

CALIFORNIA COASTAL COMMISSION

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



June 20, 1996

W11

To: Coastal Commissioners and Interested Parties

From: Susan M. Hansch, Deputy Director for Energy, Ocean Resources, and Technical Services

Darryl Rance, Coastal Analyst, Energy and Ocean Resources Unit

APPEAL DESCRIPTION: On April 29, 1995, Mr. Rodolphe Striechenberger, President of the Marine Forests Society, Inc. (MFS) submitted an appeal of the Executive Director's incomplete filing determination for Coastal Development Permit (CDP) application E-95-5.¹ CDP application E-95-5 requests after-the-fact approval for existing development on subtidal lands, offshore from the City of Newport Beach, Orange County.

SUBSTANTIVE FILE DOCUMENTS: California Coastal Act of 1976, as of January 1996; California Coastal Commission's Administrative Regulations; CDP Application No. E-95-5; (Munk, W.H., and Traylor, M.A., 1947, Refraction of Ocean Waves: a process linking underwater topography to beach erosion; Journal of Geology; Material Specification and Notification Procedure Surplus Materials for Augmentation to Artificial Reefs, California Department of Fish and Game, Marine Resources Division, November 15, 1991; U.S. Army Corps of Engineers, Final Report 1993, The Coast of California Storm and Tidal Waves Study, South Coast Region, Orange County, Report 93-1; Harbor Permit for the Marine Forests Society Tire Reef Demonstration Project.

PROCEDURAL NOTE: The filing of an application as complete is the threshold step in the California Coastal Commission's review process. Pursuant to Section 13056 of the Coastal Commission's Administrative Regulations,² an applicant may appeal to the Commission the Executive Director's determination that an application for a coastal development permit is incomplete, for the Commission's determination as to whether the permit application may be filed.

STAFF RECOMMENDATION: Staff recommends that the Commission deny the applicant's appeal of the Executive Director's filing determination for CDP application No. E-95-5 because the application does not include the information required by the Commission's application form promulgated pursuant to Section 13053.5 of Title 14, California Code of Regulations.

MOTION: The California Coastal Commission moves to deny the appeal and direct staff to accept and file Coastal Development Permit application No. E-95-5 as complete when the information and documentation described in this staff report is provided to staff and then bring the completed application back to the Commission for a decision on the permit application.

¹ The applicant requested that this appeal be scheduled at the July 1996, Commission Meeting in Huntington Beach.

² Title 14, California Code of Regulations (CCR) § 13056

SYNOPSIS

The Marine Forests Society has submitted an after-the-fact (ATF) coastal development permit (CDP) application and is seeking approval for existing development located on subtidal lands offshore from the City of Newport Beach, Orange County. The Commission staff has requested documentation and information regarding the development which is necessary to conduct a policy analysis under Chapter 3 of the California Coastal Act of 1976. The Commission's Regulations governing the filing of permit applications require that permit applications include information on the project, the project site and the vicinity sufficient to determine if the project complies with all the relevant policies of the Coastal Act. The Regulations also include a requirement for environmental documentation including feasible alternatives and feasible mitigation measures which would lessen potentially significant impacts that the project may have on the environment.

The staff has informed the applicant of the specific outstanding items required to file the application in written correspondence and in numerous telephone conversations. The outstanding information necessary to file the permit application is grouped into four general categories:

- 1) **Project description;** The applicant has not submitted a complete project description and has stated that the Commission's Regulations do not contain a requirement for a detailed and itemized project description.
- 2) **Environmental documentation** (based on the complete project description);
 - Project material compatibility with, and potential subsequent impacts to, marine resources;
 - Potential impacts to sand movement in the littoral zone;
 - Potential to exacerbate existing shoreline erosion;
 - Potential short- and long-term impacts resulting from in-place abandonment of project-related materials.

The applicant has stated that the project will not result in adverse impacts to coastal resources and that the staff's request for environmental documentation is unreasonable.
- 3) **Proof of legal interest;** The applicant has not documented its legal interest in the sub-tidal lands upon which the project is proposed. The applicant asserts that a permit has been issued for the subject development but has not submitted the required documentation.
- 4) **Agency approvals;** The applicant must submit a complete and consistent project description to all interested agencies in order to determine if approvals germane to their respective statutory jurisdiction is required. The subject development will at a minimum require approvals from the California Regional Water Quality Control Board (RWQCB) and the U.S. Army Corps of Engineers (ACOE). Additional agency approvals may be necessary based on a complete project description.

The applicant asserts that the Commission staff's requests are unreasonable, have no legal basis or that sufficient documentation and information has been provided to conduct the necessary Coastal Act policy analysis. The Commission staff strongly believes that the requested documentation and information is required by Section 13056 of the Commission's Administrative Regulations, is of a level required of all applicants and is necessary to fully evaluate potential coastal resource impacts associated with the proposed development.

FINDINGS:

I. Coastal Development Permit Filing Requirements

Pursuant to Section 13056 of the Coastal Commission's Administrative Regulations, an application for a coastal development permit (CDP) shall be deemed "filed" after all necessary information requirements (described in the Coastal Commission's permit application form promulgated pursuant to 14 CCR Section 13053.5) have been submitted together with a filing fee (Section 13055). A complete application must include, but not be limited to:

- (1) an adequate project description including maps, plans and photographs of the proposed development and project site sufficient to determine whether the project complies with the relevant policies of the Coastal Act;
- (2) environmental documentation on potential project-related impacts, including feasible mitigation measures or project alternatives;
- (3) documentation of the applicant's legal interest in all the property upon which the work would be performed; and
- (4) approvals from other government agencies.

II. Appeal Background

Commencing in 1988, without the benefit of coastal development permit approval, the Marine Forests Corporation (now identified as the Marine Forest Society) (MFS) placed on subtidal lands, offshore from the City of Newport Beach, Orange County 1,500 used automobile tires, 2,000 "kelp substrates" (one gallon plastic jugs covered with plastic mesh), 100 "mussel columns" (20 foot sections of PVC pipe), and various materials from canceled past experiments, such as nylon fishing net, plastic, styrofoam, iron rods and polyethylene mesh. The materials were placed on a conditionally approved aquaculture lease³ site issued by the California Fish and Game Commission (CF&GC).

Condition G of the CF&GC aquaculture lease agreement explicitly required the MFS to obtain Coastal Commission approval prior to proceeding with the project. The MFS did not notify the Coastal Commission and did not obtain a coastal development permit or regulatory approval from other interested agencies before proceeding with their project. Thus, an environmental analysis to identify project-related impacts, as required by the Coastal Act of 1976 and the California Environmental Quality Act did not occur prior to project implementation.

The conditions of the aquaculture lease were never fulfilled and by mutual agreement with the MFS, the CF&GC officially terminated the lease. Condition "F" of Aquaculture Lease M-738-02 required that all project-related improvement be salvaged and removed within 90-days of the termination of the lease. The MFS has not removed any project-related materials. No action has been taken by the CDFG to enforce this requirement. All project related materials remain on the site today or some materials may have been partially carried away by ocean currents.

³ Aquaculture Lease M-738-02

The Commission staff became aware of the unpermitted activity on June 7, 1993, during the review of a separate CDP application filed by the MFS. On June 18, 1993, the Commission staff informed the MFS of the apparent violation of the Coastal Act and outlined three ways to remedy the matter:

- (1) expand the scope of the application for the proposed new development to include the installation of the existing development;
- (2) apply for and obtain a separate ATF permit for all the existing structures; or
- (3) apply for and obtain a permit for the removal of all unpermitted structures.

The applicant initially chose to expand the scope of the application for the proposed development to include the existing unpermitted development. However, citing submittal and/or environmental documentation requirements of other agencies, the applicant later chose to submit a separate after-the-fact CDP application for the existing development.

On August 7, 1995, the MFS submitted an ATF CDP application (E-95-5) for the existing development (see section III of this report for project description). On August 21, 1995, the Commission staff issued to the MFS the first of three incomplete filing status determination letters (Exhibit 1, issued August 21, 1995; Exhibit 2, issued October 25, 1995; & Exhibit 3 - issued February 23, 1996). In summary, the incomplete filing determination letters requested:

- (1) a complete project description (with environmental documentation);
- (2) proof of legal interest in the project site;
- (3) clarification of project purpose;
- (4) permit verification from other agencies; and
- (5) an application filing fee.

Since the initial submittal of the application, the staff has diligently encouraged the applicant to submit the information and documentation necessary to file the application and bring this matter before the Commission. The applicant vigorously disputes the Commission staff's interpretation of the Coastal Act policies and the Commission's Administrative Regulations as they pertain to the CDP application filing status determination. The applicant believes that the application filing requirements are unreasonable and may be impossible to comply with. The Commission staff has advised the applicant of his right to appeal, under Section 13056 of the Commission's Regulations, the Executive Director's incomplete filing determination to the Commission.

III. Proposed Development -- The MFS seeks approval for various experimental structures on subtidal lands offshore from the City of Newport Beach, Orange County. According to the incomplete CDP application, the development for which the MFS seeks a CDP includes, but is not limited to:

- 1) 2,000 "kelp substrates" (one gallon plastic jugs covered with plastic mesh, moored with nylon rope and plastic anchors);
- 2) 100 "mussel columns" (20 foot sections of PVC pipe, moored with nylon rope and plastic anchors);

- 3) 1,500 used automobile tires (assembled in various configurations, moored with nylon rope and secured with plastic anchors); and
- 4) various materials from canceled past experiments, including nylon fishing net, plastic, styrofoam, iron rods, and polyethylene mesh.⁴

The project description calls for all project-related materials to be abandoned in-place.

IV. Outstanding CDP Application Filing Requirements

(1) **Project Description** -- Section 13053.5(a) of the Commission's Administrative Regulations requires that a permit application include an adequate description, including maps, plans, photographs etc. of the proposed development, project site and vicinity sufficient to determine if whether the project complies with all the relevant policies of the Coastal Act. The project description is also to include any feasible alternatives or any feasible mitigation measures available that would substantially lessen any significant adverse impacts which the development may have on the environment.

