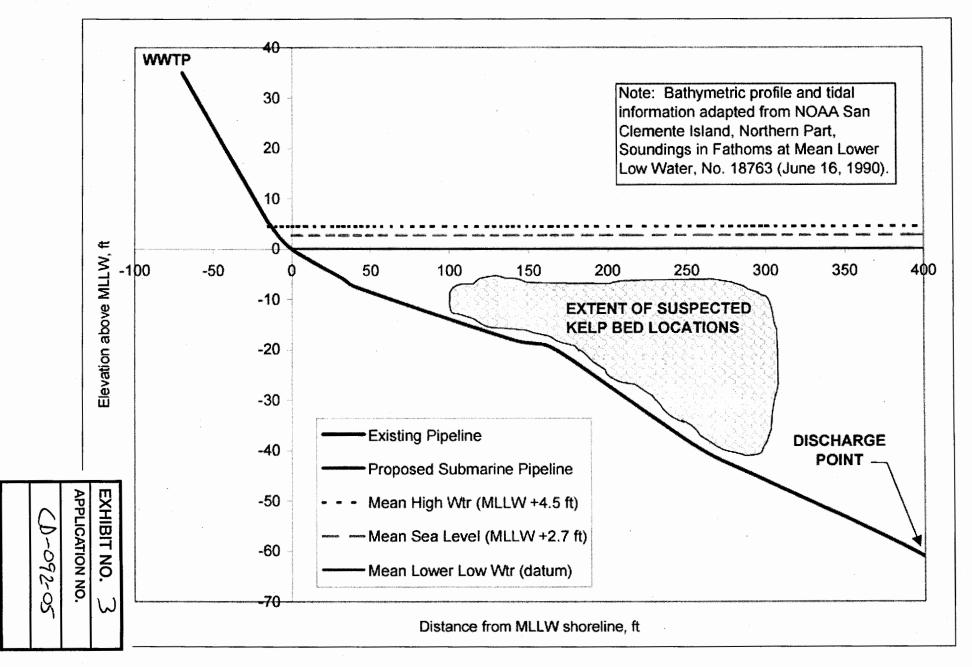


Figure 3.4-1. Bathymetric Profile in Area of the Proposed Outfall Extension