

CALIFORNIA COASTAL COMMISSION

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Th7a



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COASTAL DEVELOPMENT PERMIT APPLICATION

Application number3-02-071 Port San Luis Five-year Operations & Maintenance

Applicant.....Port San Luis Harbor District

Project location.....Port San Luis Harbor District, Avila Beach, San Luis Obispo County

Project descriptionPort San Luis Harbor District five-year operations and maintenance program, including repairs, rehabilitation, or replacement of the following: channel markers, regulatory buoys, moorings, floating docks, seawalls/revetments, decking, stringers, caps, ladders, stairs, hoists, parking lot, docks and gangways. Maintenance and repairs will not exceed the existing land area footprint.

Local approval.....None required for repair and maintenance of harbor structures (Categorical Exemption, Class 4, Item 15304(g)).

File documents.....Coastal Development Permits No. 3-97-078, and 3-97-078A1.

Staff recommendation ...Approval with Conditions

Procedural Note: In the past, the Commission has issued a combined five-year operations and maintenance permit that included two primary components: 1) routine repair and maintenance activities; and 2) dredging and beach nourishment (3-93-27 & 3-97-087). In order to improve project timing and inter-agency coordination, the Port has requested that separate permits be issued for these two components. As such, this permit only includes routine repair and maintenance activities. The Port is in the process of applying for a separate coastal permit for dredging and beach nourishment activities.

Summary: The Applicant proposes to undertake development activities associated with routine harbor maintenance during the five-year operations and maintenance program for the 2003 - 2008 time period. These activities include repairs, rehabilitation, or replacement of the following: channel markers, regulatory buoys, moorings, floating docks, seawalls/revetments, dock pilings, decking, stringers, caps, ladders, stairs, hoists, parking lot, storm drains, trails, docks and gangways. The original proposal included repairs to a wastewater discharge line, but has since been excluded from this project description. A separate permit, processed through the CCC Energy and Ocean Resource division, will be required for any work on the Avila wastewater discharge line. All repair and maintenance activities contained in this permit will not exceed the existing land area footprints and specifications.



California Coastal Commission
March, 2003 Meeting in San Luis Obispo

Staff: J. Bishop Approved by: *DSL*

Potential impacts of the proposed development include the discharge of harmful materials to the marine environment, thereby reducing water quality and harming marine life. For example, toxic chemicals used to treat dock pilings can break down over time or leach into the water column, resulting in adverse impacts to the biological productivity of the marine environment. Similarly, installation of piles has the potential to stir up sediments on the ocean floor. This increase in turbidity adversely affects marine resources by reducing the amount of light penetration, diminishing water quality, and burying living organisms. In addition, the presence of lead and other contaminants in harbor sediments become more bioavailable when suspended in the water column. The pH of marine water becomes elevated if it comes in contact with uncured concrete. Elevated pH levels can be toxic to marine life.

The proposed development activities are located entirely within the Coastal Commission's permit jurisdiction. Thus, the standard of review is the Chapter 3 policies of the California Coastal Act. The Coastal Act requires that marine resources and the biological productivity of coastal waters be maintained (Coastal Act Sections 30230 and 30231). In this case, the project has been designed in a manner which strives to avoid or reduce adverse impacts on such resources. Measures that have been incorporated into the project to reduce impacts to marine resources include monitoring, avoidance of chemically treated wood piles, containment of concrete through the use of the "tremie" method, and avoidance of jetting during piling installation to minimize turbidity.

Nevertheless, additional measures are needed to minimize project impacts on marine resources and the biological productivity of coastal waters. Staff therefore recommends that the Commission **approve** the proposed development subject to conditions that:

- Require Executive Director review and approval of final project plans for each element of the project. This will ensure that construction activities will be conducted in a manner that minimizes adverse impacts to the marine environment;
- Require the "phasing out" of chemically treated pilings; and that new fender pilings be made of plastic rather than chemically treated wood; and that installation be performed according to the method that results in the least disturbance of bottom sediments;
- Require implementation of BMP's for all construction related activities;
- Specify procedures for concrete work designed to eliminate the possibility of marine water coming into contact with uncured concrete.

As conditioned by this permit, the project will be consistent with Coastal Act policies regarding Marine Resources and Public Access and will adequately mitigate potential adverse environmental impacts. Therefore, staff recommends **approval with conditions**.



Staff Report Contents

I. Staff Recommendation on CDP Application.....	3
II. Conditions of Approval.....	4
A. Standard Conditions.....	4
B. Special Conditions.....	4
III. Recommended Findings and Declarations.....	8
A. Project Description and Background.....	8
1. Background and Purpose.....	8
2. Project Location and Description.....	8
B. Issue Analysis.....	10
1. Marine Resources.....	10
Development in Open Coastal Waters.....	11
Protection of Marine Resources.....	12
Containment of Hazardous Materials.....	13
Water Quality.....	14
Alternatives.....	14
Conclusion.....	17
2. Commercial Fishing and Boating.....	17
3. Public Access and Recreation.....	18
4. California Environmental Quality Act (CEQA).....	18
IV. Exhibits	
Exhibit A: Vicinity Map	
Exhibit B: Maintenance Detail	
Exhibit C: Site Photos	
Exhibit D: Correspondence	

I. Staff Recommendation on CDP Application

The staff recommends that the Commission, after public hearing, **approve** a coastal development permit for the proposed development subject to the standard and special conditions below.

Motion. I move that the Commission approve Coastal Development Permit Number 3-02-071 pursuant to the staff recommendation.

Staff Recommendation of Approval. Staff recommends a **YES** vote. Passage of this motion will result in approval of the coastal development permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Approve a Coastal Development Permit. The Commission hereby approves the coastal development permit on the ground that the development as conditioned, will be in



development permit complies with the California Environmental Quality Act because either: (1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the amended development on the environment; or (2) there are no feasible mitigation measures or alternatives that would substantially lessen any significant adverse effects of the amended development on the environment.

II. Conditions of Approval

A. Standard Conditions

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

B. Special Conditions

1. **Permit Expiration.** This permit shall be valid for 5 years from the date of Commission approval (until March 6th, 2003), or until the U.S. Army Corps of Engineers permit for the authorized facility maintenance activities expires, whichever comes first. An extension of this expiration date may be achieved through an amendment to this permit.
2. **Final Project Plans.** PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF EACH RESPECTIVE ELEMENT OF THE OPERATIONS AND MAINTENANCE PROGRAM, as identified in the list set forth in Section III A (2), on pages 8, 9, and 10, the permittee shall submit for Executive Director review and approval, final project plans for that component of the plan. Final



plans shall identify the exact design and location of the development, materials to be used, and the disposal area for removed or demolished materials. Final plans for each component of the operations and maintenance program shall also be accompanied by a construction phasing plan, for Executive Director review and approval, which consists of a written description and supporting graphics outlining phasing and construction sequence (phasing); seasonal considerations (tidal and wave constrains); and location of equipment staging areas, employee restrooms, employee parking, temporary security fencing, concrete washdown facility, and any similar elements which would affect ocean water quality or public access to the shoreline. To the maximum extent feasible, construction phasing shall maintain opportunities for public parking and for shoreline access during construction.

Minor repair and maintenance activities included within the operations and maintenance plan (e.g., the replacement of a single pile cap), however, do not require the submission of a final plan; in these cases, the permittee shall notify the Executive Director of the repair and maintenance activity proposed to be undertaken PRIOR TO THE COMMENCEMENT OF CONSTRUCTION for a determination if the submission of any additional information may be needed.