Applicant's Assertion -- The applicant has stated that sufficient information has been submitted for the Commission staff to determine if the project complies with all the relevant policies of the Coastal Act. The applicant additionally asserts that the Commission's application form and the Administrative Regulations upon which it is based, do not contain enforceable requirements for detailed and/or itemized project description to be submitted with coastal development permit applications (Exhibit 4).

According to the CDP application, the MFS management encouraged volunteers to experiment with a full range of materials without administrative oversight or coordination. In response to the Commission staff's request to identify these materials the MFS CDP application states "as a sacred rule and to develop creativity, the largest initiative was permitted and even recommended to the volunteers. The intellectual properties of inventions that occurred were ruled to remain the intellectual property of the individual inventors and not the MFS." Moreover, the applicant states that there is no legal basis for staff's request for a detailed project description.

Response -- Of particular concern is that component of the project description identified as "diverse units of canceled past experiments." The applicant has provided some information on the "canceled past experiments" but has also indicated that information on the exact materials, locations and installation dates of the canceled past experiments is not available. The applicant is however seeking CDP approval for and abandonment of these canceled past experiments. The materials from canceled past experiments, include, but may not be limited to, nylon fishing net, plastic jugs, styrofoam, iron rods, polyethylene mesh and other materials in various configurations.

⁴ The development includes a component that the CDP application defines as "diverse units of canceled past experiments." The MFS has stated that they will not provide an itemized description of the "diverse units of canceled past experiments" because they do not believe it is a requirement. The project description also includes a provision for on-site abandonment of all project-related materials that are no longer of use to the MFS.

The project description must provide information, critical both in terms of environmental review and Coastal Act policy analysis that includes:

- (1) a comprehensive listing, including quantities, of all project-related materials;
- (2) the depth at which the materials are placed;
- (3) the location of all project-related materials relative to the shoreline; and
- (4) the current operational status of all project-related materials.

The applicant has provided only a partial project description and has stated that this information should suffice for the necessary analysis. In a March 25, 1996, letter (Exhibit 4) the applicant states that the MFS will not provide a more detailed project description nor identify the materials, location, or function of the canceled past experiments. In a May 18, 1995, Fax Message (Exhibit 5) to Commission staff (Exhibit 5), the applicant states that "the experiments conducted at the site resulted in three structures (a) the mussel columns, (b) kelp substrates, and (c) tire ribbons; other experiments that were conducted were not recorded and of no more interest to the MFS."

Most of the project-related materials described in the application must be physically attached to the ocean floor (1/4 inch nylon rope and plastic anchors) in order to remain in place. The application states that: "the mooring capacities of the anchoring systems have been calculated according to the indications of Dr. Jacques Savel, professor of material resistance at the School of Architecture of the University of Nantes, France." The Commission staff requested that this information be submitted for verification of the anchoring system's long-term ability to secure project-related materials to the ocean floor. The MFS responded that this information was not available. As such, an analysis to confirm the applicant's claim that all project-related materials will remain in-place in perpetuity cannot be verified.

Specific information is required on all project-related components to enable a comprehensive analysis of the project under the Chapter 3 policies of the Coastal Act. The Commission staff have requested that the applicant submit project-related information:

- (1) to determine if the project complies with the Coastal Act policies;
- (2) to document potential environmental impacts of the proposed project; and
- (3) to confirm the long-term compatibility of project-related materials in the marine environment.

A complete and detailed project description is required to complete these tasks.

(2) Environmental documentation -- Section 13053.5(e) of the Commission's Administrative Regulations (Section IV.9 of the application form) provides for staff's request of additional information for specific categories of development or for specific geographic areas deemed necessary for development application review.

The Commission staff's incomplete filing determination letters (Exhibits 1, 2 & 3) requested that the MFS submit a complete project description which describes all project components and shows the location, density, height above sea floor and quantities of all experimental structures relative to ocean

depths and relative to the geographic boundaries of the site. Staff also requested information on the anchoring system, including the types of rope, connectors and their respective probable life span in the marine environment. The analysis of potential impacts to water quality from various project-related materials will be reviewed in consultation with the RWQCB.

Subtidal development in shallow nearshore waters has the potential to affect the on and offshore movement of sand in the littoral zone and exacerbate existing shoreline erosion. Furthermore, the materials that have been identified in the project description evoke questions regarding both short- and long-term compatibility with and subsequent impacts to, marine resources. Project-related materials will be evaluated against the practical materials guidelines⁵ established by the CDFG (Exhibit 8) as suitable for use in the marine environment as well as any other documentation provided by the applicant.

Applicant's Assertion -- The applicant asserts that staff's requests for environmental documentation are unreasonable. In a May 18, 1995, Fax Message (Exhibit 5), the applicant responded to Commission staff's request to provide environmental documentation regarding potential project-related impacts. Citing limited financial resources, the uncertainty of the potential environmental impacts and philosophical opposition to project-related monitoring and surveys, the applicant has indicated that the policy analysis for the existing development would have to go forward without additional documentation of potential impacts to coastal resources.

The applicant asserts that the materials used in the development are suitable for both short- and long-term use in the marine environment. The application states that the CDFG Material Guidelines (Exhibit 8) do not apply to the MFS project. The CDP application states that once project-related materials (including, but not limited to, nylon fishing net, plastic, styrofoam, iron rods, polyethylene mesh) are abandoned in-place they will become valuable marine habitat. Supporting information submitted with the application does not address the entire project description. The applicant has requested that staff accept the information submitted as adequate environmental documentation.

The applicant asserts that project-related impacts to the marine environment are insignificant. To support this conclusion the applicant has submitted an opinion from S. Ian Hartwell of the Maryland Department of Natural Resources stating that the use of tires in the marine environment will not result in acute toxicity effects (Exhibit 6). However, Mr. Hartwell's opinion is qualified with the statement that "the Fisheries Division will not use scrap tires in Chesapeake Bay until more information on potential secondary effects is available" and "that no assessment has been made regarding persistence, fate, transport or possible bioaccumulative effects" of the toxic chemical found in tire leachates.

Additionally, the applicant asserts that potential project-related impacts to shoreline erosion and to on-shore and off-shore movement of sand within the littoral zone are not significant. The applicant has submitted an opinion from Skelly Engineering [based on a partial project description (see tires only)] attesting to the same, but it is not supported by any scientific analysis or citation to literature

⁵ Material Specification and Notification Procedure Surplus Materials for Augmentation to Artificial Reefs, California Department of Fish and Game, Marine Resources Division, November 15, 1991.

(Exhibit 7). This opinion does not include quantified documentation to support the conclusion of insignificant impact nor does it address the entire project description.

Response -- Environmental documentation, including an alternatives analysis is an important component of Coastal Act policy analysis. For example, Section 30233 of the Coastal Act requires a finding of "no feasible less environmentally damaging alternative" to allow for fill in open coastal waters. The MFS project constitutes fill in open coastal waters.

Additionally, information to support claims that the project will not result in significant impacts to coastal resources must be verified and based on a complete project description. For example, the MFS project description includes a provision to abandon project components in-place. Since most of the identified project materials are not heavy enough to remain on the ocean floor without being anchored, the long-term anchoring capacity must be verified. Project materials breaking either partially or completely free from the anchoring system could result in a number of coastal resource impacts. Potential project-related impacts from a partially secured structure could include the structure moving about during period of heavy seas and thrashing against and destroying marine habitat. Project-related materials breaking completely free of the anchoring system could be moved about and become hazards to navigation or wash onto shore and potentially impact public access, recreation opportunities or become ocean rubbish suitable for disposition in an approved upland disposal facility.

Furthermore, differences in near-shore bathymetry (ocean depth and surface relief features) can result in significant variation of the susceptibility to coastal erosion. Surf action is usually the dominant force producing both wave impact action and shoreline abrasion. The amount of wave energy impacting a shoreline is controlled locally by the offshore sea floor bathymetry. The surface relief features (bathymetry) of the ocean floor alter the amount of wave energy impacting the shoreline. Variations in near-shore bathymetry can also refract ocean waves, locally focusing damaging wave energy onto certain coastline segments.⁶

The Coast of California Storm and Tidal Waves Study, South Coast Region, Orange County (CCSTWS) was developed to examine and quantify natural and induced (man made) coastal processes along the Orange County coastline.⁷ The CCSTWS data has shown that the Balboa Peninsula is losing sand at a retreat rate of about 5 feet per year. Beach profile surveys in the vicinity of the Balboa Pier identify water depths of [-30] to [-40] feet mean low low water (MLLW) as a critical depth at which any sand that passes will not return to the littoral zone. Coastal structures within the littoral zone affect both longshore and offshore sediment transport. The existing development is located within the littoral zone and may be impacting sediment transport.

The materials that have been identified in the project description require an analysis for both short- and long-term compatibility with the marine environment. The CDFG asserts that the MFS project should be reviewed as an artificial reef (Exhibit 11). The CDFG Artificial Reef Program has

⁶ (Munk, W.H., and Traylor, M.A., 1947, Refraction of Ocean Waves: a process linking underwater topography to beach erosion: Journal of Geology.)

⁷ U.S. Army Corps of Engineers, Final Report 1993, The Coast of California Storm and Tidal Waves Study, South Coast Region, Orange County, Report 93-1.

developed practical guidelines (Exhibit 8) that establish three general criteria for materials suitable for the construction of artificial reefs. Many of the project-related materials do not meet these guidelines and must be evaluated for suitability for use in the marine environment. The CDFG material guidelines are as follows:

- (1) the material must be persistent (it must be hard, but may not be so brittle that collisions with other similar materials, or boat anchors would tend to shatter it, and it must remain essentially unchanged after years of submersion in sea water);
- (2) the material must have a specific gravity at least twice that of sea water (it must be dense enough to remain in position during strong winter storms, even in water depths as shallow as 30 feet); and
- (3) the material must not contain potentially toxic substances. Materials considered suitable are quarried rock and high density concrete, however, other materials are considered on a case by case basis.

The CDP application does not include a quantified analysis of potential project-related impacts based on the various project materials and the relative location to the shoreline. The applicant has suggested that the environmental documentation aspect filing requirement be satisfied with the information that has been submitted with no additional submittals being necessary.

(3) Proof of legal interest -- Section 13053.5(b) of the Coastal Commission's Administrative Regulations (Section VI.1 of the CDP application form) requires the applicant to document its legal interest in the property upon which the development is to be performed. The project is located on submerged lands which have been legislatively granted in the public trust to the City of Newport Beach. To date, the applicant has not demonstrated legal interest to use the subject subtidal lands for the existing development.

Applicant's Assertion -- The application states that legal interest in the subtidal lands upon which the existing development is located has been demonstrated in two ways: (a) a 1987 "City Permit" for the installation of an aquaculture research project; and (b) a conditionally approved Harbor Permit for a "Tire Reef Demonstration" project.⁸

Response -- (a) Documentation of the "City Permit" referenced by the applicant has not been submitted. However, the application includes a 1987 letter from the Newport Beach City Council conceptually endorsing an aquaculture lease based on the assumption that the California Department of Fish and Game (CDFG) would authorize and administer the lease. The lease conditions were never fulfilled and the CDFG officially rescinded the MFS's conditional aquaculture lease in 1993. The termination of the lease negated the basic assumption of the City's endorsement. Based on these facts, the Commission staff believes that some further action by the City of Newport Beach authorizing the MFS to use its property is necessary to satisfy the requirements of § 13053.5(b) of the Coastal Commission's Administrative Regulations.

⁸ Letter to Mr. Darryl Rance, California Coastal Commission, from Mr. Rodolphe Streichenberger, Marine Forests Society, March 25, 1996. (Exhibit 4)

(b) On March 27, 1995, the City of Newport Beach issued to the MFS, a conditionally approved Harbor Permit for a Tire Reef Demonstration project (Exhibit 12). The scope of the Harbor Permit is limited to a specific proposed project which does not include the subject development. Neither the CEQA documentation prepared for the Harbor Permit, nor the Harbor Permit consider such development.

The Commission staff has attempted to clarify the proof-of-interest issue for the existing development with the City of Newport Beach (City). In a March 29, 1996, letter to the City, the Commission staff requested written confirmation of any legal entitlements granted to the MFS by the City for the existing development (Exhibit 9). To date, the City has not provided any written confirmation of the MFS's legal interests in the subtidal lands for the existing development.

(4) Other agency approvals -- Section 13052 of the Commission's Regulations (Section IV.10 of the application form) requires the applicant to submit verification of permit approval from public agencies. Project-related development, which is intended to be abandoned-in-place, is located in coastal zone waters approximately 300 yards offshore from the City of Newport Beach.

Applicant's Assertion -- The applicant asserts that agencies such as the California Department of Fish and Game, the California Department of Health Services, the California Regional Water Quality Control Board, and the California Department of Parks and Recreation have no jurisdiction over this type of project. Therefore, the applicant did not include agency approvals in the CDP application.

Response -- The MFS project includes materials such as used automobile tires, styrofoam, plastics and other unidentified materials that may impact water quality, the marine environment, marine species, public health and recreation opportunities. Information available to Commission staff raises some serious concerns regarding both short- and long-term use of project-related materials specifically tires, plastics and netting in the marine environment. It is also reasonable to assume that some of the unidentified materials included in the project description as "diverse components of canceled past experiments" may also raise concerns regarding potential impacts to coastal resources. The applicant must provide a consistent and complete project description to all interested agencies so an evaluation germane to the respective agencies expertise and statutory jurisdiction is possible.

Based on the project description submitted with the application, approval from the Army Corps of Engineers and the California Regional Water Quality Control Board (Exhibit 10) is required for the MFS project. Additional approvals may be necessary based on a complete project description.

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
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August 21, 1995

Rodolphe Streichenberger, President
Marine Forests Society
P.O. Box 5843
Balboa Island, CA 92662

Subject: Coastal Development Permit (CDP) Filing Status Letter E-95-5

Dear Mr. Streichenberger:

The Commission staff has reviewed the after-the-fact CDP application (CDP No. E-95-5) which includes "development" on subtidal lands without prior approval from the California Coastal Commission (Commission). The development consists of: (1) 2,000 kelp substrates, (2) 100 mussel columns, (3) 1,500 scrap automobile tires, and (4) "diverse little units of canceled past experiments." The development occurred on the California Department of Fish and Game's (CDFG), conditionally approved, Aquaculture Lease No. M-738-02 (Parcel No. 1).

A June 7, 1995 Commission correspondence outlined submittal requirements for a **complete** after-the-fact CDP application for the unpermitted development or site restoration. The Marine forests Society's August 7, 1995 CDP application remains incomplete and cannot be filed at this time.

Filing Requirements – After-the-Fact CDP for the Existing Development

As outlined in previous project-related Commission correspondence (18 June 1993, 19 July 1993, and 13 December 1994, June 7, 1995), the after-the-fact CDP application for the existing development shall include the following information:

1.0 Project Purpose

The after-the-fact CDP application states that the existing development is an aquaculture project and not an artificial reef. Please confirm.

2.0 Project Description

NOTE: The after-the-fact project description shall only include the existing project development. New project elements should be included in CDP application E-95-2. This comment specifically addresses the 500 additional tires and 100 mussel columns proposed to be added to the project site each year.

EXHIBIT NO. 1

APPLICATION NO.
E-95-5

Filing Letter #1

- 2.1 **Project Description**. The after-the-fact CDP application shall include a detailed description of the existing development. The project description shall include all tire assembly configurations and their respective anchoring patterns/techniques.
- 2.2 The CDP application shall include a detailed description of the 2,000 kelp substrates identified in Figure A, Attachment 10 of the application.
- 2.3 The CDP application shall include an itemized description of the "diverse components of canceled past experiments."
- 2.4 The project development plan submitted with the application is incomplete. The plan shall include all project components and specifically itemize "diverse components of canceled past experiments, and show the locations, densities, heights above the sea floor, and quantities of all experimental structures relative to the geographic boundaries of the lease site.
- 2.5 **Reef/Bio-Structure Anchoring System**. The CDP application shall include estimates of anchoring capacities and uplift forces to determine the overall adequacy of the anchoring system. The MFS's experience (success and failure) can be discussed as additional support for the anchoring capacities and the theoretical uplift force calculations. The general description of the water jetting process used to secure the anchors and included in the CDP application appears adequate. However, the description shall include the dimensions of, and the depths at which the anchors for the various structures are anchored.
- 2.6 The CDP application shall include information on the type rope and miscellaneous connectors that have been used with the existing development and their respective probable longevity or life span in the ocean environment.
- 2.7 **Removal Plan**. The CDP application shall include a plan to remove the tires and other experimental structures, including a discussion of the methods and equipment to be used, and an estimate of the time required for completion of project removal. The project removal plan shall address complete project removal and site remediation. The Removal plan shall include all project-related materials that have been placed on or attached to the ocean floor.

3.0 CDP Filing Fee

In response to the Marine Forests Society's request for special consideration of the CDP filing fee, please refer to the Commission Staff's correspondence of September 10, 1993 (copy enclosed).

A CDP application processing fee was not included in your application package. See Appendix E, "Other Developments Not Otherwise covered herein" of the CDP application, to determine the appropriate application fee. According to your CDP application, the cost of the existing development is under \$100,000.00. As such, the Fee Schedule identifies a \$600.00 fee for timely submittal of a CDP application. Section 13055(b) of the Commission's Administrative Regulations requires that an after-the-fact CDP application permit fee shall be double the regular application fee. The after-the-fact CDP processing fee for the existing parcel No 1 development, described in CDP application E-95-5, is \$1,200.00.

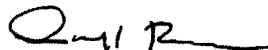
4.0 Other Agencies -- Permit Verification

Please submit the following information and provide a schedule for obtaining permits, permissions, or approvals from the agencies listed below:

- 4.1 Regional Water Quality Control Board (RWQCB). Since the project is located in State waters offshore Orange County, it must be approved by the Regional Water Quality Control Board. Please submit evidence of RWQCB approval for the project description included in the CDP application. This evidence should be in the form of either (1) a letter from the RWQCB stating that the MFS has applied for RWQCB approval (specifically for the existing unpermitted development); or (2) a copy of your application to the RWQCB.
- 4.2 Army Corps of Engineers (ACOE). Since the project is proposed in or will affect navigable waters of the United States, the project will require permits from the ACOE under Section 10, Rivers and Harbors Act of 1899 (33 USC Section 403) and/or Section 404 of the Clean water Act (33 USC 1344). Please submit evidence that you have applied for the ACOE permits. This evidence should be in the form of either (1) a letter from the ACOE stating that the MFS has applied for ACOE approval (specifically for the existing unpermitted development); or (2) a copy of your application to the ACOE.

If you have any questions regarding the content of this letter or the CDP application form, please contact me at (415) 905-5248.

Sincerely,



Darryl Rance
Coastal Analyst

enclosure

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
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September 10, 1993



Rodolphe Streichenberger, President
Marine Forests Society
P.O. Box 5843
Balboa Island, CA 92662

Dear Mr. Streichenberger:

I am in receipt of your August 31 letter requesting a waiver of the Coastal Commission's permit filing fee for the application your organization filed for the construction of an offshore tire reef. I regret to inform you that I cannot support the waiver of the application fee.

As you know, California is faced by difficult economic times and its ability to fund important public services and programs has been severely hampered by major revenue shortfalls over the last several years. At the urging of the Legislature, the Department of Finance and the Legislative Analyst, the Coastal Commission, last year, revised its fee structure in an attempt to recover a larger portion of the public costs involved in the review of coastal projects. Your proposed project raises a number of significant issues, the evaluation of which will require considerable staff resources.