3. **Containment Requirements.** Particular care shall be exercised to prevent foreign materials (e.g., construction scraps, wood preservatives, other chemicals, etc.) from entering state waters. Where additional wood preservatives must be applied to cut wood surfaces, the materials, wherever feasible, shall be treated at an onshore location to preclude the possibility of spills into state waters. A floating containment boom shall be placed around all active portions of a construction site where wood scraps or other floatable debris could enter the water. Also, for any work on or beneath fixed wharf decks, heavy-duty mesh containment netting shall be maintained below all work areas where construction discards or other material could fall into the water. The floating boom and net shall be cleared daily or as often as necessary to prevent accumulation of debris. Contractors shall insure that work crews are carefully briefed on the importance of observing the appropriate precautions and reporting any accidental spills. Construction contracts shall contain appropriate penalty provisions, sufficient to offset the cost of retrieving or clean up of foreign materials not properly contained.

4. **Piling Materials.**

Interior Piles -This permit authorizes the use of existing stocks (as of 3/6/03) of ACZA treated wood for interior pilings only. Interior pilings are those that will not come into direct contact with ocean vessels. ACZA shall be used only if wrapped PRIOR TO INSTALLATION in a water tight plastic sleeve, and in a manner acceptable to the Executive Director as follows:

- The material used shall be durable and a minimum of one-tenth of an inch thick.
- All joints shall be sealed to prevent leakage.
- Sealing or capping the tops of the pilings shall prevent ACZA surface exposure.
- The plastic sleeves shall extend a minimum of 18 inches below the mudline.



Fender Piles - This permit authorizes the use of reinforced plastic for fender pilings only. Fender pilings are those that will come into direct contact with ocean vessels.

To prevent the introduction of toxins and debris into the marine environment, the use of plastic wrapped ACZA and reinforced plastic as replacement pilings, shall conform to the following requirements:

A. Inspection and Maintenance Program. The permittee shall exercise due diligence in periodically inspecting pilings installed under this permit, and shall immediately undertake any repairs necessary to maintain the wrapping and/or structural integrity of the pilings. ON AN ANNUAL BASIS FOR ALL PLASTIC PILES THAT MAY COME INTO CONTACT WITH BOATS, AND ON A BIENNIAL BASIS FOR THOSE THAT WILL NOT, beginning one and two years (as applicable) following the date that the first pile is installed, the permittee shall conduct a piling inspection to ensure the integrity of the pile, and that all corrective actions have or will be immediately undertaken to maintain the plastic wrapping and/or integrity of the pile. The inspections shall be undertaken by boat, during periods of extreme low tides, and synchronized, when feasible, to precede the periods of maximum expected harbor occupancy. Alternatively, the permittee may submit a different timeline for the piling inspection program that ensures that the plastic wrapping and/or structural integrity of the pile is properly maintained; the alternative timeline shall be reviewed and approved by the Executive director PRIOR TO THE INSTALLATION OF PLASTIC PILINGS.

B. New Information. If federal or state regulatory agencies, through new or better scientific information, determine that environmentally less damaging materials or methods are available for piling replacement, and are feasible to implement, the permittee shall, after consultation with the Executive Director, revise procedures or use alternative materials consistent with the new information. The substitution of non-plastic piling materials may be authorized by the Executive Director. Other revisions, including the use of other preservative-treated piles, may require an amendment to this permit.

5. **Piling Installation Requirements.** Piling installation shall be performed in accordance with Department of Fish and Game recommendations (Exhibit C, attached). Generally, the new pilings shall be installed according to the method that results in the least disturbance of bottom sediments. Where feasible, disturbed sediments shall be contained with a flexible skirt surrounding the driven pile. The installation contract and/or specifications shall incorporate the applicable portions of the containment requirements of Special Condition 3 above.
6. **Procedures for Concrete Work.** If pile installation, or any other portion of the operations and maintenance program, requires the pouring of concrete in, adjacent to, or over the water, the following methods shall be employed to prevent uncured concrete from entering coastal waters;



- a. Complete dewatering of the pour site, within a cassion or other barrier; the site to remain dewatered until the concrete is sufficiently cured to prevent any significant increase in the pH of adjacent waters; or,
- b. the tremie method, which involves placement of the form in water, inserting a plastic pipe down to the bottom of the form, and pumping concrete into the form so that the water is displaced towards the top of the form. If this method is selected, the displaced waters shall be pumped off and collected in a holding tank. The collected waters shall then be tested for pH, in accordance with the following California Department of Fish and Game recommendations. If the pH is greater than 8.5, the water will be neutralized with sulfuric acid until the pH is between 8.5 and 6.5. This pH-balanced water can then be returned to the sea. However, any solids that settle out during the pH balancing process shall not be discharged to the marine environment; or,
- c. an alternative method, subject to review and approval by the Executive Director (in consultation with the California Department of Fish and Game) **PRIOR TO THE COMMENCEMENT OF WORK.**

In each case involving such concrete pours in or near the waters of the Bay, the permittee shall insure that a separate wash out area is provided for the concrete trucks and for tools. The wash out area(s) shall be designed and located so that there will be no chance of concrete slurry or contaminated water runoff to the adjacent waters of Monterey Bay.

7. **Water Quality Review.** Permittee shall be responsible for obtaining any necessary approvals from the Regional Water Quality Control Board, including any Section 401 water quality certification or waiver, which may be required. **PRIOR TO THE COMMENCEMENT OF PILE INSTALLATION OR IN-WATER CONSTRUCTION**, permittee shall provide written evidence that the Regional Water Quality Control Board (RWQCB) has reviewed and approved the proposed work, or that no such approvals are needed.
8. **Other Agency Approvals.** **PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF A SPECIFIC ELEMENT OF THE OPERATIONS AND MAINTENANCE PROGRAM**, the permittee shall submit, for Executive Director review and approval, documentation from the Corps of Engineers, that the project has been reviewed for conformance with Federal agency requirements, and, that the project is permitted or that no Corps permits are necessary.
9. **Additional Harbor Improvements.** Additional development activities beyond those specified in this approval shall be submitted for a determination of the appropriate coastal development permit requirements (i.e., a separate Coastal Development permit, amendment to this permit, or waiver).



III. Recommended Findings and Declarations

The Commission finds and declares as follows:

A. Project Description and Background

1. Background and Purpose

Due to the corrosive nature of the marine environment, and constant exposure to the sometimes-extreme forces of the Pacific Ocean, harbor facilities are in need of constant repair and maintenance. In addition, high levels of public and commercial use of harbor facilities demand that the design of these facilities be well thought out, and where possible, improved, in order to accommodate the numbers of recreational boaters, commercial fisherman, and tourists that utilize harbor facilities. Coastal Act Sections 30234 calls for the protection of such facilities, as well as upgrading such facilities where feasible. Unlike other repair and maintenance activities which are exempt from coastal development permit requirements, Section 13253 of the California Coastal Commission's Administrative Regulations requires a coastal development permit for repair and maintenance in, adjacent to, and above coastal waters because they involve a risk of substantial adverse environmental impact.