I have enclosed, for your information, a staff report approved by the Coastal Commission in response to a similar request from a non-profit organization. Given the number of projects submitted to the Commission by non-profit organizations, I think it would be difficult for the Commission to decide when to waive fees. When the request of the Inverness Foundation was before the Commission last year, the notion of waiving application fees for all non-profit organizations was raised and rejected. If you wish this matter to be scheduled for Commission consideration and possible action, please let me know and I will agendize the matter for the Commission's October meeting in Los Angeles. If the matter is agendized, staff will not recommend approval.

If you have any questions, please feel free to call me or Cy Oggins.

Sincerely,

A large, stylized handwritten signature in black ink, appearing to read "Peter Douglas".

Peter M. Douglas
Executive Director

cc: Susan Hansch
Cy Oggins
Jim Burns

Enclosure

2717E

CALIFORNIA COASTAL COMMISSION

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



October 25, 1995

Rodolphe Streichenberger, President
Marine Forests Society
P.O. Box 5843
Balboa Island, CA 92662

Subject: Coastal Development Permit (CDP) Application No. E-95-5, Filing Status Letter

Dear Mr. Streichenberger:

The California Coastal Commission (Commission) staff has reviewed the after-the-fact CDP application (CDP No. E-95-5) which includes "development" on subtidal lands without prior approval from the Commission. The CDP application also includes additional submittal information which was received in the Commission staff office on September 27, 1995. Pursuant to our telephone conversations since that supplemental submittal (9/27/95), the application remains incomplete and cannot be filed at this time.

1.0 November Commission Meeting Agenda

This item was tentatively scheduled for the November 1995 Commission meeting based on our agreement that the required outstanding information would be supplied in a timely manner that allowed for comprehensive review of the application. The required information was not available at the time this letter was drafted. Therefore, the after-the-fact permit is no longer scheduled for the November Commission meeting. This item will be scheduled for the first available Commission meeting following the submittal of a complete CDP application.

2.0 Filing Requirements -- After-the-Fact CDP for the Existing Development

As outlined in previous project-related Commission correspondence (18 June 1993, 19 July 1993, 13 December 1994, and 7 June 1995), the after-the-fact CDP application for the existing development shall include the following information:

3.0 Project Purpose

The after-the-fact CDP application states that the existing development is an aquaculture project and not an artificial reef. As the application and the 9/27/95 submittal identifies this project as aquaculture, please include the appropriate aquaculture approval/certification from the California Department of Fish and Game.

4.0 Project Description

4.1 The after-the-fact CDP application shall include a detailed description of the existing development. The project description shall include all tire assembly configurations and their respective patterns/techniques.

EXHIBIT NO. 2

APPLICATION NO.
E-95-5

Filing Letter #2

- 4.2 The CDP application shall include a detailed description of the 2,000 kelp substrates identified in Figure A, Attachment 10 of the application. The submittal should include the current status of the kelp substrates.
- 4.3 The CDP application shall include an itemized and detailed description of the "diverse components of canceled past experiments" referenced in the application. The items included in Attachment 19 of the 9/27/95 submittal do not provide a description of what the various schematics and pictures represent. Please provide a complete description of all existing development. The project development plan submitted with the application is incomplete. The plan shall include all project components and specifically itemize "diverse components of canceled past experiments," and show the locations, densities, heights above the sea floor, and quantities of all experimental structures relative to the geographic boundaries of the lease site.
- 4.4 The Reef/Bio-Structure Anchoring System section of the 9/27/95 supplemental submittal states that *"the mooring capacities of the anchoring systems have been calculated in 1987 according to indication of Dr. Jacques Savel, Professor of Material Resistance at the School of Architecture of the University of Nantes, France. Unfortunately, These indications cannot be located anymore in the files of the Marine Forest Society."* Please make the necessary arrangements to obtain said documentation from Dr. Savel, for inclusion in the CDP application.

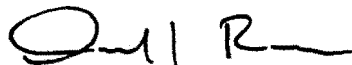
5.0 Other Agencies -- Permit Verification

Please submit the following information and provide a schedule for obtaining permits, permissions, or approvals from the agencies listed below:

- 5.1 California Department of Fish and Game (CDFG). The CDP application states that the project is aquaculture. Please provide the appropriate Aquaculture Registration and applicable conditions of approval from the CDFG
- 5.2 City of Newport Beach. The CDP application states that a Harbor Permit has been conditionally approved by the City of Newport Beach. Harbor Permit approval is based on project monitoring and reporting requirements for impacts to water quality, to marine life on and in the immediate vicinity of the project, and on erosion and deposition of beach sands. The required monitoring and reporting program must be included in the CDP application as a part of the project description to facilitate a comprehensive project review.

If you have any questions regarding the content of this letter or the CDP application form, please contact me at (415) 905-5248.


Sincerely,



Darryl Rance
Coastal Analyst

CALIFORNIA COASTAL COMMISSION

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

EXHIBIT NO.	3
APPLICATION NO.	E-95-5
Filing Letter #	3
	

February 23, 1996

[Sent via facsimile and mail]

Rodolphe Streichenberger, President
Marine Forests Society
P.O. Box 5843
Balboa Island, CA 92662

Subject: Coastal Development Permit (CDP) Application No. E-95-5, Filing Status Letter
Violation File No. V-E-93-001 -- 30-DAY NOTICE to complete filing requirements.

Dear Mr. Streichenberger:

The California Coastal Commission (Commission) staff has reviewed the after-the-fact CDP application (CDP No. E-95-5) and supplemental information submitted in correspondence dated September 27, 1995 and December 12, 1995, for development on subtidal lands without prior approval from the Commission in apparent violation of California Coastal Act of 1976 (Public Resources Code § 30600). Pursuant to our telephone conversations since your last submittal (12/12/95), the application remains incomplete and cannot be filed at this time. Please submit the necessary documentation to complete your application for filing. If necessary documentation has not been received in the Commission office within 30 days from the date of this letter, staff will return your incomplete application and refer this matter to the Commission's Statewide Enforcement Unit.

As outlined in previous project-related Commission correspondence (18 June 1993, 19 July 1993, 13 December 1994, 7 June 1995, and 25 October 1995), the after-the-fact CDP application for the existing development must include the following information:

1.0 Proof-of-legal Interest

The project site is located on submerged lands offshore the City of Newport Beach. The Marine Forests Society has not provided the documentation necessary to confirm the MFS's legal interest to use the property for the purposes of the existing development.¹ The

¹ Title 14 California Code of Regulations §13053.5(b): "A description and documentation of the applicant's legal interest in all the property upon which work would be performed, if the application were approved, e.g., ownership, leasehold, enforceable option, authority to acquire the specific property by eminent domain."

Public Resources Code § 30601.5: "Where the applicant of a coastal development permit is not the owner of fee interest in the property on which a proposed development is to be located, but can demonstrate a legal right, interest, or other entitlement to use the property for the proposed development, the commission shall not require the holder or the owner of any superior interest in the property to join the applicant as co-applicant. All holders or owners of any other interests of record in the affected property shall be notified in writing of the permit application and invited to join as co-applicant. In addition, prior to the issuance of a coastal development permit, the applicant shall demonstrate the authority to comply with the conditions of approval."

application states that a Harbor Permit has been conditionally approved by the City of Newport Beach. However, the referenced conditionally approved Harbor Permit is based on the MFS's Tire Reef Demonstration Project, not the existing development. Please submit documentation to support the MFS's claim of proof of legal interest to utilize the site for the purposes of the after-the-fact permit request.

2.0 Project Purpose

The after-the-fact CDP application states that the existing development is an aquaculture project and not an artificial reef. Please include the appropriate aquaculture approval(s), registration(s) and/or certification(s) with applicable conditions of approval from the California Fish and Game Commission,² the California Department of Fish and Game³ and the California Department of Health Services.⁴

3.0 Project Description⁵

- 3.1 The project description must include a detailed description of the existing development. The project description must include all tire assembly configurations and their respective anchoring patterns/techniques.
- 3.2 The project description must include a detailed description of the 2,000 kelp substrates identified in Figure A, Attachment 10 of the application. The submittal must include the current status of the kelp substrates.
- 3.3 The project description must include an itemized and detailed description of the "diverse components of canceled past experiments" referenced in the application. The items included in Attachment(s) 18 and 19 of the 9/27/95 submittal and the October 25, 1995 do not provide a complete description of what the various schematics and pictures represent. Additionally, the project development plan submitted with the application is incomplete. The plan must include all project components and specifically itemize "diverse components of canceled past experiments," and show the locations, densities, heights above the sea floor, and quantities of all experimental structures relative to the geographic boundaries of the lease site.

² Fish and Game Code § 15400: "The Commission may lease state water bottoms to any person for aquaculture. The Commission may adopt regulations governing the terms of the lease. No state water bottom may be leased, unless the commission determines that the lease is in the public interest."

³ Fish and Game Code § 15101: "The owner of each aquaculture facility shall register all the following information with the department by March 1 of each year: (a) the owner's name; (b) the species grown; (c) the location or locations of each operation or operations. The department may provide registration forms for this purpose and may impose a registration fee not to exceed fifty dollars(\$50). Anyone failing to register under this section shall be operating unlawfully."

⁴ Health and Safety Code § 112170(a): "The director or the directors duly authorized agent, shall conduct sanitary surveys of any shellfish growing water to assure: (1) Any shellfish growing water is safe as an article of food and meets bacteriological, chemical and toxicological standards as prescribed by regulation. (b) if it is found that the shellfish and growing water are in compliance with the regulations promulgated under this chapter, the director shall issue a certificate attesting to the compliance to the lawful grower of the shellfish."

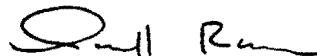
⁵ Title 14 California Code of Regulations §§ 13053.5 (a), (d), & (e): See attached.

According to the CDP application, the MFS administration encouraged volunteer participants to experiment with a full range of materials without oversight or coordination. The exact materials, locations and installation dates of the canceled past experiments have not been provided. In response to the Commission staff's request to identify these materials the CDP application states "As a sacred rule and to develop creativity, the largest initiative was permitted and even recommended to the volunteers. The intellectual properties of inventions that occurred were ruled to remain the intellectual property of the individual inventors and not the MFS." Regardless of the purported proprietary nature of the experiments conducted, specific information is required for all project components to enable a comprehensive analysis of the project under the Chapter 3 Policies of the Coastal Act.

- 3.4 The project description must include documentation of the anchoring system mooring capacity. The Reef/Bio-Structure Anchoring System section of the 9/27/95 supplemental submittal states that "*the mooring capacities of the anchoring systems have been calculated in 1987 according to indication of Dr. Jacques Savel, Professor of Material Resistance at the School of Architecture of the University of Nantes, France. Unfortunately, These indications cannot be located anymore in the files of the Marine Forest Society.*" Please make the necessary arrangements to obtain said documentation from Dr. Savel, for inclusion in the CDP application.

If the necessary documentation has not been received in the Commission office within 30-days from the date of this letter (March 24, 1996), Violation File No. V-E-93-001 will be referred to the Commission's Statewide Enforcement Unit. If you have any questions regarding the content of this letter, please contact me at (415) 905-5248.

Sincerely,




Darryl Rance
Coastal Analyst

cc: Susan M. Hansch Deputy Director for Energy, Ocean Resources, and Technical Services
Division
Nancy Cave, Statewide Enforcement Supervisor
Chris Kern, Statewide Enforcement Unit

MARINE FORESTS SOCIETY



EXHIBIT NO. 4
APPLICATION NO. E-95-5
MFS 3/25/95 Ltr
 California Coastal Commission

California Coastal Commission
45 Fremont, Suite 2000
San Francisco, CA 94105-2219

RECEIVED
MAR 27 1996
CALIFORNIA
COASTAL COMMISSION

March 25, 1996

Subject: After-the-fact CDP application # E-95-5.

Dear Mr. Rance,

As requested by phone by Mrs. Hansh and as confirmed by your February 23, 1996 letter, please find enclosed a last documentation to end your demand for information for the above-mentioned application.

Unfortunately, it has now become too difficult or impossible to meet with your requests. As you will see below, there is not much more we can do to satisfy your pending questions.

Board of Directors
Roy Lay, Chairman
Richard Higbie
David Kulcinski
Anthony Pereslete
Dale Sarver
Rodolphe Streichenberger

President & Founder
Rodolphe Streichenberger

Honorary Directors
Professor Wheeler J. North
Honorable Bruce W. Sumner

Employer I.D. Number
33-0204342

Federal Tax Exemption
Section 501 (C) (3)

1. Your Question "Proof-of-legal-interest"

Valuable proofs of legal interest already exist. They are:

a) The August 14, 1995 letter of the City of Newport Beach which testifies to the existence of "A City Permit for the installation of an Aquaculture Research Project off Newport Beach-1987" and which says that "As far as the City of Newport Beach is concerned, that authorization is still in effect".

b) The Harbor Permit, issued after the City of Newport Beach's March 27 approval of the "Tire reef Demonstration Project", a project based on the development of two parcels named as Parcel 1 and Parcel 2. In this approved, and still alive project said Parcel 1 was described as "the older 10 acre parcel" containing "experimental reef projects", precisely the description of the existing development.

You should be satisfied with the above-mentioned, well-known documentation of legal interest.

2. Your Question "Project Purpose"

page 2

Since ten years, invariably, the project purpose has been presented as an "Aquaculture Research Project".

In such a research project, as we have said to you, the Department of Fish and Game (CDFG) and the Department of Health Services (DHS) have no jurisdiction.

a) The CDFG's no-jurisdiction on the project.

The ten-year research by the Marine Forests Society (MFS) was done without any fish, shellfish, and/or plants harvesting. As a matter of fact, and according to the definition of the law, the MFS was never involved itself in any aquaculture activity. The California Coastal Act of 1976, Section 30100 defines an aquaculture activity as follows: *"Aquaculture" means a form of agriculture that is devoted to the controlled growing and harvesting of fish, shellfish, and plants in marine, brackish, and fresh water.*"

In its July 12, 1994 letter to the City of Newport Beach the CDFG clearly recognized that the project is not an "Aquaculture Project".

"It was agreed that the Society's experiments could no longer be construed as aquaculture, but rather were presently directed at the development of new techniques for creating artificial habitat."

Also, in July 25 the CDFG writes: *"After a thorough discussion, it was agreed by all parties that aquaculture was not the most appropriate classification for the experiments being conducted by the Society, and that their work was more appropriately classified as habitat enhancement. The Fish and Game Commission is authorized by Fish and Game Code Section No. 15400 to issue a lease of State water bottom only for the purpose of Aquaculture.*

and

"Therefore, the Department recommends that the Commission declare Aquaculture lease No. M-738-02 abandoned because the proposed project is no longer considered aquaculture, and is no longer under the purview of the Commission".

The above clarifies why we cannot satisfy the Commission's staff requirement for including in our application:

"....an appropriate aquaculture approval(s), registration(s), and/or certification(s) with applicable conditions of approval from the California Fish and Game Commission, the California Department of Fish and Game...."

b) The DHS's no-jurisdiction on the project.

A similar impossibility prevents us to satisfy the Commission's staff demand to include in our application an approval of the project by the DHS.

The reason is that the "Aquaculture Research Project" does not sell any aquaculture product for human consumption.

In its June 22, 1993 letter the DHS says ;

" You are correct in stating that the Society does not need a permit (certificate) from this department to conduct the proposed mussel reef demonstration project as you described it to me in your letter and recent telephone conversation. You are also correct in your understanding that you must not sell, offer, or hold for sale for human consumption any bivalve shellfish"

and

"This Department has no jurisdiction or concern about your proposal as a research and development or demonstration project"

The above states again why we cannot satisfy the Commission's staff requirement to include in our application the DHS's approval.

3. Your question "Project Description"

Since 1993, at the request of the Commission's staff, we have been continually describing the Marine Forests Society's research and experimental work for the discovery of a new technique to make new marine habitats.

Altogether, It has been a tremendous amount of work consisting of hundreds of pages of descriptions, graphs, drawings, photos, and referenced documents. It cost hundreds of hours of our volunteers' unpaid work, and thousands of dollars in fees. It is little to say that we are exhausted by all this paper work at the expense of our research, only for a non-productive, bureaucratic obligation. **We strongly complain that for three years the Commission's staff has made excessive demands for unnecessary information.**

At this point, to avoid more stress and to protect the good continuation of our Society's work, we do not want to answer to any more excessive demands. We will supply information that is justified according to the spirit of the California Coastal Act of 1976. Within this limit only, and according to the requirement of said California Coastal Act, Section 30320, we shall be able to maintain *..."confidence in the Commission and its practices and procedures"*.

After carefully reviewing your February 23, 1996 letter, sections 3.1, 3.2, 3.3, and 3.4 we find that we do not :

...must include a detailed description of the existing development
... (3.1)

.... must include a detailed description of the 2,000 kelp substrates
... (3.2)

.... must include an itemized and detailed description of the "diverse components of canceled past experiments" (3.3)

.... must include documentation of the anchoring system mooring capacity....(3.4)

The reasons why all these "must includes" are inappropriate requests are:

1. We have already answered all these questions in previous letters, and you have not told us how our answers were not sufficient or satisfactory.
2. In the California Coastal Commission Administrative Regulations which "*....shall be intepreted and liberally construed to accomplish the purposes and carry out the objectives of the California Coastal section Act of 1976.....(13003)*" there is no requirement for any "detailed" and/or "itemized" description. The only requirement is for a "*description sufficient to determine whether the project complies with all relevant policies of the California Coastal Act of 1976*".. (13053.5 (a)).

Since the month of October 1995, sufficient information has been supplied to the Commission's staff in order for them to determine that the project complies with all relevant policies of the California Coastal Act of 1976.


We never understood why on October 25, 1995 our application was in the first place declared complete and scheduled for the Coastal Commission's hearing in November, and then on the same day was declared incomplete. Among the additional information you later required we did not find anything that could have justified the change in the staff's appreciation of the completeness of our application.

After ten years of successfull field research, and three years of administrative applications, we do not know why we are not permitted to peacefully continue our work for the benefit of California marine resources.

Sincerely,



Rodolphe Streichenberger

EXHIBIT NO. 5
APPLICATION NO. E-95-5
MFS 5/18/95 Ltr.
 California Coastal Commission

MARINE FORESTS SOCIETY
P.O. Box 5843 Balboa Island Ca. 92662. USA

From: Rodolphe Strelchenberger
Company: Marine Forests Society
Phone: USA 1 714 721 9006
Fax: USA 1 714 721 9509

To: D. Rance
Company: C.C.C.
Phone: 415 904 5248
Fax: 415 904 5400

MAY 18 1995
CALIFORNIA
COASTAL COMMISSION

Date: May 18, 1995

Pages including this cover: 2

FAX MESSAGE

Dear Mr. Rance,

I shall be ready for the conference call, May 18 1995, approximately 3 P.M.

In consideration of the innovation of the project, and of its limited extend, here are some of my actual thoughts on the items in discussion.

Monitoring and Survey (M&S)

M&S are too often a luxury to keep busy and paid many scientists.

It makes no sense to ask for the survey of a reef productivity when there is no money to pay for it and when the scientific community already accepts that reefs are productive.

It makes no sense to ask for a survey of the beach erosion impact from removable tire ribbons when there is no money to pay for it, when no expert anticipates such erosion and when nobody knows how a scientifically reliable survey could be organized for this purpose.