As a result, Port San Luis Harbor District has prepared an operations and maintenance program which comprises the repair, maintenance, and improvement projects that are proposed to be undertaken over the next five years. The packaging of all of these development activities into one permit application has been encouraged by the Commission staff, and well received by the Port, as a means of efficiently processing the routine development activities associated with the operation of a major port facility. Special conditions have been attached to this permit to ensure that these activities will not have an adverse impact on coastal resources from both an individual and cumulative standpoint, consistent with the Chapter 3 policies of the California Coastal Act of 1976.

2. Project Location and Description

Port San Luis Harbor is located south of Morro Bay and north of Pismo Beach, between Point San Luis and the east end of Avila Beach, in San Luis Obispo County (Exhibit 1). As discussed in the project summary, the dredging and beach nourishment elements of previous blanket permit 3-97-078 are not included, but rather will be reviewed under a separate coastal development permit. This project is the renewal of the 5-year repair and existing facilities maintenance element. The general location and work detail of the specific repair and maintenance activities authorized by this permit is shown in Exhibit 2. As described in the coastal development permit application, the proposed repair and maintenance activities include:

1. **San Luis Bay:** A COLREGS Demarcation line extends from the USACE breakwater to Fossil Point and represents the Harbor District's main interest in San Luis Bay. A number of existing



facilities may require, rehabilitation, or replacement, including: channel markers, regulatory buoys, permanent and seasonal moorings, floating docks, and revetments.

It is important to note, that the original permit application included repair and replacement activities associated with the Avila Beach waste water line. Upon request of Commission staff, this element is no longer included in the repair and maintenance permit and will be reviewed under a different and more appropriate permit.

2. **Harford Pier:** The historic wooden pier, originally built in 1873, is approximately 1,456 feet long with an average width of 39 feet and approximately 120 feet wide at the terminus. Repair and maintenance activities will not exceed the original pier footprint and structural repairs will be made with materials similar to the original construction. No alterations to the historic qualities will be made. The following existing facilities may require repairs, rehabilitation, or replacement: decking, stringers, caps, rails, piles, ladders, stairs, floating and fixed landings, and hoists.
3. **Harford Land Area:** The land area is a combination of reinforced concrete or asphalt over an aggregate base adjacent to a seawall. A portion of the seawall is constructed of 1-4 ton rock, 25 lb. rip-rap, filter fabric, and class B concrete base. Repair and maintenance activities will not exceed the original land area footprint and structural repairs will be made with materials similar to the original construction. The following existing facilities may require repairs, rehabilitation, or replacement: parking lot, seawall, concrete revetments, and storm drains.
4. **Mobile Hoist Pier:** The mobile hoist pier is designed to haul and launch commercial and recreational vessels. The mobile hoist has a 60-ton capacity. The mobile hoist pier is constructed of steel reinforced concrete, and is adjacent to a revetment and concrete seawall. Repair and maintenance activities will not exceed the original land area footprint and structural repairs will be made with materials similar to the original construction. The following existing facilities may require repairs, rehabilitation, or replacement: mobile hoist pier, concrete piles, floating dock, deck rails, ladders, seawall, and concrete revetments.
5. **Sport Launch Basin:** The sport launch basin is designed to haul and launch recreational boats. The sport launch has a 15-ton capacity. The sport launch basin is constructed of steel reinforced concrete and is adjacent to a revetment and concrete seawall. Repair and maintenance activities will not exceed the original land area footprint and structural repairs will be made with materials similar to the original construction. The following existing facilities may require repairs, rehabilitation, or replacement: sport launch hoist, docks and gangways, seawalls, revetment and concrete.
6. **Fisherman/Olde Port Beach:** Fisherman's Beach and Olde Port Beach are located between the Sport Launch and the Cal Poly Pier. Repair and maintenance activities will not exceed the original land area footprint and structural repairs will be made with materials similar to the original construction. The following existing facilities may require repairs, rehabilitation, or



replacement: stairs, trail to beach, vehicle and pedestrian ramps, storm drains, seawalls, revetment and concrete.

7. **Cal Poly Pier:** The Cal Poly Pier, built on steel piles with concrete and metal grating deck, is approximately 3000 feet long. Repair and maintenance activities will not exceed the original land area footprint and structural repairs will be made with materials similar to the original construction. The following existing facilities may require repairs, rehabilitation, or replacement: decking, girders, beams, piles, ladders and stairs, landings, utilities, hoists, seawalls, revetment and concrete.
8. **Avila Beach:** Avila Beach is located between Cal Poly Pier and Fossil Point. Repair and maintenance activities will not exceed the original land area footprint and structural repairs will be made with materials similar to the original construction. The following existing facilities may require repairs, rehabilitation, or replacement: stairs, recreational equipment (swings, slide, barbecues, picnic tables, and volleyball posts), lifeguard headquarters/tower, ramps, storm drains, and concrete seawall.
9. **Avila Pier:** This wooden pier is 1,635 feet long with an average width of 20 feet and approximately 120 feet wide at its terminus. Repair and maintenance activities will not exceed the original land area footprint and structural repairs will be made with materials similar to the original construction. The following existing facilities may require repairs, rehabilitation, or replacement: decking, stringers, caps, rails, piles, ladders and stairs, fixed landings, utilities, and hoists.

B. Issue Analysis

1. Marine Resources

Several Coastal Act sections protecting marine resources apply to the subject project. In particular:

Section 30230 Marine resources; maintenance – *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 Biological Productivity; water quality – *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 30232 *Oil and hazardous substance spills – Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

Section 30233 *Diking, filling or dredging; continued movement of sediment and nutrients –*

(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:

a. New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

b. Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

Section 30234 *Commercial Fishing and Recreational Boating – 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.*

Development in Open Coastal Waters

Components of the operations and maintenance program involve “filling” (through the installation of pilings and mooring blocks) in open coastal waters. Section 30233(a)(4) of the Coastal Act allows such activities for new or expanded boating facilities “where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects.”



Available alternatives include the no project alternative, or a revised operation and maintenance program involving the use of less environmentally damaging materials. The no project alternative is not considered feasible because it will not maintain facilities used by recreational boaters and commercial fishermen, as required by Coastal Act Section 30234. Similarly, alternative materials that adequately maintain existing boating facilities, or enhance their usability by the public and commercial fishing industry, would therefore be consistent with the objectives contained in Coastal Act Section 30234. As discussed below, mitigation measures to avoid and reduce adverse impacts on coastal resources, as well as, a requirement for use of alternative pile materials are required as conditions of project approval. Therefore, the proposed project, as conditioned by this permit, is considered the least environmentally damaging feasible alternative available.

Protection of Marine Resources

With respect to Coastal Act requirements that mitigation measures be provided to minimize adverse environmental effects (Coastal Act Section 30233), and that marine resources and the biological productivity of coastal waters be maintained (Coastal Act Sections 30230 and 30231), the project has been designed in a manner which strives to avoid or reduce adverse impacts on such resources. Measures that have been incorporated into the project design in order to reduce impacts to marine resources include containment of concrete through the use of the "tremie" method, and avoidance of jetting during piling installation to minimize turbidity.