It makes no sense to ask for a survey of the water quality impact of immersed scrap tires when there is no money to pay for it, when no expert anticipates such impact, and when a scientifically reliable survey can only be done by a few U.S. experts who do not exist in Newport Beach, California.

In the case of the TRD project the only necessary survey is the survey of the tire stability. The Marine Forests Society and the Marine Department of the City of Newport Beach are the most interested, available and competent organizations to do it under their own responsibility.

Description of the project

Parcel 1. has been developed, Fish and Game Commission permitting, under the initiative of volunteer divers with innovative minds. It was an underwater workshop for invention. It resulted successfully in three typical structures which can be described to day as follows: The mussel columns, the kelp substrates, and the tire ribbons. Other tests which were made were not recorded, they are no more visible and present no more interest.

PARCEL 2. The description of the innovative tire ribbons and mussel columns should only be an indication of the project feasibility, as is it required by the examiners of applications for US patents or as it is required by the examiners of application for state or federal grants for innovative products. This is obviously completely different of what would ask an engineering office controlling for a client the realization of a contracted building.

In the present case of the TRD project an allowance of change in the work method is necessary when the field feasibility of the project will appear to be improved by some new finding, as long no change of the overall objective or character of the project will occur.

The description of a project, intended to be a demonstration of feasibility of an innovation, should serve only as a controlling means of this feasibility. It should not serve as a guarantee of conform realization.

.....

.....

Long to be to innovative

Sincerely,



Rodolphe Streichenberger



ATT

EXHIBIT NO. 6

APPLICATION NO.
E-95-5

Hartwell Ltr.

California Coastal Commission

Parris N. Glendening
GovernorMaryland Department of Natural Resources
Chesapeake Bay Research & Monitoring Division
Tawes State Office Building, B-2
Annapolis, MD 21401John R. Griffin
SecretaryRonald N. Young
Deputy Secretary

March 23, 1995

Mr. Rodolphe Streichenberger
Marine Forests Society
P.O. Box 5843
Balboa Island, Calif. 92662

Dear Mr. Streichenberger:

This letter is in response to your request for information on the safety of using scrap tires for artificial reefs in marine waters. I must emphasize that these observations are my own interpretation of our data, and that the Maryland Department of Natural Resources has not established a policy regarding the safety of using scrap tire reefs in Chesapeake Bay. The Fisheries Division will not use scrap tires in Chesapeake Bay until more information on potential secondary effects is available. Scrap tires are deployed on the ocean side of the Delmarva peninsula however.

As you are aware, we have conducted a comprehensive study of the question as it applies to estuarine waters in Chesapeake Bay. The only other study which we are aware of, that addressed the question of effects on marine organisms was by R. B. Stone and co-workers at the Beaufort N.C. NMFS laboratory in 1975. Several other studies have been done in fresh water with a variety of experimental designs. Stone's experiments utilized a large tank and employed a flow-through water system to expose marine fish to whole tires. They concluded that no effects on the fish attributable to the tires were present. To summarize our approach, we shredded scrap tires and leached the tire chips according to a modified U.S. EPA, TCLP extraction procedure in synthetic saltwater solutions (5, 15, and 25ppt salinity) for three sequential periods of seven days each. Bioassays were conducted with fish, shrimp, copepods and Microtox^R. Fish tissues were examined for histological effects.

We found that the toxicity of the leachate was significant for

Hartwell
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at
600
Tires
concentrations

all test species depending on salinity. Fish and copepods were more sensitive than grass shrimp. We demonstrated that leachate toxicity decreased from 100% to zero following sequential leaching periods. We also demonstrated that leachate toxicity decreased to zero with increasing salinity. The growth results showed similar patterns of response as mortality. Histological evaluations of fish indicated the chemical mode of action was neurotoxicity. We were unable to identify the chemical(s) responsible for the observed toxicity however. We have been collaborating with researchers at the National Water Research Institute in Canada, and they believe they have identified a mass spectrum signature of the compounds. Different suites of chemicals appear to be responsible for toxicity to different test species. The chemicals responsible for the observed toxicity to fish have been shown to be persistent over a period of at least 60 days in fresh water.

I believe this means that the chemicals leaching off the tires come from the surface layer, and do not continue to leach after the surface has been exposed to water for some time. This is consistent with other reports. Furthermore, while the suspected chemicals appear to be present in the leachate at all salinities (assuming the Canadian interpretation is correct), toxicity is not observed at higher salinities. I believe this is due to a synergistic interaction with sea salts at higher salinities.

800
sec
S.M.

The TCLP extraction process provides a worst case leaching scenario. The surface to volume ratio of tires to water (which determines how much material is available from the tires for solution in water) in the TCLP extraction procedure is at least 660 times greater than any conceivable scenario in the field. Dilution series tests and extrapolation of laboratory results to leaching potential in the field indicate that proposed tire reefs should not pose a serious threat to water quality in Chesapeake Bay. No Observed Effects Concentrations were at least an order of magnitude above expected field concentrations for a hypothetical 10,000 acre artificial reef in Chesapeake Bay, even with unrealistically low flushing volumes. A follow-up study was performed using whole tires in large tanks to test this hypothesis. The data has not been finally assessed, but the preliminary results support this conclusion.

The highest concentrations of organic compounds which we observed in the leachates were 56.3 $\mu\text{g/L}$ for naphthalene (U.S. EPA Water Quality Criteria L.O.E.C.=2,350 $\mu\text{g/L}$) and 27.2 $\mu\text{g/L}$ for 2-methyl naphthalene (no water quality criteria available). These compounds were below detection limits at higher salinities (15 and 25ppt). I do not recall detection of quinoline, pyrene or dibenzothiophene in any of our samples, nor are they specifically mentioned in our report.

Thus, I feel the use of scrap tires in the marine environment will not result in acute toxicity effects. However, as noted above, the identification of the toxic chemicals in the leachates is unknown. No assessment can be made regarding persistence, fate and transport or possible bioaccumulative effects. Also, it is probably a moot point. Presumably, every time it rains, tires on vehicles on the road throughout the watershed will leach chemicals into the

AH. 13
Hartwell
3


water, which eventually ends up in the ocean. At least one particular chemical, known to be derived from tires, has been used to track urban runoff in San Francisco Bay for example.

I hope this provides you with the information you were looking for. I will be happy to send you a copy of our completed report, when it is available for distribution.

Sincerely,



S. Ian Hartwell, Chief
Toxic Aquatic Contaminants Program

EXHIBIT NO. 7
APPLICATION NO. E-95-5
Skelly Ltr.
 California Coastal Commission

SE SKELLY ENGINEERING
DAVID W. SKELLY COASTAL ENGINEER

May 5, 1995

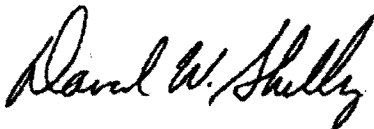
Mr. Rodolphe Streichenberger
Marine Forests Society
P.O. Box 5843
Balboa Island, CA 92662

COMMENTS ON POTENTIAL FOR SHORELINE EROSION FROM MFS PARCEL 1

1. The majority of sand movement along the shoreline is within the surfzone. The surfzone very seldom extends out to water depths greater than 20 feet. At a depth of 40 feet the tires are essentially outside the littoral zone.
2. The average depth of closure for the seasonal profile change in this area is less than 40 feet. Closure in the Oceanside Littoral Cell is at depths of about 30 feet.
3. The parcel has been in place for several years and there is absolutely no evidence of any impact on the shoreline. The depth contours in the lee (shoreward) of the installation show no changes. If the tires were having any effect on the distribution of sand it would be measurable in the vicinity of the tires.
4. The tires are very close to the bottom (1 to 2 feet) and do not effect incoming waves, at all. The tires should not be compared to nearshore and shoreline structures, such as jetties, piers, groins etc. These structure are in the active littoral zone and take up the entire water column.

There is absolutely no basis for expecting the MFS tire experiment to have any impact on the sand deposition at the shoreline.

Respectfully,



David W. Skelly MS, PE
RCE #47857

DEPARTMENT OF FISH AND GAME


Marine Resources Division
330 Golden Shore, Suite 50
Long Beach, California 90802
(310) 590-5171

Page 1 of

EXHIBIT NO. 8

APPLICATION NO.
E-95-5

CDFG Guidelines

 California Coastal Commission**MATERIAL SPECIFICATIONS AND NOTIFICATION PROCEDURE****SURPLUS MATERIALS FOR AUGMENTATION TO ARTIFICIAL REEFS**

The California Department of Fish and Game (CDFG) is designated as the "lead agency" in the construction of artificial reefs off the coast of California. Department biologists have been involved in the planning and construction of over 30 artificial reefs off our coastline. Some of these reefs, in Orange and San Diego Counties are permitted for future expansion, through the use of surplus materials of opportunity. Cities, Counties, public agencies and private organizations or businesses are invited to submit proposals to CDFG for the disposal of certain categories of surplus material, for use in the construction of artificial reefs. ONLY THOSE PROPOSALS WHICH WILL INCUR NO COST TO THE STATE FOR TRANSPORTATION OF MATERIALS TO THE REEF SITE WILL BE CONSIDERED.

Acceptable Materials

Materials suitable for construction of artificial reefs must meet the following general criteria:

- (1) The material must be persistent. It must be hard, but may not be so brittle that collisions with other similar materials, or boat anchors would tend to shatter it. It must remain essentially unchanged after years of submersion in salt water.
- (2) The material must have a specific gravity at least twice that of sea water. The material must be dense enough to remain in position during strong winter storms, even in water depths as shallow as 30 feet.
- (3) The material must not contain potentially toxic substances.

Acceptable materials include, but may not be limited to QUARRIED ROCK and HIGH DENSITY CONCRETE. Other materials may be considered on a case to case basis.

Preparation of Surplus Concrete Materials

SIZE: Concrete slabs must be broken into chunks; 2 ft. minimum diameter; 4-6 ft. optimum size
Concrete pilings must be broken into lengths, ranging from 2-10 ft.