Nevertheless, additional measures that will minimize project impacts on marine resource and the biological productivity of coastal waters are available, and are required to be implemented by the conditions of project approval. The potential impacts, and the measures required by the conditions of this permit to avoid such impacts, are summarized in the following table:

Potential Impacts	Required Mitigation Measures
Construction activities, equipment, and staging and wash down areas have the potential to result in the discharge of harmful materials to the marine environment, thereby reducing water quality, and harming marine life.	Special Condition 2 requires Executive Director review and approval of construction phasing plans for each element of the project. This will ensure that construction activities will be conducted in a manner, which minimizes adverse impacts to the marine environment. Special Condition 3 requires measures to prevent foreign materials (e.g., construction scraps, wood preservatives, other chemicals, etc.) from entering state waters.
Treated wood pilings may impact water quality by leaching chemicals/metals into the marine environment.	Special Condition 4 requires the use of recycled plastic piles; and, the implementation of a piling inspection and reporting program, to ensure that the integrity of the piles is maintained. In addition, the recommended conditions identify that if new or



	<p>better scientific information reveals that less environmentally damaging materials are feasible to implement repairs, the permittee is required to revise procedures or use new materials consistent with the new information, after consulting with the Executive Director.</p>
<p>The installation of piles has the potential to stir up sediments on the ocean floor. This increase in turbidity adversely affects marine resources by reducing the amount of light penetration, diminishing water quality, and burying living organisms. In addition, the presence of lead and other contaminants in harbor sediments become more bioavailable when suspended in the water column.</p>	<p>Special Condition 5 requires that piling installation be performed in accordance with Department of Fish and Game recommendations, and according to the method that results in the least disturbance of bottom sediments. Where feasible, disturbed sediments must be contained with a flexible skirt surrounding the driven pile.</p>
<p>The pH of marine water becomes elevated if it comes in contact with uncured concrete. Elevated pH levels can be toxic to marine life.</p>	<p>Special Condition 6 specifies procedures for concrete work designed to eliminate the possibility of marine water coming into contact with uncured concrete.</p>

Containment of Hazardous Materials

Coastal Act Section 30232 requires that development provide protection against the spillage of crude oil, gas, petroleum products, or hazardous substances. The subject project includes development activities which involve the use and transport of materials hazardous to marine resources, including concrete, asphalt, wood preservatives, as well as fluids and oils associated with mechanized equipment.

In order to ensure that the hazardous substances associated with the proposed development activities are adequately contained, consistent with Coastal Act standards, Special Condition 3 requires particular care to be exercised in order to prevent foreign materials from entering the water. Specifically, it requires that:

- the application of wood preservatives be undertaken at an onshore location, whenever feasible, to preclude the possibility of spills into coastal waters;
- a floating containment boom be placed around all active portions of a construction site where wood scraps or other floatable debris could enter the water;
- for any work on or beneath fixed wharf decks, heavy-duty mesh containment netting shall be maintained below all work areas where construction discards or other material could fall into the



water. The floating boom and net shall be cleared daily or as often as necessary to prevent accumulation of debris; and,

- project contractors insure that the work crews are carefully briefed on the importance of observing the appropriate precautions and reporting any accidental spills.

In addition, Special Condition 3 requires that construction contracts contain appropriate penalty provisions, sufficient to offset the cost of retrieving or clean up of foreign materials not properly contained. Also, special conditions 2, 5, and 6 attached to this permit require that construction activities, piling installation, and cement work, be implemented in a manner which avoids, to the greatest extent feasible, the discharge of hazardous materials into the marine environment.

Water Quality

Coastal Act section 30231 specifies that the biological productivity and the quality of coastal waters, appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored. The subject project has the potential to adversely affect water quality through the discharge of harmful materials and disturbance of contaminated sediments.

As previously addressed by this staff report, construction activities associated with the project have the potential to adversely affect water quality. Therefore, special conditions have been attached to this permit that will minimize, to the greatest extent feasible, the impact of construction operations on water quality and marine resources. Special Condition 6 identifies that the permittee is responsible for obtaining any necessary approvals from the Regional Water Quality Control Board for all work proposed under the operations and maintenance plan prior to the commencement of construction.

Alternatives

Coastal Act Section 30233 does not allow fill of coastal waters if there is a feasible, less environmentally damaging alternative to the project. Alternatives to the project as proposed must be considered before a finding can be made that a project satisfies this provision of Section 30233.

With respect to wood pilings, the Port is proposing to use ammoniacal copper zinc arsenate (ACZA) treated wood for repairs to existing pier structures. ACZA contains copper, zinc, and arsenic. These chemicals are used to preserve the wood when used in or over the water. Until recently, little research has been conducted on the release of wood preservatives from existing structures and the environmental impacts, if any, of those releases. In each of the studies, measurable amounts of preservatives were shown to be released into the environment. While the degree of environmental accumulation and biological impacts appear to be low, some release does occur.¹ Recognizing the potential impacts of using ACZA treated wood products in the marine environment, a precautionary approach is warranted.

¹ *Guide for Minimizing the Effect of Preservative-treated Wood on Sensitive Environments*, Lebow and Tippie, prepared for United States Forest Service, February 2001.



Staff has been grappling for some time with the issue of chemically treated wood pilings for use in the marine environment. Research into alternatives shows that other materials can be used as replacement piles. These alternatives include: concrete, steel, reinforced plastic, and untreated wood. Given the fact that the existing piers are made of wood, and that the Harford was built in 1873 and has historical value, the use of like materials is appropriate here. However, decisions based on these criteria alone should not be made at the expense of the marine environment.

The applicant has proposed to use treated wood to maintain existing piers. Treated wood is used for the construction of piers because it is economical, is easy to install, and is durable. The wood is durable because it contains chemical preservatives that prevent fungal decay, and insect attack. However, the same chemicals used to protect the integrity of the wood piles may also leach into the water column and become potentially toxic to aquatic organisms.

In the past, the Commission has required that creosote treated piles be wrapped in a watertight plastic sleeve to minimize impacts to marine resources. However, questions are raised with respect to the effectiveness of this requirement. In most cases, the plastic wrap has been applied prior to pile installation and entails nailing the plastic to the wood and capping the pile for a water resistant seal. In theory this protective measure seems to make sense, however, a recent site visit to the Port indicates that the requirement of plastic wrapping has achieved limited benefits. As shown in site photos (Exhibit D), the plastic wrap appears to be well worn from abrasion with vessels, torn in places, lacking the intended watertight seal, and in some instances has fallen off completely into the water. In fact, it appears that the plastic wrap may eventually become floatable plastic marine debris. As such, the Commission finds that this is not the least environmentally damaging feasible alternative to the proposed fill.

Because of the potential adverse environmental impacts associated with the release of toxic substances from chemically treated pilings, Staff has evaluated the use of plastic pilings as an alternative. Recent studies done by the US Navy in San Diego evaluated plastic pier pilings based on a number of criteria, including: durability, strength, cost, and environmental integrity.² Plastic pier pilings are a relatively new product, so the long-term durability and maintenance requirements are not known. In summary, the test results show that the actual service life of the plastic pier pilings is longer than untreated and ACZA treated wood pilings.³ Cost comparisons were done for installing plastic pier pilings verses ACZA-treated timber pilings and showed that the initial purchase price was greater for plastic piles (approximately \$800- \$1,150 more). However, when ongoing maintenance and repair costs were factored, cost benefits over time were actually greater. Finally, environmental integrity was evaluated. Based on toxicity data presented by the manufacturers, the use of plastic pier pilings does not appear to present harmful impacts to fish and wildlife.

² *Plastic Pier Piling Evaluation Report*, prepared by Tetra Tech for Navy Region Southwest, November 1999.

³ According to the manufacturers, the plastic pier pilings are warranted against degradation for a period of 10 years and may last as long as 40 years or more if not damaged by vessels. According to discussions with Port San Luis Harbor, under ideal conditions the life span of fender piles on Harford Pier is about 10 years. Of course, there are exceptions like damage incidents. Sometimes fishing boats destroy fender pilings and then the normal life span is reduced dramatically.



Staff has been grappling for some time with the issue of chemically treated wood pilings for use in the marine environment. Research into alternatives shows that other materials can be used as replacement piles. These alternatives include: concrete, steel, reinforced plastic, and untreated wood. Given the fact that the existing piers are made of wood, and that the Harford was built in 1873 and has historical value, the use of like materials is appropriate here. However, decisions based on these criteria alone should not be made at the expense of the marine environment.

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Commission staff is also concerned about the use of plastic pilings in the marine environment due to the possible deterioration of the pilings and subsequent increase in marine debris. The Commission staff has also reviewed the water quality effects from the use of recycled plastic composites⁴. The composites are made from used bottles collected at curbside for recycling. This material is comprised of approximately 80% polyolefin content (polyethylene and polypropylene), with the remaining percentages made of polyethylene terephthalate, polystyrene, polyvinyl chloride, and other plastics. In a leach test only minor amounts of copper, iron, and zinc leached from the plastic. None of the contaminants had a concentration significant enough to have any adverse effects on the marine environment. Additionally, in a study comparing the toxic effects of plastics to treated wood, the researchers concluded that *"in all these experiments with four different species of estuarine organisms, the recycled plastic proved to be far less toxic material than the treated wood."*⁵

However, the Commission staff is concerned about the potential to add plastic debris to the marine environment. Since plastic is an inorganic material, it does not biodegrade, but rather continually breaks down into ever-smaller pieces. The presence of plastics in the coastal and ocean environment is both widespread and harmful to human and marine life. There are no examples that staff can identify that document the deterioration rate of this plastic. Commission determinations with respect to the use plastic piling materials indicates that potential impacts exist from the breakdown of plastic materials entering the marine environment. One federal consistency letter responding to the use of this material states:

"If plastic pilings were installed, they would be exposed to ultra violet radiation. The plastic contains stabilizers that are intended to protect it from degradation that may result from UV exposure. Notwithstanding the protection provided by the stabilizers, the potential does exist that the plastic would degrade over time. If the plastic piles were to become brittle, they may splinter upon impact and would introduce plastic debris into the coastal waters, and thus would adversely affect water quality resources." (see Exhibit D -Federal Consistency Correspondence).

Clearly, a completely benign pier pile alternative has yet to be discovered. Each alternative has demonstrated a range of costs and benefits. However, based on these most recent studies, it appears that plastic pier pilings are far superior to plastic wrapped chemically treated wood with respect to durability, long-term costs, and potential environmental impacts. As such, the Commission finds that plastic pier piles constitute the least environmentally damaging feasible alternative available.

⁴ ND-075-02. Negative Determination for the repair of existing wharves and upgrading of utilities services, Naval Base Ventura County, Port Hueneme Area.

⁵ *Toxicity of Construction Materials in the Marine Environment*; Weis, Peddrick; Weis, Judith; Greenberg, Arthur; and Nosker, Thomas; Archives of Environmental Contamination and Toxicology; 1992.



Conclusion

The subject project represents a comprehensive program for operations and maintenance activities necessary to maintain and improve facilities for recreational boating and commercial fishing. Because these activities have the potential to impact marine resources, special conditions are attached to his permit that will protect the quality and biological productivity of coastal waters.

One of the most critical issues regarding the protection of marine resources and coastal water quality raised by this project is the proposed use of ACZA treated wood pilings. Scientific studies conducted to date have focused on unwrapped treated piles, and there are varying opinions regarding whether or not these studies accurately reflect the potential environmental impacts that may result from use in the marine environment. While the use of plastic pier piles as a superior alternative may be debated, it is clearly more effective and less environmentally damaging than wrapping treated piles in plastic.

Recognizing the fact that the Port may have existing stocks of ACZA treated wood piles, a phasing out condition has been included that limits the use of ACZA to that which is currently in stock.(Special Codnition4. Furthermore, to prevent plastic wrapping from entering the water due to abrasion, Special Condition 4 also requires that plastic wrapped ACZA piles only be used in the interior of the structure.

In any event, all pier pilings must be carefully monitored (Special Condition 4). If monitoring confirms that the use of plastic piles are damaging marine resources, the use of such materials should be stopped, as more environmentally friendly products are developed.

The special conditions attached to this permit accomplish these objectives. As conditioned, this permit provides for containment of construction debris, construction related BMP's, requirements for contractors regarding accidental spills, Corps of Engineers and Regional Water Quality Control Board permit coordination, and precautionary measures prohibiting the use of chemically treated wood products. The Commission will have an opportunity to re-evaluate the potential impacts to marine resources and coastal water quality associated with the use of plastic piles, and the effectiveness of permit requirements in addressing these potential impacts, at the conclusion of the five year permit period.

Therefore, as conditioned, the Commission finds that the project is consistent with the Coastal Act marine resource protection policies.

2. Commercial Fishing and Boating

The following Coastal Act Sections apply:

***Section 30234 Commercial Fishing and Recreational Boating** – 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 Importance of Fishing Activities – The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.

Coastal Act Sections 30234 and 30234.5 require that the importance of fishing activities be recognized, and that facilities serving the commercial fishing recreational boating industries be protected, and where feasible upgraded. This permit allows the Port San Luis Harbor District to proceed with the repair and maintenance activities that are essential to maintaining and operating the commercial fishing fleet as well as the recreational boats. Therefore, the Commission finds that this project implements, and is consistent with, Section 30234 and 30234.5.

3. Public Access and Recreation

Coastal Act Section 30220 protects coastal areas for water oriented recreational activities. Section 30252 requires that the location and amount of new development maintain and enhance public access to the coast. The proposed repair and maintenance activities will protect and enhance the water oriented access and recreation facilities provided by Port San Luis Harbor.

The proposed repair and maintenance activities do, however, have the potential to temporarily disrupt coastal access and recreation opportunities during operations. To minimize these impacts, Special Condition 2 requires a construction operations plan, to be reviewed and approved by the Executive Director prior to construction, which protects to the greatest degree feasible, facilities serving coastal access and recreation such as public parking and access routes during construction.

As conditioned, the project will maintain and enhance public access to the coast, and is therefore consistent with Sections 30220 and 30252 of the Coastal Act regarding public access and parking.

4. California Environmental Quality Act (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

In response to the environmental review requirements of CEQA, the Port San Luis Harbor District determined that the project qualifies for a categorical exemption under CEQA. The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. This staff report has discussed the relevant coastal resource issues with the proposal, and has recommended appropriate mitigations to address adverse impacts to said resources. Accordingly, the project is being approved subject to conditions, which implement the mitigating actions required of the Applicant by the Commission (see Special Conditions). As such, the Commission finds that only as modified and conditioned by this permit will the proposed project not have any significant adverse effects on the environment within the meaning of CEQA.