REBAR: Reinforced concrete is allowable, but no rebar may protrude more than 3 inches.

PROCEDURE

Placement of material at any reef site requires prior written approval from the California Department of Fish and Game. Specific off-loading sites and actual configuration of material placement will be determined by CDFG, in writing and will be strictly adhered to.

Responsibilities of Principal Party to Agreement
(City, Port District, etc.)

NOTIFICATION: The principal party to the agreement must notify CDGF one full month prior to moving any material to the specified reef site.

REEF AUGMENTATION REPORT:

As part of the record keeping on all reef construction off the California coast, the principal party to this agreement must submit a Report of Augmentation to CDFG no later than 10 working days after completion of off-loading of materials. This report will include:

- (1) Verification of inspection by the principal party that each barge load of materials is in compliance with the above specifications.
- (2) Estimated quantity of material actually placed on the site.
- (3) A sketch of the completed augmentation, accompanied by LORAN coordinates for each load of material placed.

Responsibilities of Barge Contractor

NOTIFICATION: The barge contractor must notify the U.S. Coast Guard two weeks prior to moving any material to the reef site. The Coast Guard must be given a minimum of two week lead time to include this job in their Aids to Navigation and Notice to Mariners. Los Angeles area: (310) 499-5410; San Diego area: (619) 557-5877.

This notification must include:

- (1) Location of work site.
- (2) Size and type of equipment that will be performing the work.
- (3) Name and radio call sign for working vessels, if applicable.
- (4) Telephone numbers for on site contact with project engineers.
- (5) Schedule for completing the project.

PLACEMENT OF MATERIALS:

The contractor must arrange for inspection of loaded barge materials, immediately prior to movement of any barge to the reef site.

The barge contractor shall place temporary buoys at the off loading site. These buoys must remain in place for one month after completion of off loading operations.

The barge loads of material must not be allowed to drift off site during material augmentation.

Prepared by:
Dennis W. Bedford
Marine Resources Division - Long Beach
November 15, 1991

Reef Augmentation Procedures (continued pg. 4 of 4)

I have read and understand the conditions and requirements set forth above. I hereby agree that the movement and placement of materials, to a site designated by the California Department of Fish and Game, shall be performed in accordance with these conditions and requirements, and I further agree to correct any condition which is demonstrated to be in violation of the agreement.

Signature of Principal Party _____ For _____
(City, Port District, etc.)

Date _____

Signature of Primary Contractor _____ For _____

Date _____

Signature of Sub-Contractor _____ For _____

Date _____

Department of Fish and Game Representative _____

Date _____

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000

SAN FRANCISCO, CA 94105-2219

VOICE AND TDD (415) 904-5200

EXHIBIT NO. 9

APPLICATION NO.
E-95-5

Newport Beach Intr.

 California Coastal Commission

March 29, 1996

Tony Melum, Deputy Chief
Marine Division
Fire and Marine Department
P.O. Box 1768
Newport Beach, CA 92658-8915

Subject: Marine Forests Society (MFS)-- Land use entitlement for existing development

Dear Mr. Melum:

By letter dated February 23, 1987, the Newport City Council endorsed an MFS aquaculture research project over City Tidelands. The California Department of Fish and Game (CDFG) was to act as lead agency and administer the lease. On June 15, 1987, the CDFG issued to the Marine Forests Corporation (Marine Forest Society) **conditionally approved** Aquaculture Lease, M-738-01. According to lease documentation, the MFS was authorized to culture experimentally specific plant and animal species and required to obtain all necessary government agency approvals. The existing development includes, but is not limited to: 2,000 kelp substrates (one gallon plastic jugs covered with plastic mesh, moored with nylon rope and secured with plastic anchors), 100 mussel columns (20 foot sections of PVC pipe, moored with nylon rope and secured with plastic anchors) and 1,500 scrap automobile tires (attached in various configurations, moored with nylon rope and secured with plastic anchors).¹

The MFS did not fulfill the explicit terms and conditions of the lease, including requirements to obtain regulatory approval(s) and meet aquaculture production requirements. In August, 1993, the CDFG officially rescinded Aquaculture Lease M-783-01.

The Coastal Commission staff is currently reviewing a coastal development permit application, submitted by the MFS, for the above-described development on subtidal lands offshore the City of Newport Beach. The purpose of this letter to request written clarification of any land use entitlement(s) granted by the City of Newport Beach to the MFS for the existing development. The MFS asserts (1) that the February 23, 1987, City Council endorsement, as discussed above, confirms their legal interest to use the property for existing development and (2) that a conditionally approved harbor permit issued by the Newport Beach City Council on March 27, 1995, for a Tire Reef Demonstration Project, also constitutes an entitlement for the existing development. Upon review of

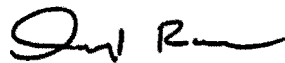
¹ The development includes a component that the CDP application defines as "diverse units of canceled past experiments." The MFS has stated that they will not provide an itemized description of the "diverse units of canceled past experiments." The project description also includes a provision for on-site abandonment of all project-related materials that are no longer of use to the MFS.

Mr. Tony Melum, Marine Division
Existing Development
March 29, 1996
Page 2

the August 14, 1995, letter from your office regarding the City Council endorsement, the conditionally approved Harbor Permit and Negative Declaration for the Tire Reef Demonstration Project, the Commission staff is unable to confirm any land use entitlement issued by the City of Newport Beach for development described herein.

We would appreciate you researching your records and providing the Coastal Commission with a written clarification of any land use entitlement(s) or any other approvals granted by the City of Newport Beach to the MFS for the above described development. If you have any question regarding this request or would like to discuss other issues regarding the MFS project, please contact me at (415) 904-5248.

Sincerely,




Darryl Rance
Coastal Analyst

cc: Rodolphe Streichenberger, President, Marine Forests Society
LB Boydston, Acting Chief, Marine Resources Division, CDFG

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION**

2010 IOWA AVENUE, SUITE 100
RIVERSIDE, CA 92507-2409
PHONE: (909) 782-4130
FAX: (909) 781-6288

EXHIBIT NO. 10
APPLICATION NO. E-95-5
RWQCB Ltr. 8/31/95
 California Coastal Commission

SEP 07 1995
CALIFORNIA
COASTAL COMMISSION

August 31, 1995

Susan Hansch
California Coastal Commission
45 Fremont, Suite 2000
San Francisco, CA 94105-2219

COMMENTS ON AN AFTER-THE-FACT COASTAL DEVELOPMENT PERMIT APPLICATION FOR THE MARINE FORESTS SOCIETY (MFS) EXPERIMENTAL SITE, NEWPORT BEACH, ORANGE COUNTY

Dear Ms. Hansch:

This is in response to the Coastal Development Permit (CDP) for the above-referenced project. The project is located offshore, southeast of Balboa Pier, Newport Beach, in Orange County. Regional Water Quality Control Board (RWQCB) staff have discussed this project and the previously proposed Tire Reef Demonstration (TRD) project with Rodolphe Streichenberger of the Marine Forests Society on several occasions. We denied a clearance for the TRD in a RWQCB correspondence of 19 May, 1995 (see attachment) due to a lack of evidence showing that the project would not adversely affect water quality, the absence of a monitoring program to assess water quality and biological communities, and the absence of any meaningful monitoring done at the previous experimental site. The concerns outlined in that correspondence are still valid and applicable to the current CDP application.

The CDP application summarily dismisses both water quality monitoring and the potential bioaccumulation of toxic substances in marine organisms as being unimportant, unnecessary, and expensive. This appears to be based on a single correspondence from Mr. Ian Hartwell, Maryland Department of Natural Resources, to Rodolphe Streichenberger, Marine Forests Society. Mr. Hartwell states in that correspondence that there has been only one other study examining tire leachates in marine environments, the identity of chemicals causing toxicity in various tests were not known, chemicals causing toxicity in fish were shown to be persistent for at least 60 days in *fresh water* (emphasis added), and that the use of scrap tires for artificial reefs was not a formally endorsed policy of the Maryland Department of Natural Resources due to concerns with toxicity. Conversely, the CDP application states that "Tire leachate has been extensively studied and has always been proven [to be] non toxic in the field" and ". . . 1,500 tires, which 2 or 3 years ago for 60 days have released a non toxic leachate, will not cause a change of the site's water quality." These are clearly false statements that contradict the information provided by Mr. Hartwell.

The MFS has stated on numerous occasions the existence of additional evidence showing an absence of toxicity from scrap tires in marine artificial reefs. RWQCB staff had specifically requested that this additional information be provided for our review of the TRD project. This information was never provided. RWQCB staff specifically requested on August 21, 1995 that the MFS provide this information for our review of the CDP application (see attachment).

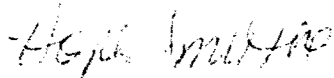
The response of the MFS on August 28, 1995 contained a collection of quotes from various studies but not the studies themselves. RWQCB staff then requested that several of the studies listed in the response be provided for review.

The studies that were sent to the RWQCB do not demonstrate the non-toxicity of scrap tire leachate in marine environments. A scientific article on tire leachate toxicity in fresh water showed toxicity to *ceriodaphnia dubia* from zinc and copper (Nelson, Mueller, and Hemphill 1994). The article describes the lack of information on the toxicity of tire leachates in fresh water and marine environments. A less rigorous paper describes the growth of organisms on various reef materials off of Sea Bright, New Jersey (Pearce and Chang 1982). There are not any data or toxicity information presented in the paper. The paper recommends tires and concrete rubble as "good" building material for artificial reefs based on the texture of the material. The additional information provided by the MFS does not support the conclusions presented in the CDP application.

Attachment #2 of the CDP application, a MFS Brochure, states that no toxic impact will result from tires immersed in open sea waters based on special studies conducted. It then cites the reference - Streichenberger, 1993. RWQCB staff have not seen this document or any corresponding analysis.