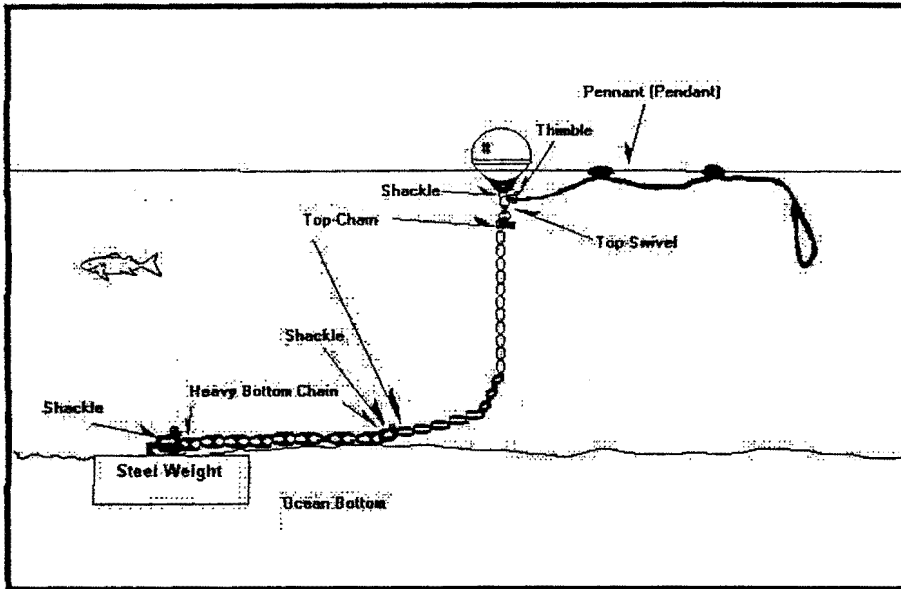


Vicinity Map
No Scale

Appendix: Routine Maintenance Procedures

MOORINGS

Repair, rehabilitate, or replace **channel markers, regulatory buoys, floating docks moorings, permanent and seasonal moorings** including buoys, pendants, upper and lower chain assemblies and anchors:
Typical Mooring Diagram – minor deviations occur depending on uses.



<http://home.gwi.net/~jandk/Mooringdia.htm>

FLOATING DOCKS

Decking. Decking will be replaced with ~~properly treated sawn timber~~ when the top surface becomes excessively uneven, hazardous, or worn to a point of possible failure. Spacing between decking planks is normally provided for ventilation and drainage.

Hardware. Various decking hardware, such as cleats, floats, connection hardware, bolts and washers are utilized on floating docks. These items require constant replacement.

~~WASTE WATER LINE~~
Repair, rehabilitate, or replace **waste water line** including marine pipe anchor, marine diffuser or hydraulic stabilizer.

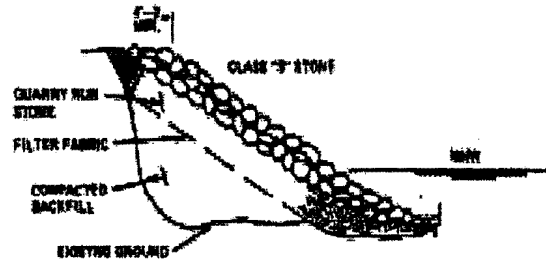
CCC Exhibit B
(page 1 of 4 pages)

SEAWALLS - REVETMENT

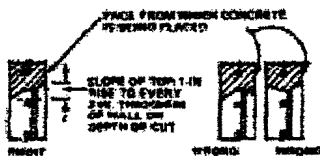
Repair, rehabilitate, or replace the **revetment** facing placed in various location throughout the Harbor. The revetment is made of stone and protects existing shore structures and parking area against erosion by wave action. Wave action makes it necessary to replace revetment stone that is lost during high-energy events.

Repairs consist of replacing and adding to materials in the structure. Extreme wave action will dislodge riprap and wash out portions that must be replaced. Adding crushed stone to the crowns, seaward slopes, and grouting adjacent surfaces holes repairs revetment type seawalls.

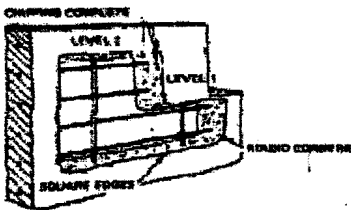
Proper grading of the seaward slope and use of correct classes of stone for the core and capping must be followed in repairs to minimize future maintenance requirements. Even then, material lost must be replaced periodically with materials of the same kind and size as used originally. Change in the type of capping material also may be necessary with the passage of time.



SEAWALLS - CONCRETE



Repair, rehabilitate, or replace section of the concrete seawall structure that separates the Harford Land Area and San Luis Bay at the Sport Launch Basin and Mobile Hoist Pier Basin.



The Seawall is designed to prevent erosion and other damage due to wave action. Defective sections of wall are removed, surfaces and reinforcing steel are prepared, formwork constructed, and wall is restored with cast-in-place concrete. Repair may be an internal section, or it may be the top of a wall or pier deck curb requiring an open-top form.

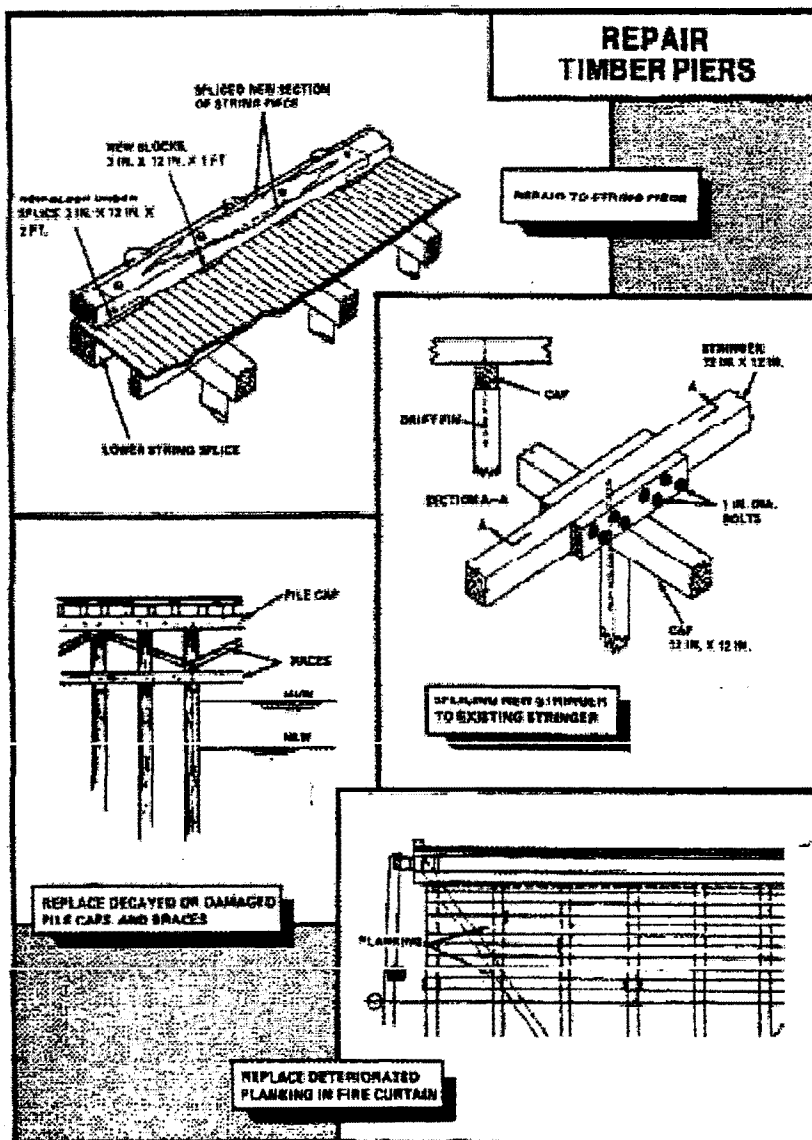
CCC Exhibit B
 (page 2 of 4 pages)

TIMBER PIER STRUCTURE

Repair, rehabilitate, or replace:

Decking. Decking will be replaced with properly treated sawn timber when the top surface becomes excessively uneven, hazardous, or worn to a point of possible failure. Spacing between decking planks is normally provided for ventilation and drainage.

Pile Caps. Decayed or damaged pile caps will be replaced with treated members. Replacement caps will be the same size and length as the original caps unless redesigned.



Braces. Diagonal braces that have been broken or attacked by fungi or marine borers will be replaced. Where decking has been removed for repairs, it is often possible to drive diagonal brace piles to provide lateral stiffness.

Stringers. Decayed or damaged stringers will be replaced with properly treated members. Decayed or damaged areas of long stringers will be removed and replaced with properly treated new sections. Connections between replacement and existing stringers will be made directly over a pile cap and stringers will be bolted tightly or pinned to the pile cap. Splices in adjacent stringers will be staggered where possible.

Piles. Decayed, marine borer damaged, or broken piles that cannot be adequately repaired will be pulled and replaced with new piles. Deteriorated or damaged piles will be replaced with the same size and length as the original unless redesigned. Treatment requirements for the piles will be determined at time of installation and based on current environmental requirements.

Fire Curtain. Fire Curtains will be replaced with properly treated sawn timber when the surface becomes excessively worn to a point of possible failure.

HOISTS AND UTILITY DISTRIBUTION SYSTEMS

Hoists and Utility Distribution Systems are provide on piers to service commercial and recreational boaters. Utilities include; water, sewage and oily waste collection, electricity, fuel, telephones, and fire protective systems. These systems require ongoing maintenance of wire rope, conduit, piping, valves, expansion joints, and drains. The maintenance of hoists, utility systems, and their components are covered by manufacturer recommendations and code manuals and are not included in this permit application.

ASPHALT PARKING

Repair, rehabilitate, or replace existing asphalt parking because stresses producing minor defects are constantly at work in an ocean environment. These stresses are also caused by traffic loads, temperature fluctuations, and changes in moisture content. Regardless of the cause, the result is the same-without timely maintenance the pavement ultimately deteriorates. These maintenance techniques may require:

- Application of a light seal coat.
- Filling and sealing random cracks and Holes
- An asphalt overlay or slurry seal.

TRAILS

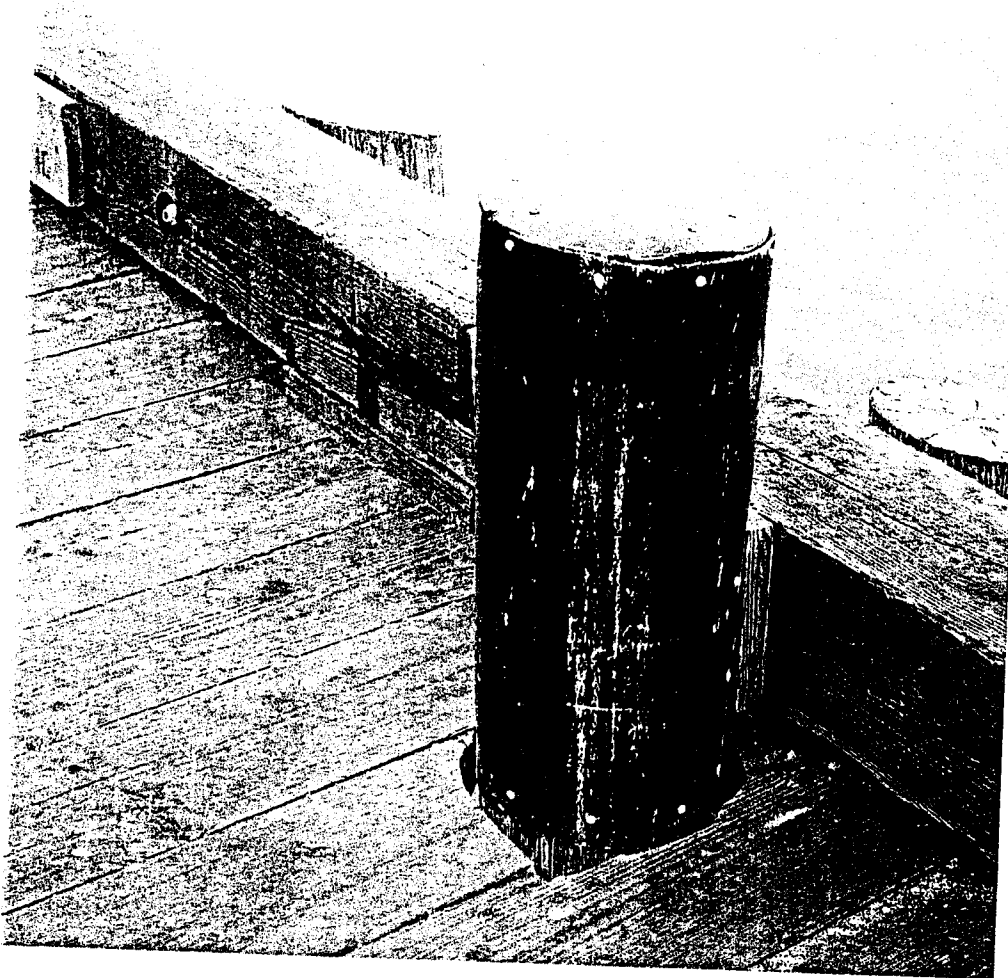
Trail maintenance includes trimming of vegetation, tread (wood or stone) and guardrail repair/replacement.

CCC Exhibit B
(page 4 of 4 pages)

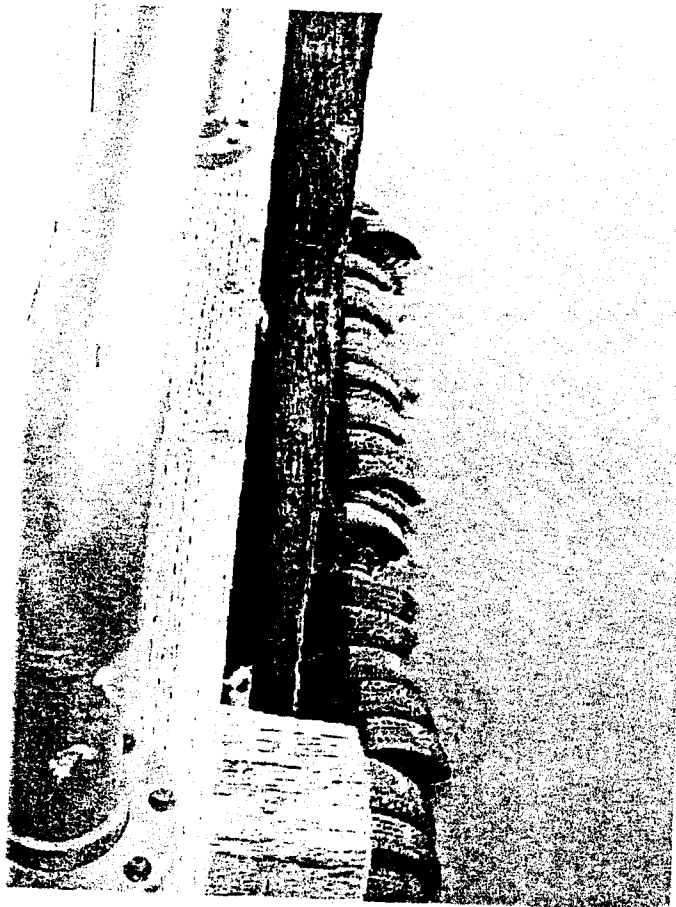
HARFORD PIER

- Deteriorating WRAP
- FLOATABLE Debris





• Non-WATERTIGHT
PILE CAP



• WORN FENDER PILE

CALIFORNIA COASTAL COMMISSION

1500 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200



December 20, 2002

Robert Wood
Department of the Navy
Naval Base Ventura, Public Works Department
311 Main Road, Suite 1
Point Mugu, CA 93042-5001