The CDP application does not adequately address the concerns of the RWQCB and we cannot provide an approval for this project. If you have any questions, please contact me at (909) 782-3287 or Scott Dawson of my staff at (909) 782-4241.

Sincerely,



Joanne E. Schneider
Environmental Program Manger

attachments

cc: Marine Forests Society, Rodolphe Streichenberger

References (as submitted by MFS)

Candle, R. D. 1985. Scrap tires as artificial reefs. Pages 293-302 in *Artificial Reefs: Marine and Freshwater Applications*. Lewis Publishers.

Nelson, S.M., G. Mueller, and D. C. Hemphill. 1994. Identification of tire toxicants and a risk assessment of water quality effects using tire reefs in canals. *Bulletin of Environmental Contamination and Toxicity* 52:574-581.

Pearce, J. B., and S. Chang 1982. The effects of various materials in artificial reef construction. National Marine Fisheries Service, Sandy Hook Laboratory, Highlands, New Jersey.

DEPARTMENT OF FISH AND GAME

1416 NINTH STREET
P.O. BOX 944209
SACRAMENTO, CA 94244-2090

(916) 653-6281

EXHIBIT NO. 11

APPLICATION NO.
E-95-5

CDFG Ltr. 6/29/95

California Coastal Commission

June 29, 1995

RECEIVED
JUL 03 1995
CALIFORNIA
COASTAL COMMISSION

Mr. Darryl Rance
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105-2219

Dear Mr. Rance:

After receiving a copy of a letter recently sent to you from Mr. Rodolphe Streichenberger, Marine Forests Society (MFS), I feel compelled to set the record straight concerning the State's artificial reef program.

In 1985, the State Legislature enacted a bill creating a program of artificial reef research and development, including reef design, placement, and monitoring. This program was created because the Legislature felt it was necessary to coordinate research and construction of artificial reefs in State waters. Recognizing what was then over 27 years of research on artificial reefs conducted by the Department and cooperating investigators from the University of California, the legislature placed that program under the administration of the Department of Fish and Game (sections 6420-6424, Fish and Game Code).

Mr. Dennis Bedford, the leader of the Department's Artificial Reef Program is the Department's expert and the appropriate contact person when you require information from the Department on artificial reefs.

In his letter to you, Mr. Streichenberger contends that his operation is aquaculture and not an artificial reef after all. I had thought that this issue was settled some time ago. The location of the tire reef under consideration by your agency is within a prohibited harvesting zone for bivalve shellfish for human consumption established under the National Shellfish Sanitation Plan. This zone was established around the Orange County Sanitation District's Ocean discharge to, among other things, provide a buffer zone in the event of treatment plant failure. We believe that it is highly unlikely that permission

Mr. Darryl Rance
June 29, 1995
Page Two

to harvest mussels for human consumption will ever be granted for Marine Forest Society's tire reef at its present location and, therefore, that it is not a viable aquaculture project.

MFS operated under the authority of a research and development Aquaculture Registration for over five years. When in 1993 it became apparent to us that MFS's efforts at its current location would not result in a viable commercial aquaculture operation, we met with Mr. Streichenberger, and others from MFS, to discuss the above concerns. Both parties agreed that aquaculture was not an appropriate umbrella under which to pursue MFS's activities. At that time all existing aquaculture leases and registrations issued to MFS were cancelled by mutual agreement.

Regardless of its status as either aquaculture or artificial reef, the Department continues to take the position that the certification of a mitigated negative declaration for this project by the City of Newport Beach was inappropriate given the project's proposed scale. Given the Department's legislatively created role as coordinator of all artificial reef projects in State waters, we believe we have an abiding interest in this project. In that regard, we remain unconvinced that the benefits that can reasonably be expected to result from tire reef construction will outweigh the environmental hazards to California's marine resources.

Sincerely,



Rolf Mall, Chief
Marine Resources Division

cc: Mr. Rodolphe Streichenberger, MFS
Mr. John Turner, ESD
Mr. Richard Klingbeil, MRD-Long Beach
Mr. Dennis Bedford, MRD-Long Beach
Mr. Robert Treanor
Executive Office
Fish and Game Commission


EXHIBIT NO. 12
APPLICATION NO. E-95-5
Harbor Permit
 California Coastal Commission

EXHIBIT "A"

FINDINGS AND CONDITIONS OF APPROVAL
HARBOR PERMIT FOR
MARINE FORESTS SOCIETY TIRE REEF DEMONSTRATION PROJECT

A. ENVIRONMENTAL DOCUMENT: Accept the Negative Declaration, making the following findings and requiring the following mitigation measures:

Findings:

1. That an Initial Study has been prepared in compliance with the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and Council Policy K-3.
2. That based upon the information contained in the Initial Study, comments received, and all related documents, there is no substantial evidence in the record that the project, as conditioned or as modified by mitigation measures identified in the Initial Study, could have a significant effect on the environment, therefore a Negative Declaration has been prepared. The Negative Declaration adequately addresses the potential environmental impacts of the project, and satisfies all the requirements of CEQA, and is therefore approved. The Negative Declaration reflects the independent judgment of the City Council and was reviewed and considered prior to approval of the project.
3. That the mitigation measures identified in the Initial Study have been incorporated into the proposed project and are hereby adopted as conditions of approval.
4. The mitigation monitoring requirements of Public Resources Code Section 21081.6 will be met through required compliance with applicable codes, standards, mitigation measures, and conditions of approval adopted in connection with the project. The Mitigation Monitoring and Reporting Program for the project is attached to the Negative Declaration.

Mitigation Measures:

4-1 Tire Module Density

Tire modules shall be installed at different densities to assess the possibility of a concentration effect of potentially noxious compounds.

4-2 Tire Module Anchors

Tire modules shall be installed with anchors allowing the tires to sink into the sand so as to increase the stability of the tire reefs during storms.

4-3 Project Monitoring and Reporting

Prior to issuance of a Coastal Development Permit the project applicant shall develop a program for monitoring and reporting on impacts to water quality and marine life on and in the immediate vicinity of the project, and on erosion and deposition of beach sands. The program methodology shall be developed in consultation with the City of Newport Beach Marine Department, the California Coastal Commission and the California Department of Fish and Game, and shall be approved by the Regional Water Quality Control Board/Santa Ana Region.

The program shall specify: 1) that the Harbor Permit and Coastal Development Permit shall be subject to revocation or modification if the monitoring reports indicate that the project is resulting in significant adverse impacts to water quality, marine organisms, or beach erosion; and 2) that the entire project shall be discontinued and removed at the applicant's expense within 30 days if the Harbor Permit is revoked by the City of Newport Beach or the Coastal Development Permit is revoked by the Coastal Commission.

6-1 Compliance With US Coast Guard Requirements

Standard US Coast Guard requirements shall be followed for towing, anchoring, and notifying the public of the potential hazard to navigation. Additionally, the barge and any temporary moorings shall be well lighted and fitted with radar reflectors.

6-2 Barge Moorings

The barge shall be on a four-point mooring so that its movements can be carefully controlled.

6-3 Safety Practices

Smaller watercraft, supporting the construction/installation phase, shall follow standard US Coast Guard safety practices and shall display warning signs/signals to avoid conflicts with other vessels.

6-4 Tire Retrieval

The applicant shall monitor all tires and retrieve any that fall off the barge. Prior to assembly, the tires shall be retained on the barge by netting and ropes.

6-5 Reef Removal Upon Notice

If the City determines that the project would result in any unanticipated hazards to public health, safety, or navigation, the applicant shall remove all tires and ancillary materials at his own expense within 30 days of being provided notice from the City. Any tires or materials that break free from the reef shall be removed immediately by the applicant.

6-6 Reef Maintenance

After installation the applicant shall monitor the physical condition of the reef on a regular monthly basis and shall provide a quarterly report to the Newport Beach Marine Director and the California Coastal Commission of the status of the project, any problems that have developed, and actions taken to correct such problems. Any worn or broken rope bindings shall be replaced immediately so as to prevent tires from becoming detached from the reef.

6-7 Financial Security

Prior to issuance of a Coastal Development Permit the applicant shall post financial security (e.g., cash, bond or letter of credit) acceptable to the Newport Beach Marine Director, and sufficient to guarantee that any loose tires will be collected and properly disposed of, or the project will be removed if necessary.

10-1 Noise Requirements

All vessels shall comply with state and federal noise requirements. Furthermore, the hours of operation shall comply with the provisions of the Noise Ordinance (NBMC Chapter 10.28).

- B. **HARBOR PERMIT:** Approve the Harbor Permit for the Marine Forests Society Tire Reef Demonstration Project subject to the following findings and conditions.

Findings:

1. That the proposed permit application is consistent with the General Plan, the Local Coastal Program Land Use Plan, and the Newport Beach Municipal Code.
2. That the approval of the Harbor Permit for the Marine Forests Society Tire Reef Demonstration Project will not, under the circumstances of this case, be detrimental to the health, safety, or the general welfare of the City.

Conditions:

1. That the development shall be in substantial conformance with the approved plans and project description as submitted on the permit application. The proposal is a non-commercial demonstration project, and any change to the project area, number of tires, or use of the project for commercial purposes shall require an amendment to this permit. No commercial aquaculture or harvesting of shellfish shall occur on the site.
2. That all of the mitigation measures listed above are hereby adopted as conditions of approval.
3. That the plans and specifications for the project shall be subject to further review by the Public Works Department, and changes may be required to ensure that sound engineering practices are incorporated into the project design.
4. No construction shall begin until all required permits and approvals have been obtained from the California Coastal Commission, the Department of Fish and Game, the US Army Corps of Engineers, the US Coast Guard, and the Regional Water Quality Control Board.
5. This permit shall expire unless exercised within 24 months from the date of approval.
6. This permit may be revoked or modified subject to the provisions of Sec. 17.24.090 of the Newport Beach Municipal Code.