Attn: James Danza

RE: **ND-075-02**, Negative Determination for the repair of existing wharves and upgrading of utilities services, Naval Base Ventura County, Port Hueneme Area.

Dear Mr. Wood:

The Coastal Commission staff has received and reviewed the above-referenced negative determination. The Navy proposes the following activities:

The proposed construction is to be conducted for the purpose of repairing and upgrading the existing wharf facilities. The wharves size will not be increased. Proposed construction will consist of new utility systems, piling and fenders to meet berthing requirements, power, and "cold iron" requirements at Wharves 3, 4, 5, & 6. The "cold iron" features will include below deck potable water, sewer, and electrical service for ships berthed at these wharves. The base electrical service will be upgraded to support the additional wharf and site demands, including additional exterior lighting and cabling to shore power, and other related miscellaneous utilities such as telephone and telecommunications equipment.

The upgrade of electrical service will provide at least one power box (4800 amp) at each of wharves 3 and 4 and one box (4800 amp) at the wharf 5 and 6 locations. The proposed construction will also provide sewer and water lines to each wharf. Any existing lines will be upgraded to handle increased loads.

The project will also provide for the installation of a new fendering system at Wharves 3, 4, 5, & 6 using an advanced technology fendering system such as plastic composite or reinforced concrete with fiber composite materials to replace the existing chemically treated wood fenders, piles, and camels. New piles will be driven in new positions adjacent to existing piles. Old piles will be cut and removed.

Construction will also entail resurfacing and repairing the concrete and asphalt mobilization areas. All construction will meet seismic zone 4 requirements.

CCC Exhibit D
(page 1 of 3 pages)

Although the project includes measures to minimize water quality impacts from the proposed repair of the wharves, the Commission staff is concerned about the use of plastic pilings in the marine environment from the deterioration of the pilings and subsequent increase in marine debris. The Commission staff understands that the project involves removing deteriorating chemically treated wood pilings, and thus the Navy will reduce an existing impact to water quality resources. The Commission staff has also reviewed the water quality effects from the use of recycled plastic composites. The composites are made from used bottles collected at curbside for recycling. This material is comprised of approximately 80% polyolefin content (polyethylene and polypropylene), with the remaining percentages made of polyethylene terephthalate, polystyrene, polyvinyl chloride, and other plastics. In a leach test only minor amounts of copper, iron, and zinc leached from the plastic. None of the contaminants had a concentration significant enough to have any adverse effects on the marine environment. Additionally, in a study comparing the toxic effects of plastics to treated wood, the researchers concluded that "*in all these experiments with four different species of estuarine organisms, the recycled plastic proved to be far less toxic material than the treated wood.*"¹

However, the Commission staff is concerned about the proposed project because of its potential to add plastic debris to the marine environment. Since plastic is an inorganic material, it does not biodegrade, but rather continually breaks down into ever-smaller pieces. The presence of plastics in the coastal and ocean environment is both widespread and harmful to human and marine life.

An article, written by Jose G.B. Derraik, entitled "The pollution of the marine environment by plastic debris: a review," reviews much of the literature published on the topic of deleterious effects of plastic debris on the marine environment. The article states:

*The literature on marine debris leaves no doubt that plastics make-up most of the marine litter worldwide.*²

In support of this statement, the article includes a table that presents figures on the proportion of plastics among marine debris around the world. In most of the locations listed on the table, plastics represented more than 50 percent of the total marine debris found.³

Existing studies clearly demonstrate that plastic debris creates problems for marine life. Plastic marine debris affects at least 267 species worldwide, including 86% of all sea turtle species, 44% of all sea bird species, and 43% of marine mammal species.⁴ For example, plastics cause significant adverse impacts in seabirds, when birds mistakenly ingest the plastic debris. A study performed in 1988, concluded that seabirds consuming large amounts of plastics reduced their food consumption, which limited their

¹ Toxicity of Construction Materials in the Marine Environment; Weis, Peddrick; Weis, Judith; Greenberg, Arthur; and Nosker, Thomas; Archives of Environmental Contamination and Toxicology; 1992.

² Derraik, Jose. "The pollution of the marine environment by plastic debris: a review," Marin Pollution Bulletin," 44: 842-852, 2002.

Marine Debris - Sources, Impacts and Solutions. Springer-Verlag, New York, 99-139, 1997..

³ Ibid

⁴ Laist, D. W. "Impacts of marine debris: entanglement of marine life in marine debris including a comprehensive list of species with entanglement and ingestion records," Coe., J.M., (page B of 3 pages)

ability to lay down fat deposits and in turn reduced fitness. In addition, ingesting plastics can block gastric enzyme secretion, diminish feeding stimulus, lower steroid hormone levels, delay ovulation, and cause reproductive failures.⁵ Plastic debris that has settled on the seabed floor also harms the biological productivity of coastal waters. In Derriak's article, he states:

*The accumulations of such [plastic] debris can inhibit gas exchange between the overlying waters and the pore waters of the sediments, and the resulting hypoxia or anoxia in the benthos can interfere with the normal ecosystem functioning, and alter the make-up of life on the sea floor. Moreover, as for pelagic organisms, benthic biota is likewise subjected to entanglement and ingestion hazards.*⁶

There are no examples that staff can identify that document the deterioration rate of this plastic. If the proposed pilings were installed, they would be exposed to ultra violet radiation. The plastic contains stabilizers that are intended to protect it from degradation that may result from UV exposure. Notwithstanding the protection provided by the stabilizers, the potential does exist that the plastic would degrade over time. If the plastic piles were to become brittle, they may splinter upon impact and would introduce plastic debris into the coastal waters, and thus would adversely affect water quality resources. The plastic debris resulting from the proposed project would degrade the water quality and pose threats to the wildlife in the ocean. Thus the project would result in significant adverse impacts to the biological productivity and quality of coastal waters.

In conclusion, the Coastal Commission staff **disagrees** with the Navy's conclusion that the proposed project will not adversely affect coastal zone resources. The Commission staff, therefore, objects to the negative determination made pursuant to 15 CFR § 930.35. If you have any questions, please contact James Raives of the Coastal Commission staff at (415) 904-5292.

Sincerely,

PETER M. DOUGLAS
Executive Director

cc: South Central Coast District

PMD/JRR

⁵ Derraik, Jose. "The pollution of the marine environment by plastic debris: a review," *Marine Pollution Bulletin*, 44: 842-852, 2002.

⁶ *Ibid*

